

[LGA Somerset_(R) (QLD)] - total vegetation cover soil protection report [Sep 2019]

This report provides information about vegetation covering the soil surface for a region during a single month with comparison to previous years. The total vegetation cover indicates where soil is likely to be protected from wind ($\geq 50\%$ total vegetation cover) and water/hillslope ($\geq 70\%$ total vegetation cover) erosion. Results are shown for the whole region (polygon) and also separated by land use and forest cover class. This is because different land use / forest cover classes are likely to have different cover patterns and targets.

[Somerset_(R)]

The six maps and two graphs provide a report for the month with:

- Land use and forest cover information for the area:
 - o Map: Land use and forest cover
 - o Chart: Land use and forest cover area
- Total vegetation cover for this month:
 - o Map: total vegetation cover classified into 4 classes
 - o Chart: total vegetation cover percentage area classified into 4 classes
- Areas protected from erosion for the month:
 - o Map: water erosion protection ($>70\%$ cover) percentage area and hectares
 - o Map: wind erosion protection ($>50\%$ cover) percentage area and hectares
- Comparison with previous years:
 - o Map: anomaly – compare this month to the average cover from the same month in previous years
 - o Map: deciles – rank this month against the same month in previous years
- Time series from January 2001 to current:
 - o Wind erosion protection time series: percentage of the area of the region with greater than 50% cover for each month since January 2001 (orange line): Horizontal lines are 10th (cover target) and 50th percentiles. Vertical line is month of report.
 - o Water erosion protection time series: percentage of the area of the region with greater than 70% cover for each month since January 2001 (blue line): Horizontal lines are 10th (cover target) and 50th percentiles. Vertical line is month of report.
 - o Rainfall: millimetres rainfall each month (black line). Vertical line is month of report.
- Time series for each month stacked by year
 - o Same data as time series from January 2001 to current month, grouped by month. Black line is current year of data.
- Water erosion protection on higher slopes. As slope increases, more cover is required to control water erosion.

The thresholds reported are:

- o the percentage area with pixels greater than 80% total cover
- o the percentage area with pixels greater than 90% total cover
- o the percentage area with pixels greater than 95% total cover

The following pages repeat the above sequence for each land use and forest cover class. For example

- All agricultural lands, that is grazing, cropping plus Horticulture (depending on what land use is present)
- Grazing lands by forest classes if present
- Cropping lands
- Irrigation lands
- Protected areas by forest classes if present

The following pages repeat the above sequence for each land use and forest cover class if 1% or more of area makes up a land use and forest cover class. Four land uses are reported: Conservation and natural environments, Agriculture, production native forests and plantation forests, and other. Agriculture is further divided into grazing, crops and horticulture are then divided into non-irrigated and irrigated. Land use is further divided by forest class if present: non-forest, woodland forest and non-woodland forest.

Explanatory notes:

This report has been generated using MODIS fractional vegetation cover information available in Rangelands and Pasture Productivity (RAPP) map tool. The report is based on an analysis of 500 metre pixel data on monthly time steps. Report uses baseline from January 2001 to September 2019 for each month to generate anomalies and deciles. Post September 2019 all similar months are used to calculate anomalies and deciles.

Acknowledgment of data:

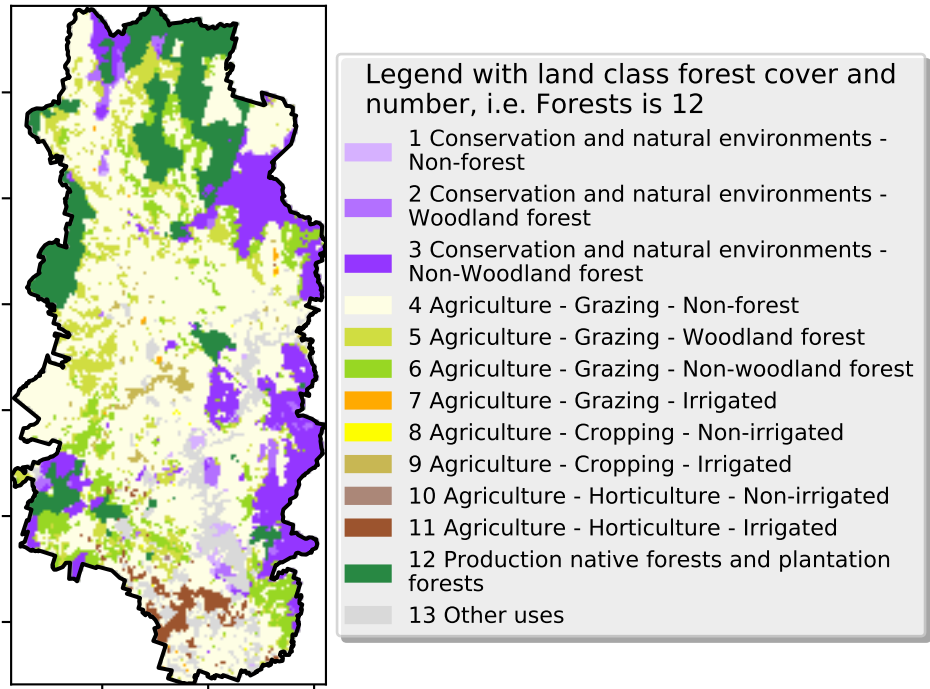
1. <http://www.agriculture.gov.au/abares/aclump/land-use/alum-classification>
2. <http://www.agriculture.gov.au/abares/forestsaustralia/sofr/sofr-2018>
3. <https://www.dpi.nsw.gov.au/agriculture/pastures-and-rangelands/establishment-mgmt/production-management2/groundcover>
4. MODIS Fractional cover algorithm:
<https://doi.org/10.4225/08/5848a3f19a7b3>



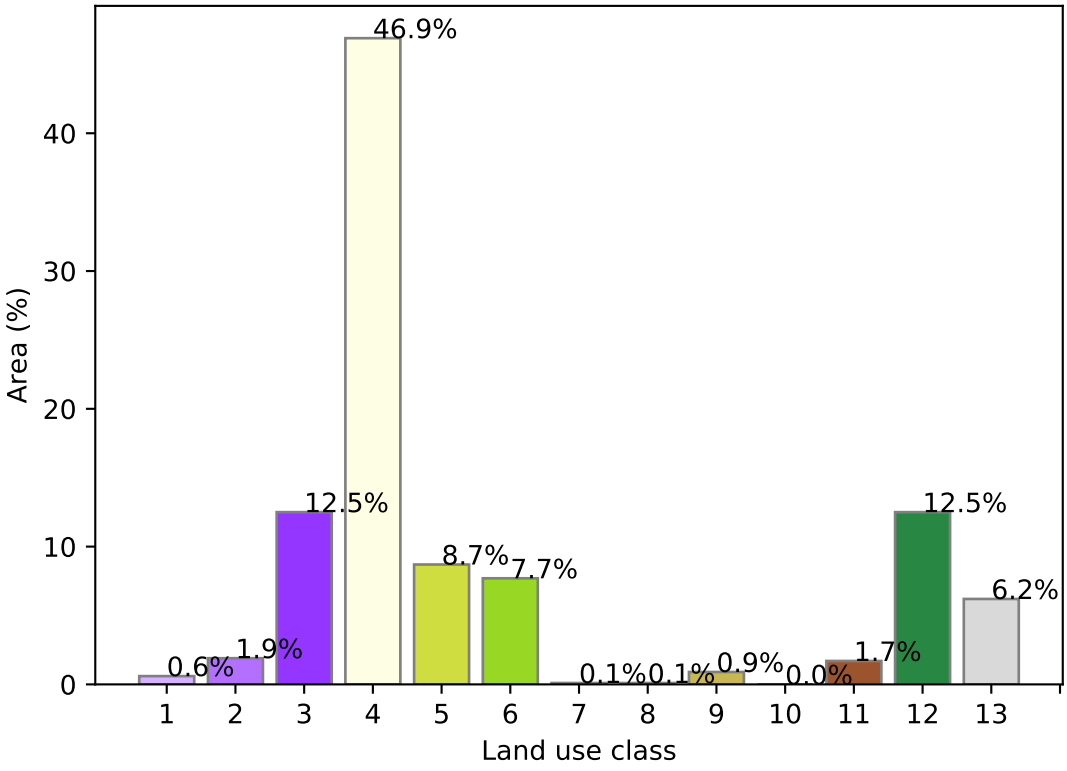
Vegetation Cover Sep 2019

Land use and forest cover

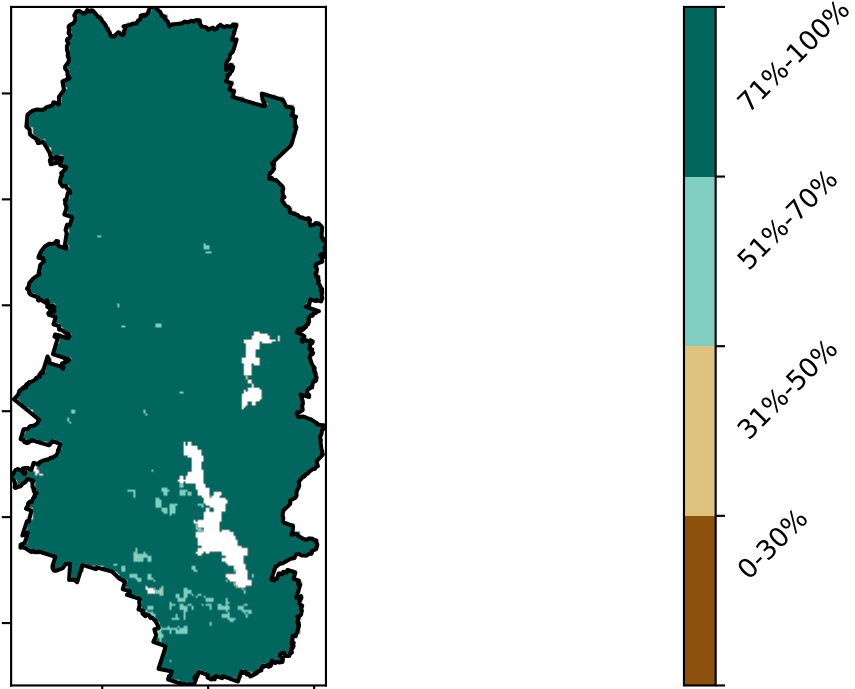
Landuse map of area based on 2015 catchment scale landuse and Australia's National Forest Inventory, where no forest is < 20% tree cover, sparse is 20 to 50% and dense > 50% tree cover.



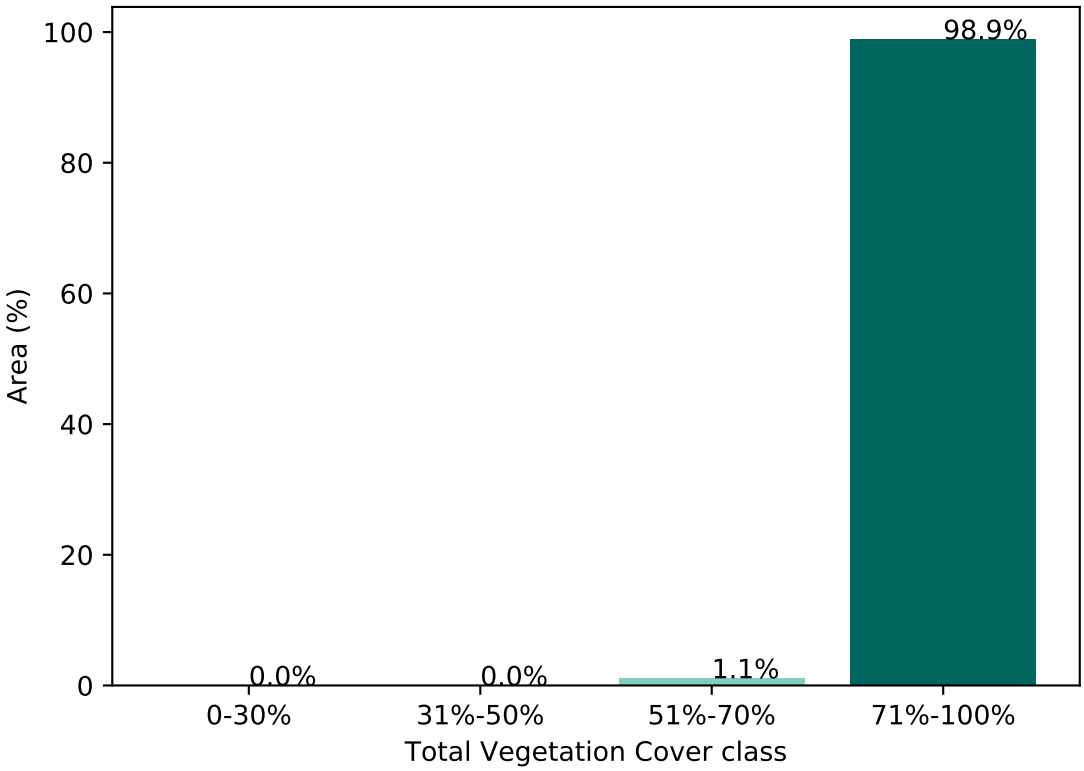
Proportion of each land class in area



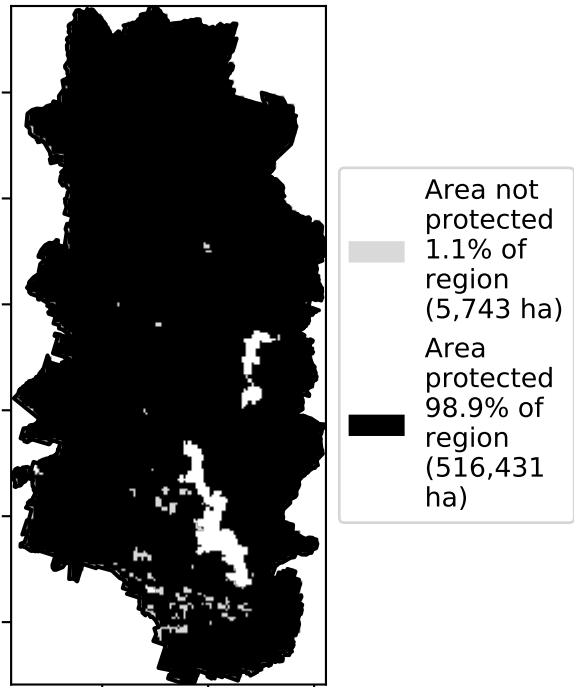
Total Vegetation Cover [%]



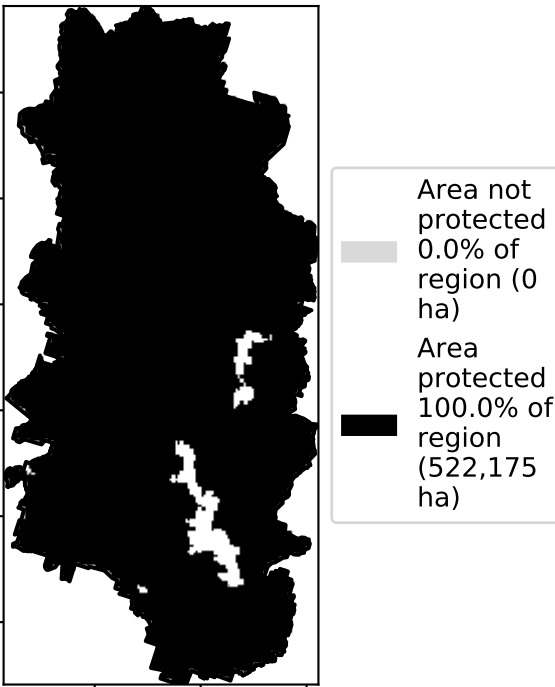
Proportion of vegetation cover class in area



% Area protected from water erosion (>70%)

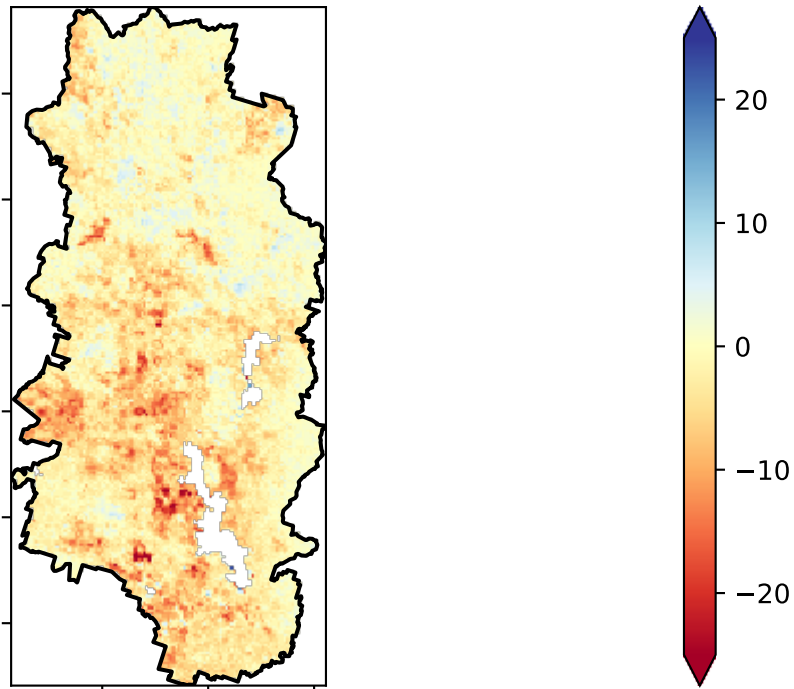


% Area protected from wind erosion (>50%)



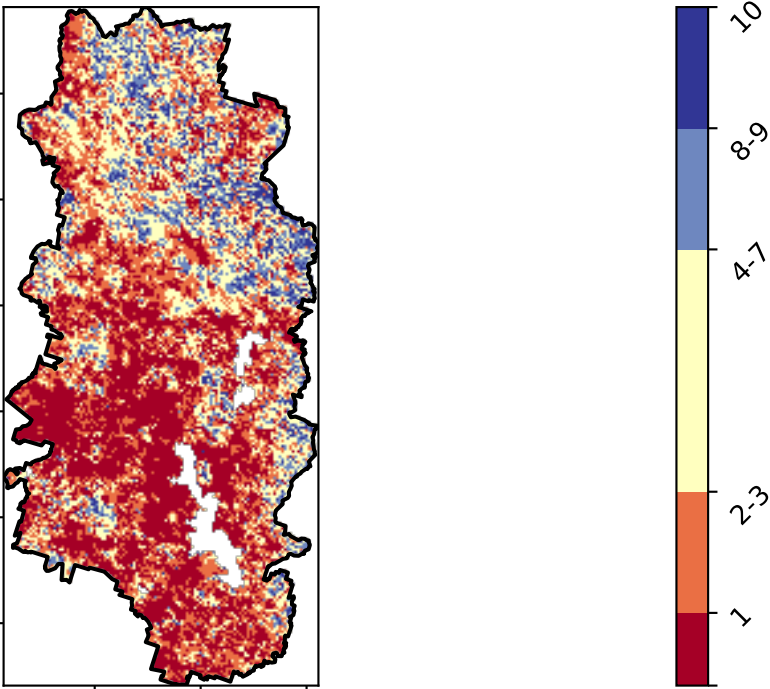
Total Vegetation Cover Anomaly [%]

Anomaly show how many percentage 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.



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.

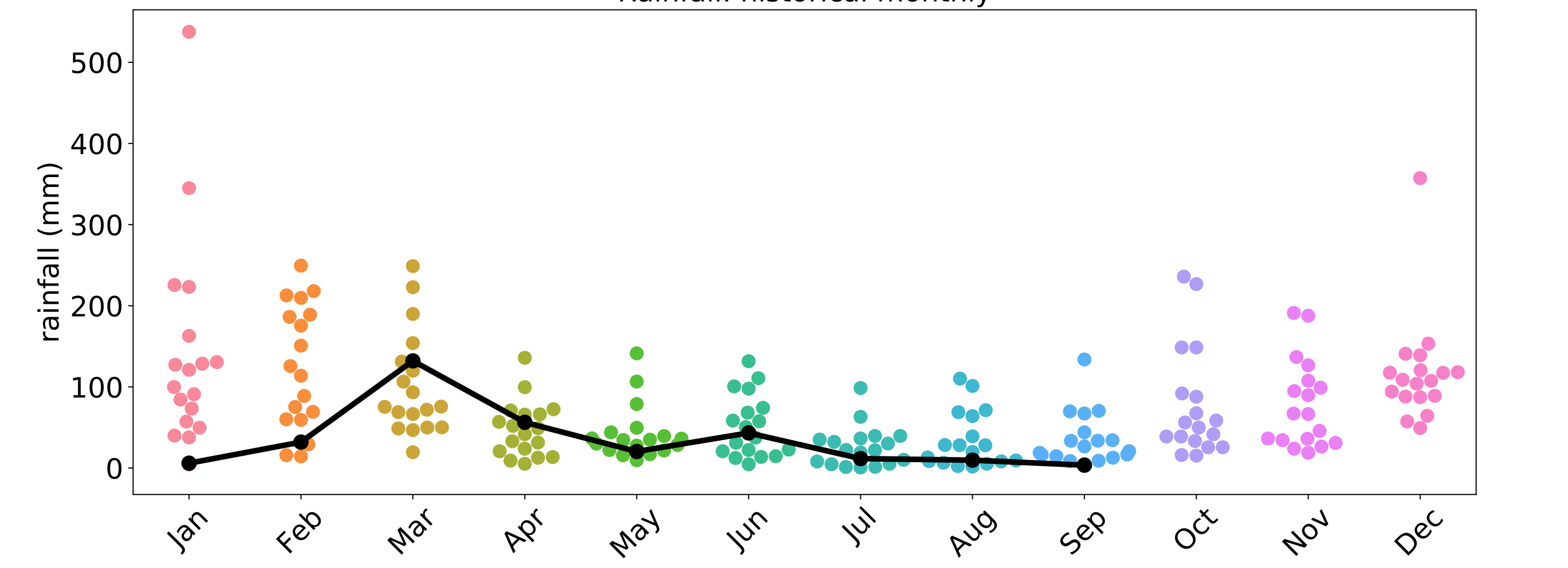
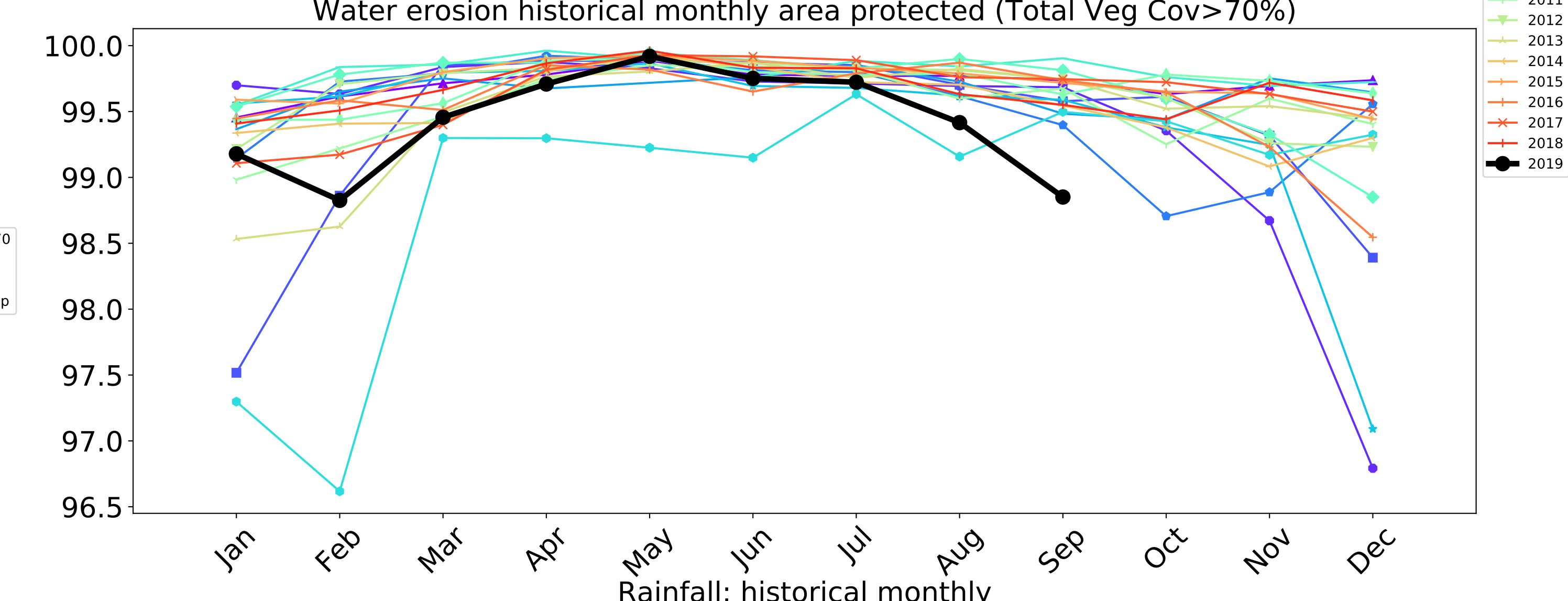
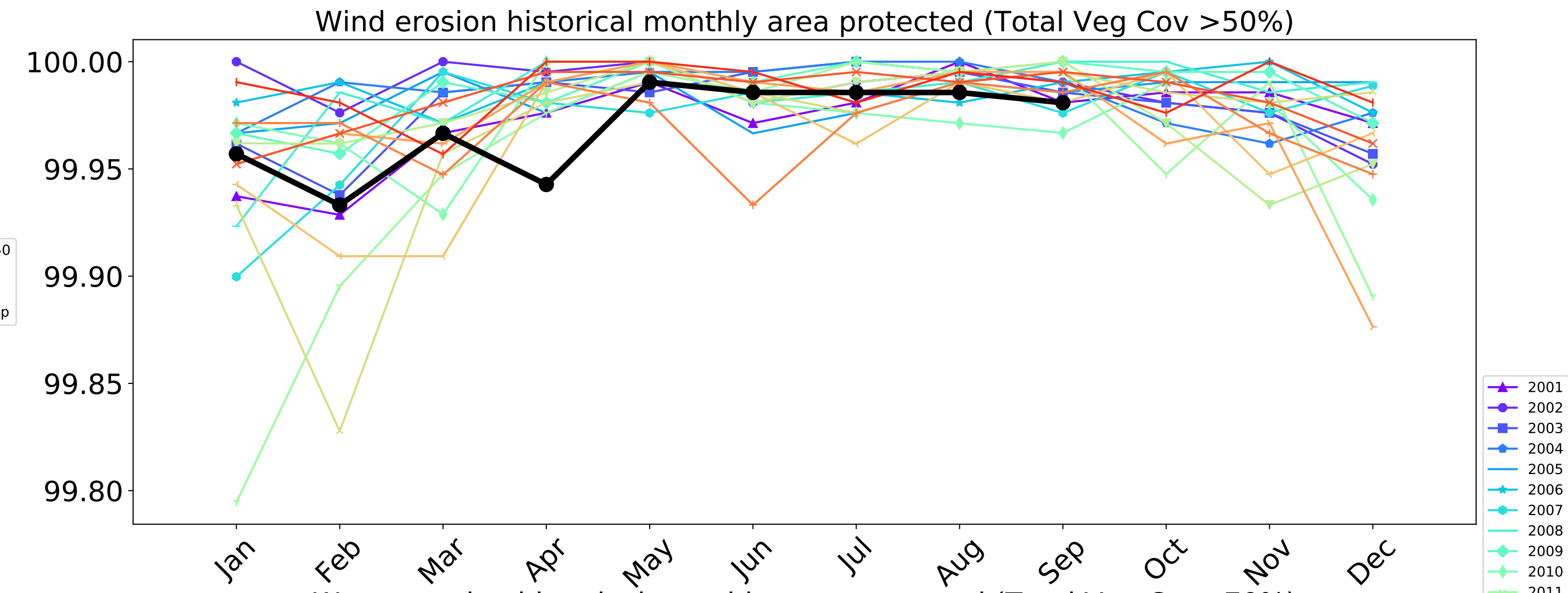
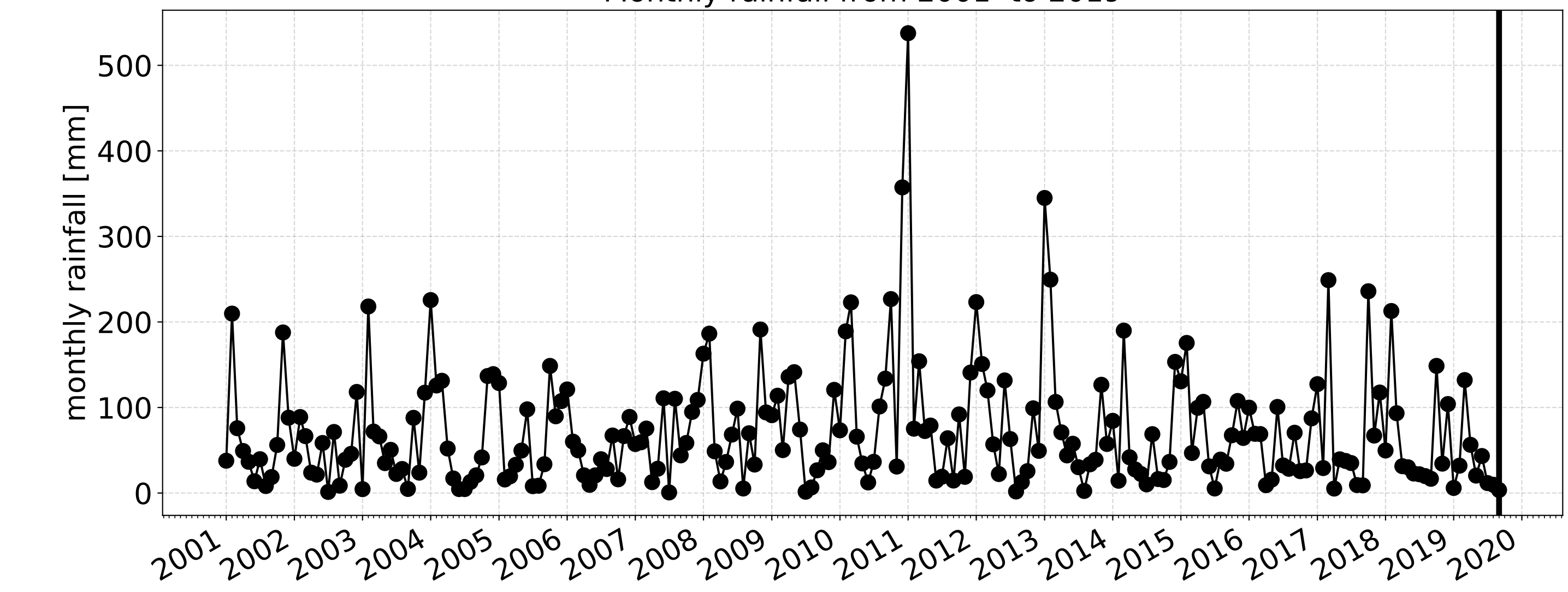
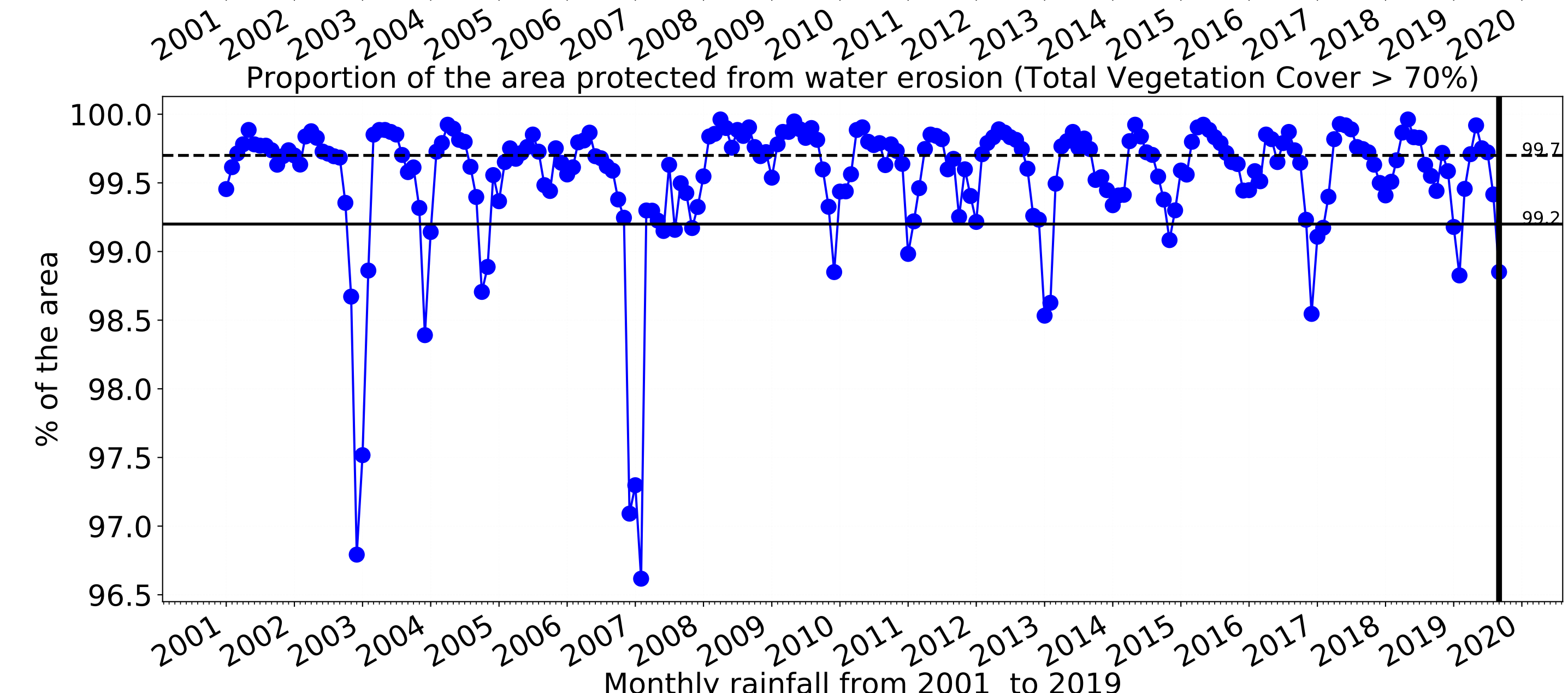
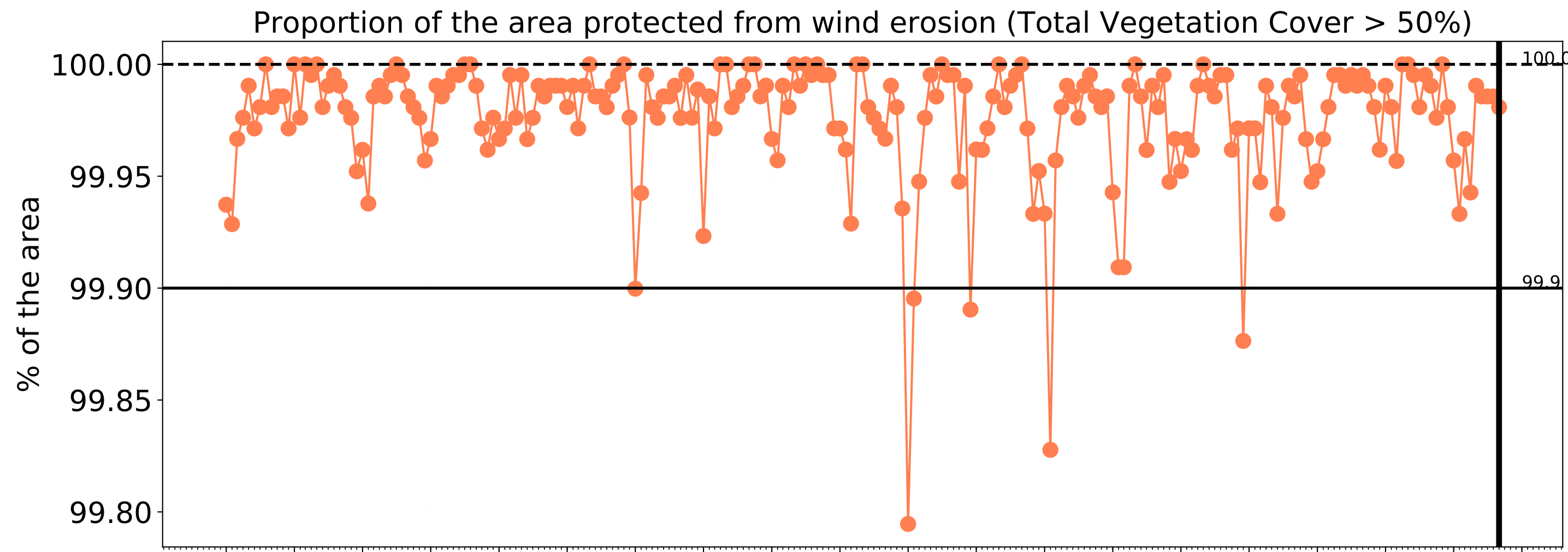
Total Vegetation Cover Decile [%]

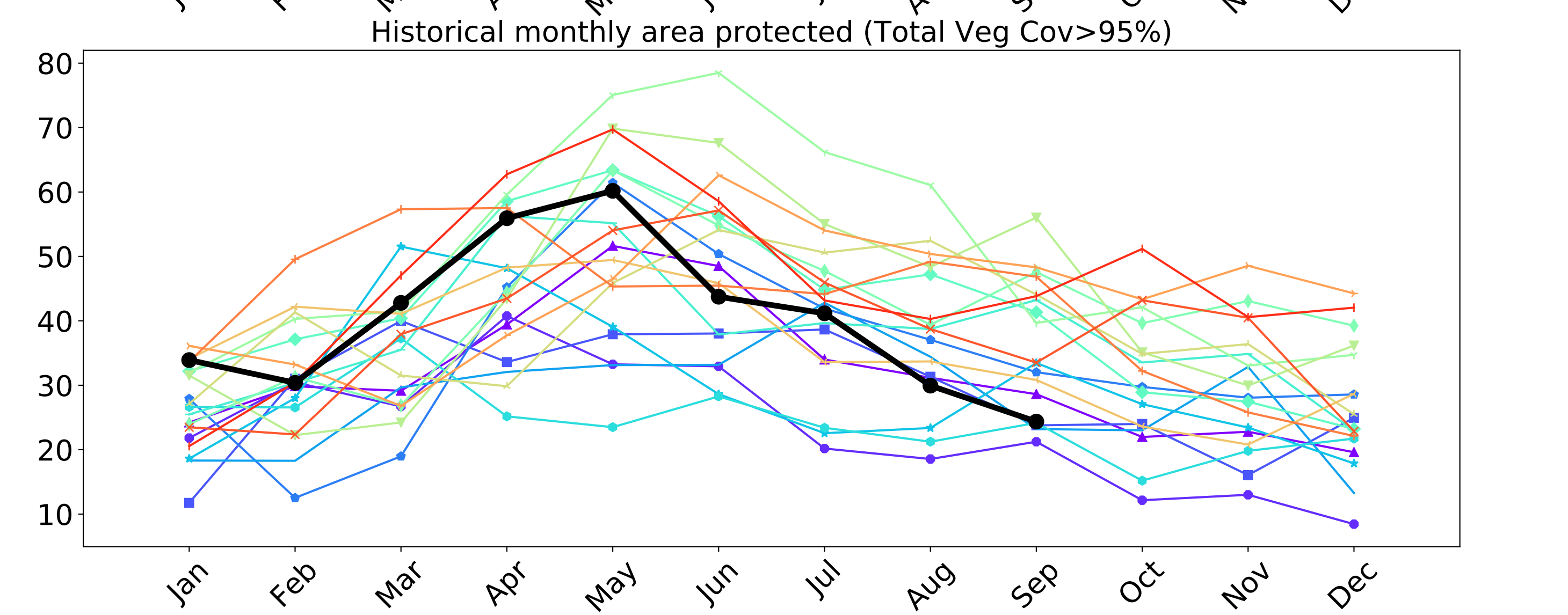
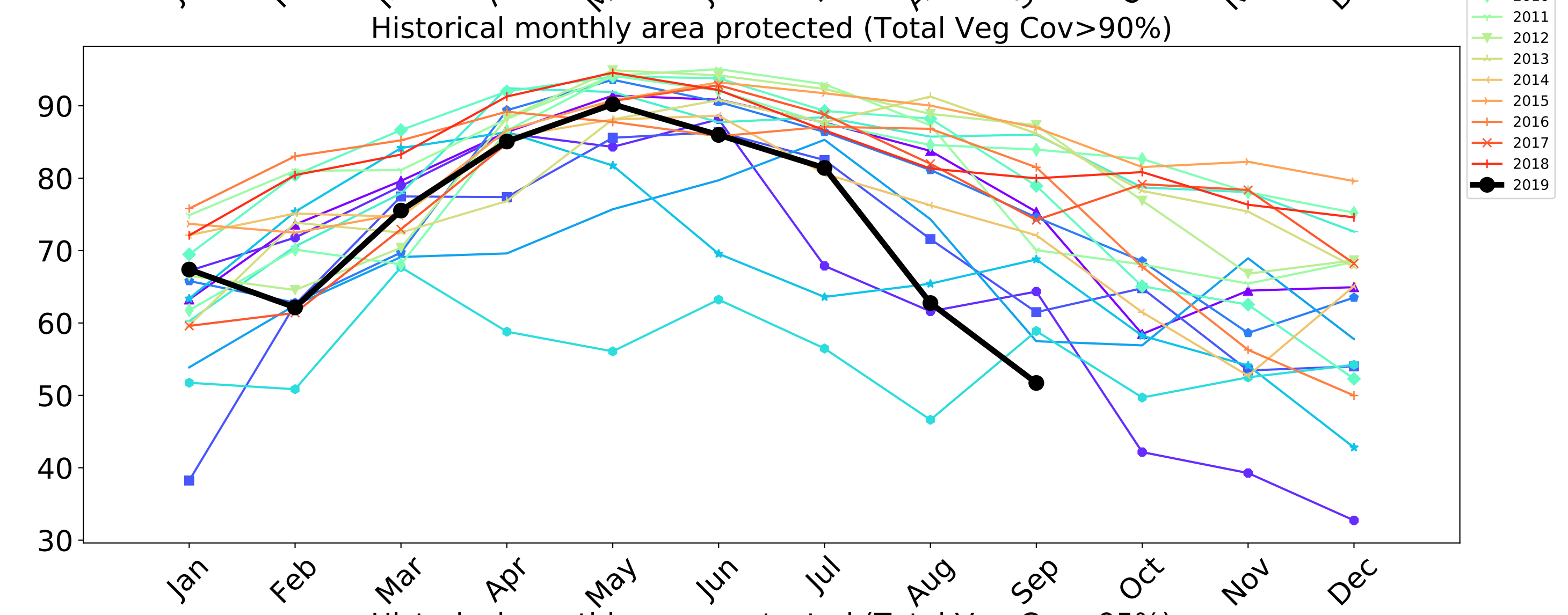
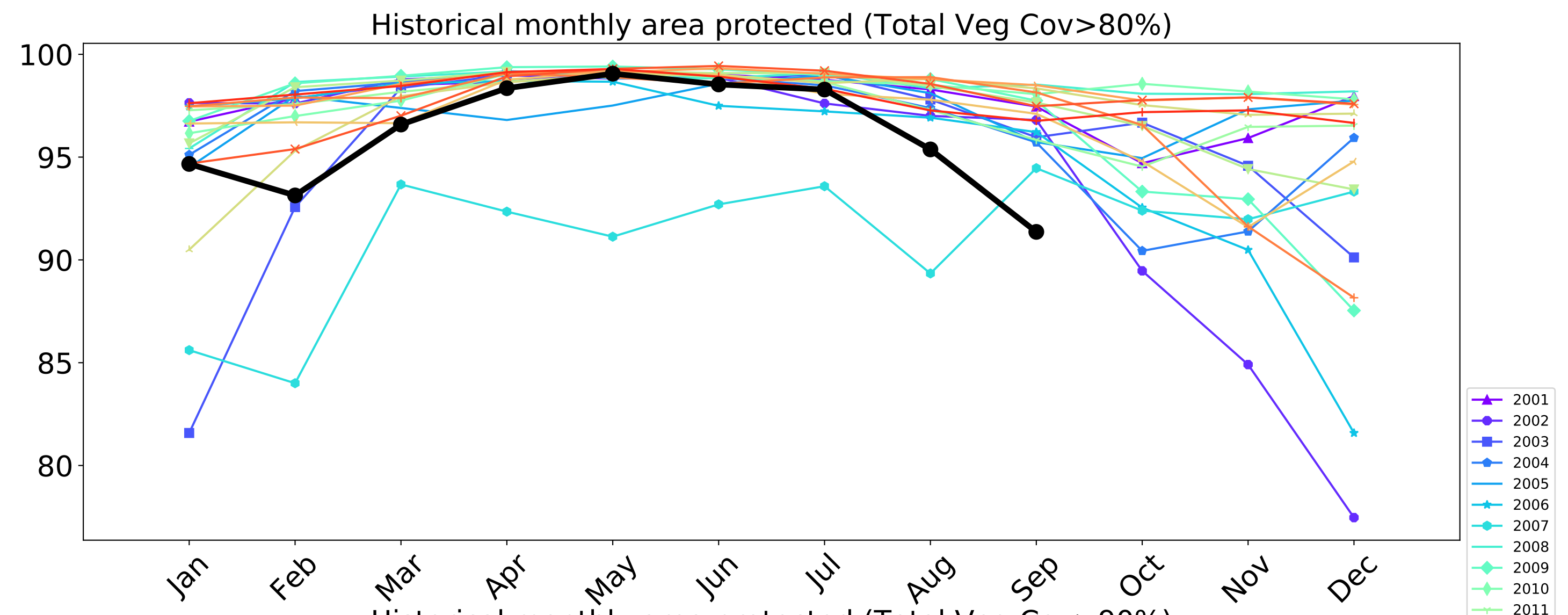
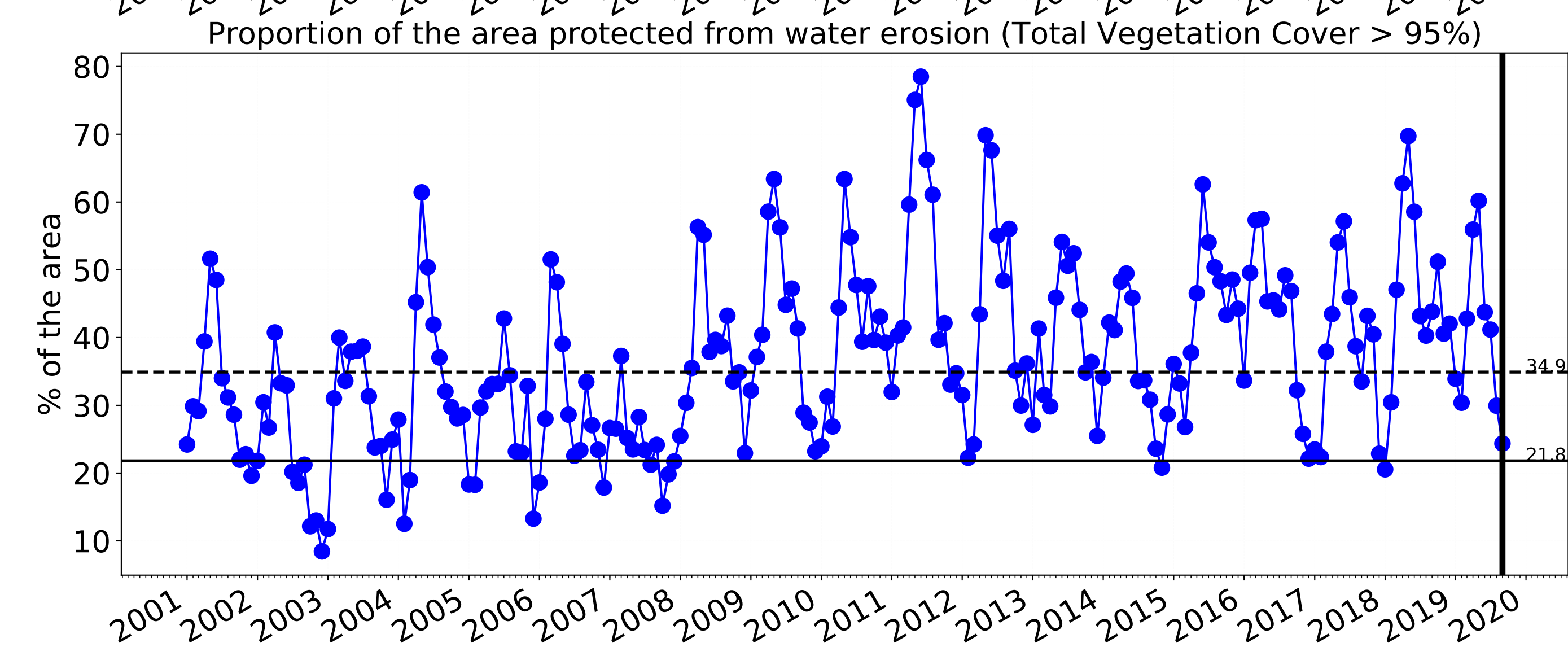
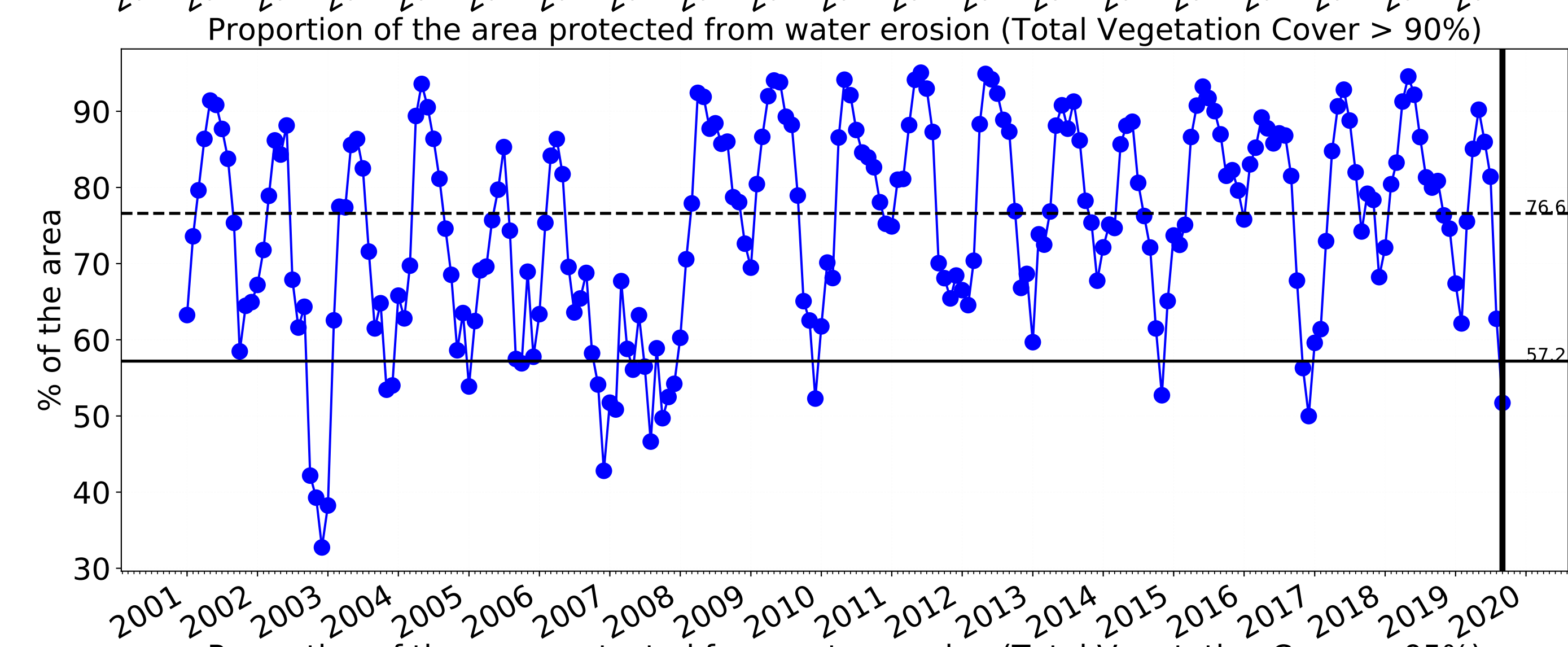
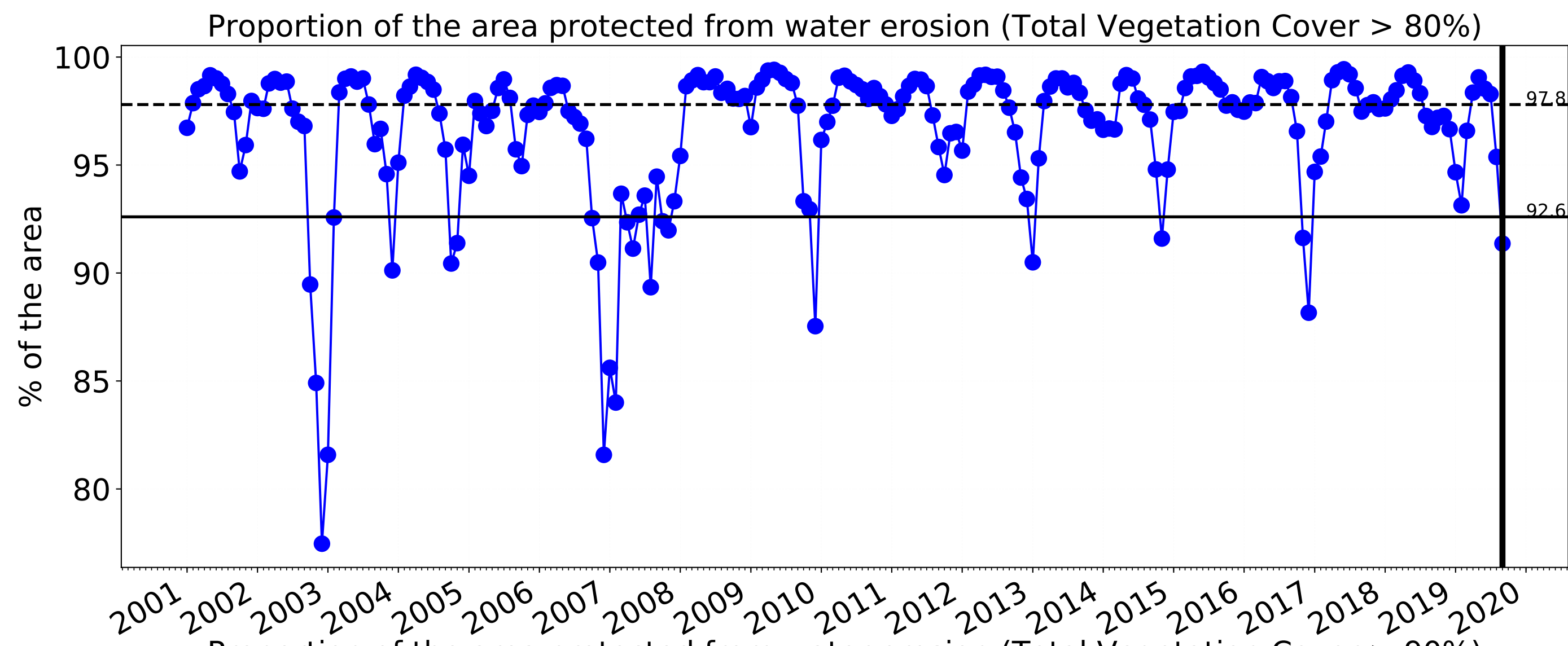


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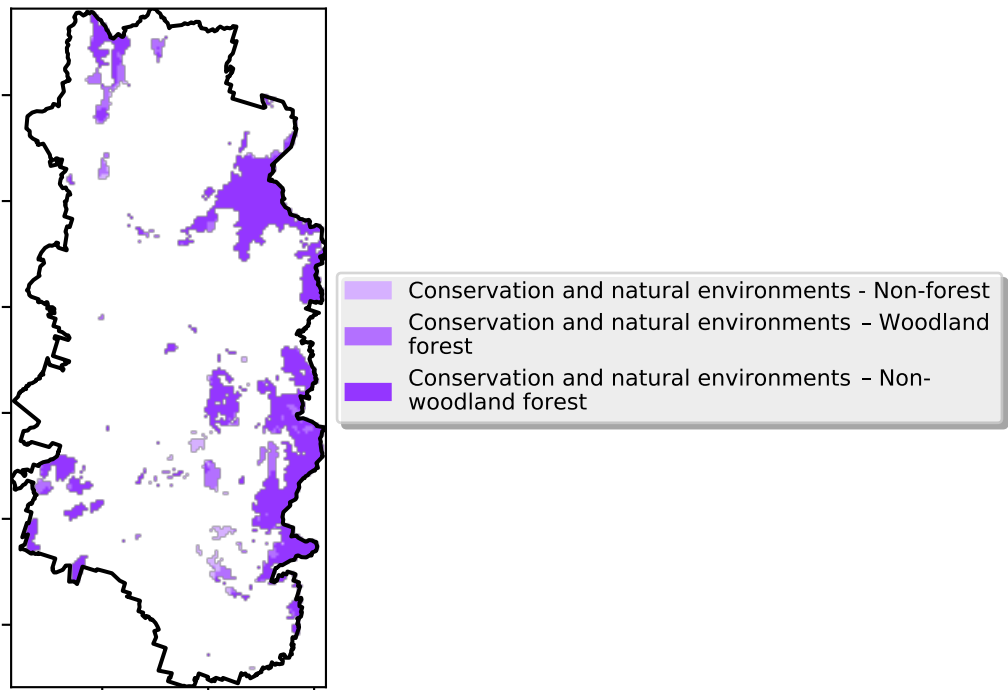




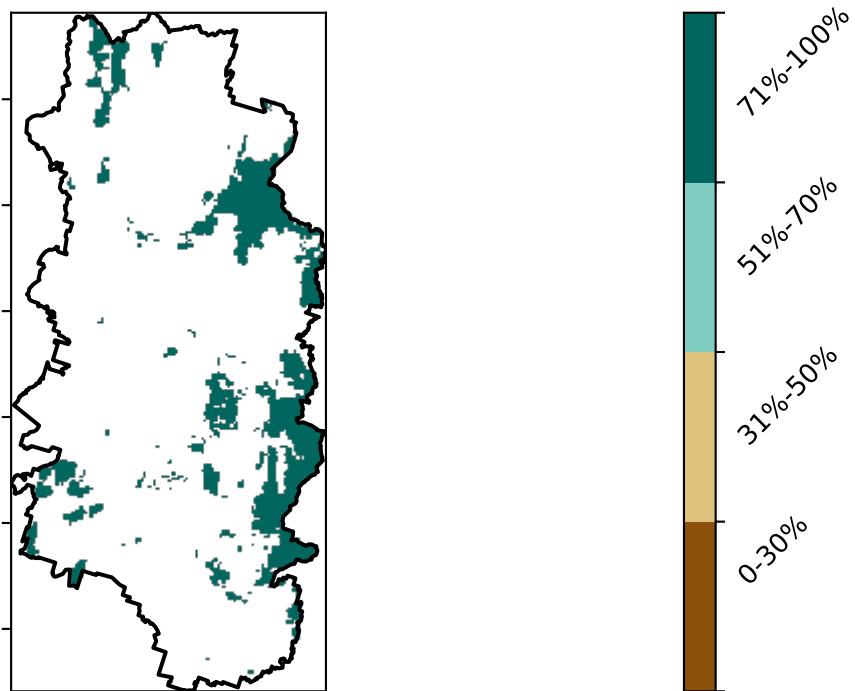
Conservation and natural environments

Land use and forest cover

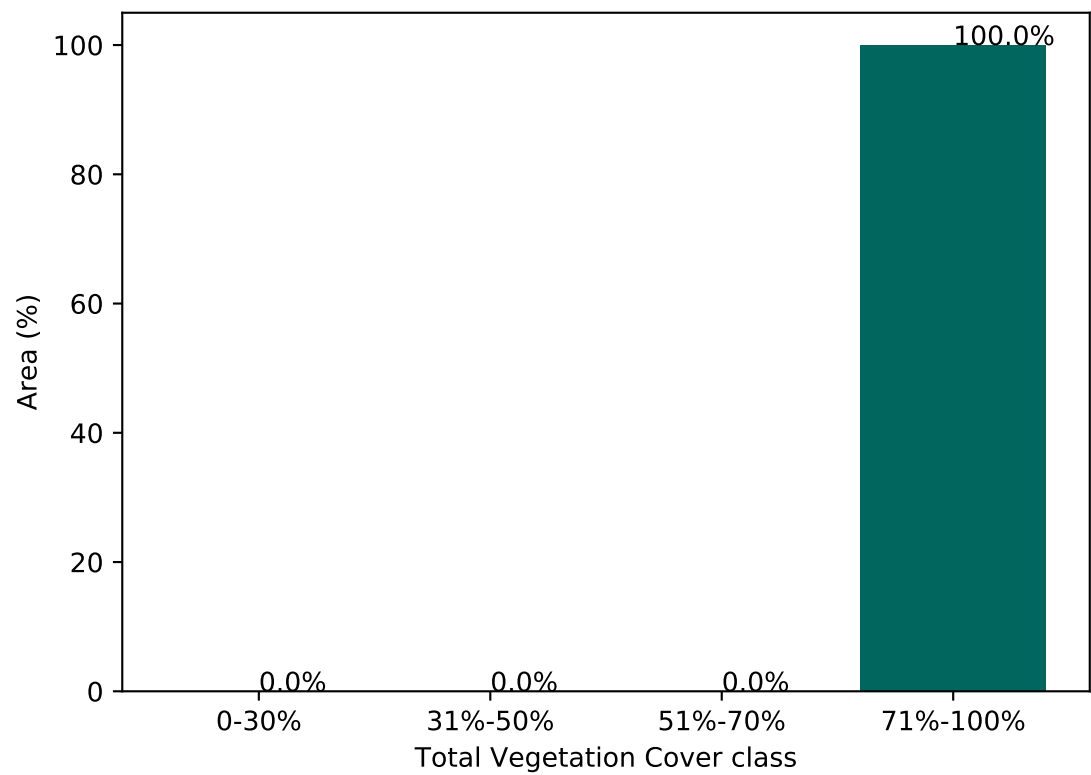
Landuse map of area based on 2015 catchment scale landuse and Australia's National Forest Inventory, where no forest is < 20% tree cover, sparse is 20 to 50% and dense > 50% tree cover.



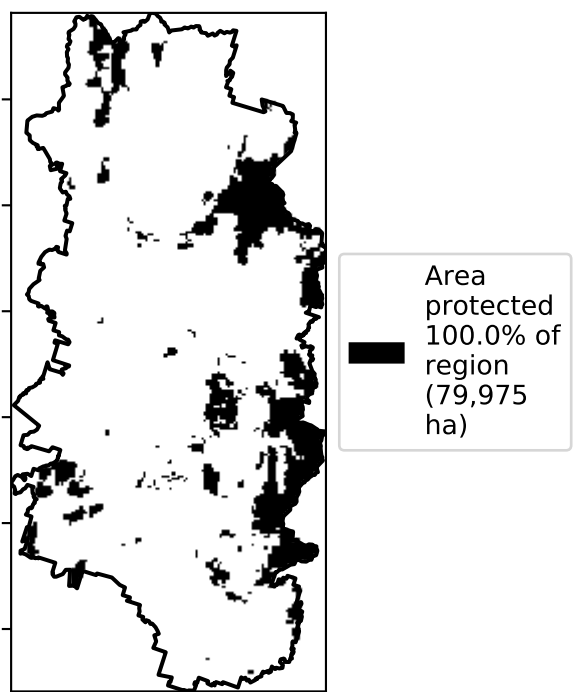
Total Vegetation Cover [%]



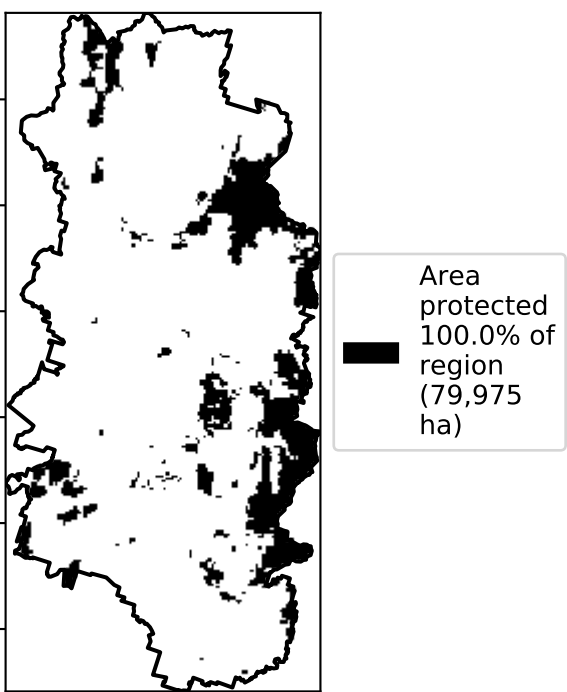
Proportion of vegetation cover class in area



% Area protected from water erosion (>70%)

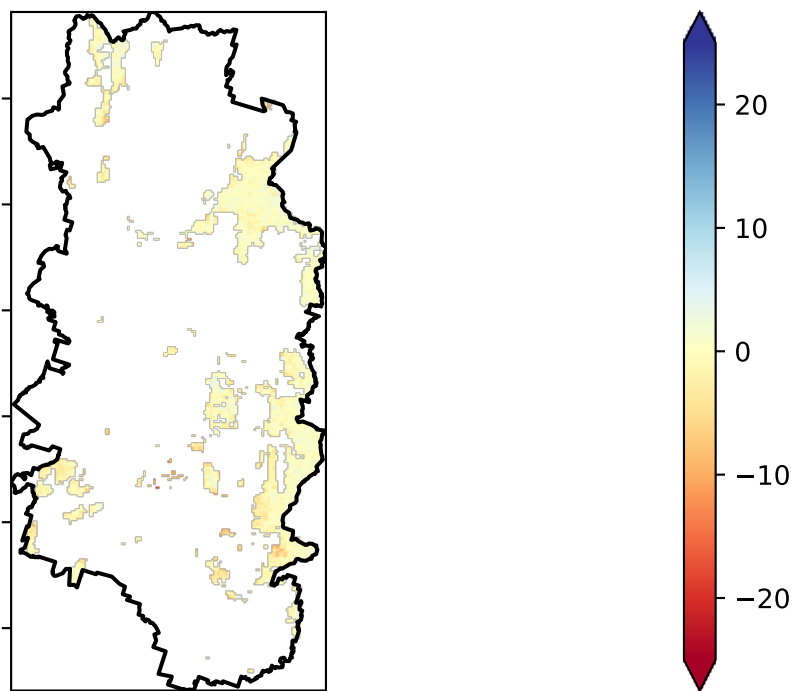


% Area protected from wind erosion (>50%)



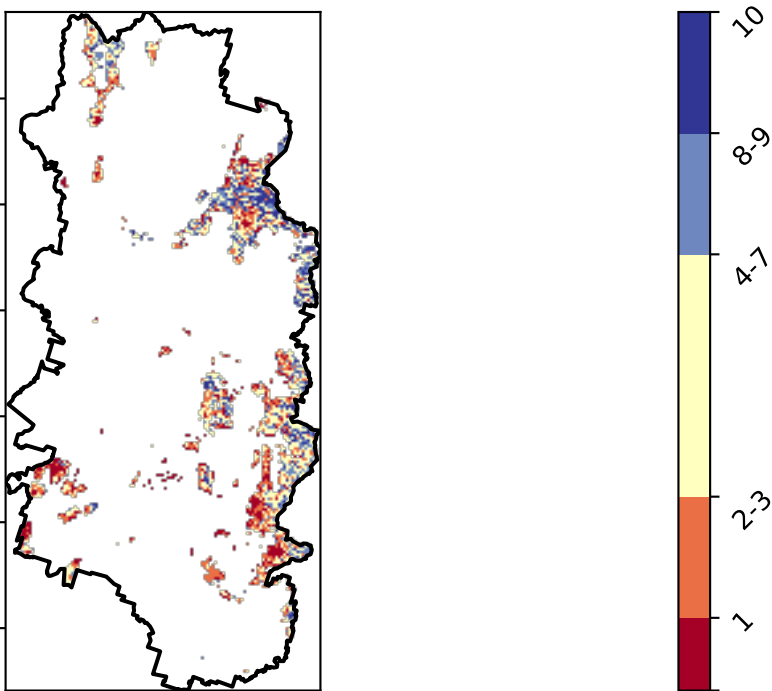
Total Vegetation Cover Anomaly [%]

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Total Vegetation Cover Decile [%]



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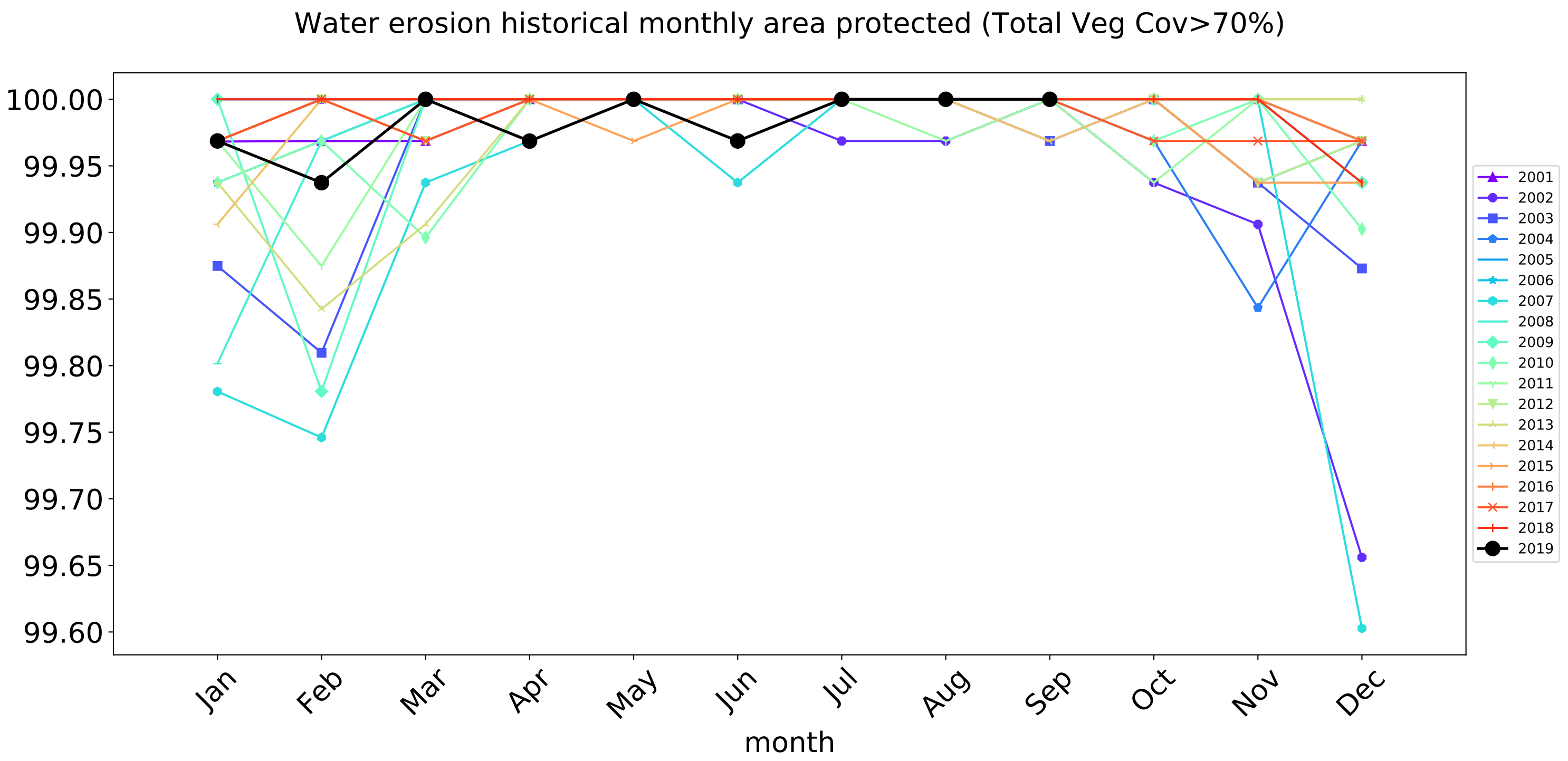
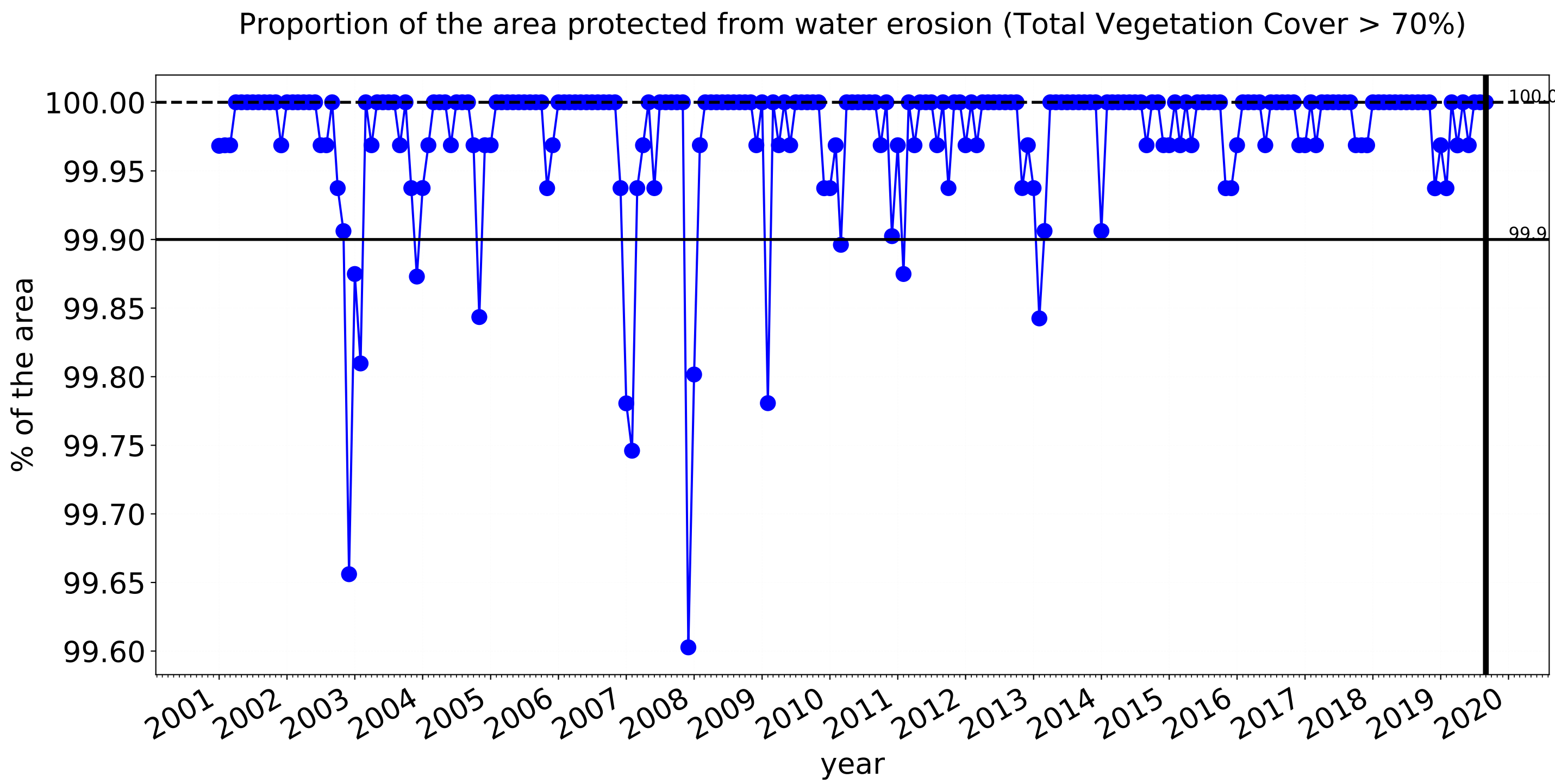
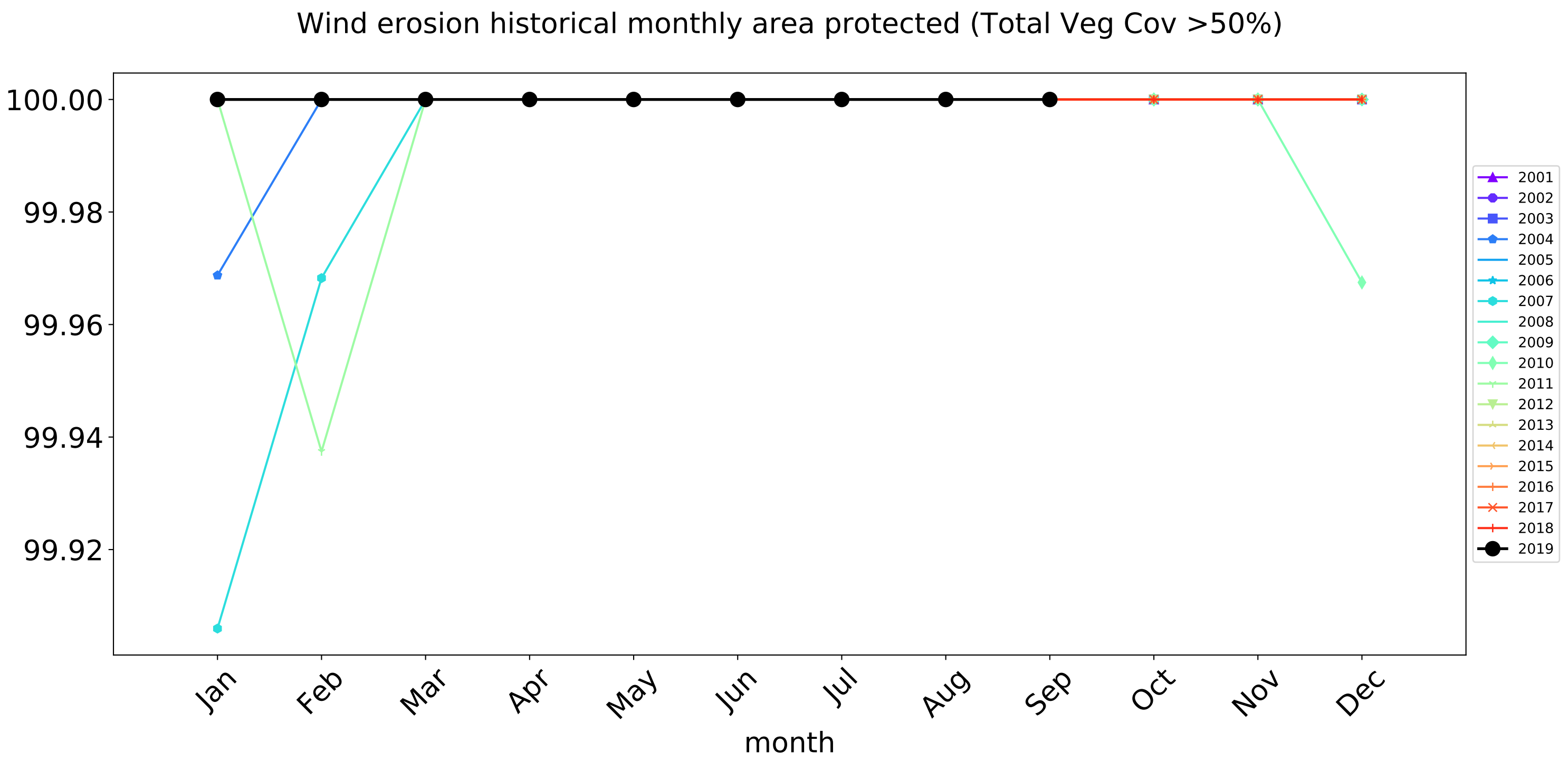
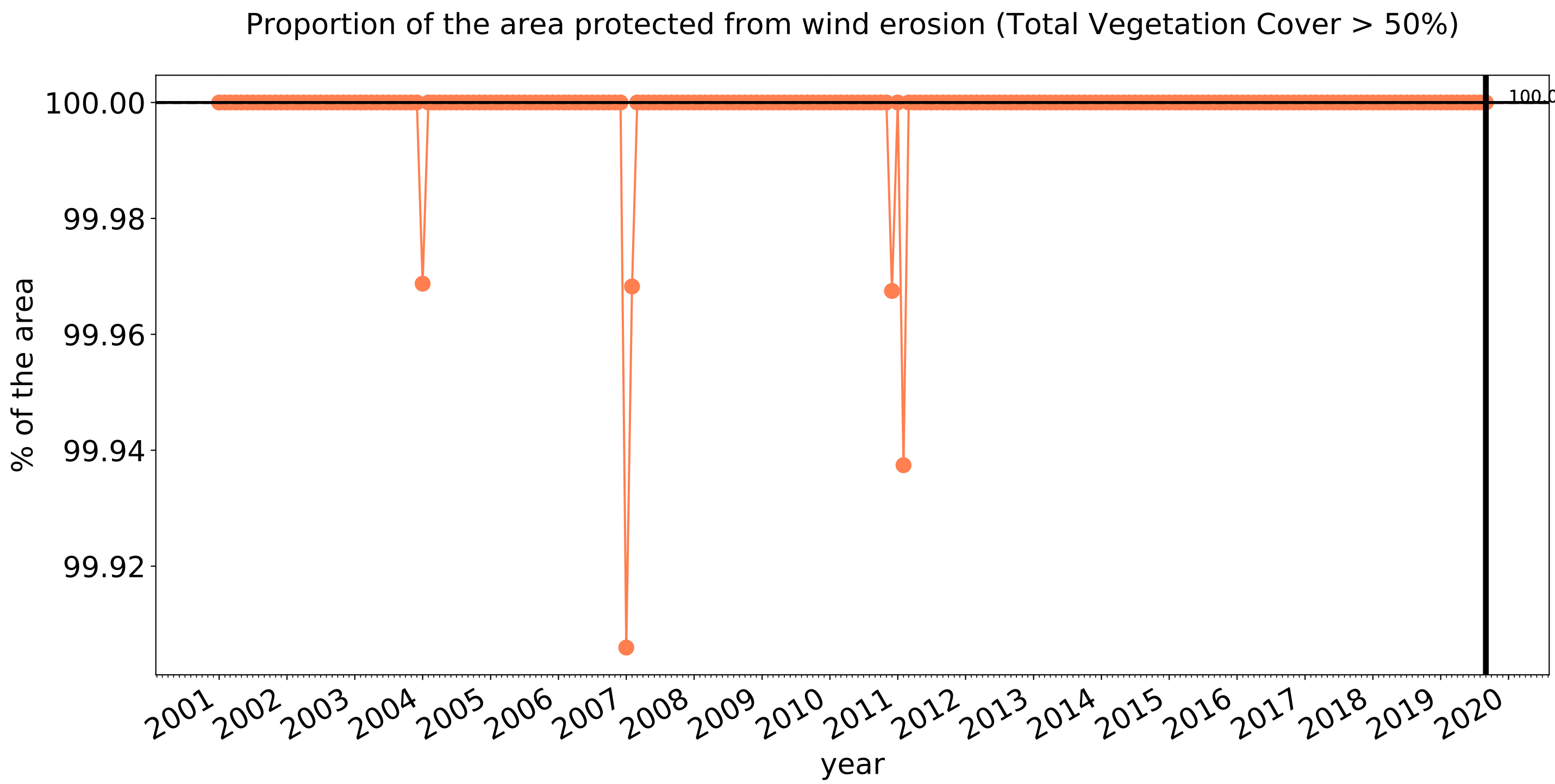


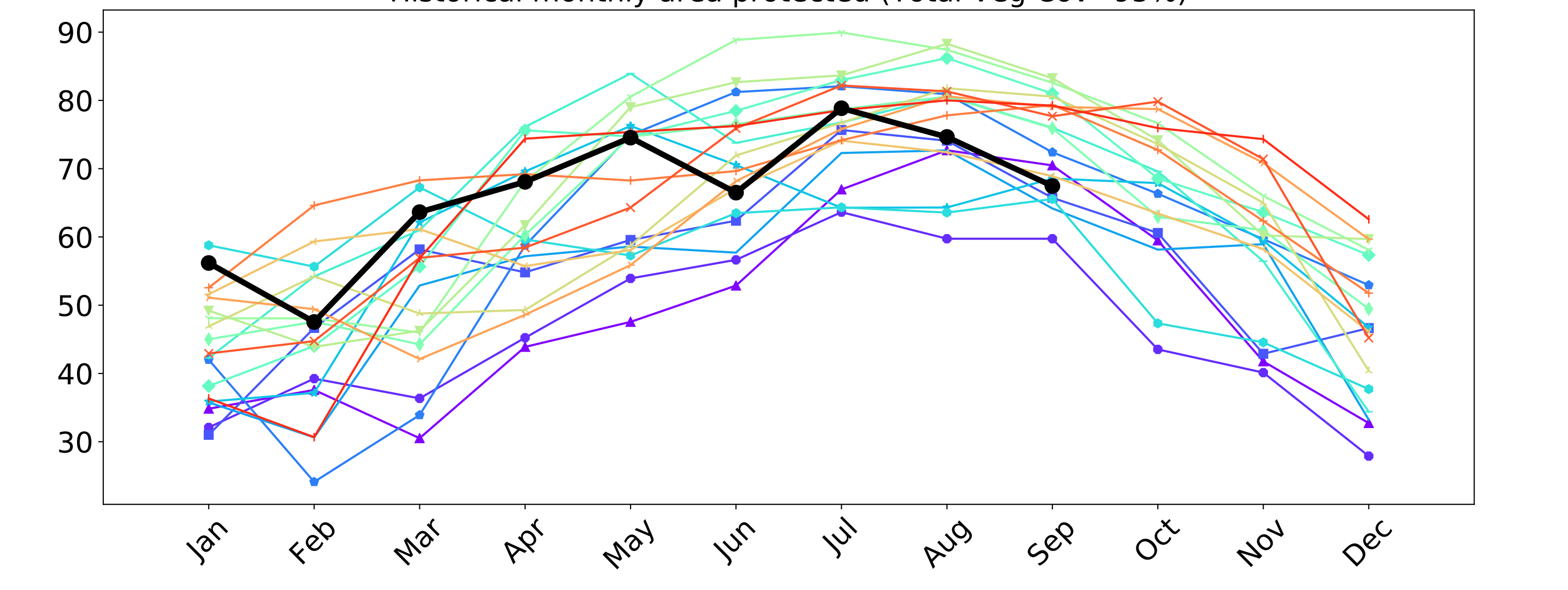
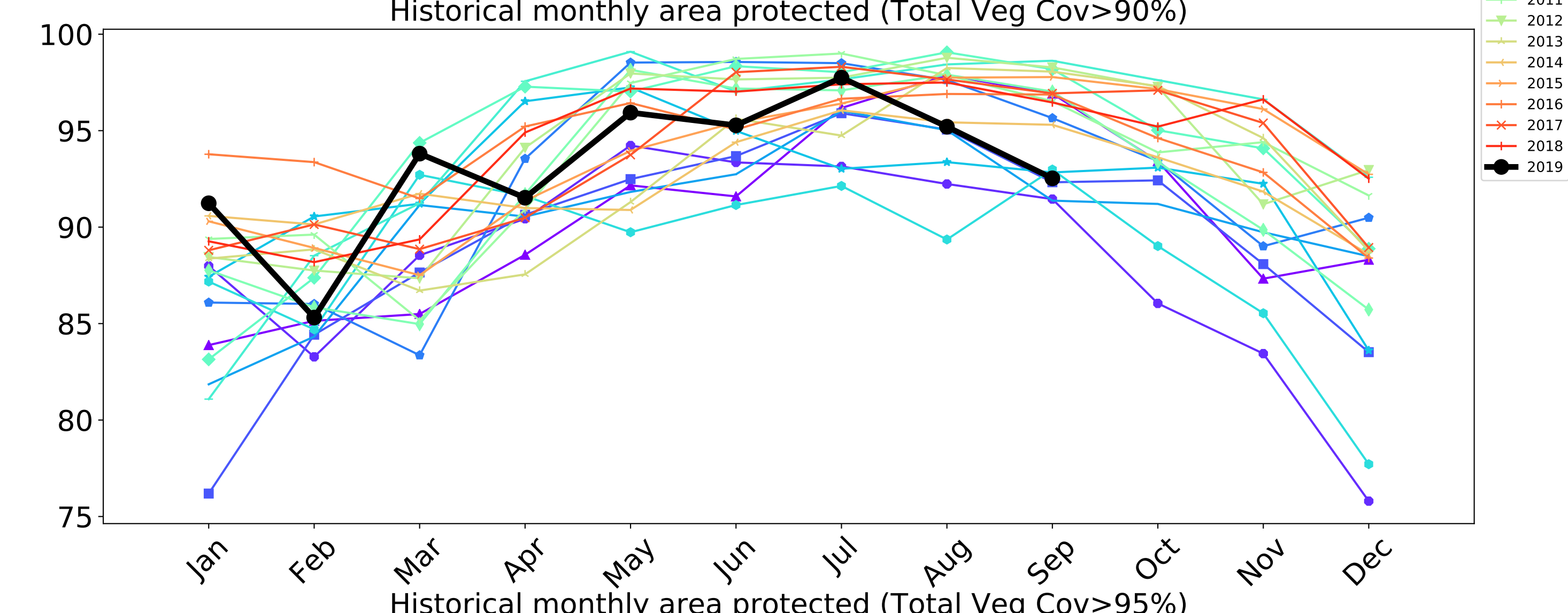
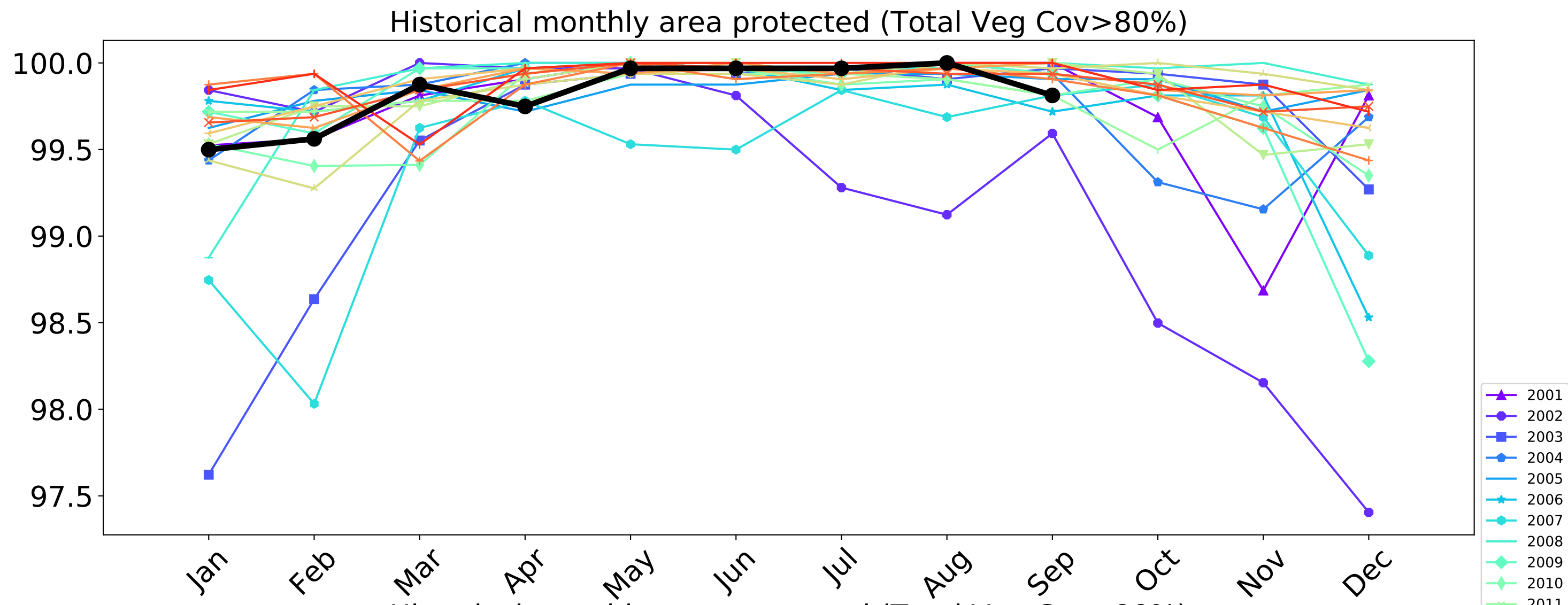
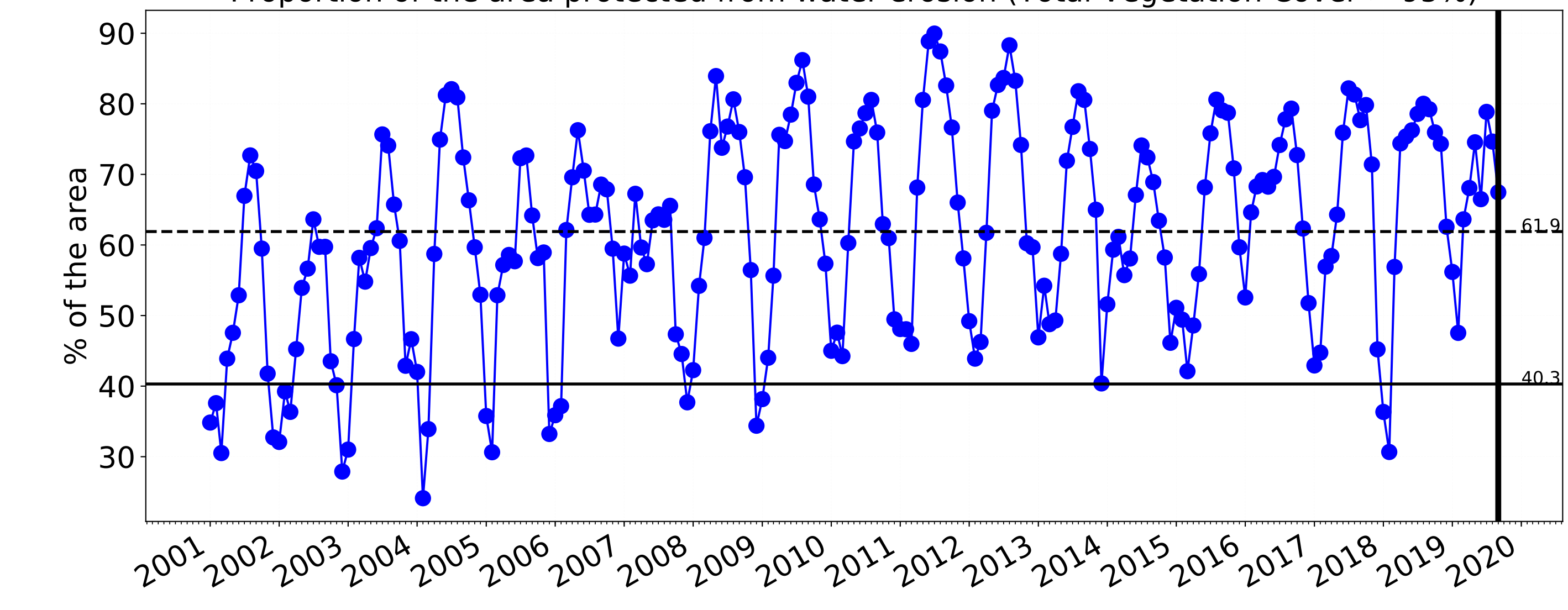
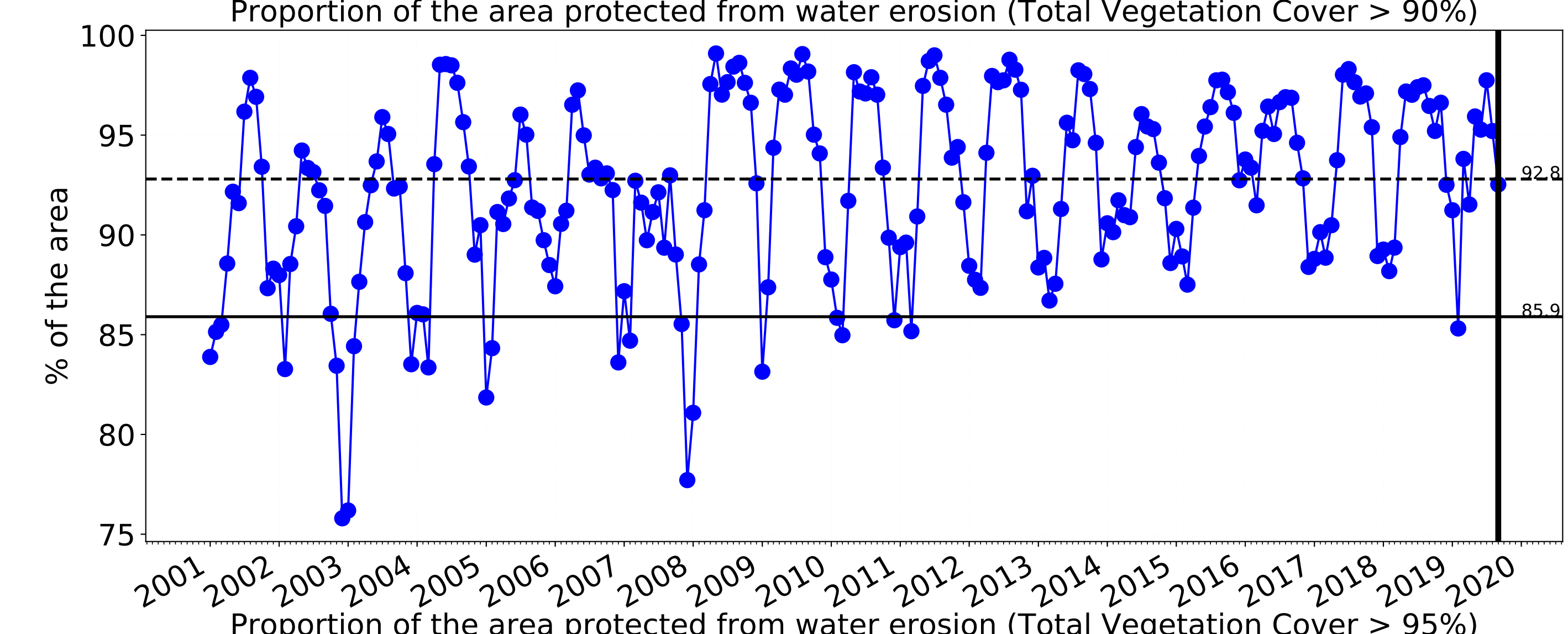
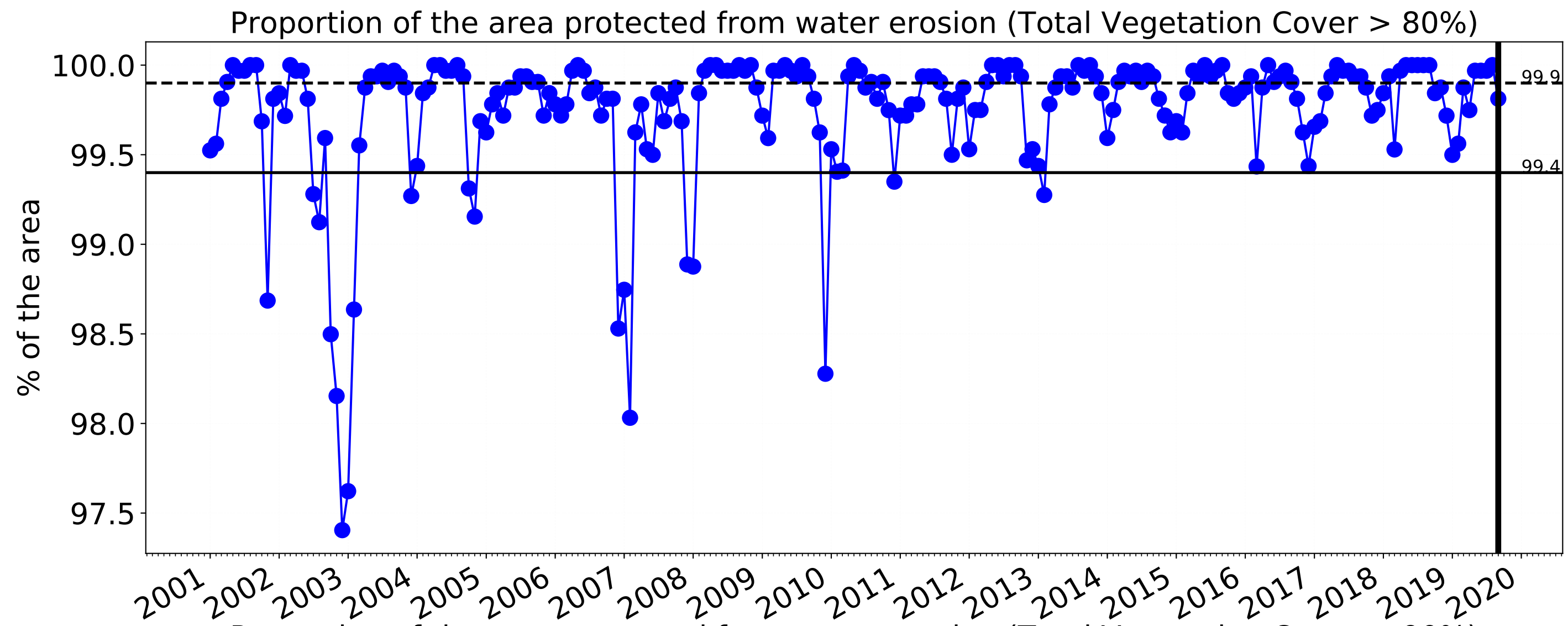
National Landcare Programme



Planning, Industry & Environment

Conservation and natural environments timeseries

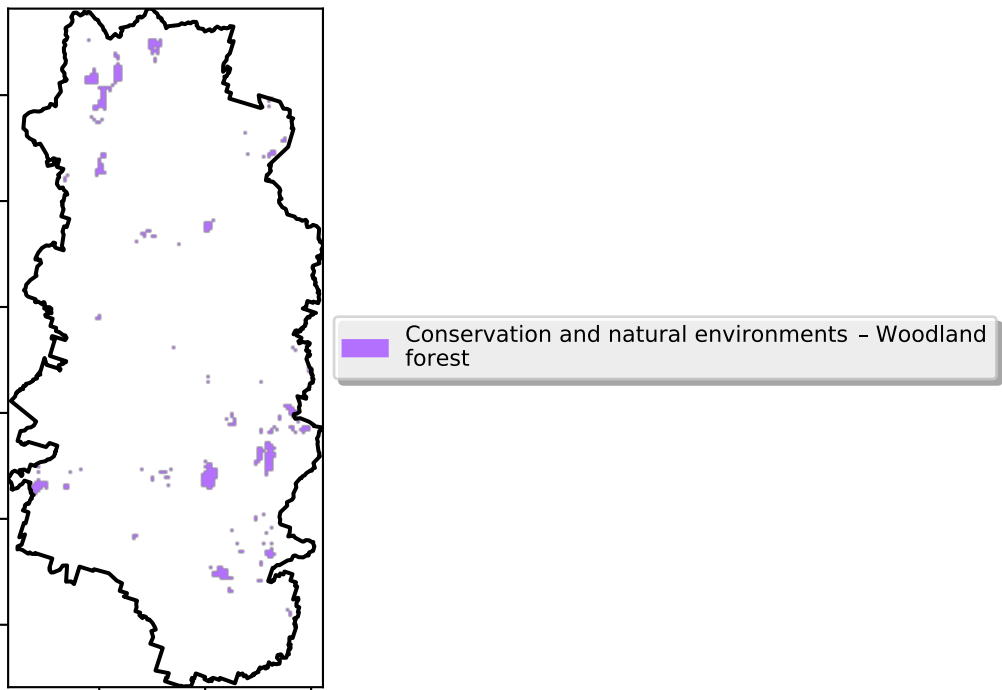




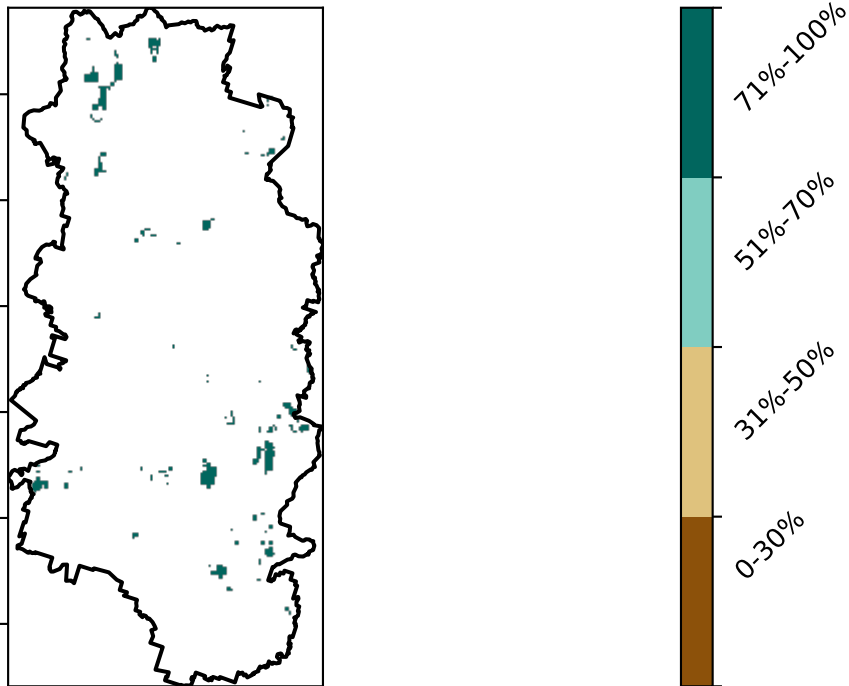
Conservation and natural environments Woodland forest

Land use and forest cover

Landuse map of area based on 2015 catchment scale landuse and Australia's National Forest Inventory, where no forest is < 20% tree cover, sparse is 20 to 50% and dense > 50% tree cover.



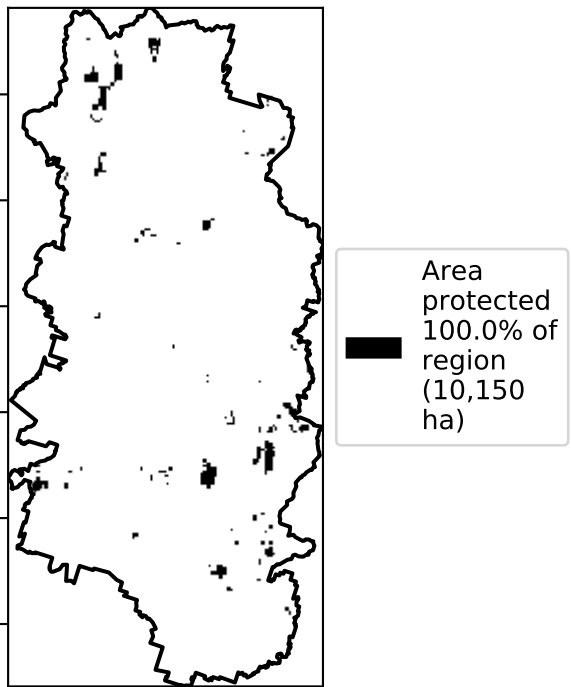
Total Vegetation Cover [%]



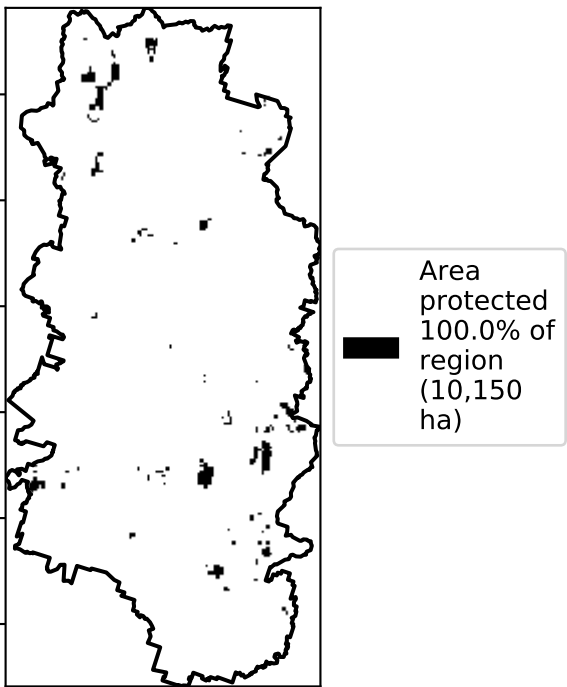
Proportion of vegetation cover class in area



% Area protected from water erosion (>70%)

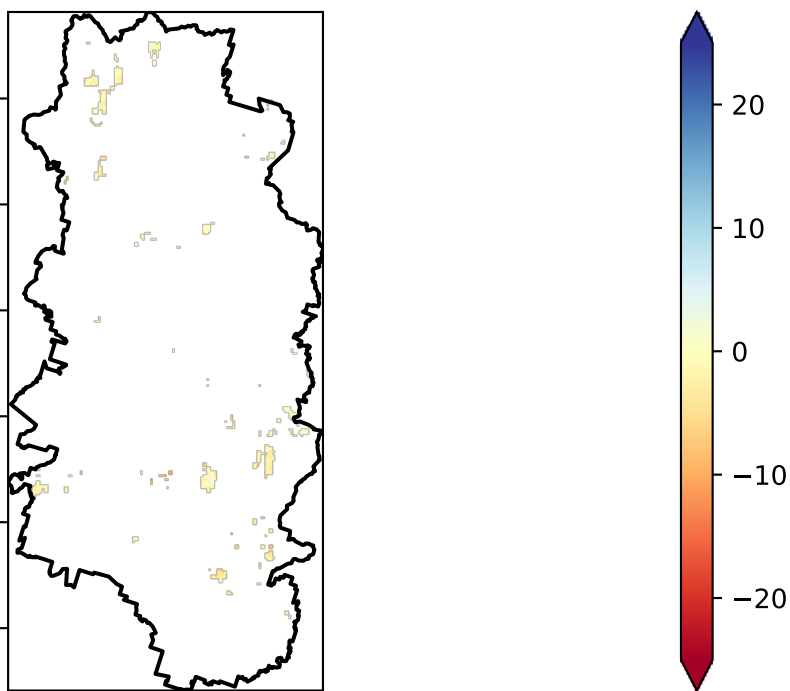


% Area protected from wind erosion (>50%)



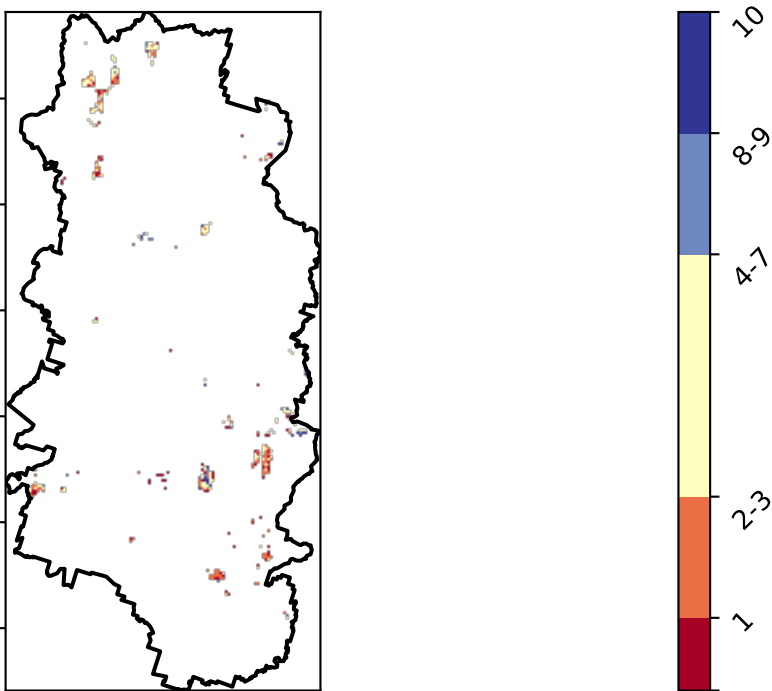
Total Vegetation Cover Anomaly [%]

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Total Vegetation Cover Decile [%]



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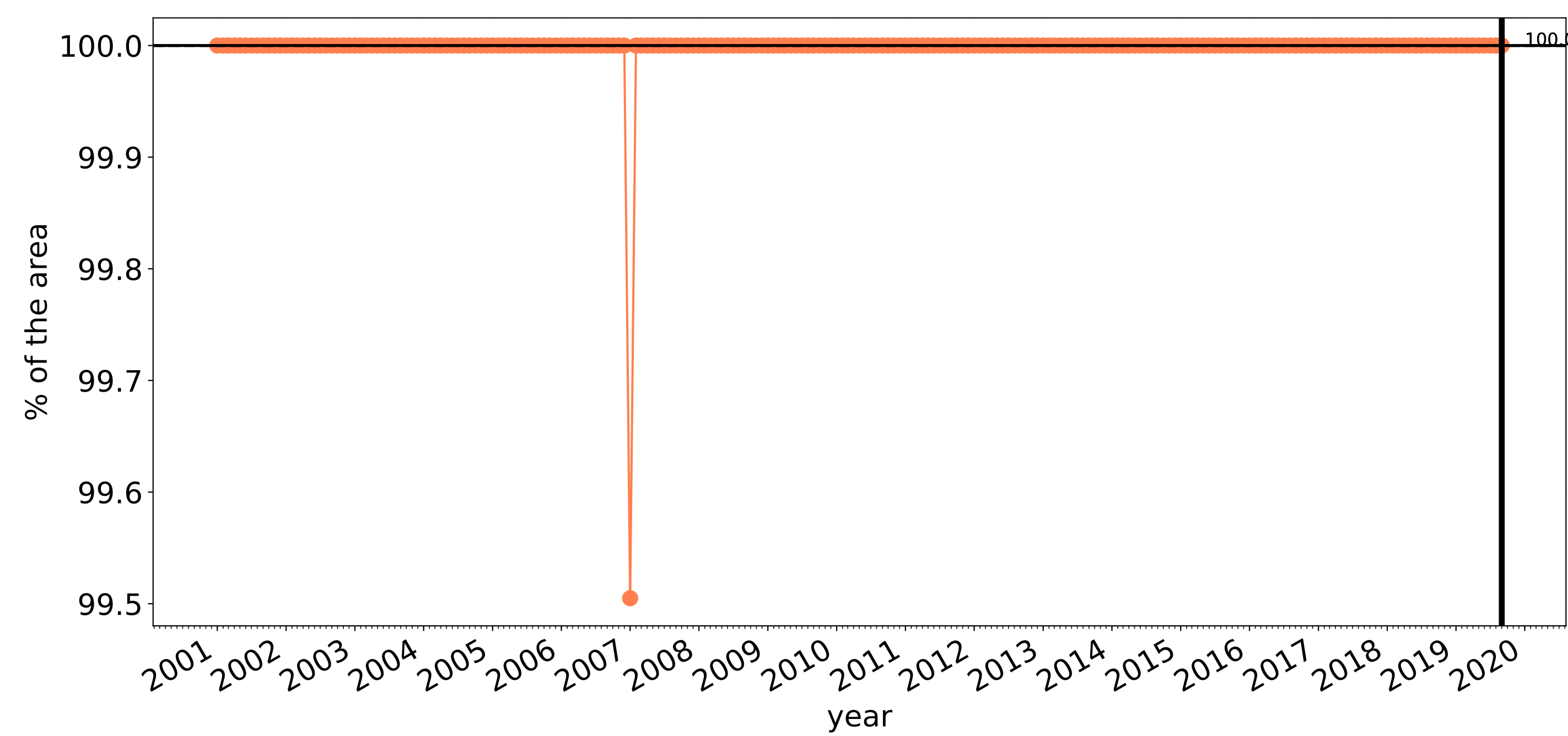
National
Landcare
Programme



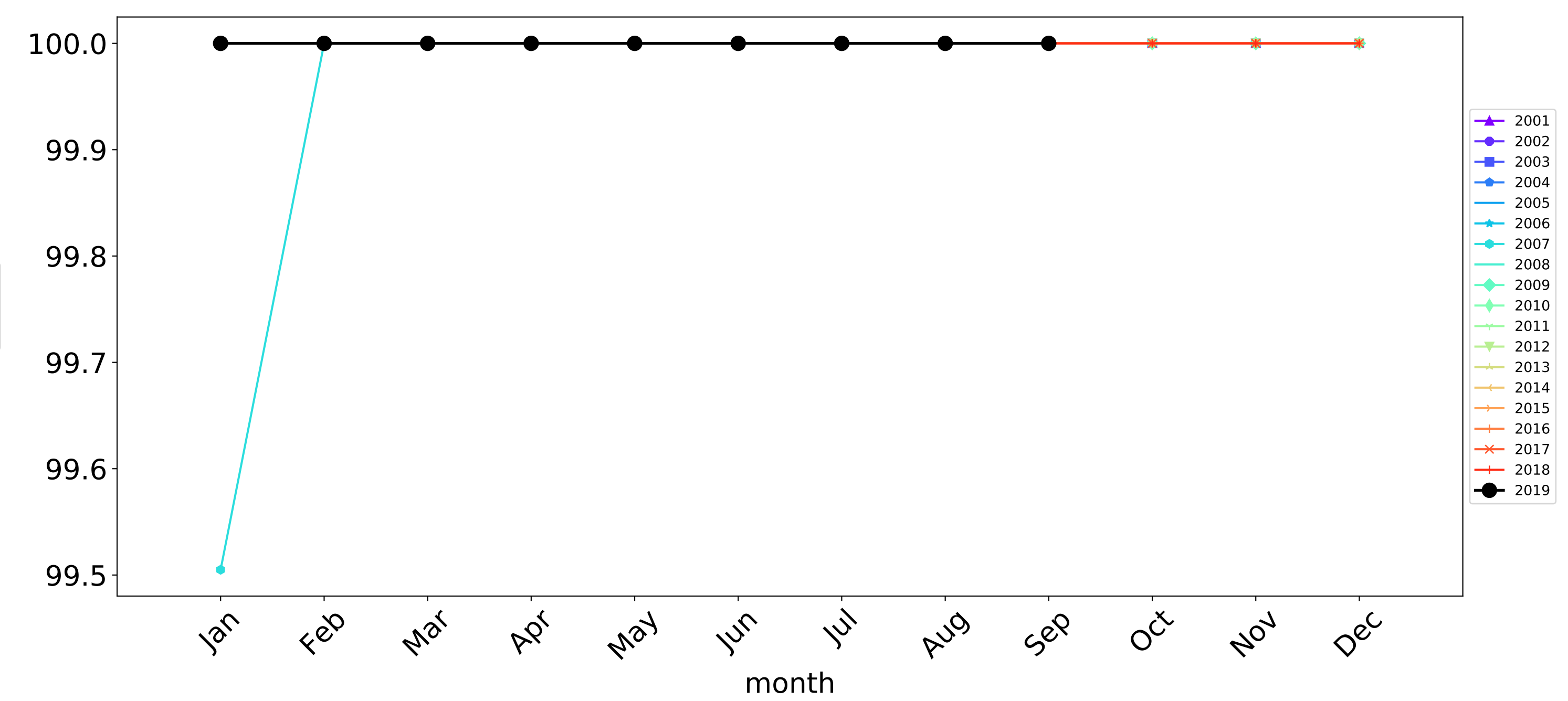
Planning,
Industry &
Environment

Conservation and natural environments Woodland forest timeseries

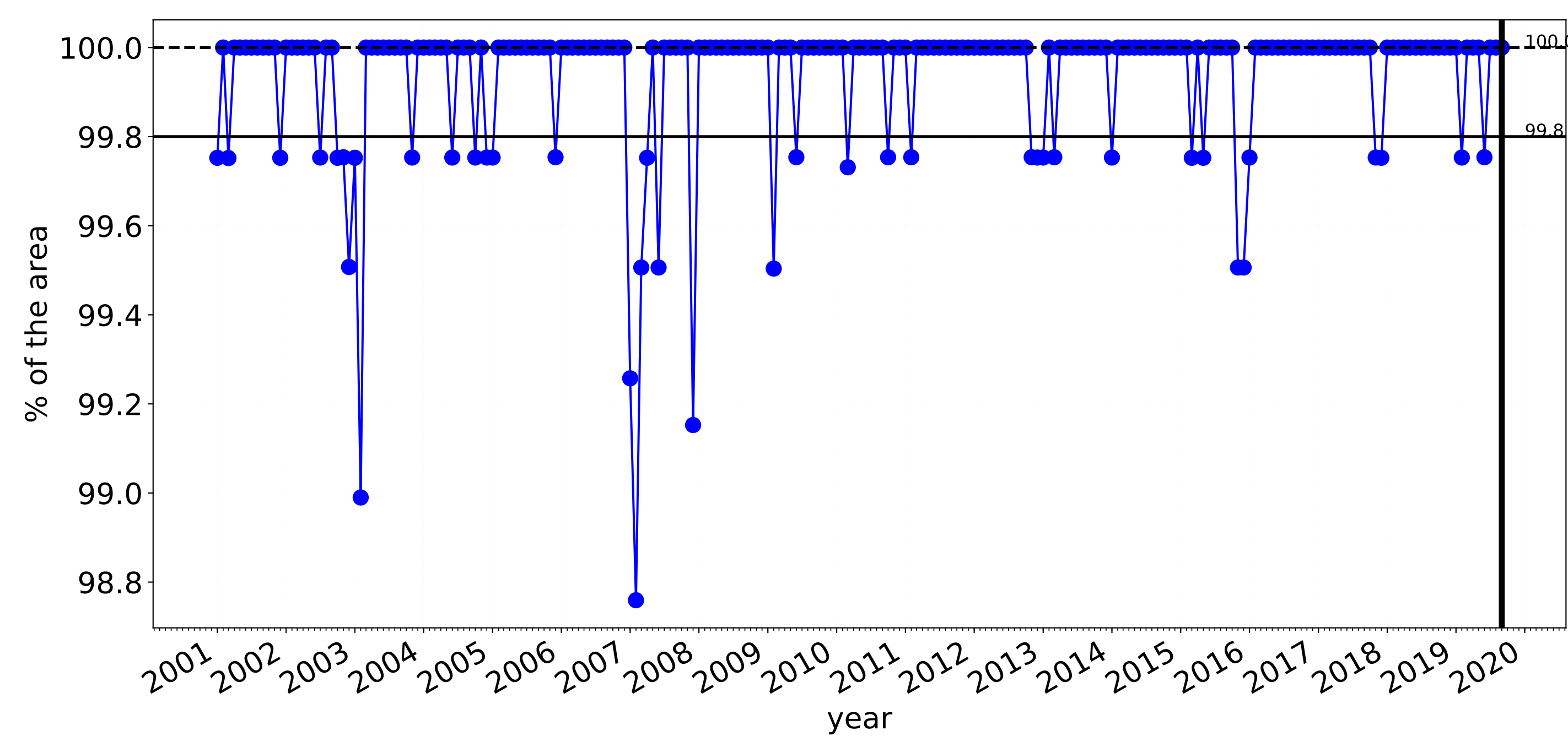
Proportion of the area protected from wind erosion (Total Vegetation Cover > 50%)



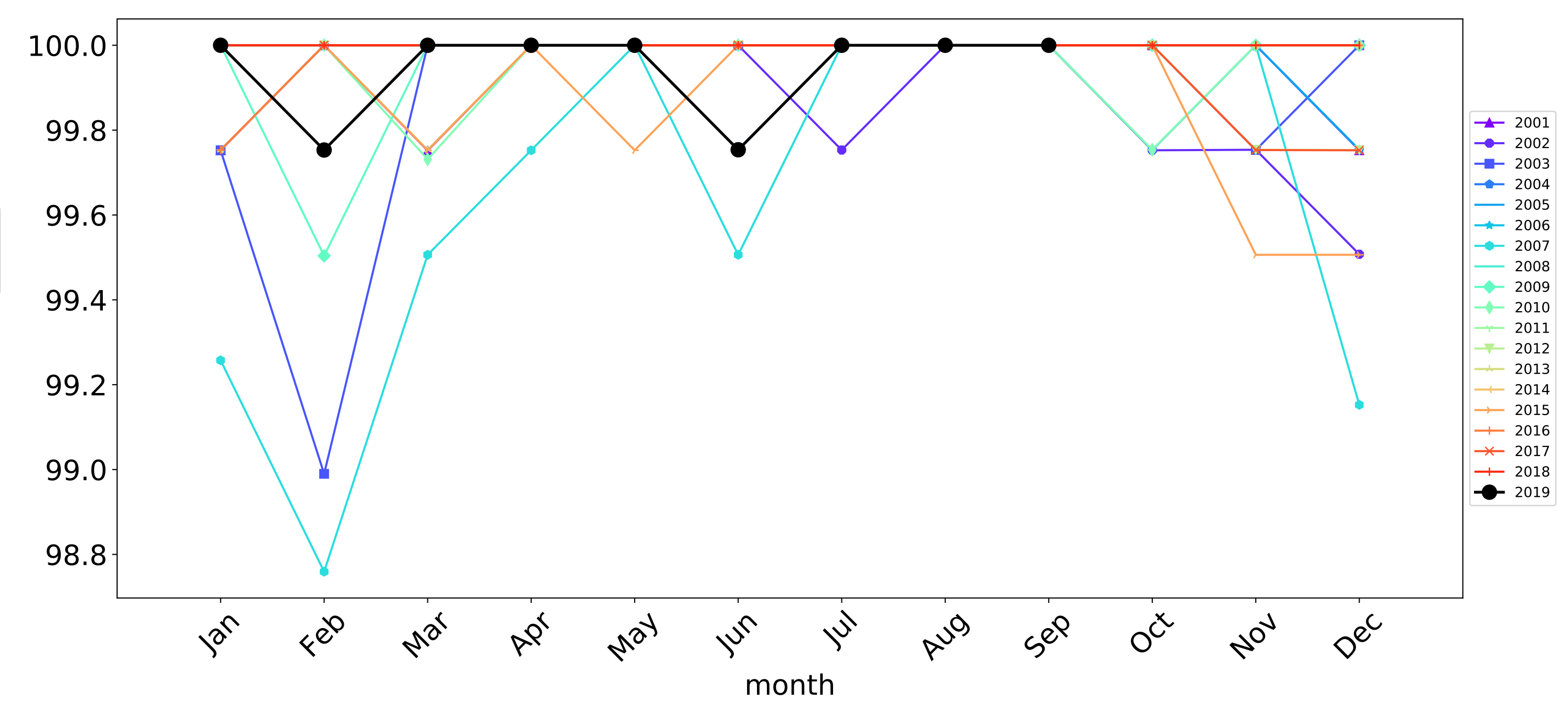
Wind erosion historical monthly area protected (Total Veg Cov > 50%)

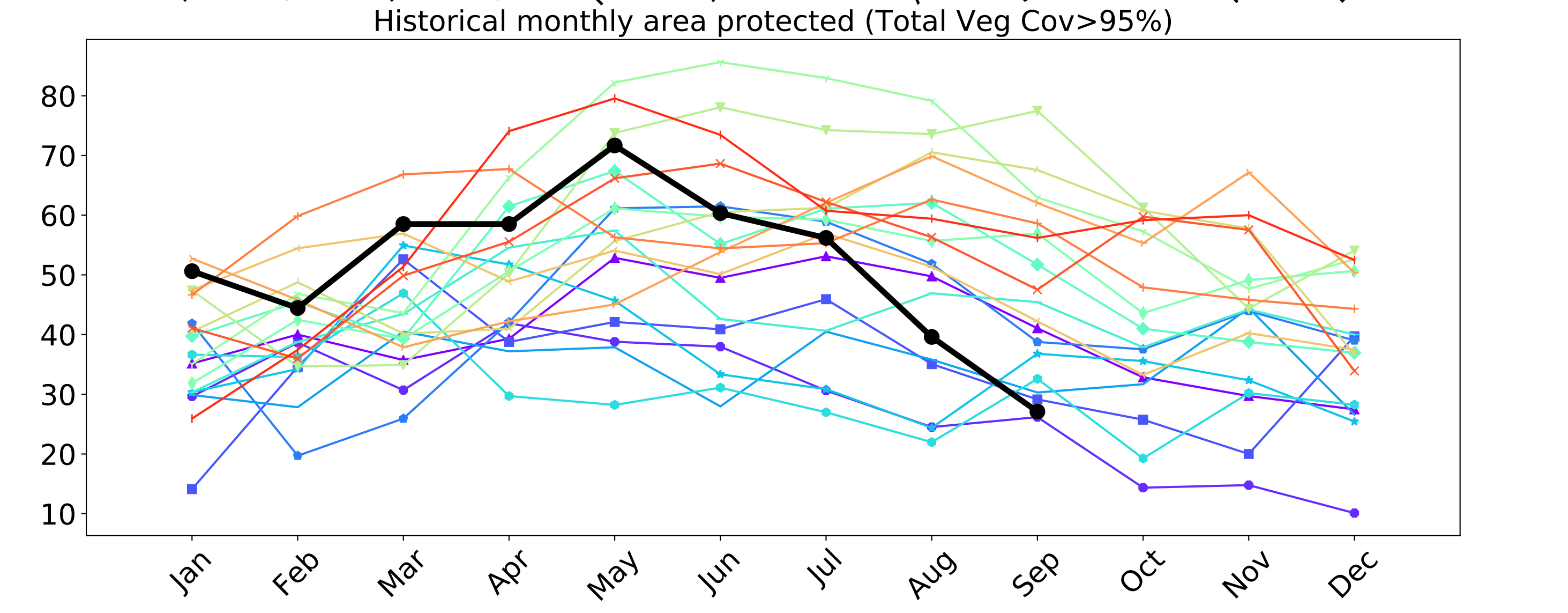
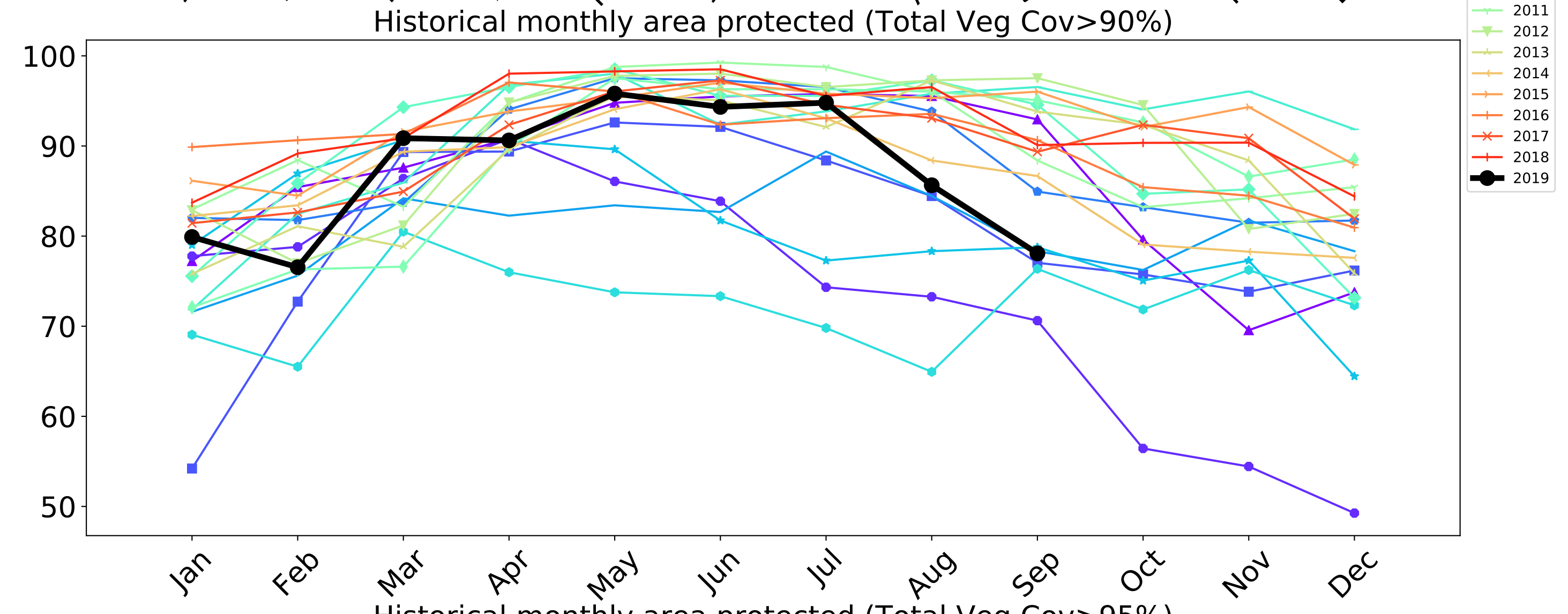
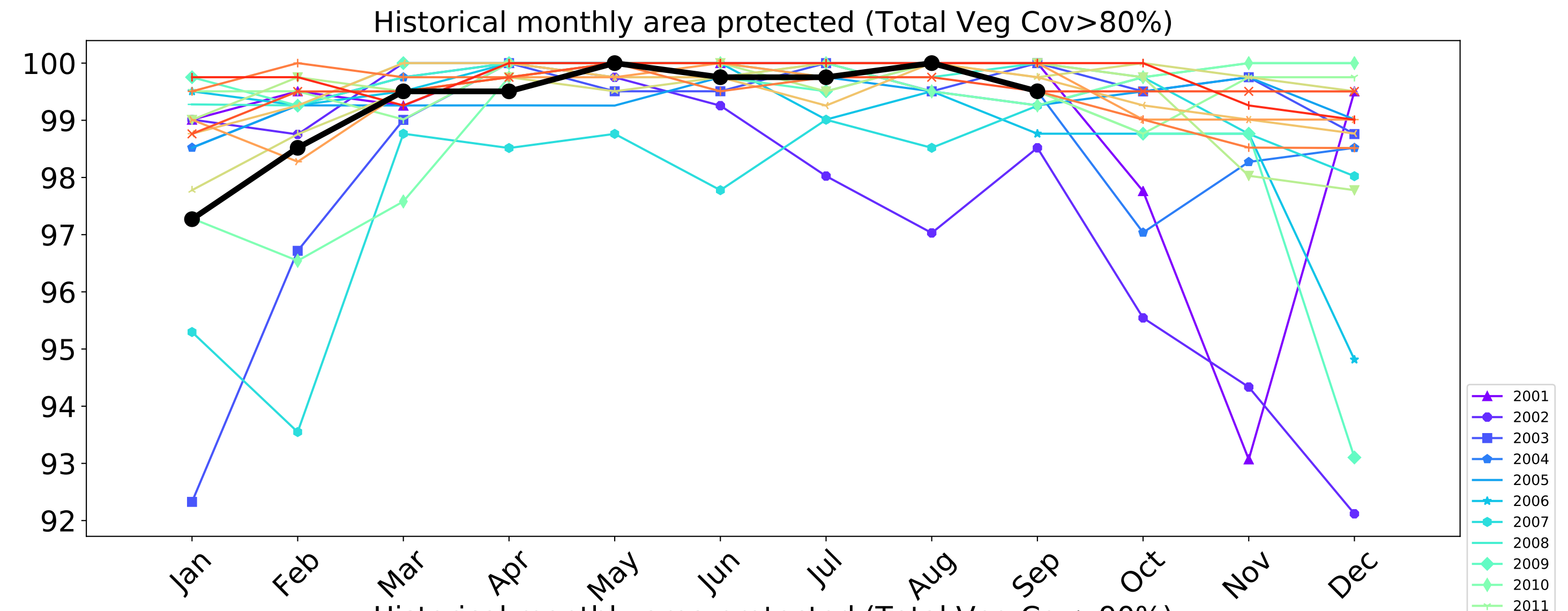
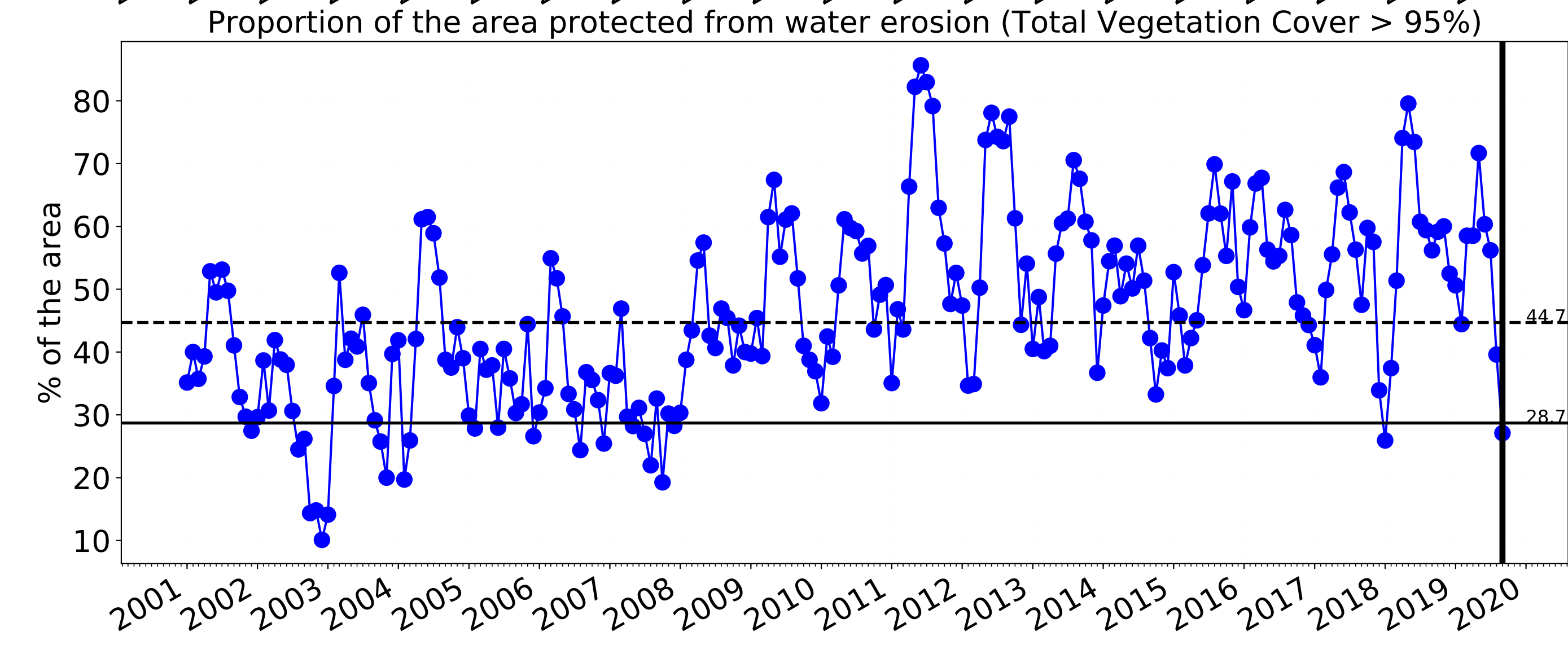
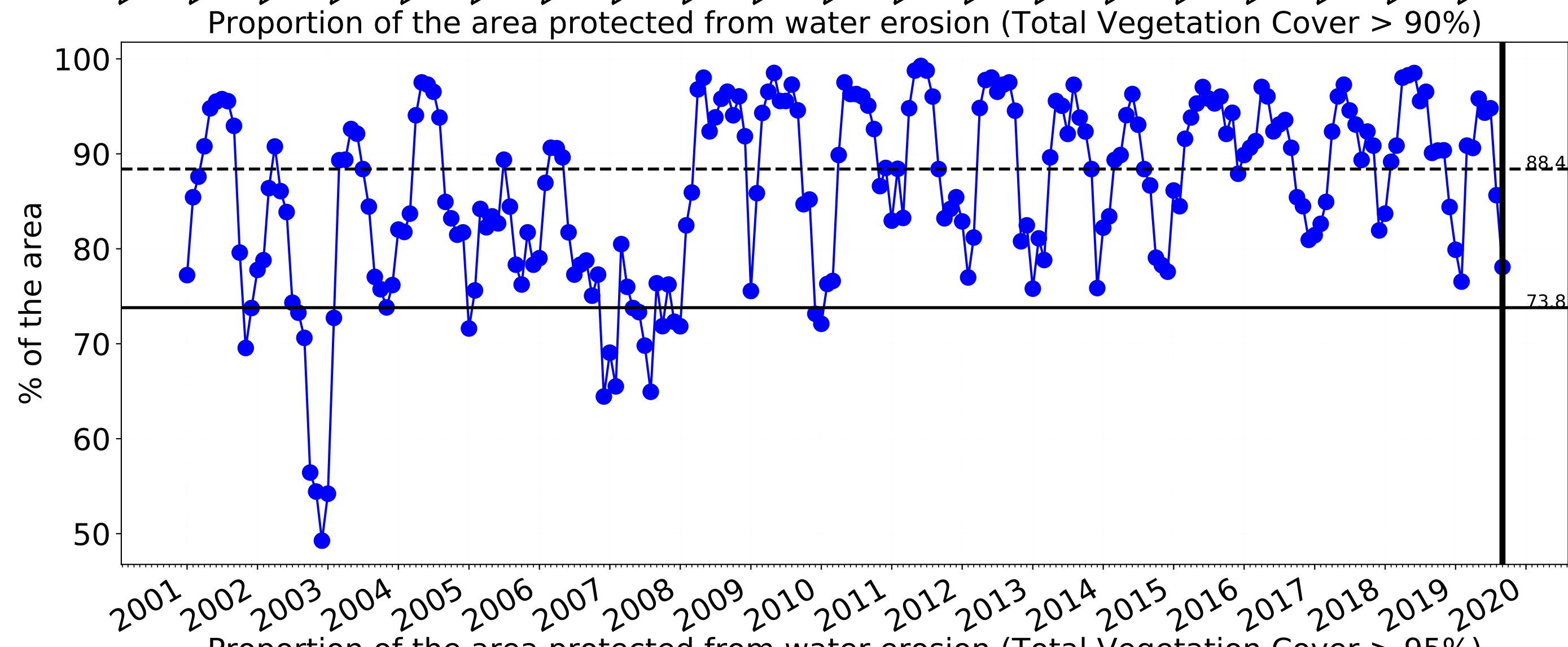
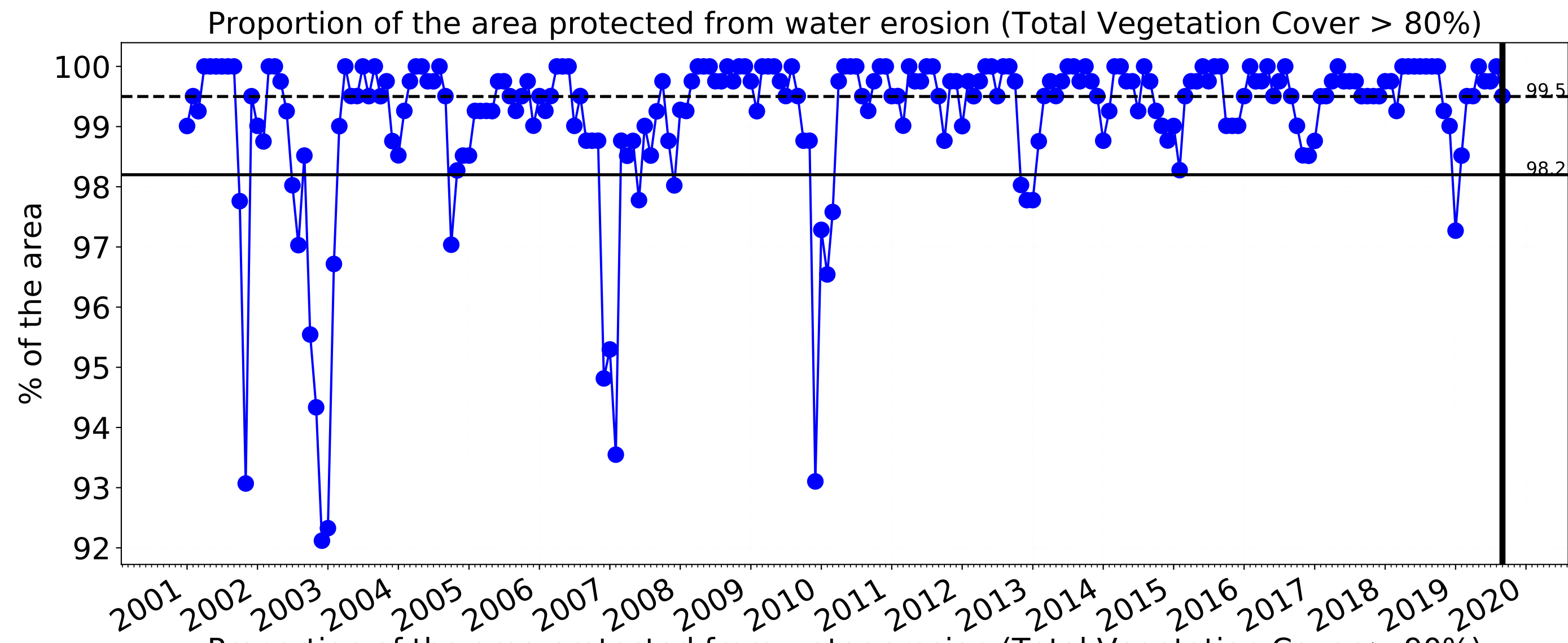


Proportion of the area protected from water erosion (Total Vegetation Cover > 70%)



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

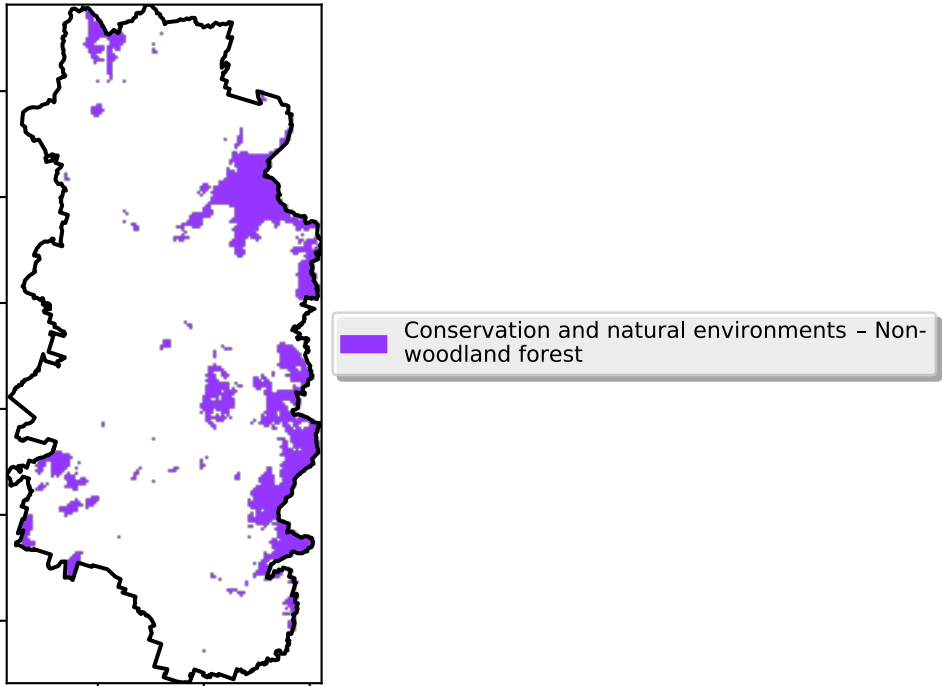




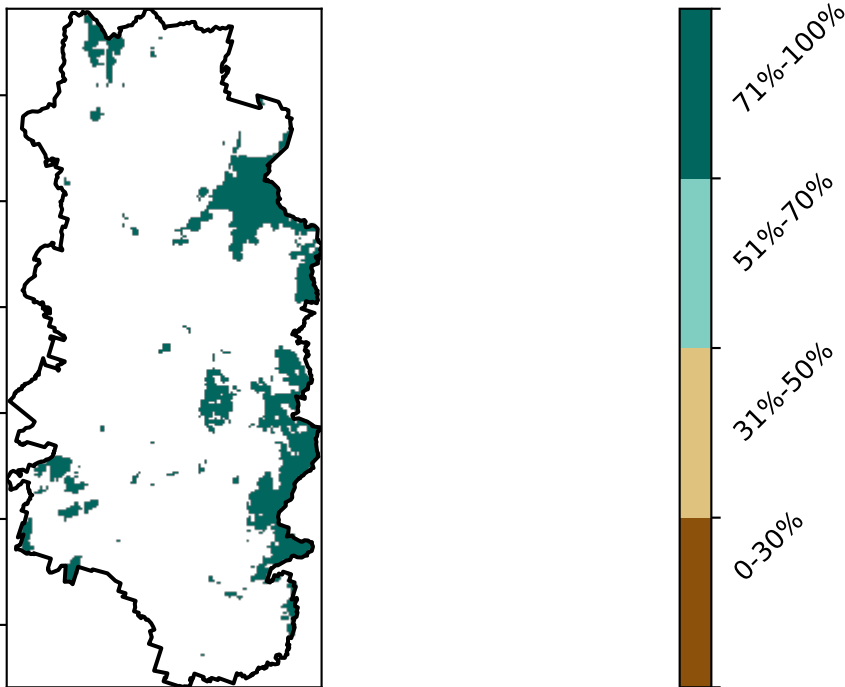
Conservation and natural environments Forest (non woodland)

Land use and forest cover

Landuse map of area based on 2015 catchment scale landuse and Australia's National Forest Inventory, where no forest is < 20% tree cover, sparse is 20 to 50% and dense > 50% tree cover.



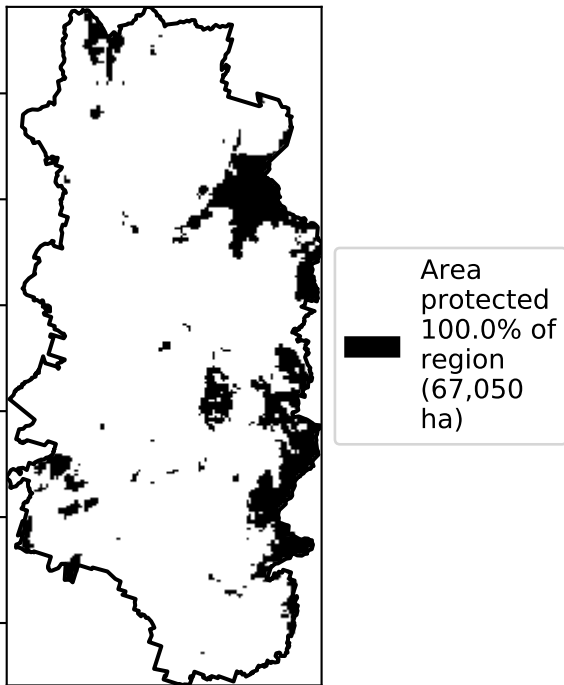
Total Vegetation Cover [%]



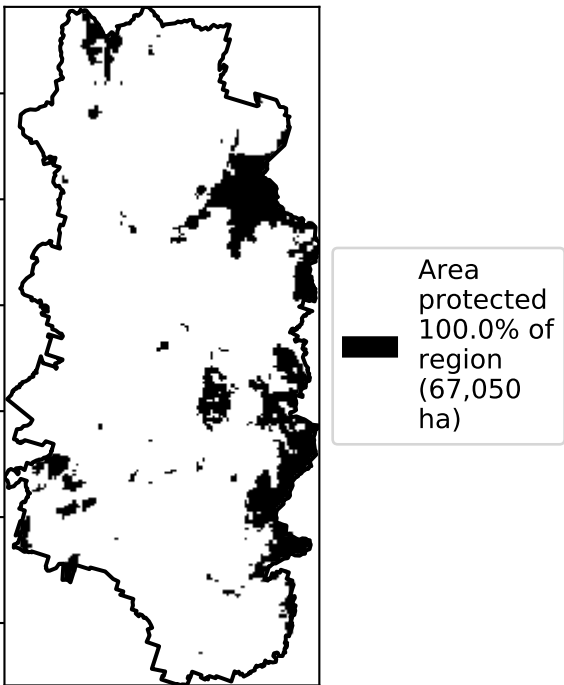
Proportion of vegetation cover class in area



% Area protected from water erosion (>70%)

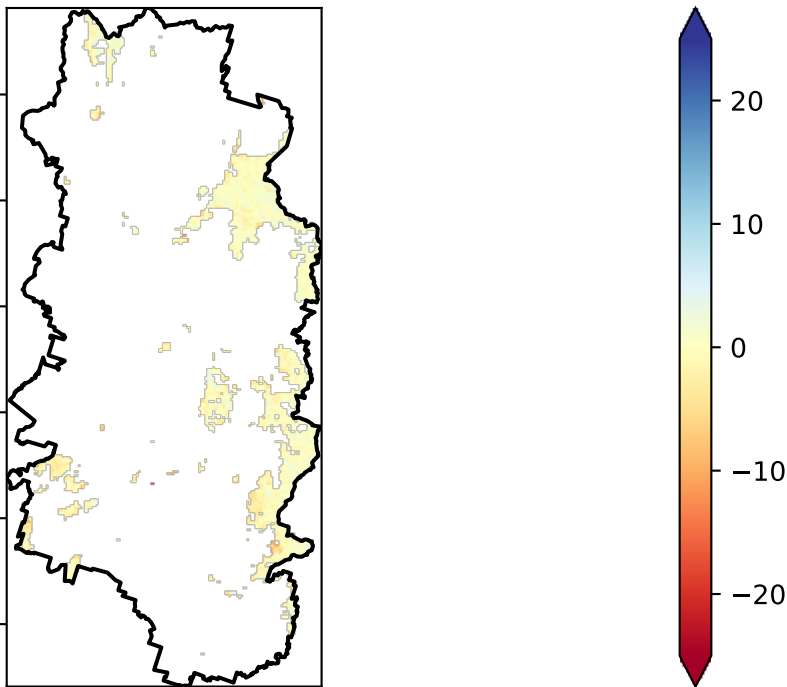


% Area protected from wind erosion (>50%)



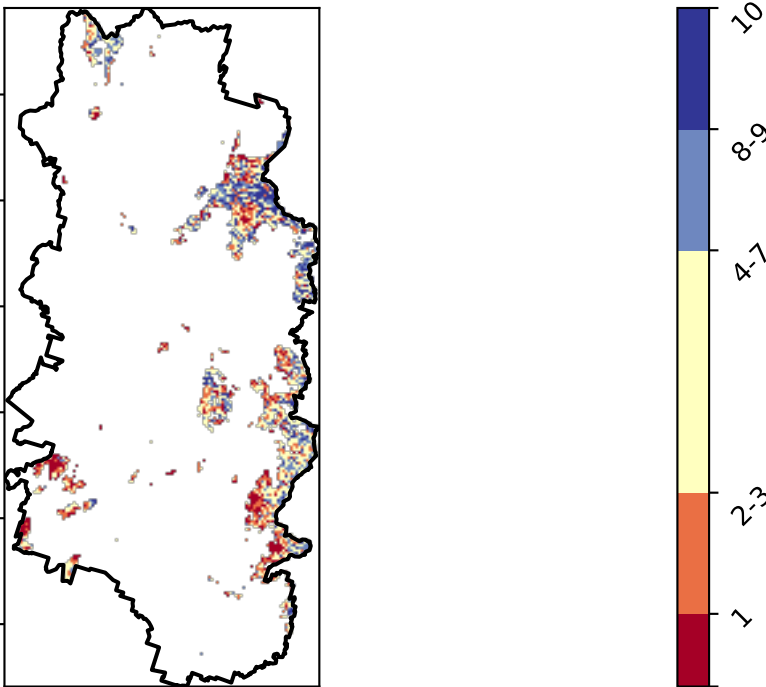
Total Vegetation Cover Anomaly [%]

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Total Vegetation Cover Decile [%]



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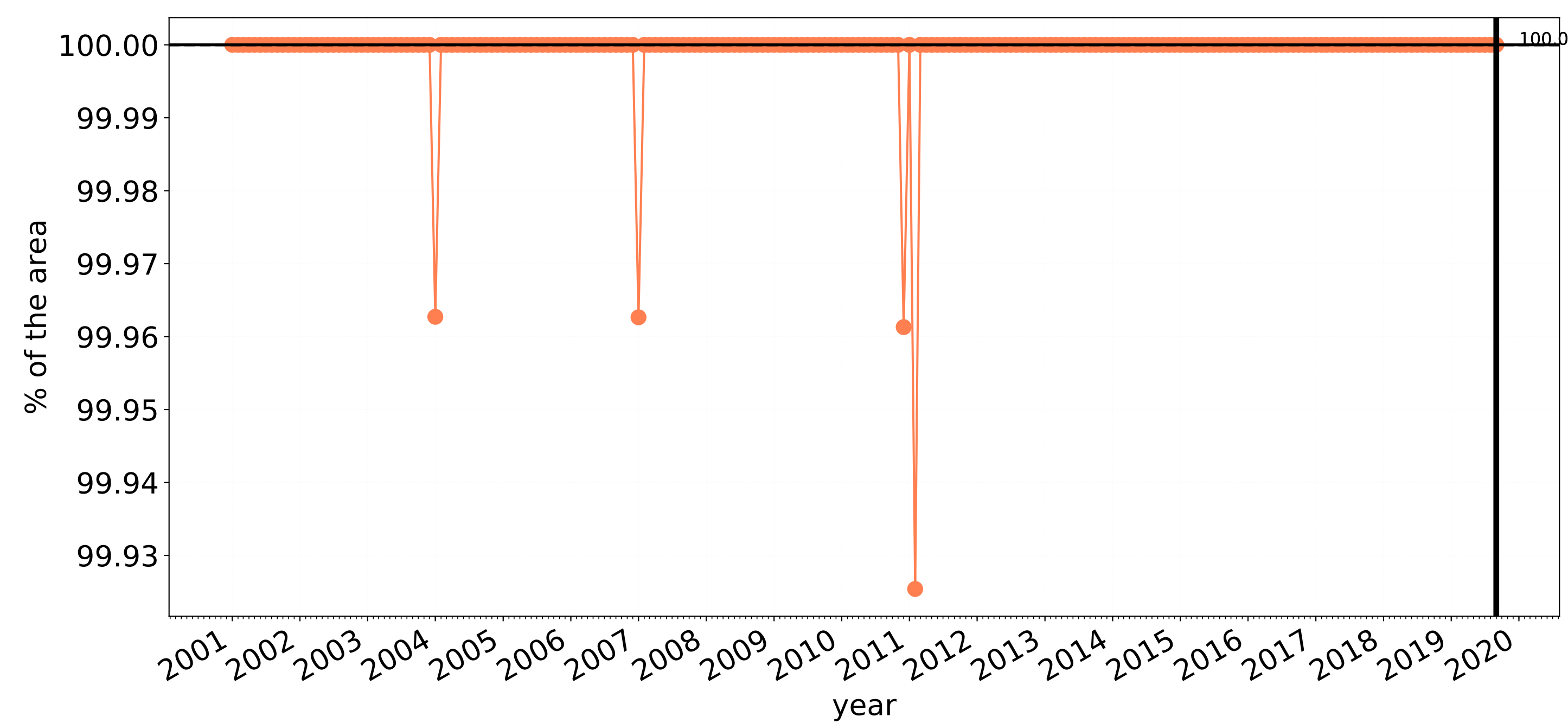
National Landcare Programme



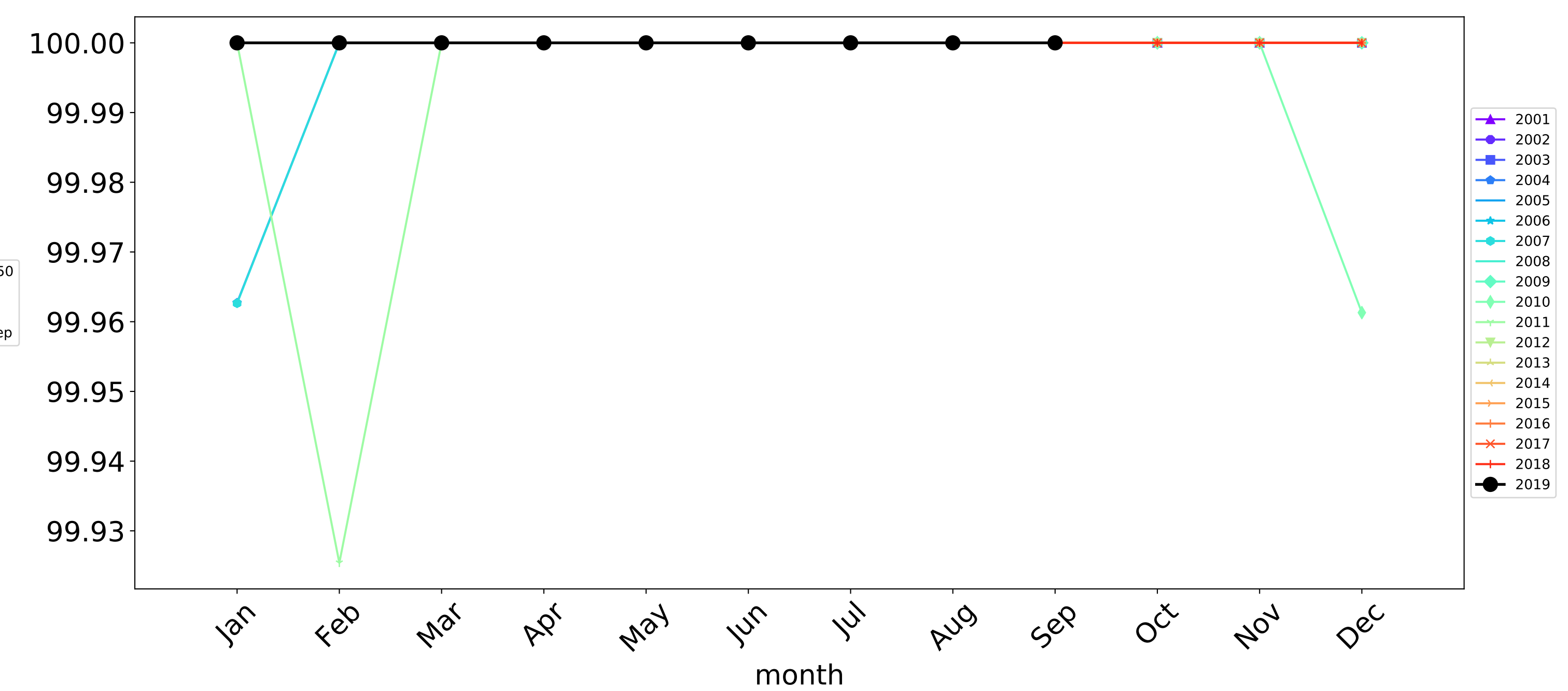
Planning, Industry & Environment

Conservation and natural environments Forest (non woodland) timeseries

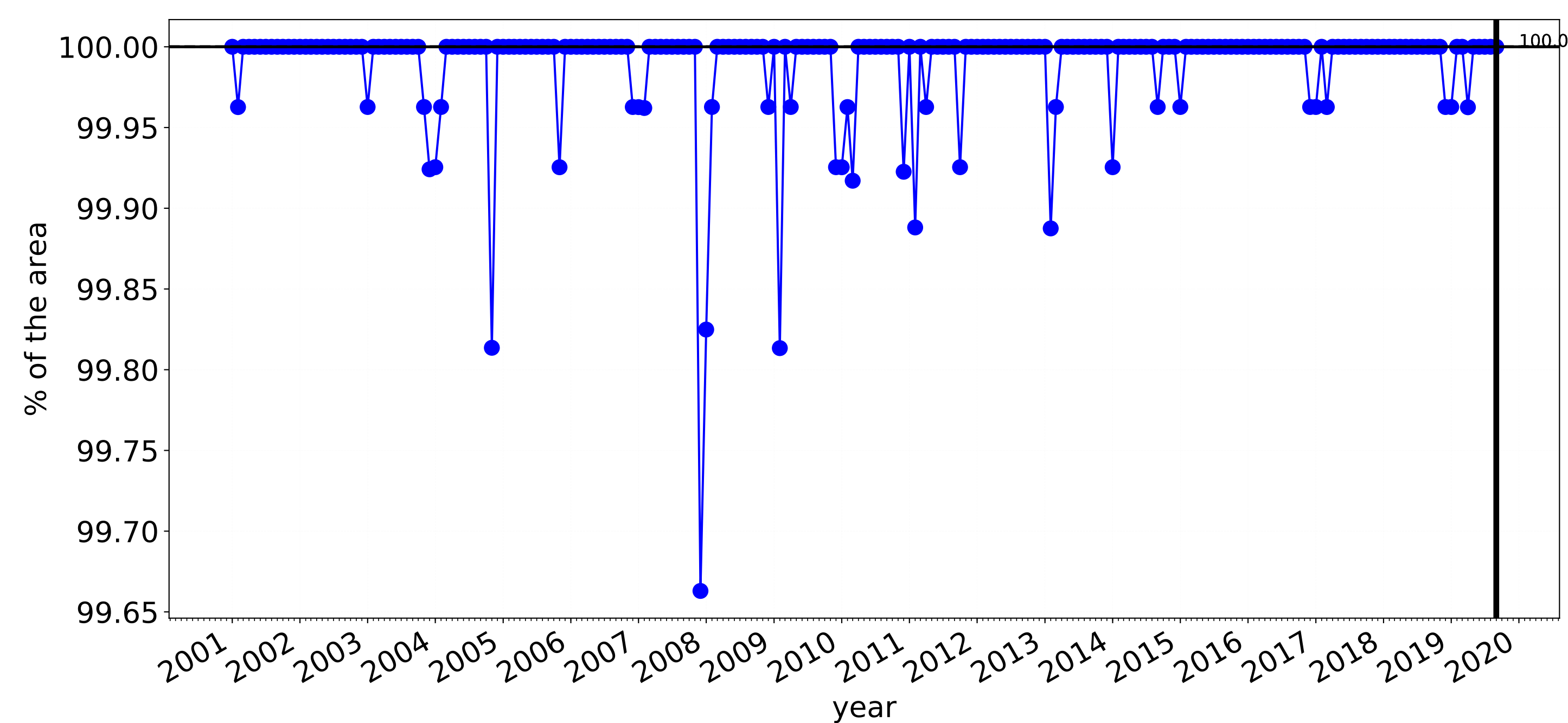
Proportion of the area protected from wind erosion (Total Vegetation Cover > 50%)



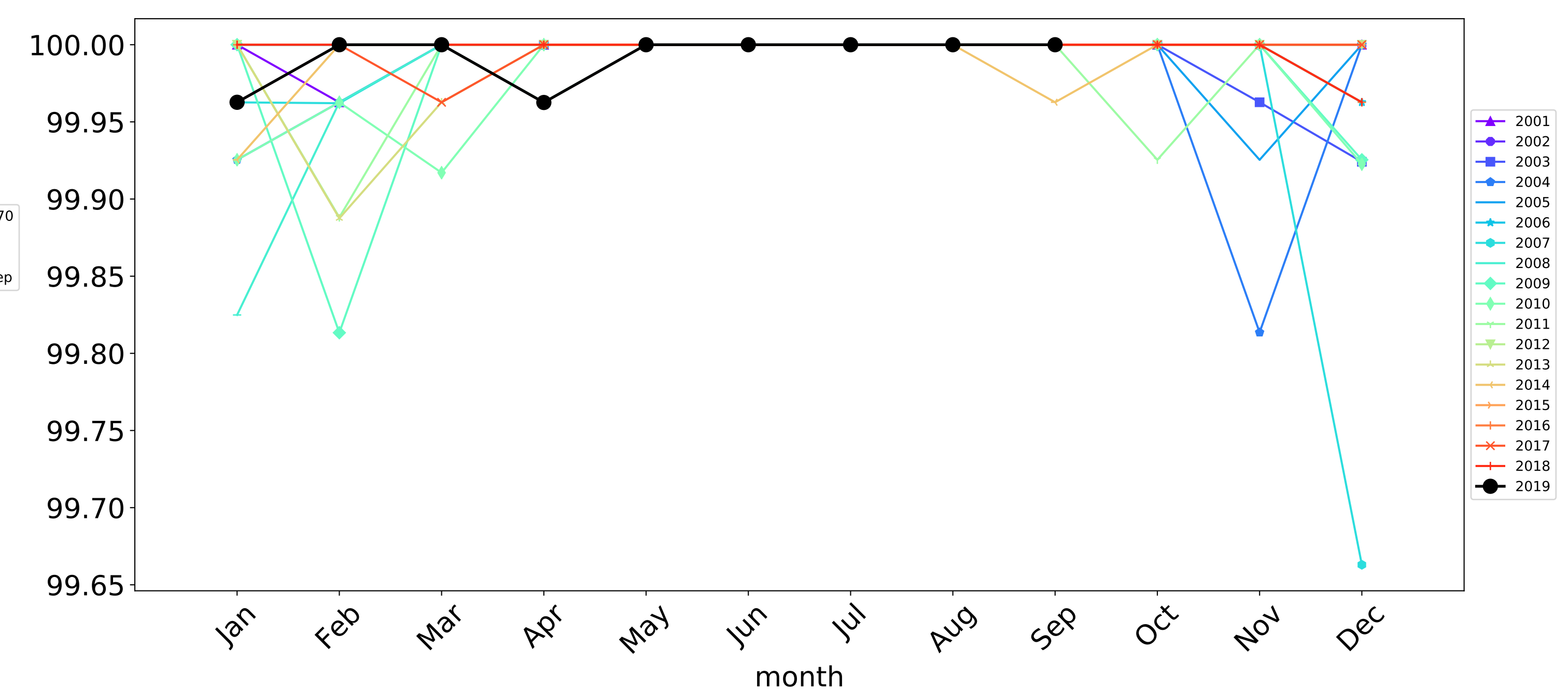
Wind erosion historical monthly area protected (Total Veg Cov >50%)

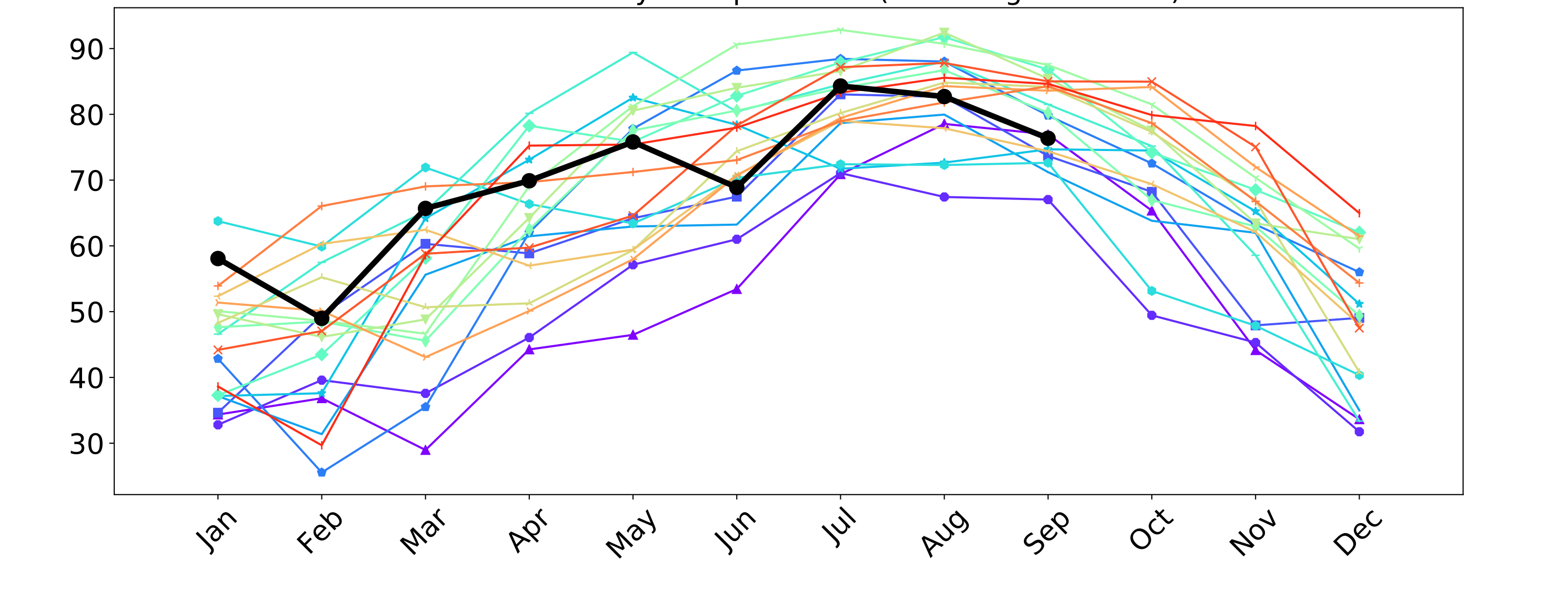
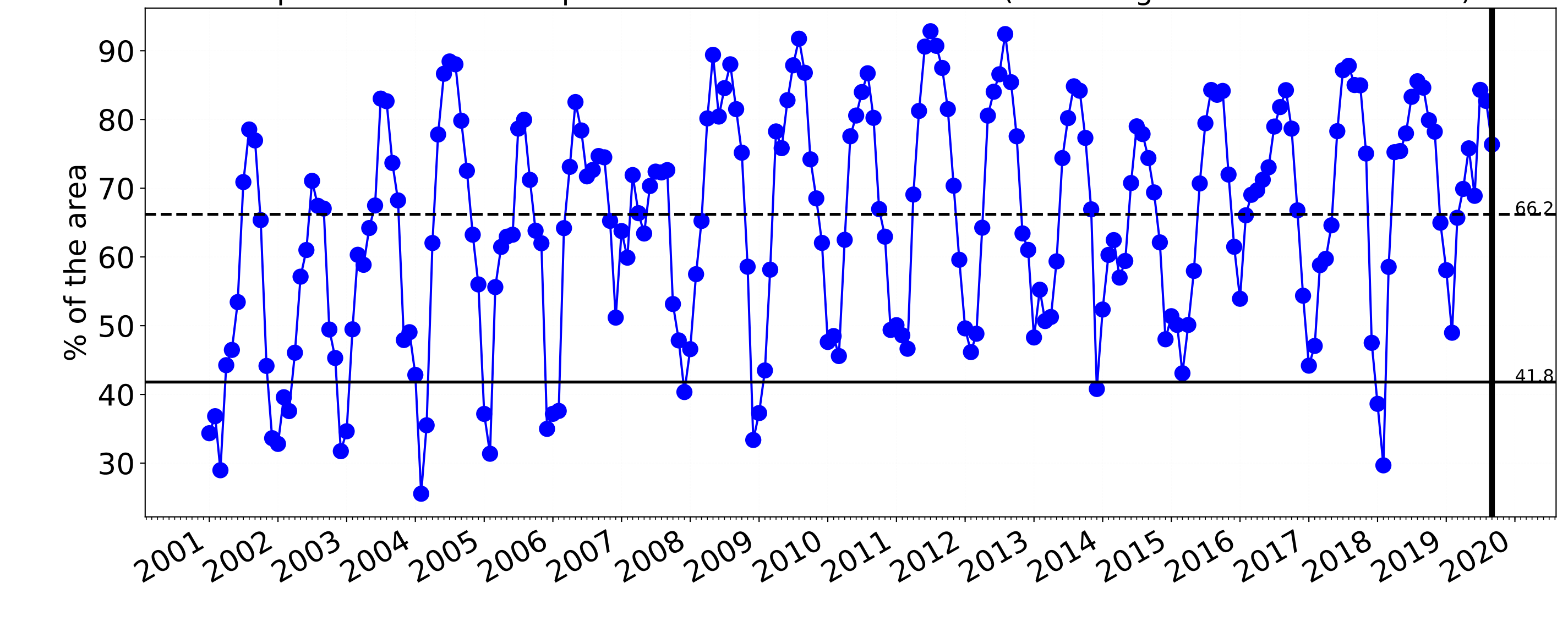
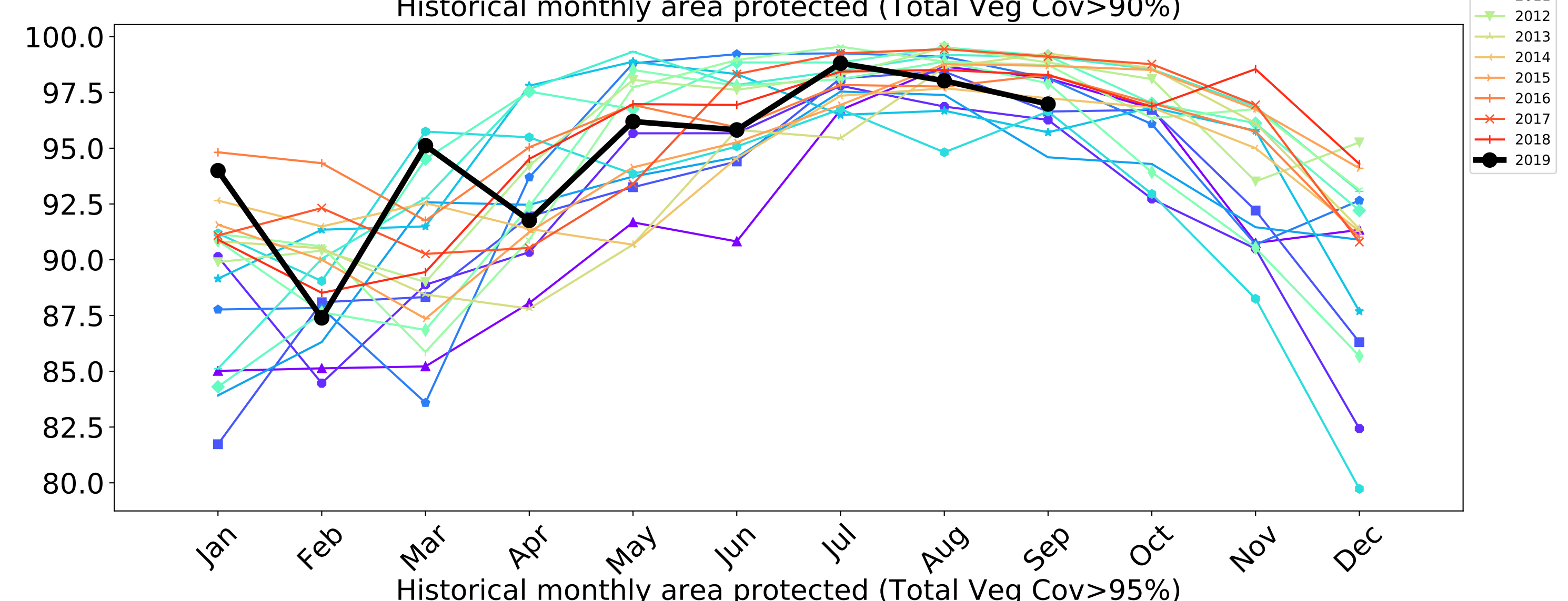
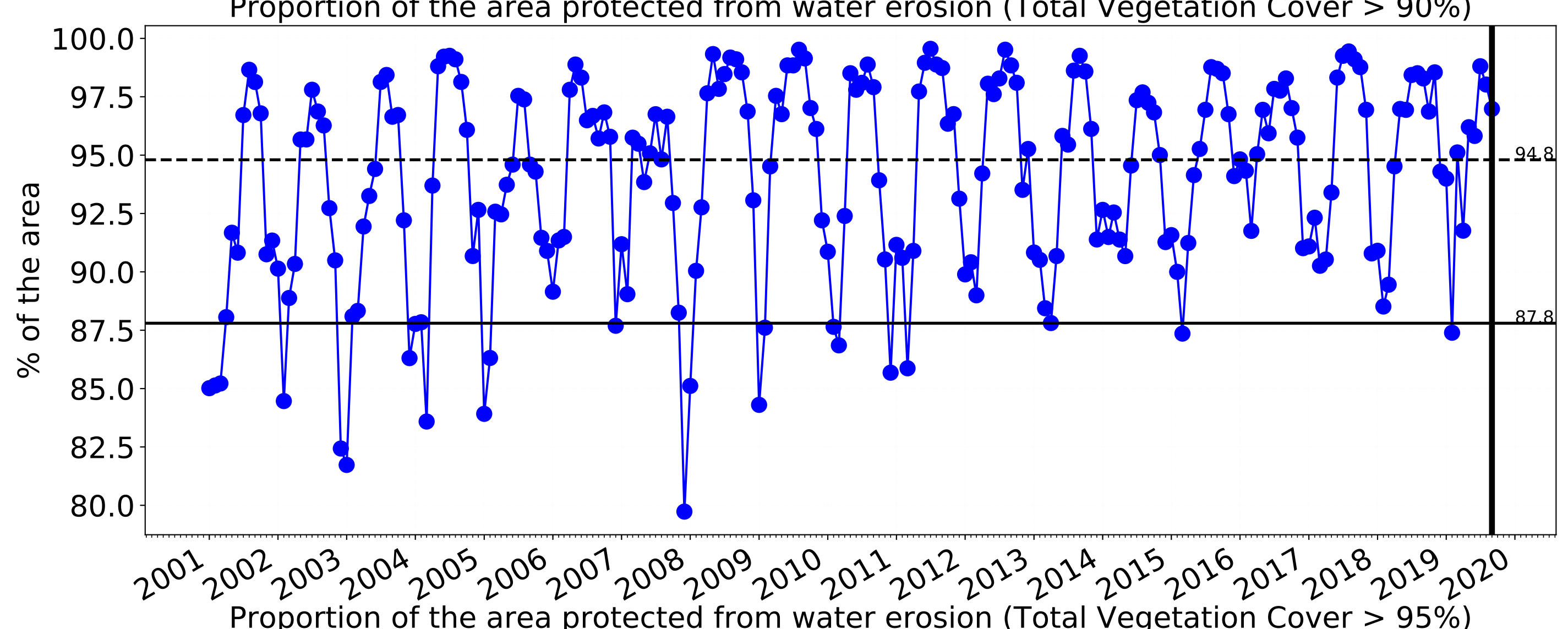
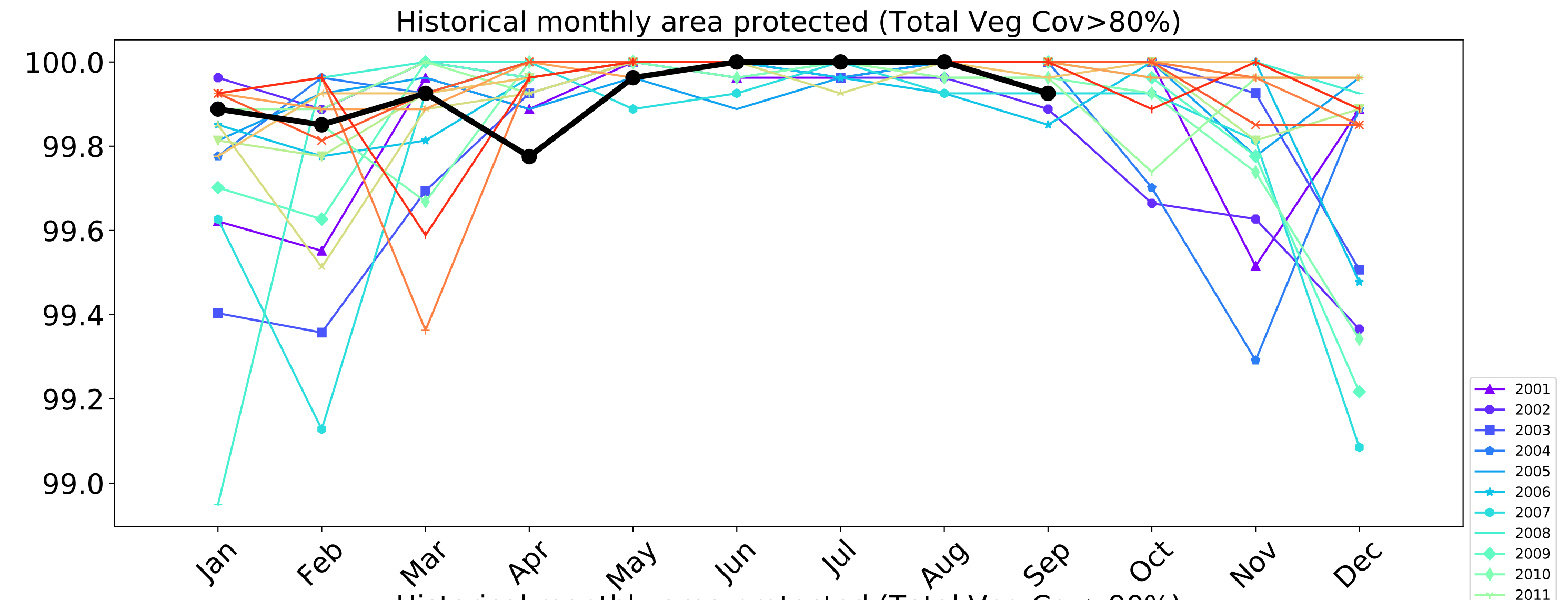
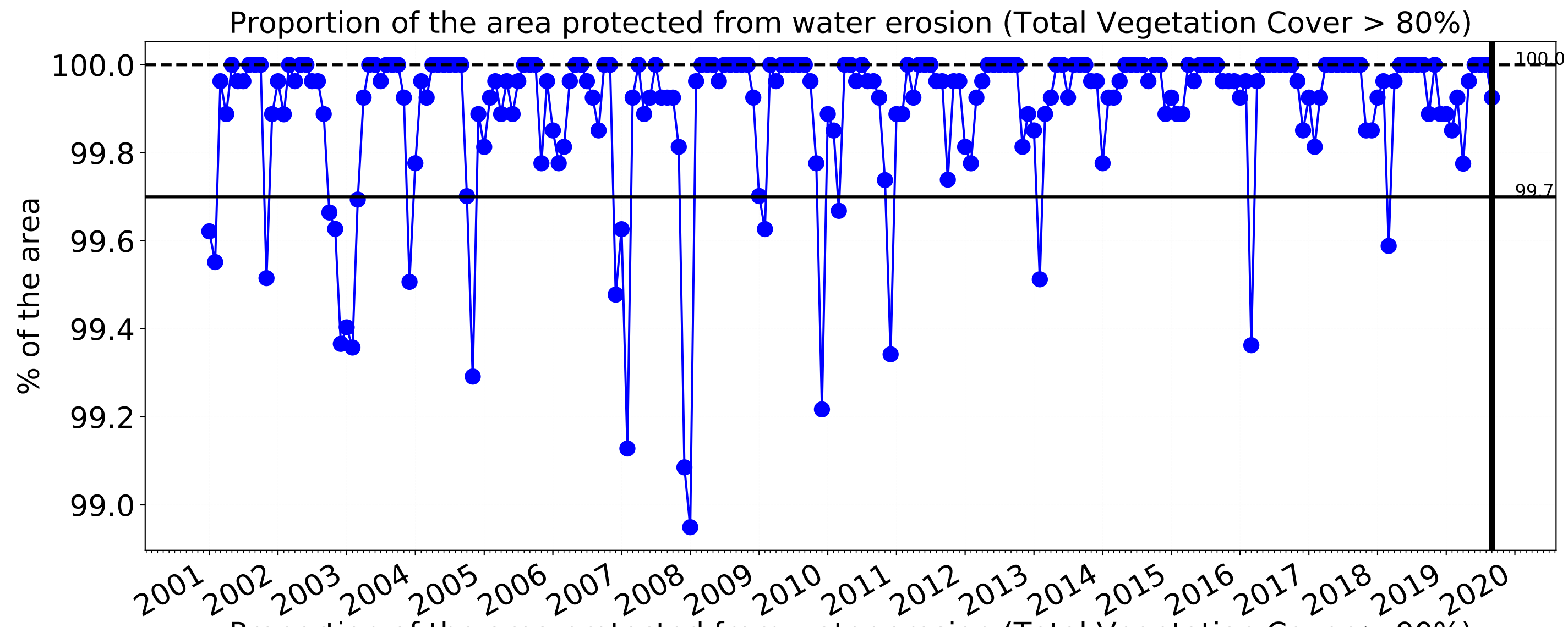


Proportion of the area protected from water erosion (Total Vegetation Cover > 70%)



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

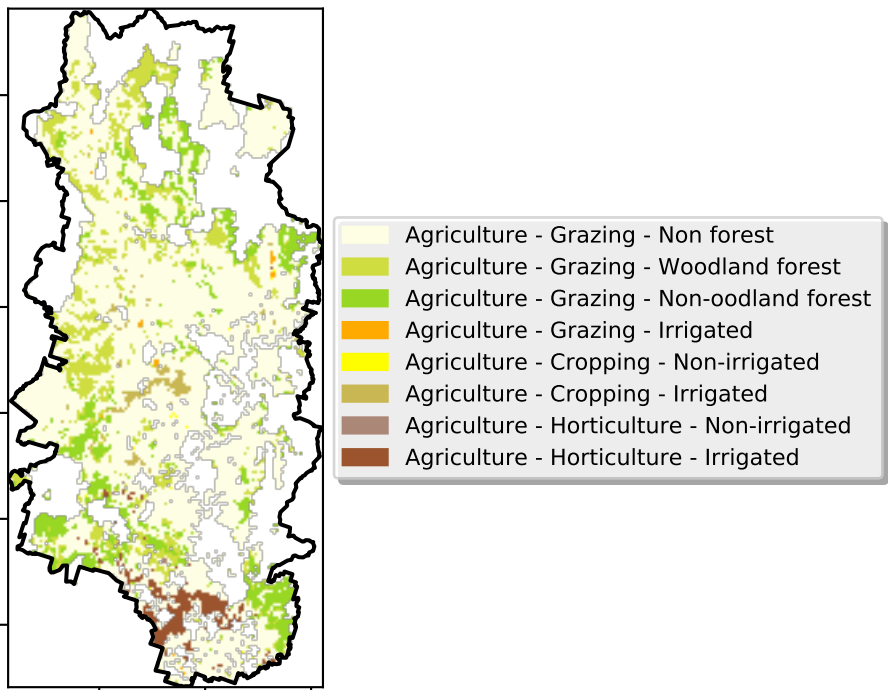




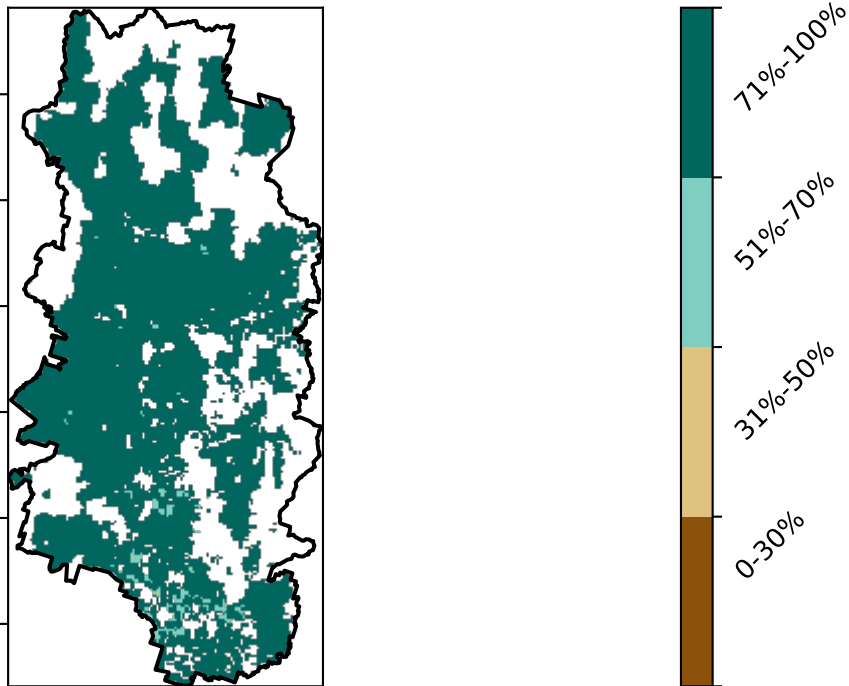
Agriculture

Land use and forest cover

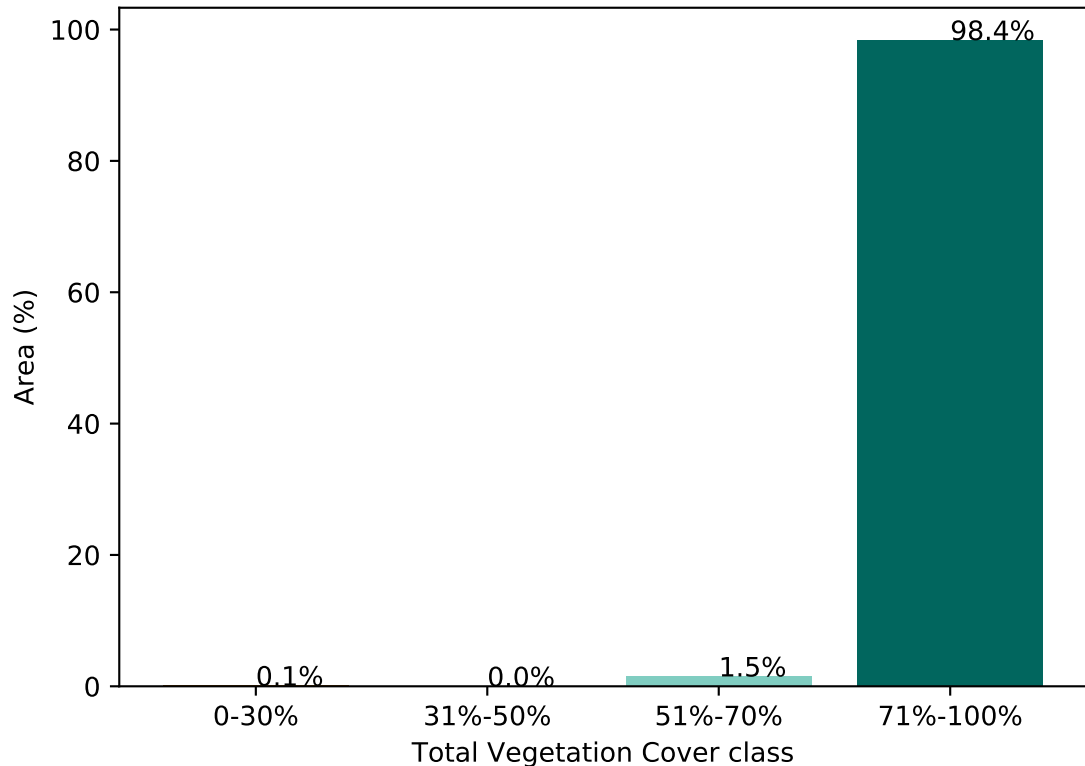
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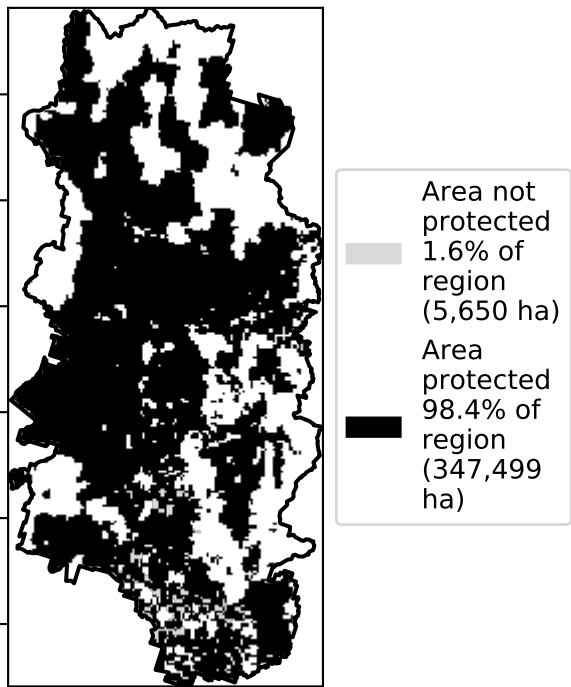
Total Vegetation Cover [%]



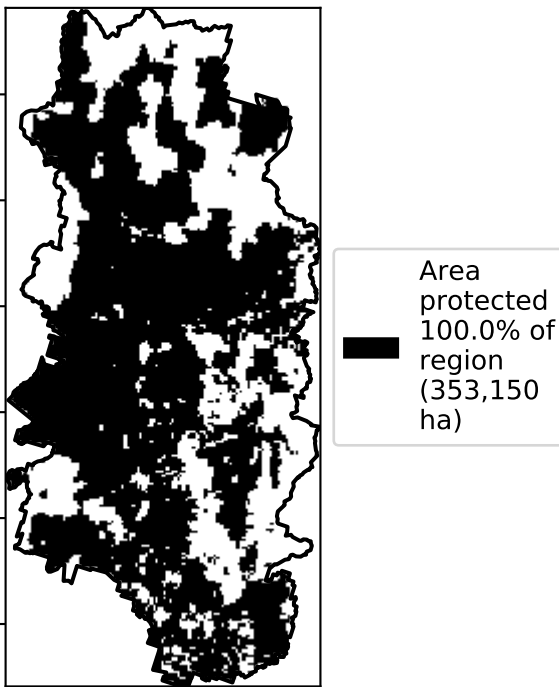
Proportion of vegetation cover class in area



% Area protected from water erosion (>70%)

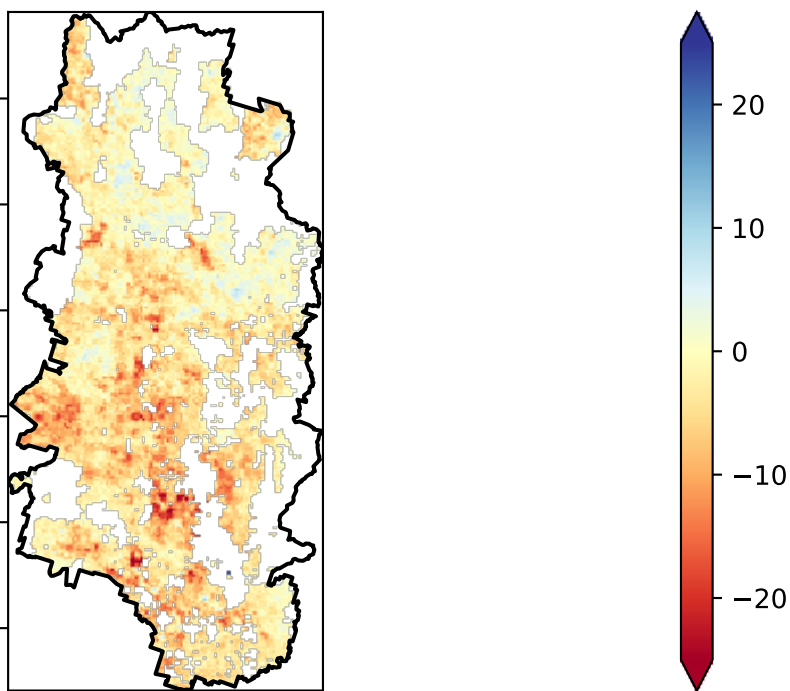


% Area protected from wind erosion (>50%)



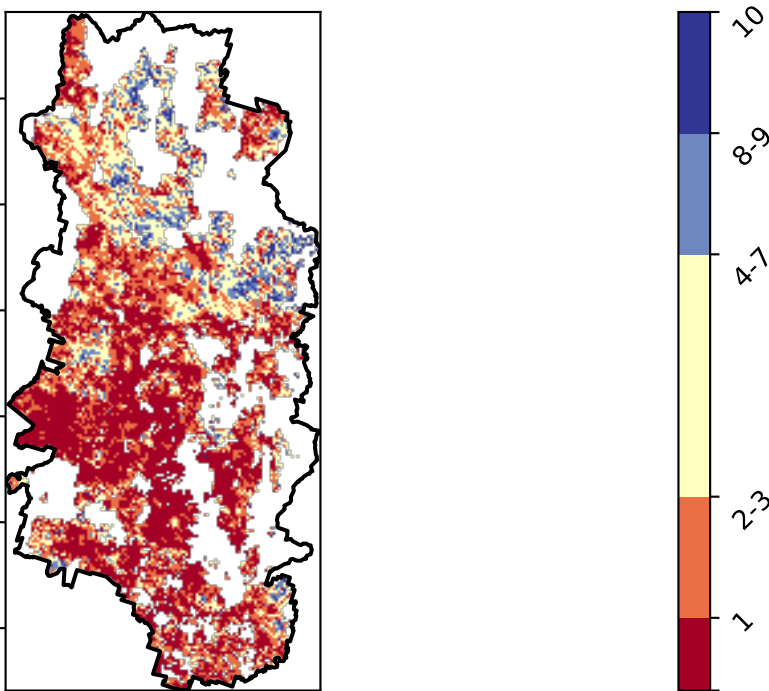
Total Vegetation Cover Anomaly [%]

Anomaly show how many percentage 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.



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.

Total Vegetation Cover Decile [%]



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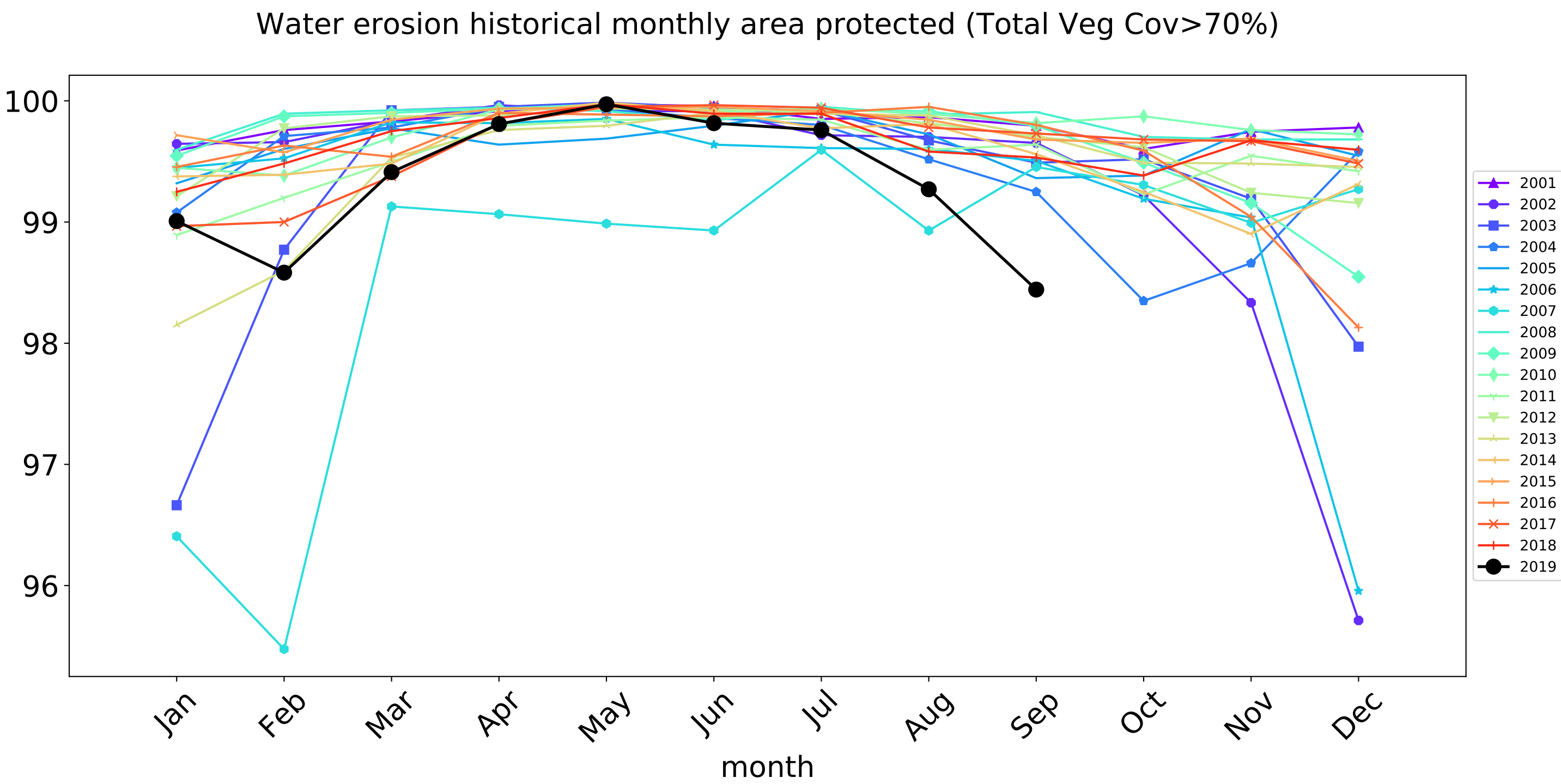
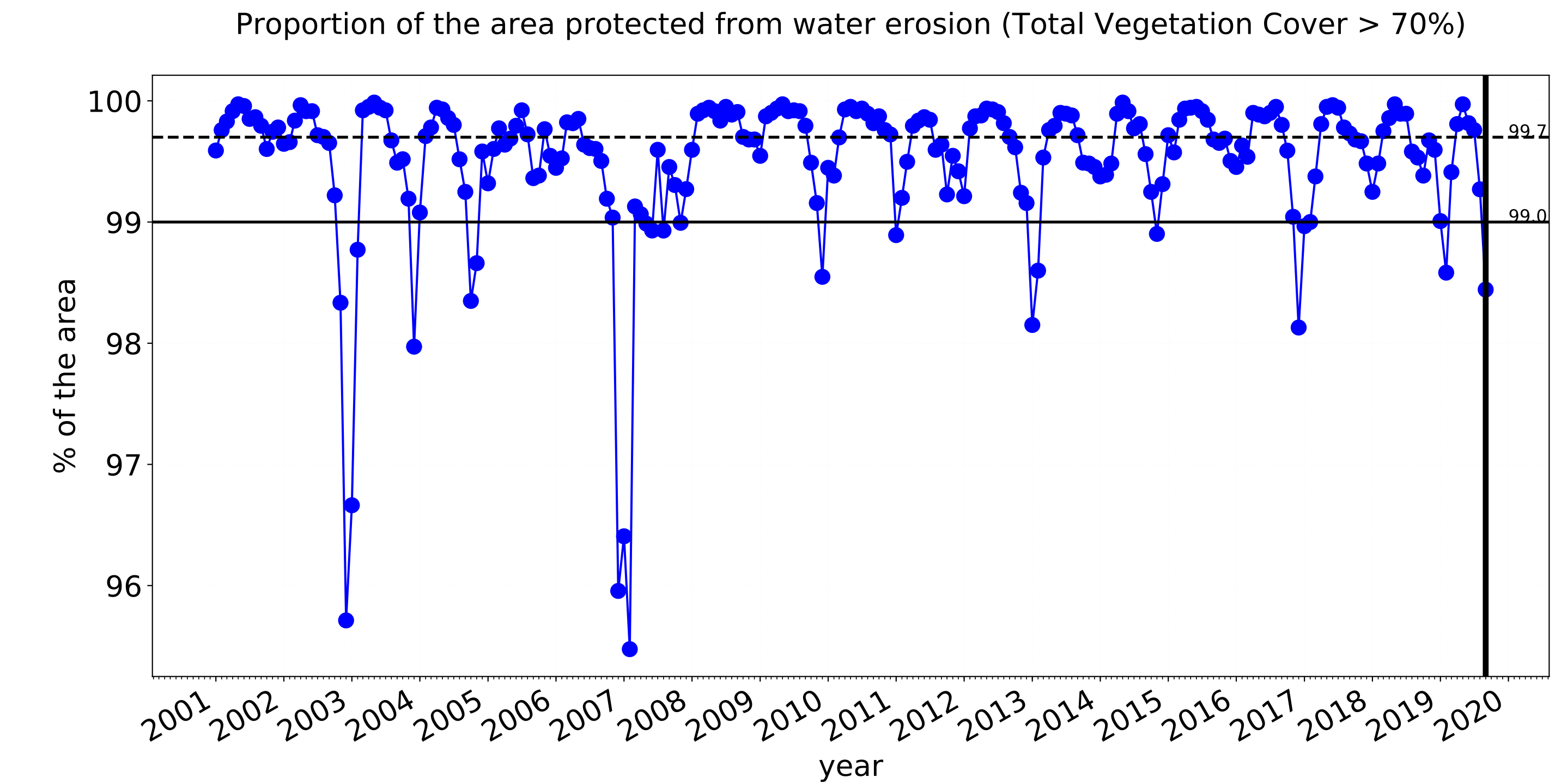
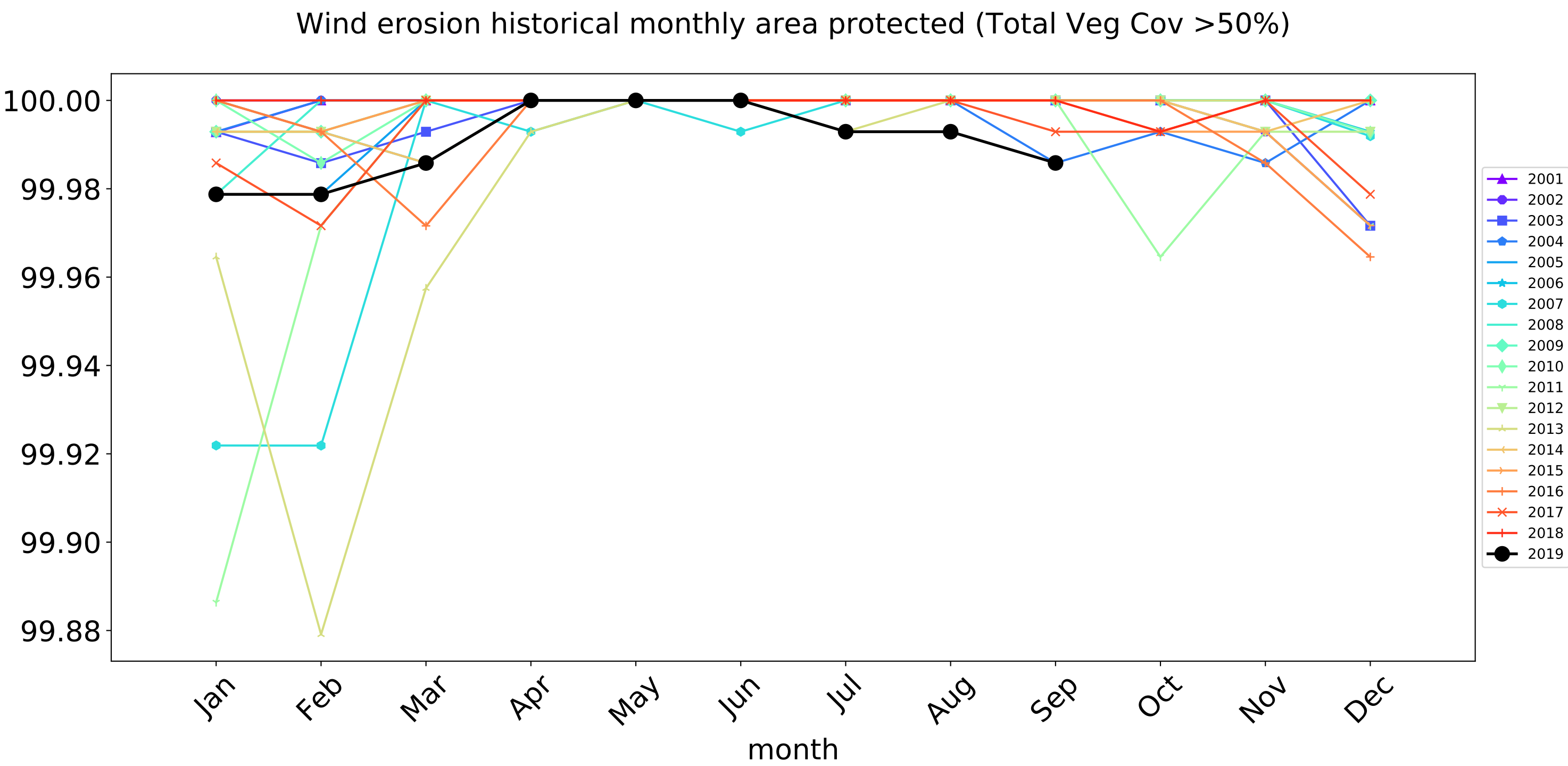
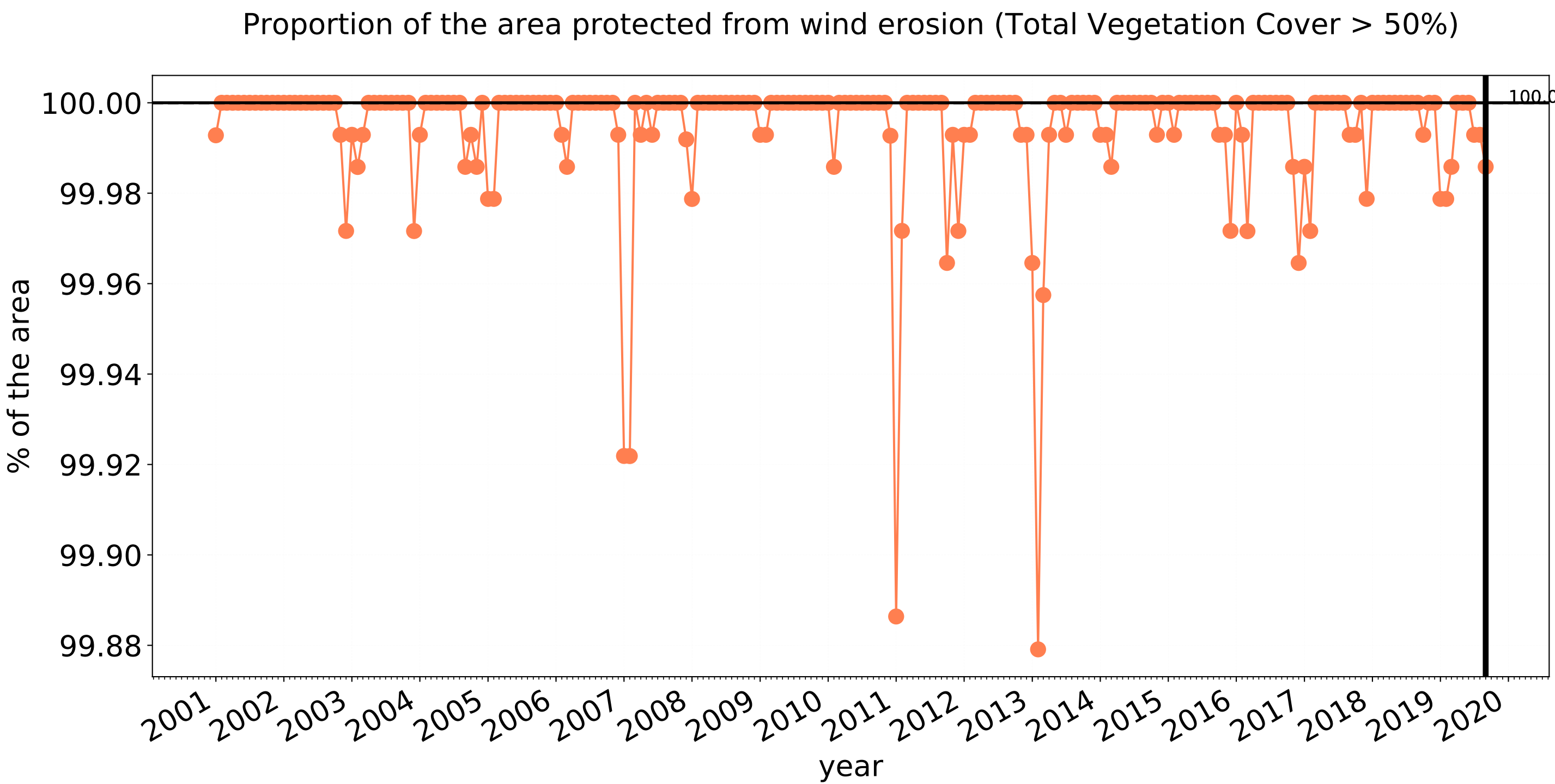


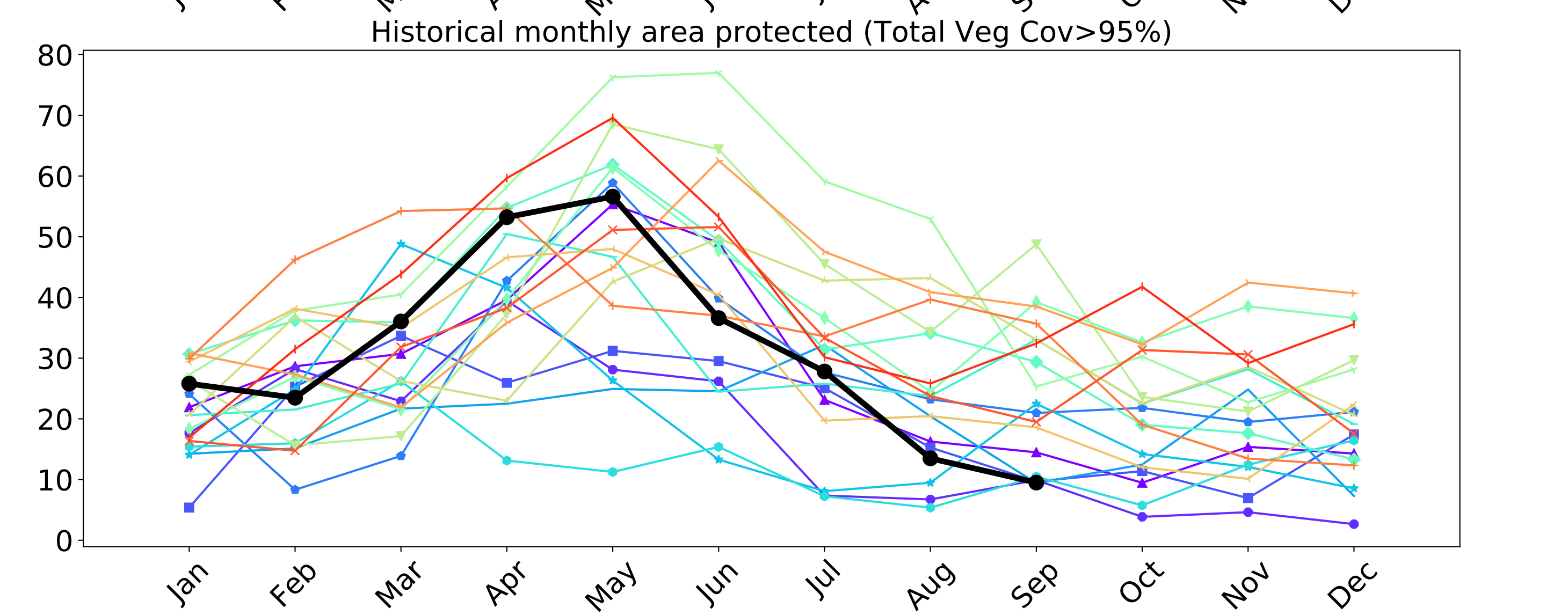
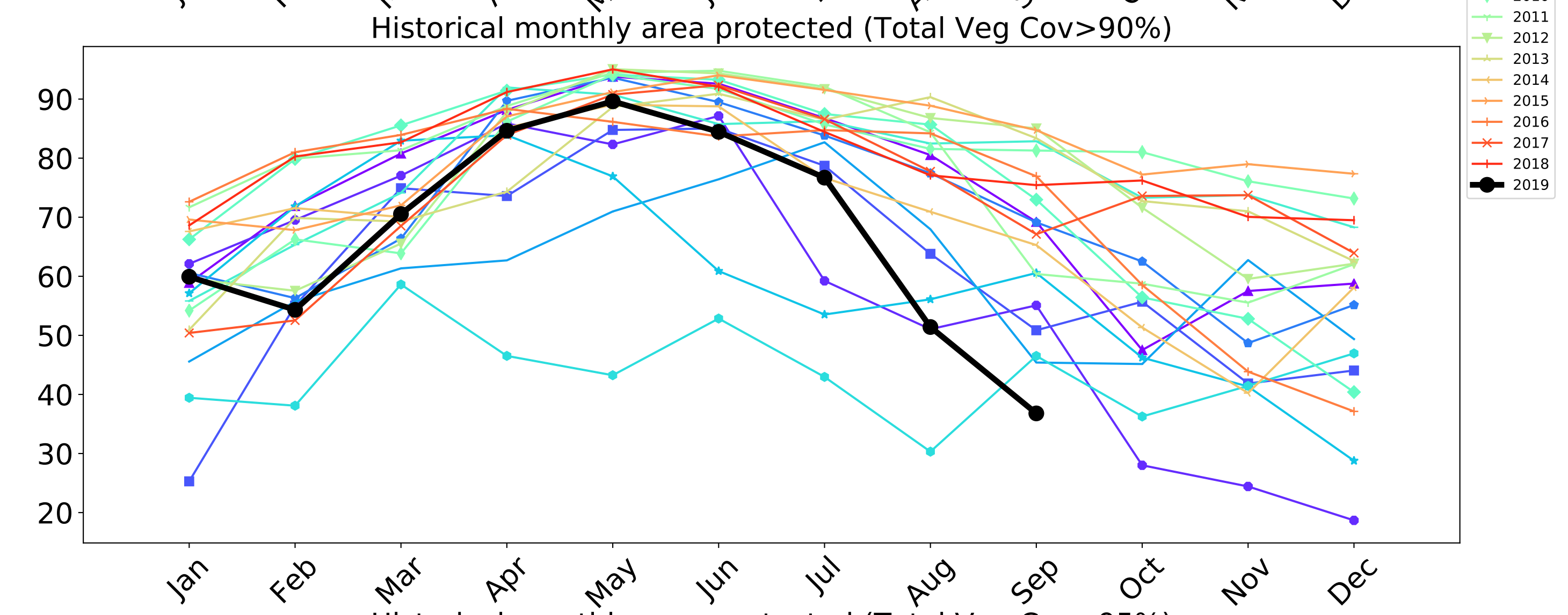
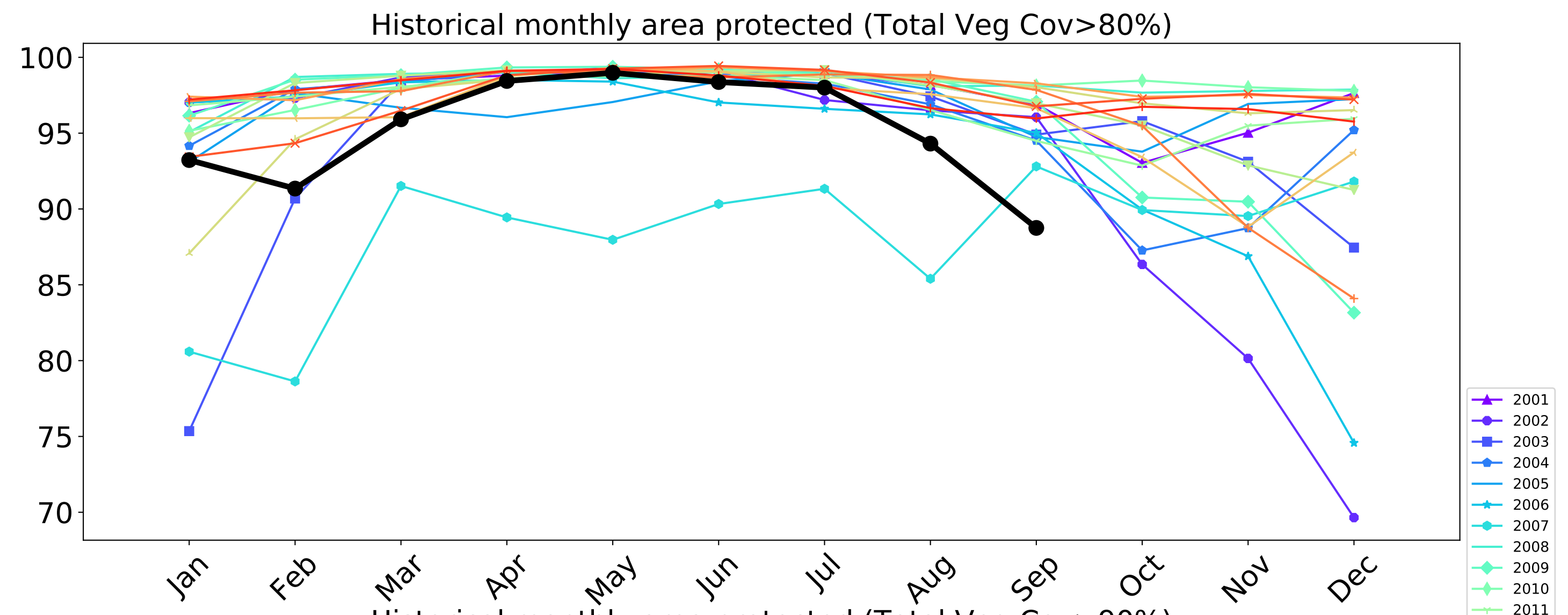
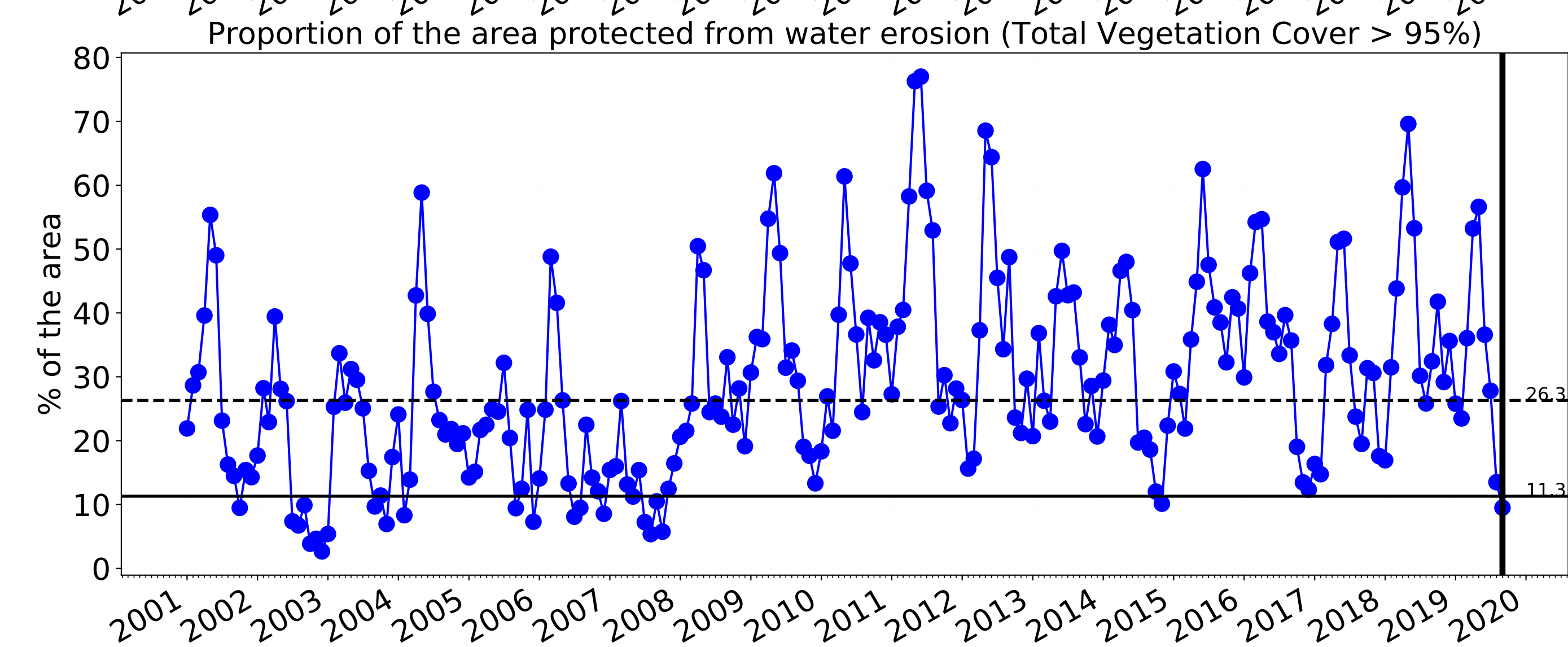
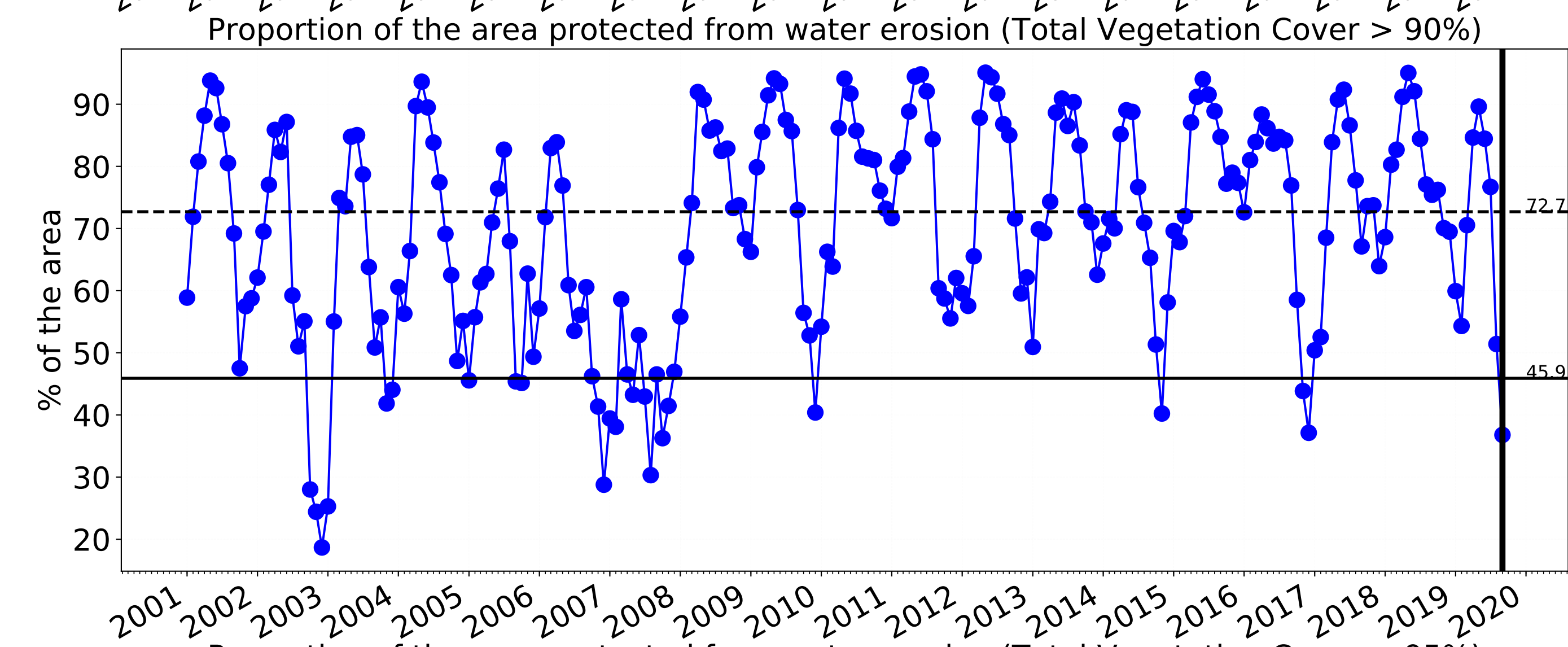
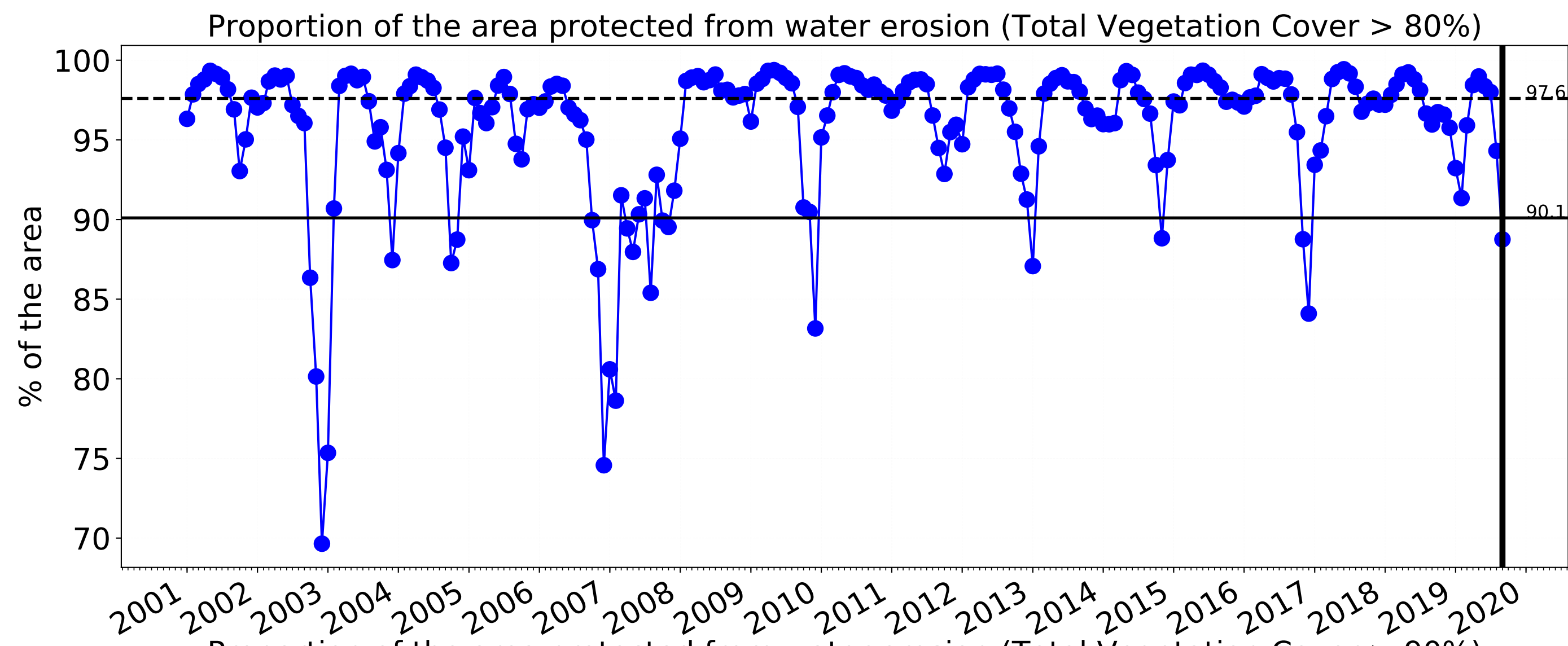
National
Landcare
Programme



Planning,
Industry &
Environment

Agriculture timeseries

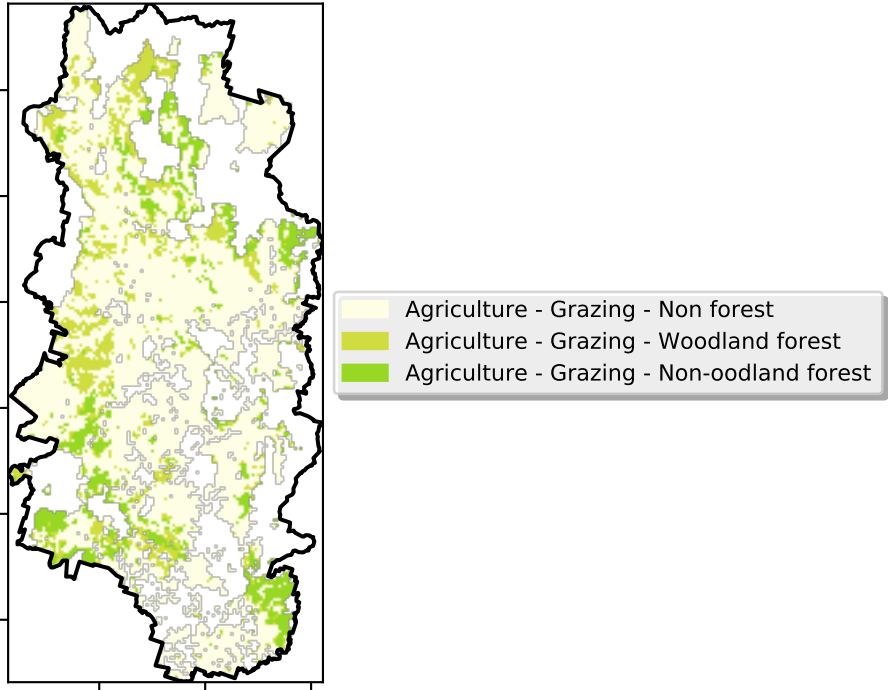




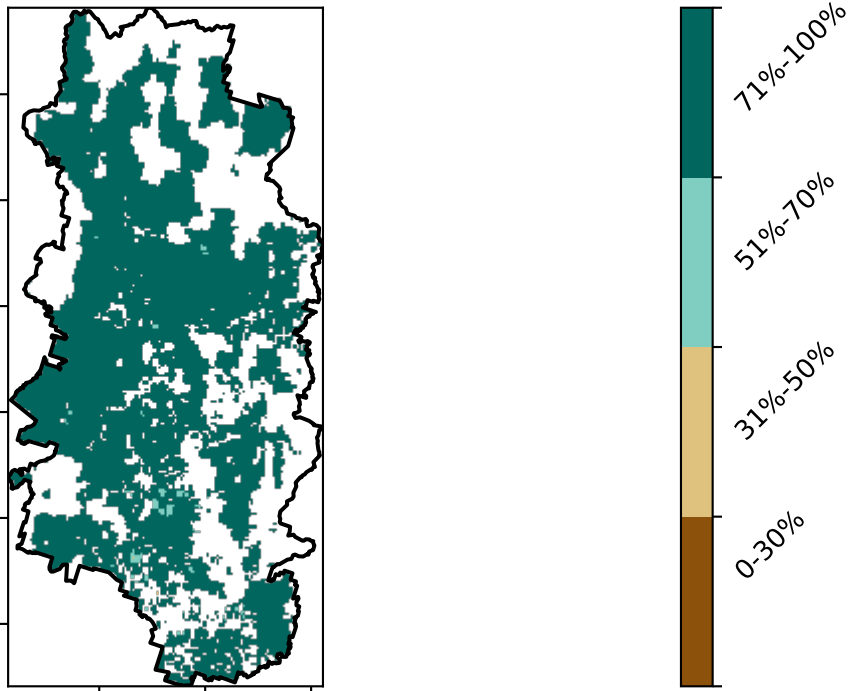
Grazing

Land use and forest cover

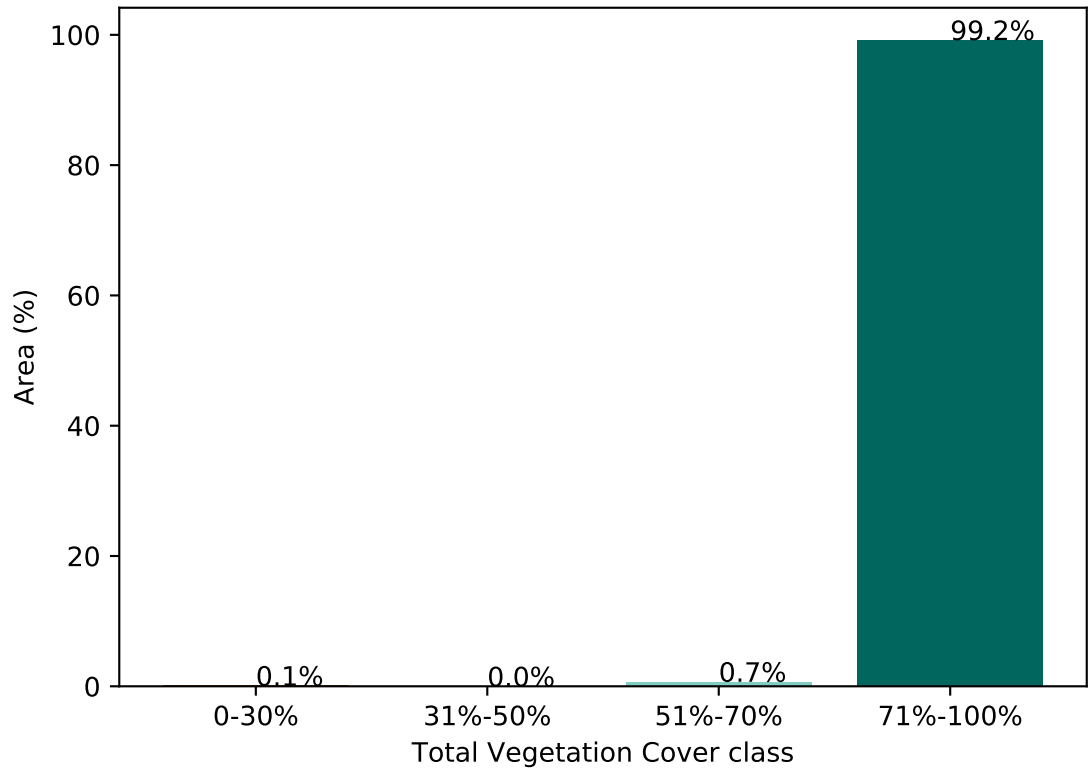
Landuse map of area based on 2015 catchment scale landuse and Australia's National Forest Inventory, where no forest is < 20% tree cover, sparse is 20 to 50% and dense > 50% tree cover.



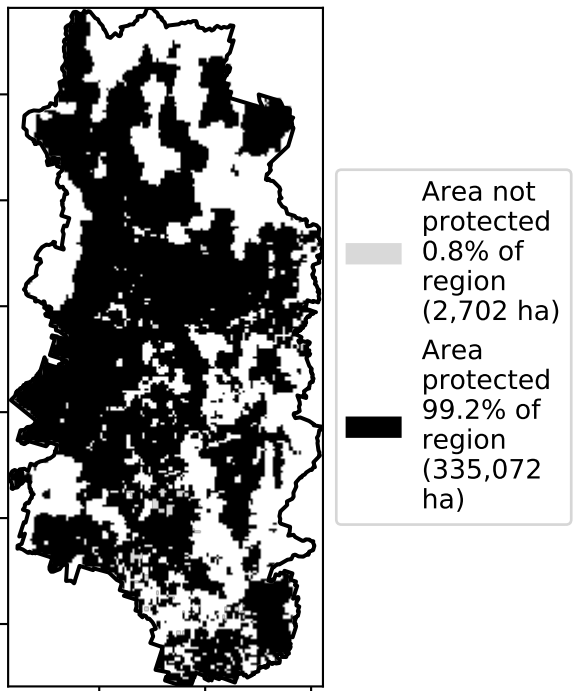
Total Vegetation Cover [%]



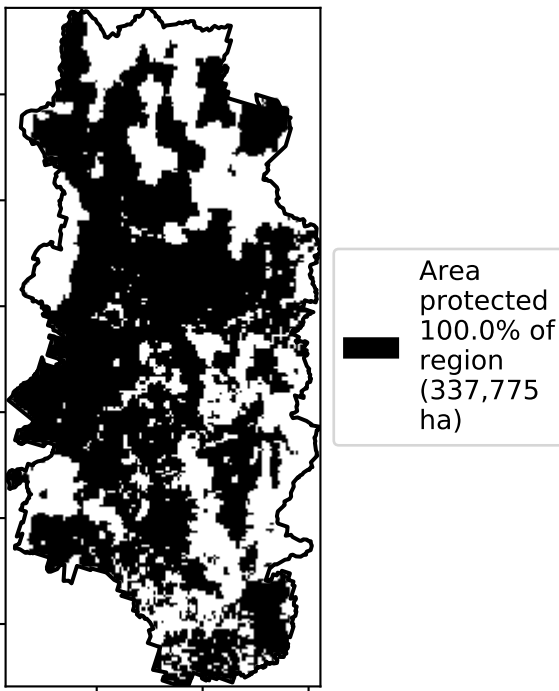
Proportion of vegetation cover class in area



% Area protected from water erosion (>70%)

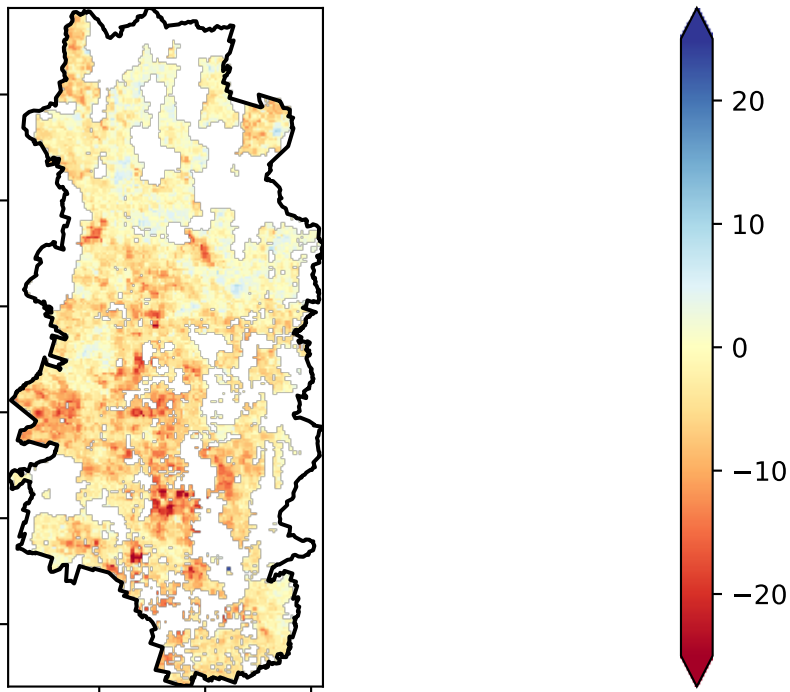


% Area protected from wind erosion (>50%)



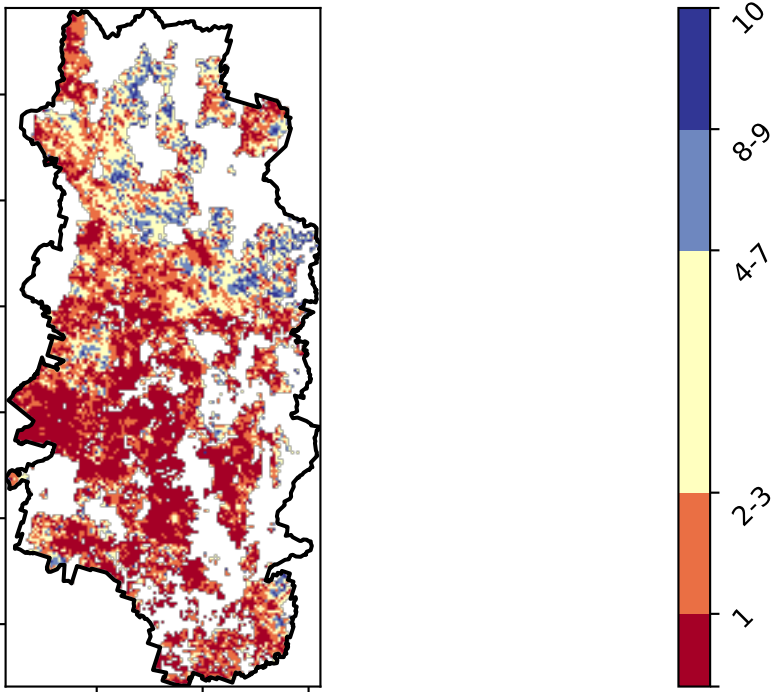
Total Vegetation Cover Anomaly [%]

Anomaly show how many percentage 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.



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.

Total Vegetation Cover Decile [%]



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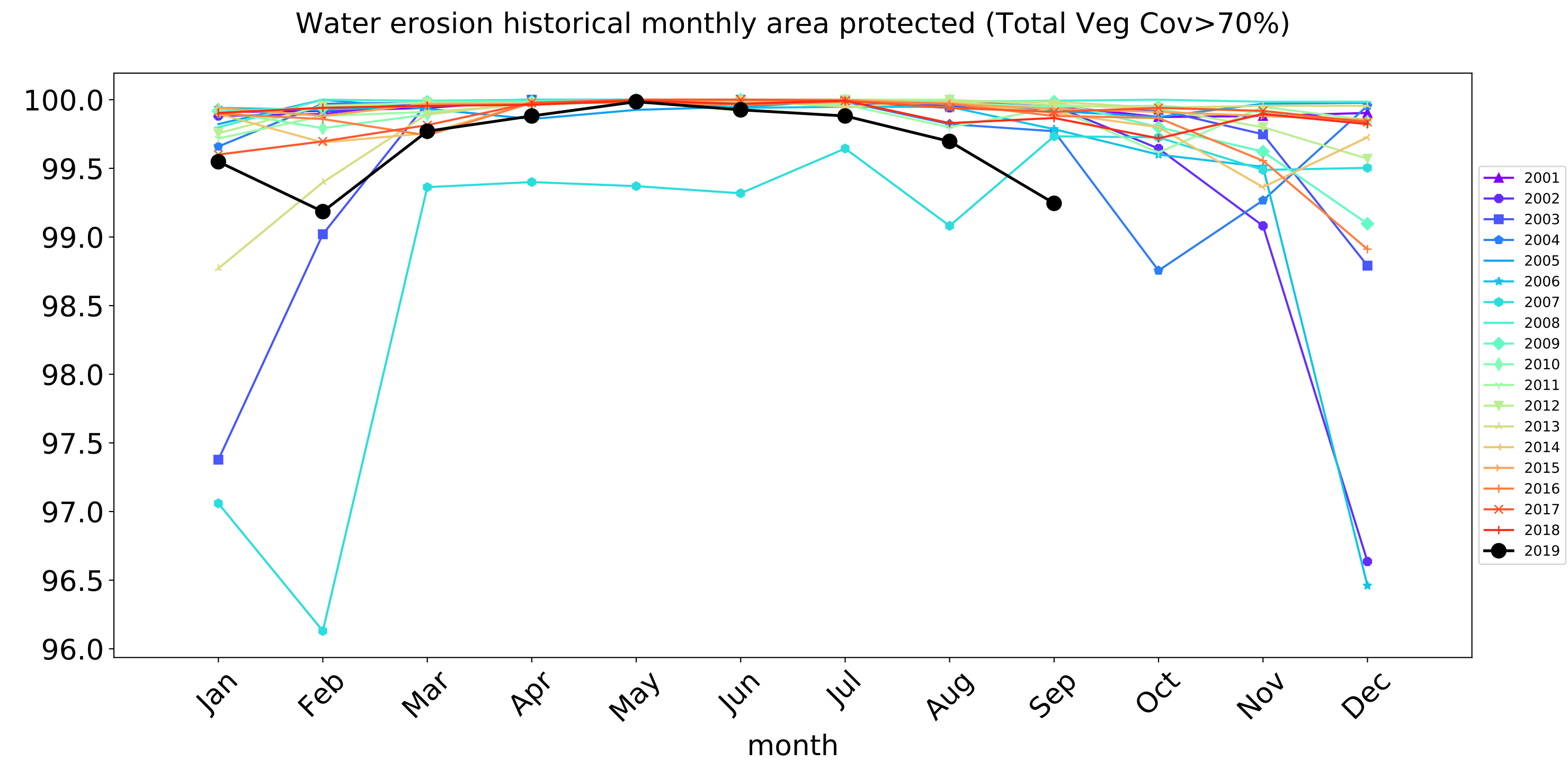
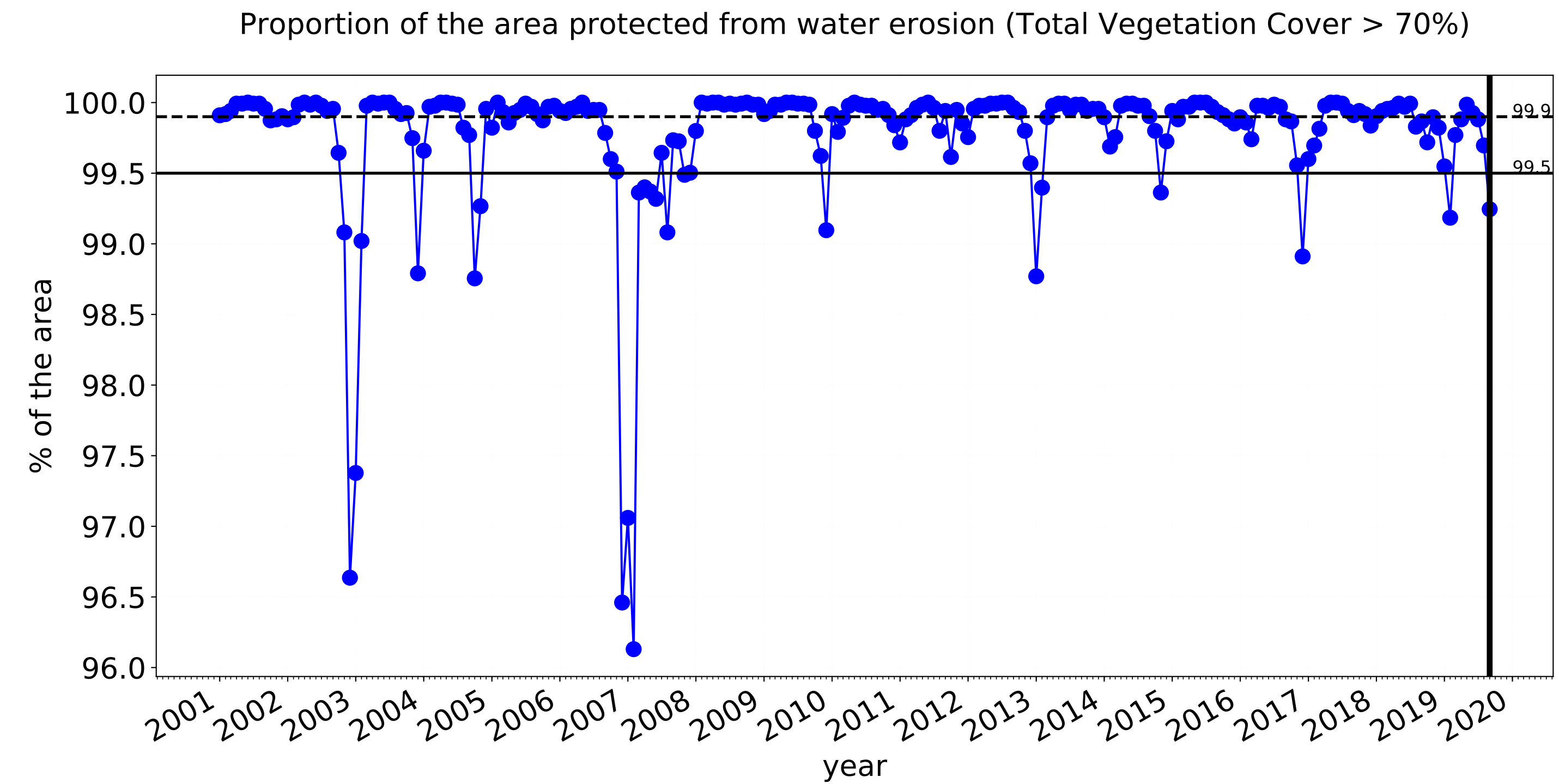
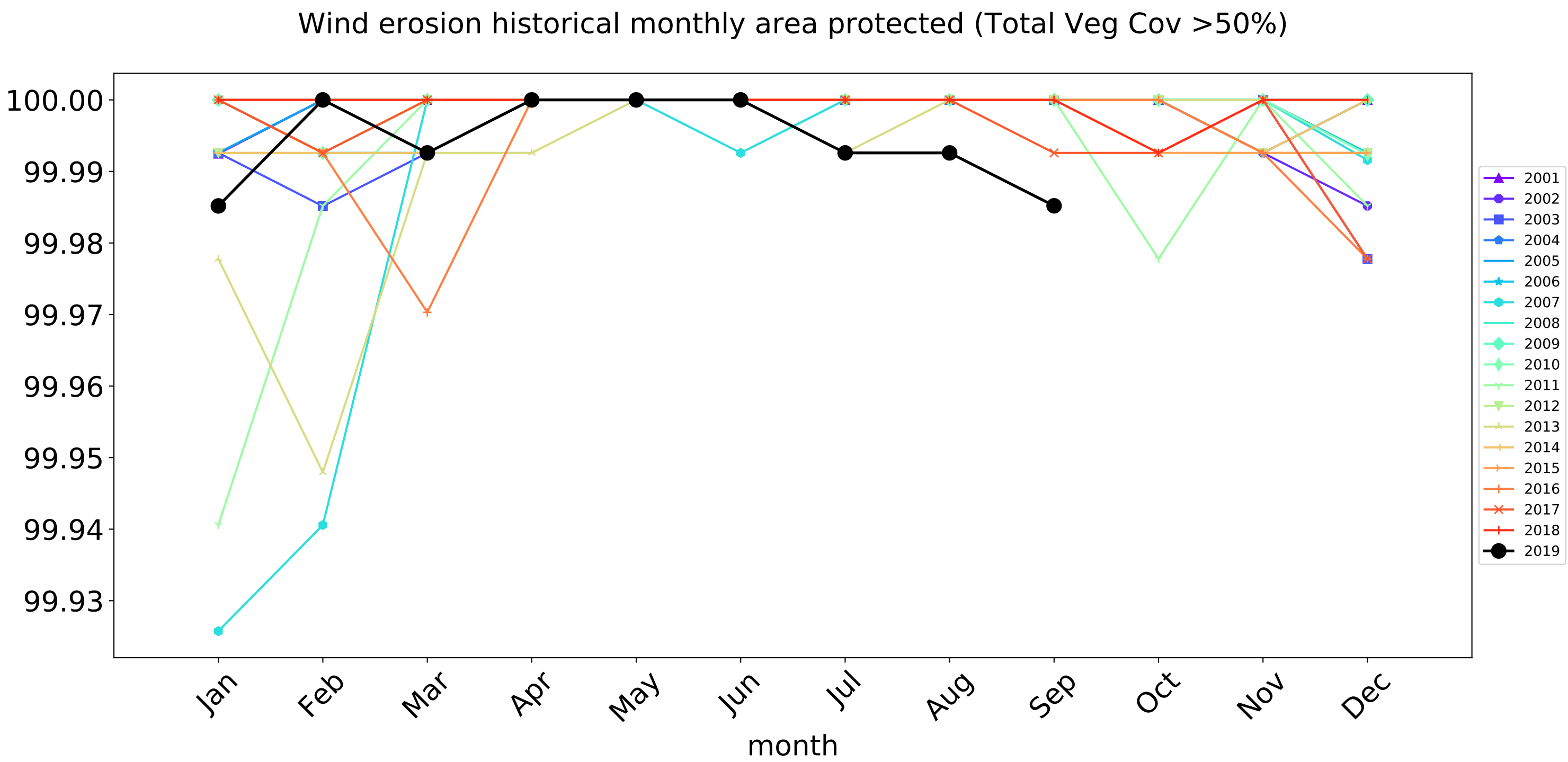
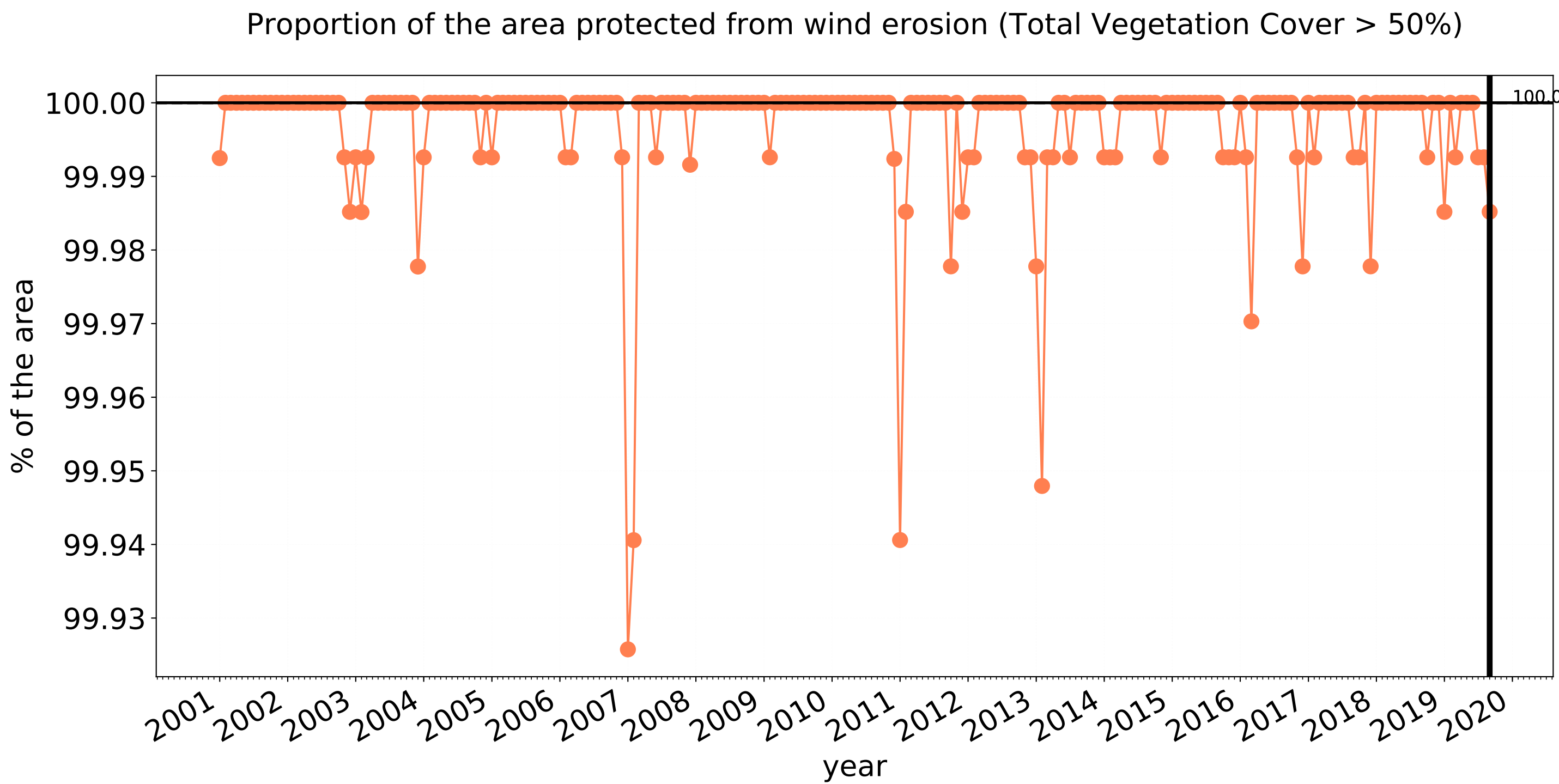


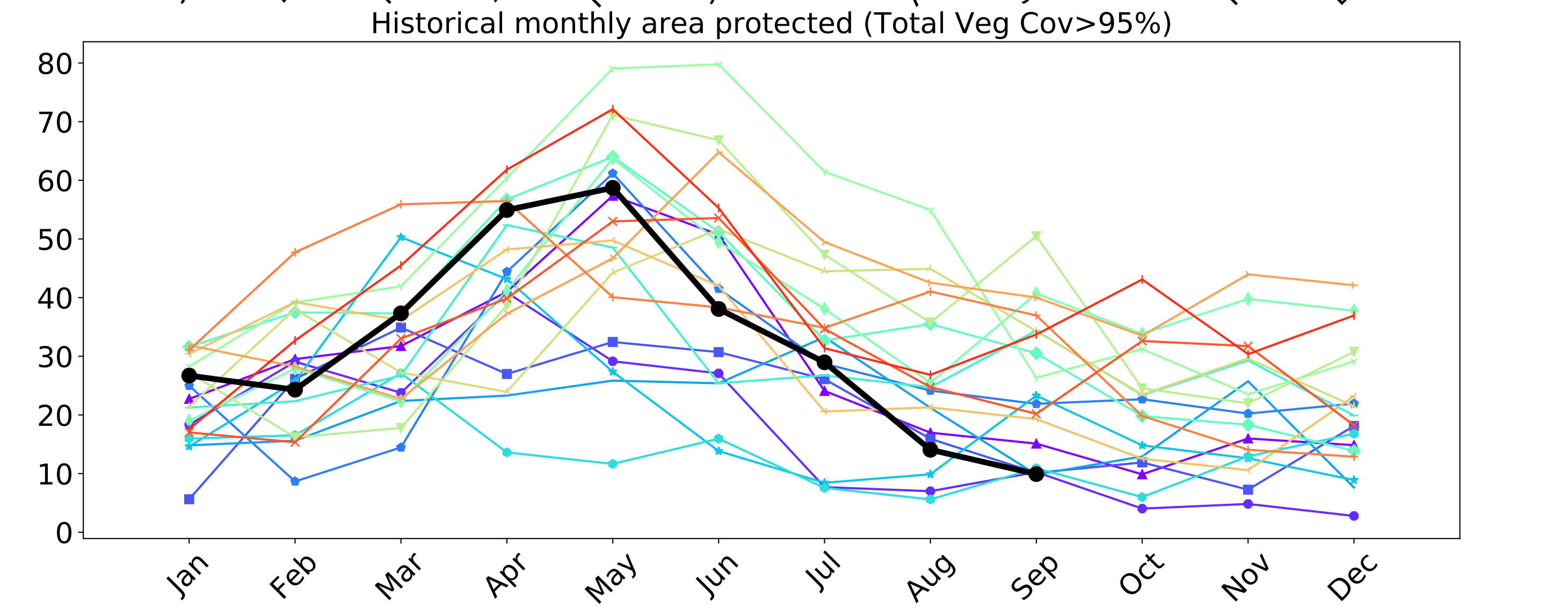
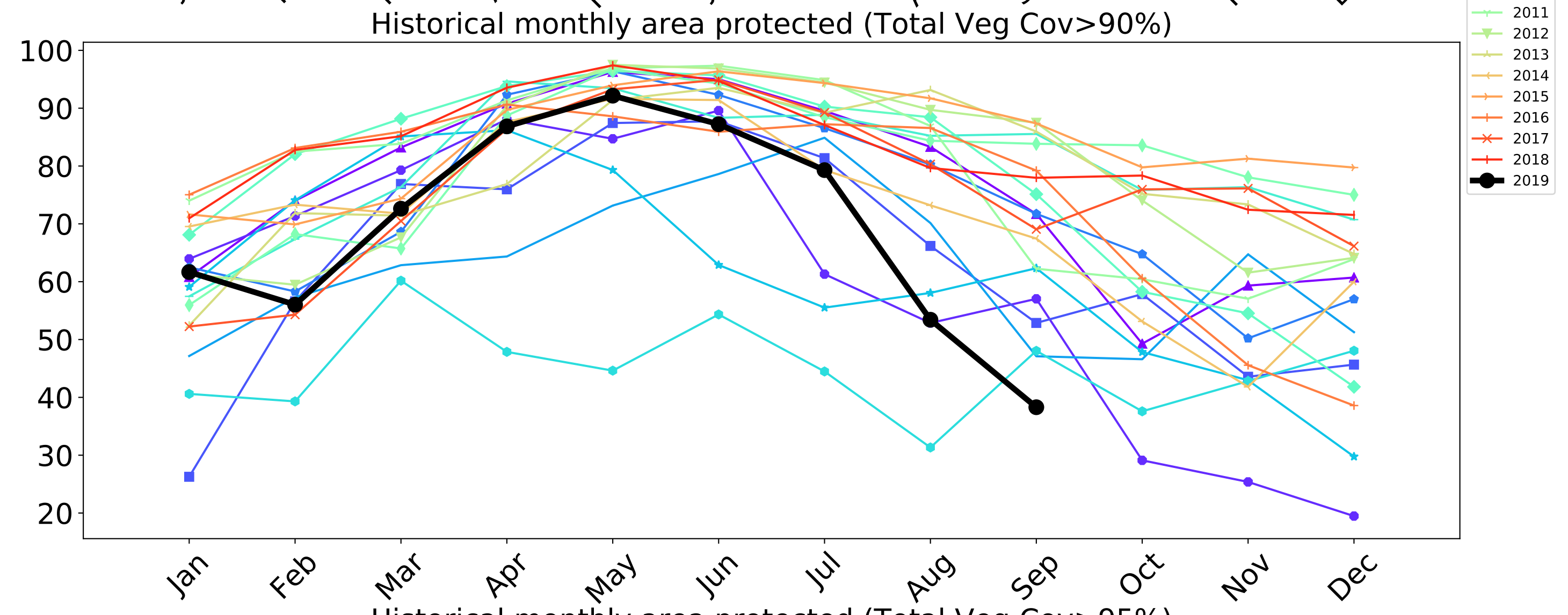
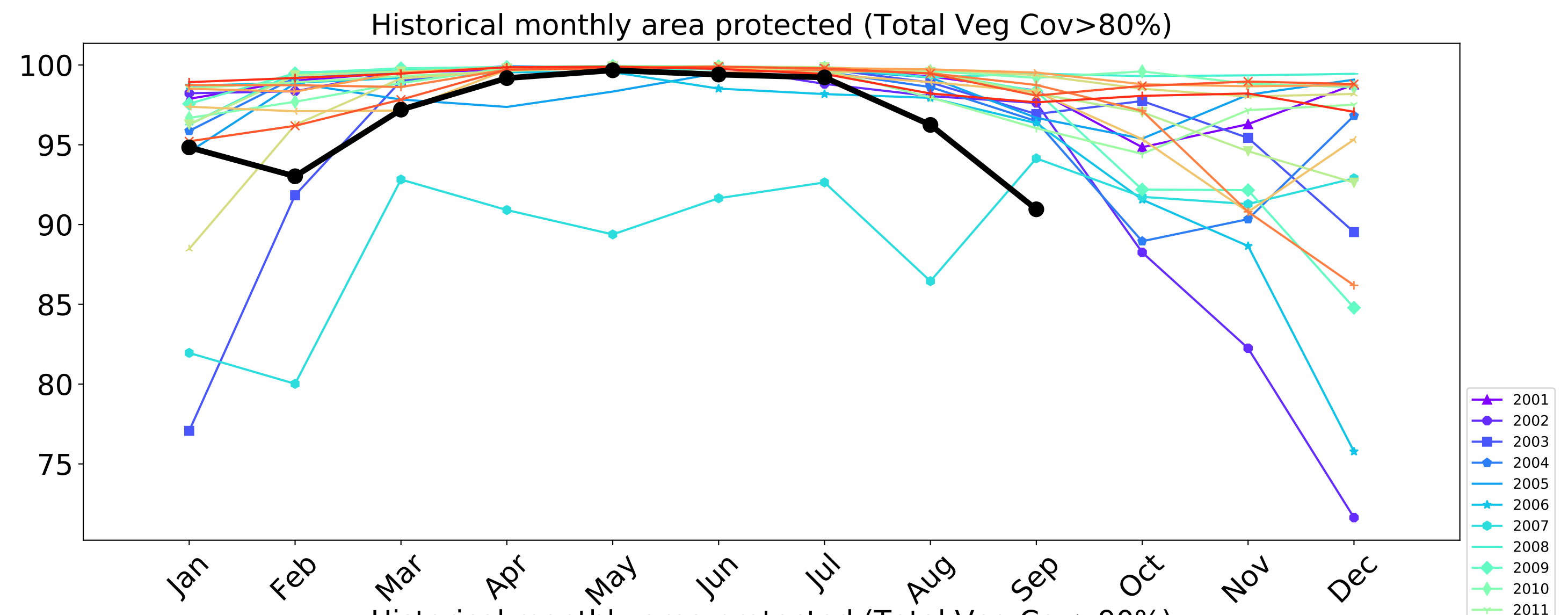
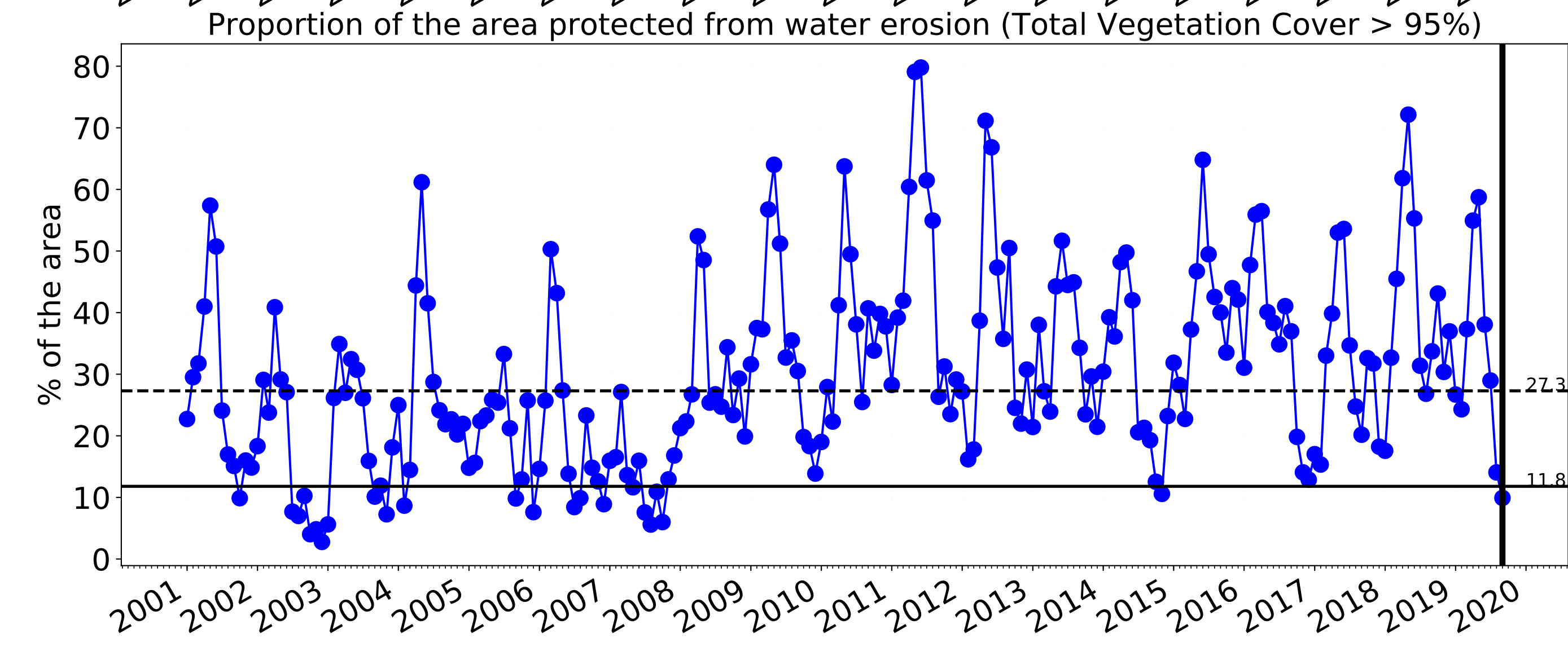
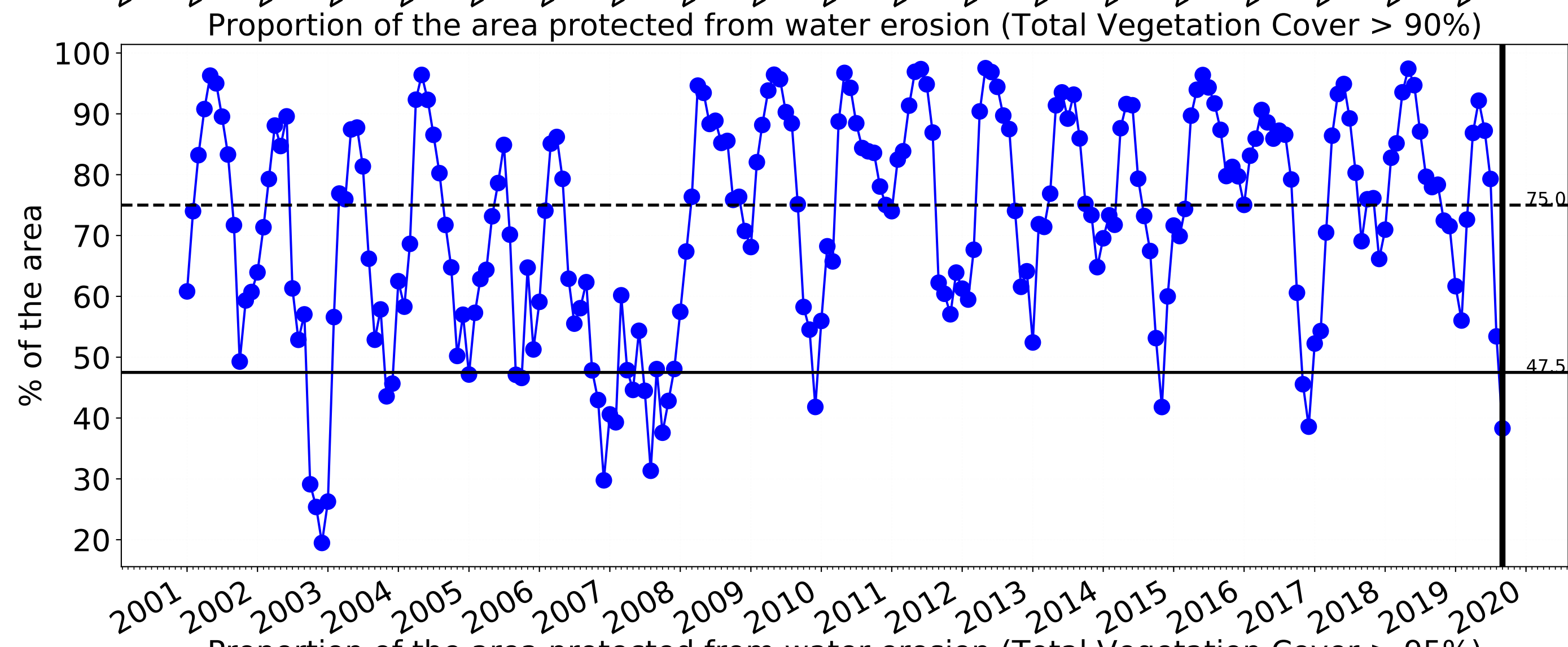
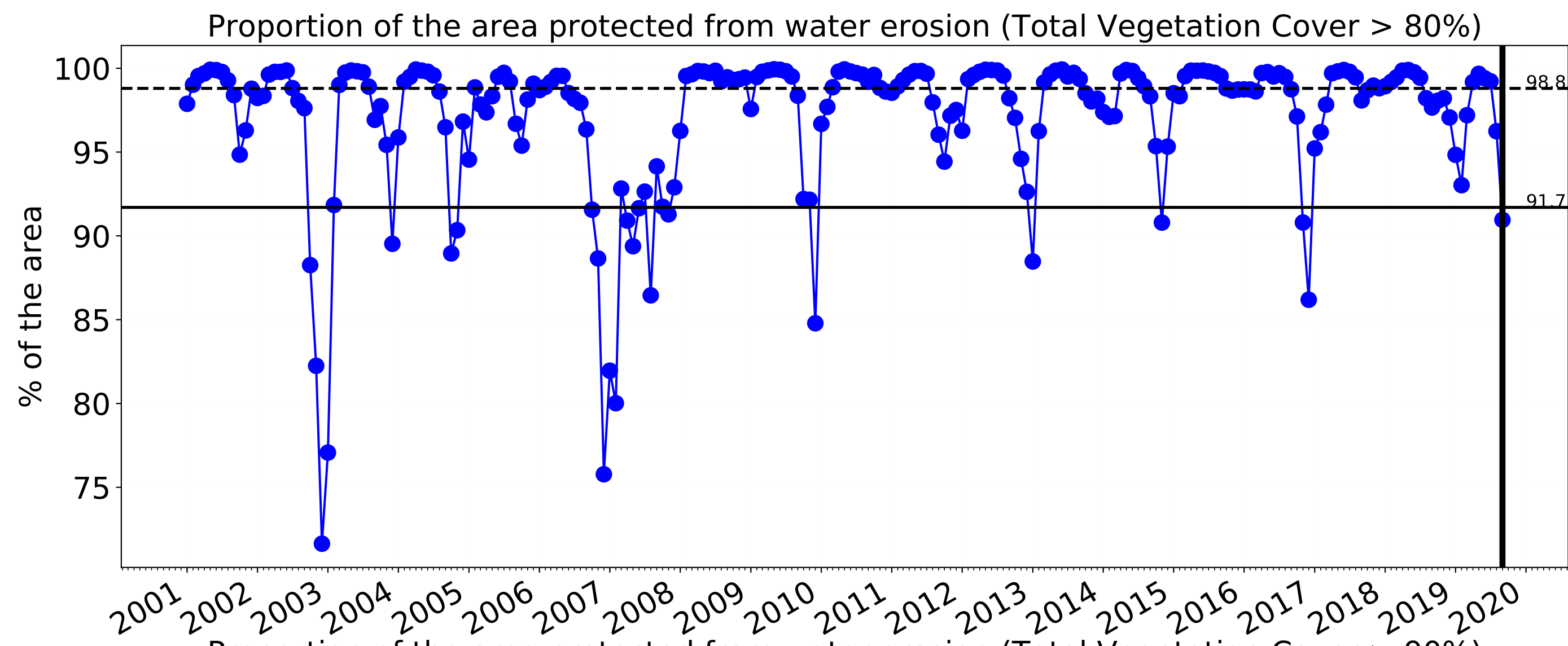
National
Landcare
Programme



Planning,
Industry &
Environment

Grazing timeseries

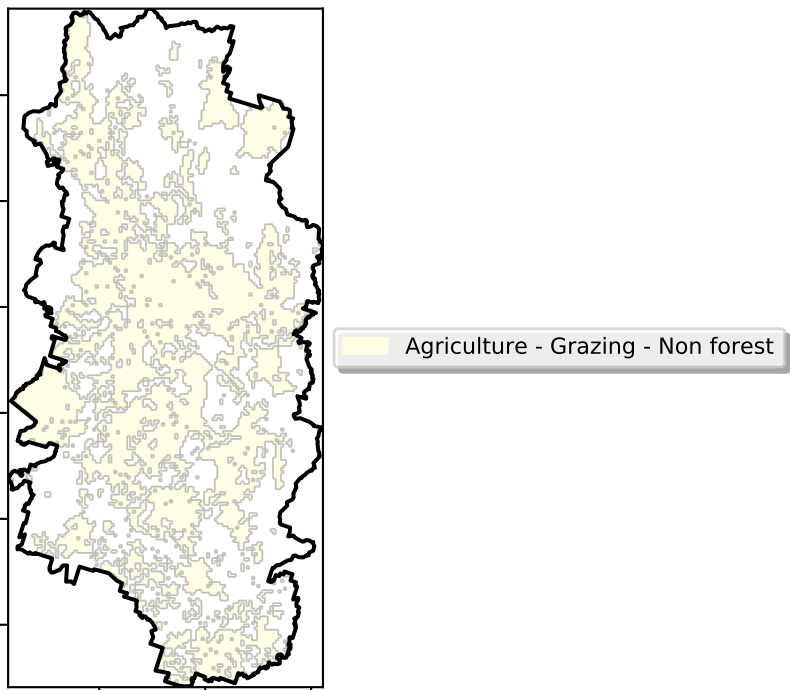




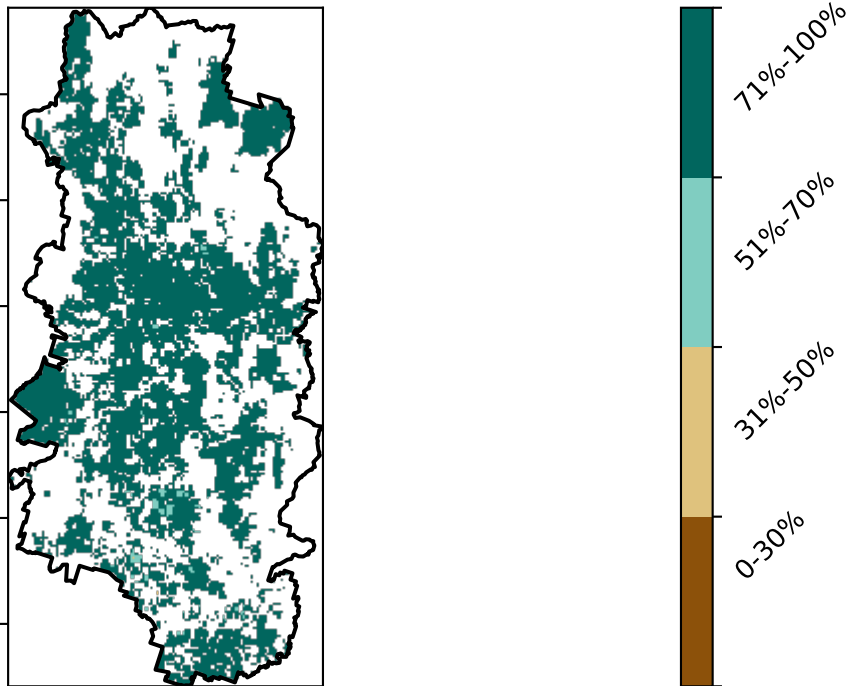
Grazing non forest

Land use and forest cover

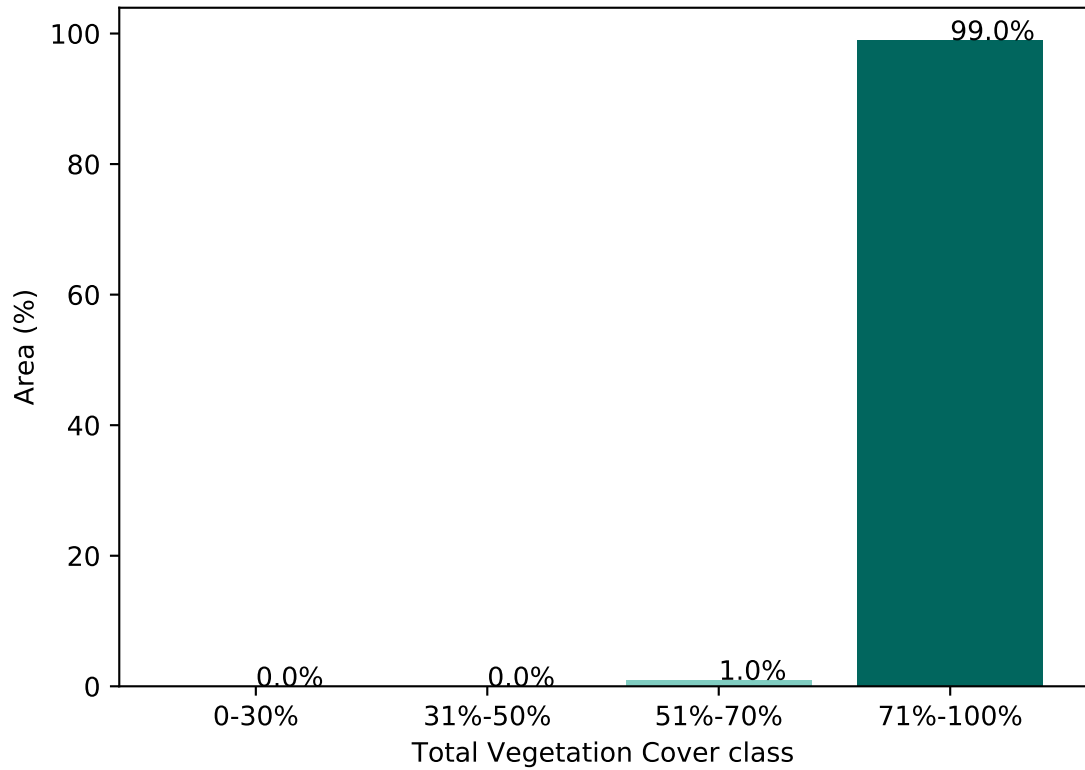
Landuse map of area based on 2015 catchment scale landuse and Australia's National Forest Inventory, where no forest is < 20% tree cover, sparse is 20 to 50% and dense > 50% tree cover.



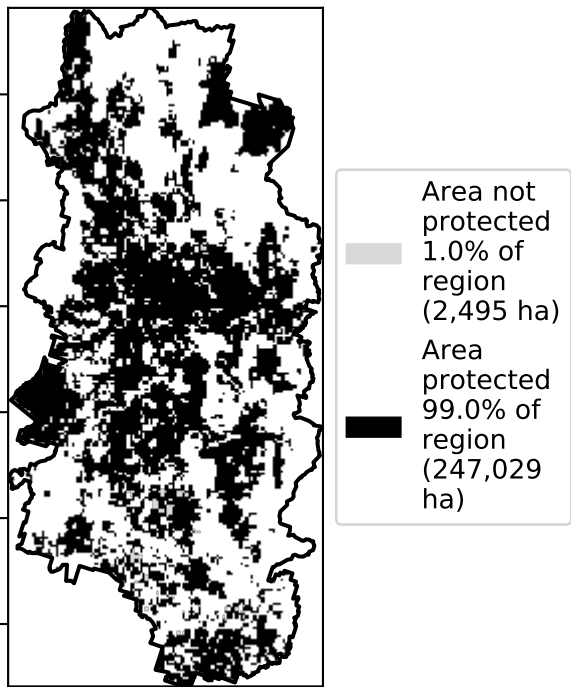
Total Vegetation Cover [%]



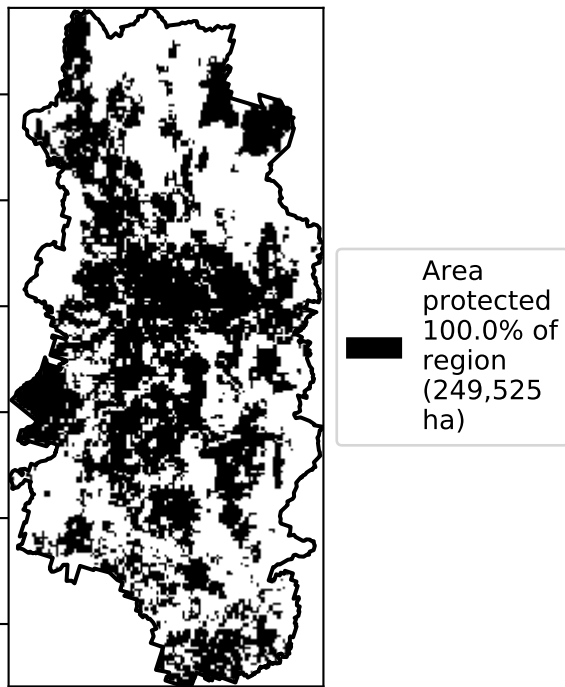
Proportion of vegetation cover class in area



% Area protected from water erosion (>70%)

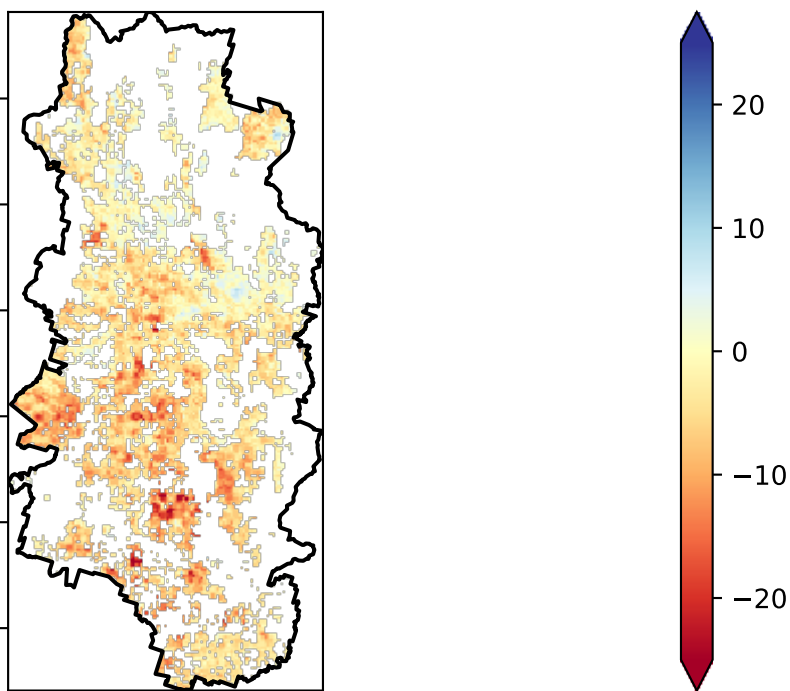


% Area protected from wind erosion (>50%)



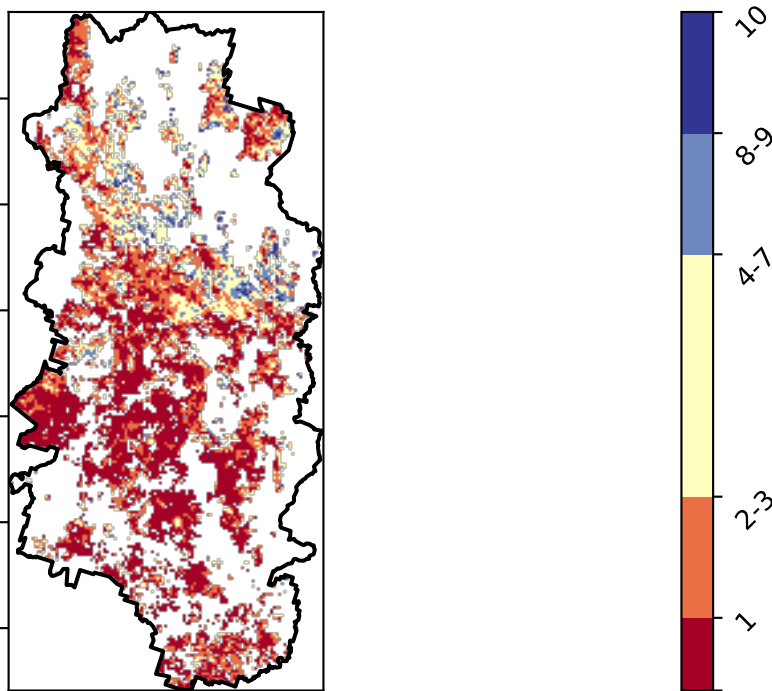
Total Vegetation Cover Anomaly [%]

Anomaly show how many percentage 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.



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.

Total Vegetation Cover Decile [%]



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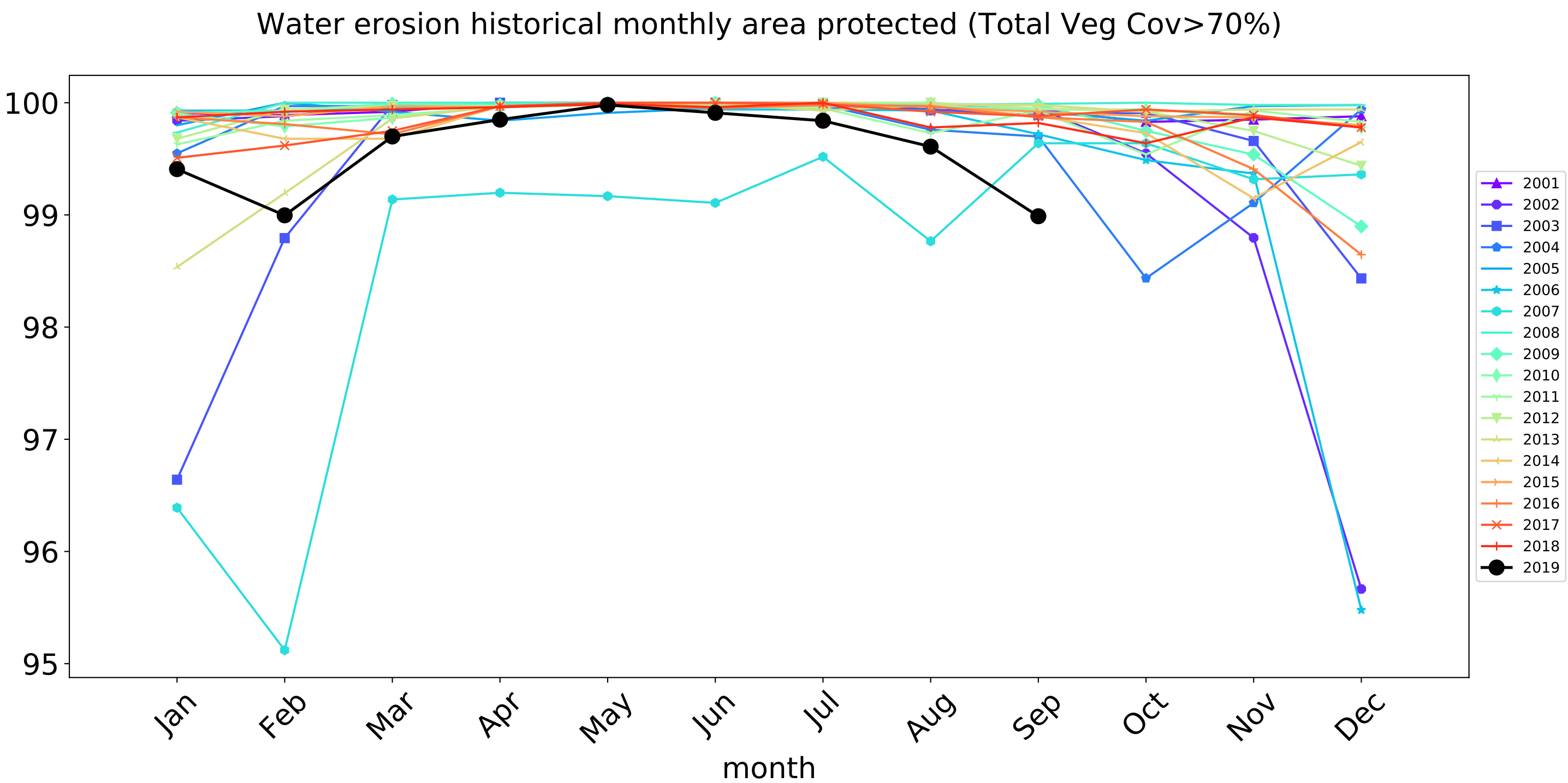
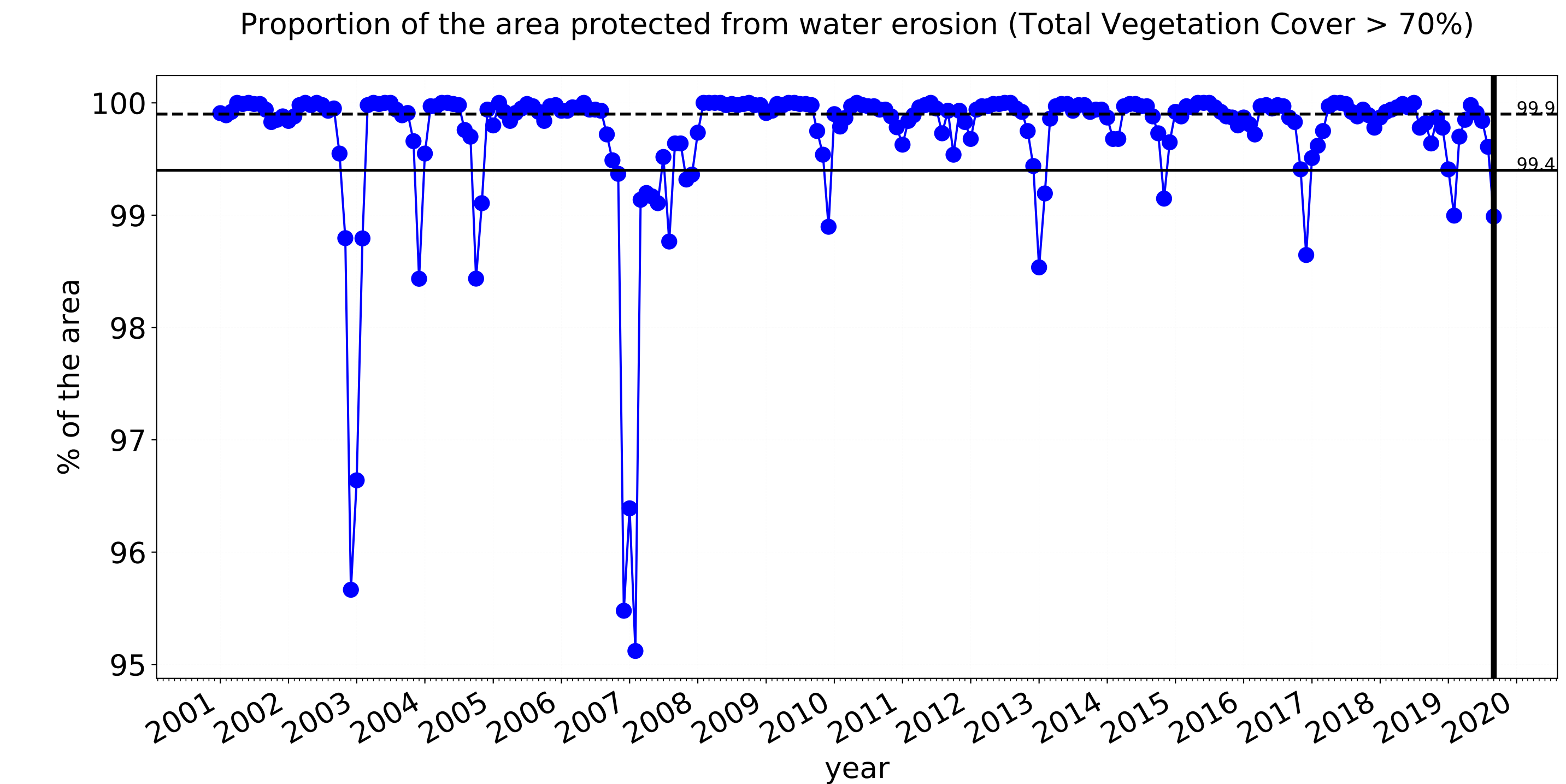
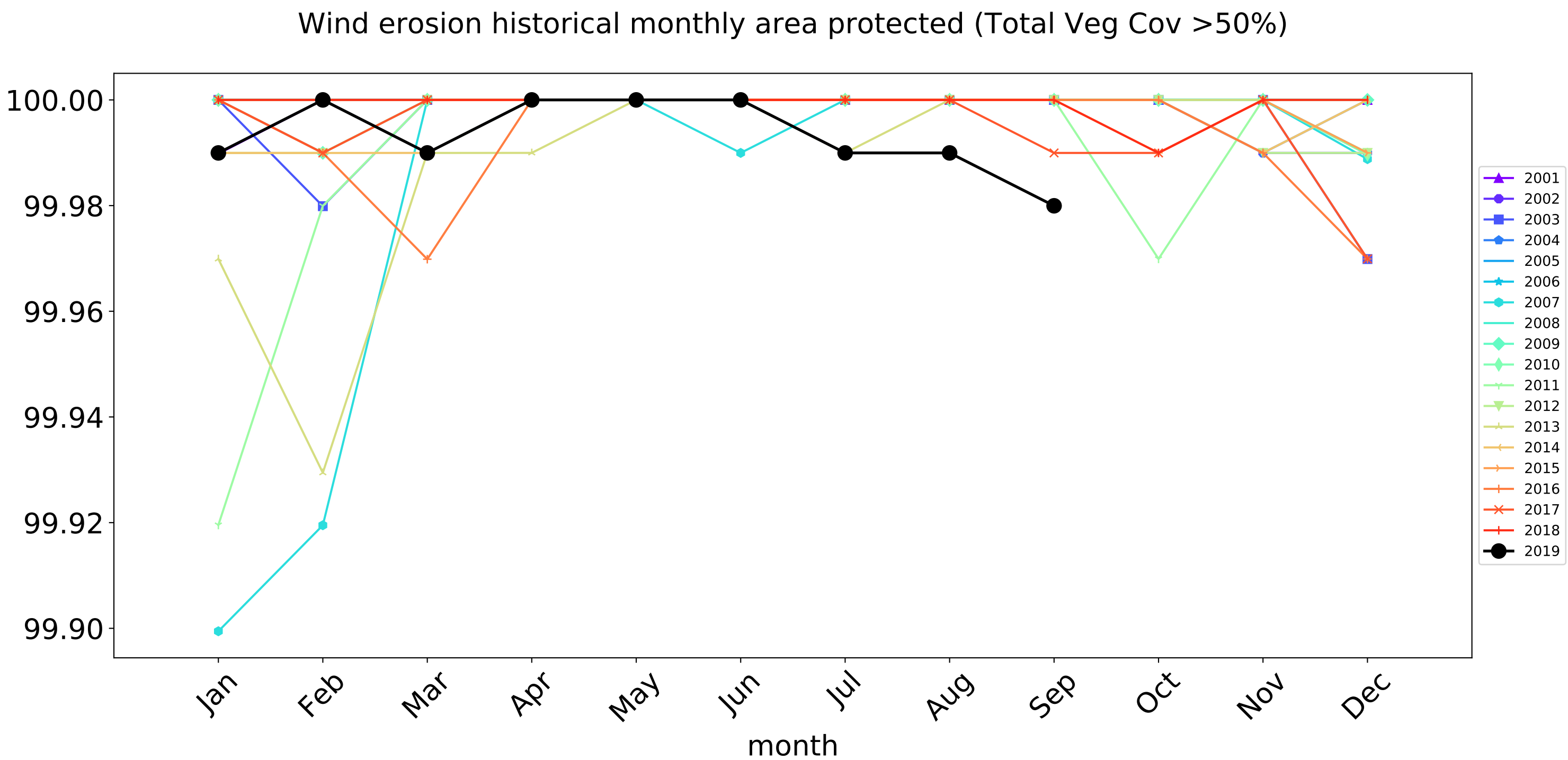
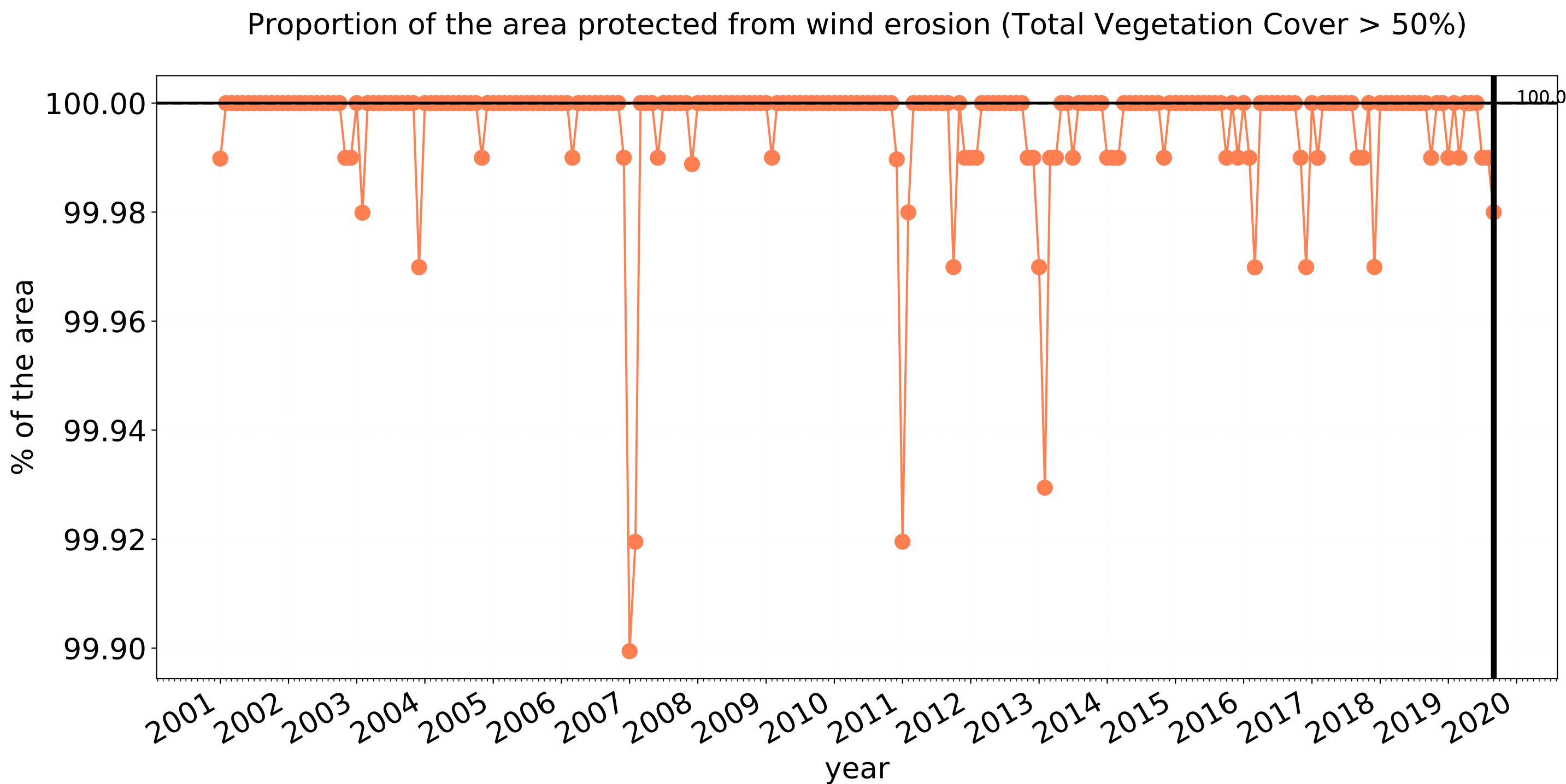


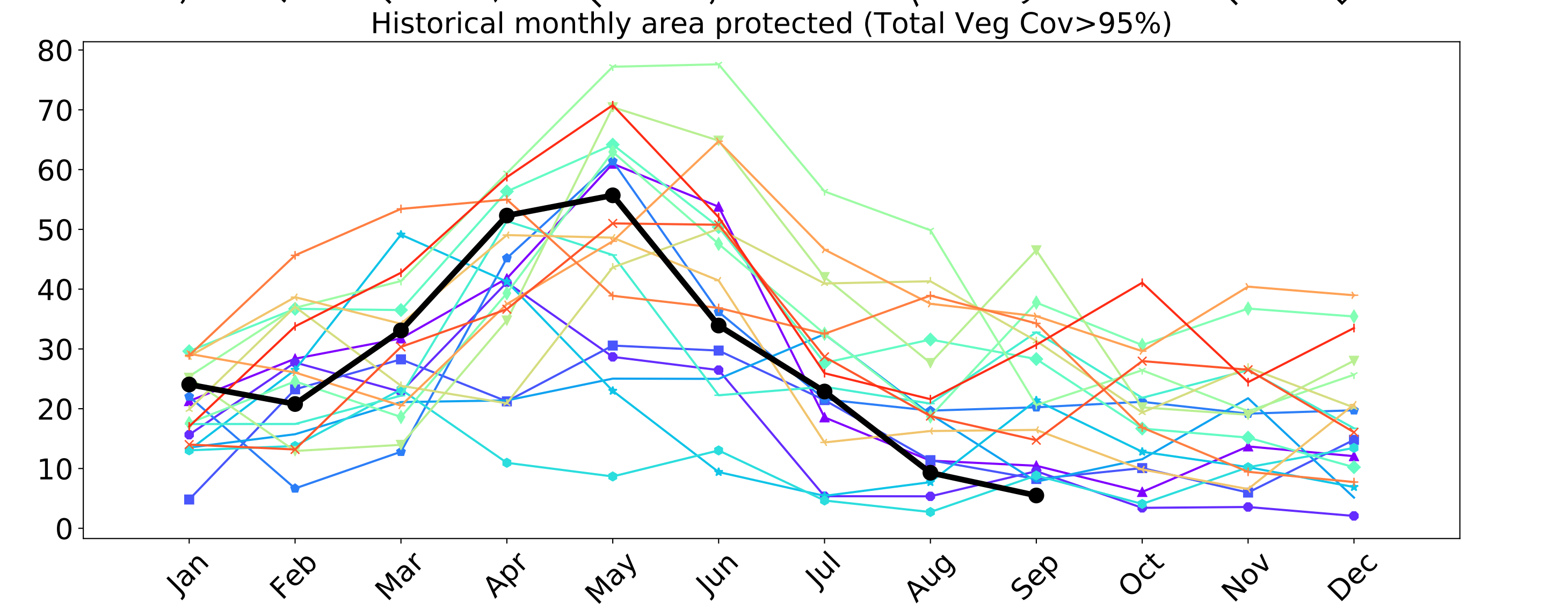
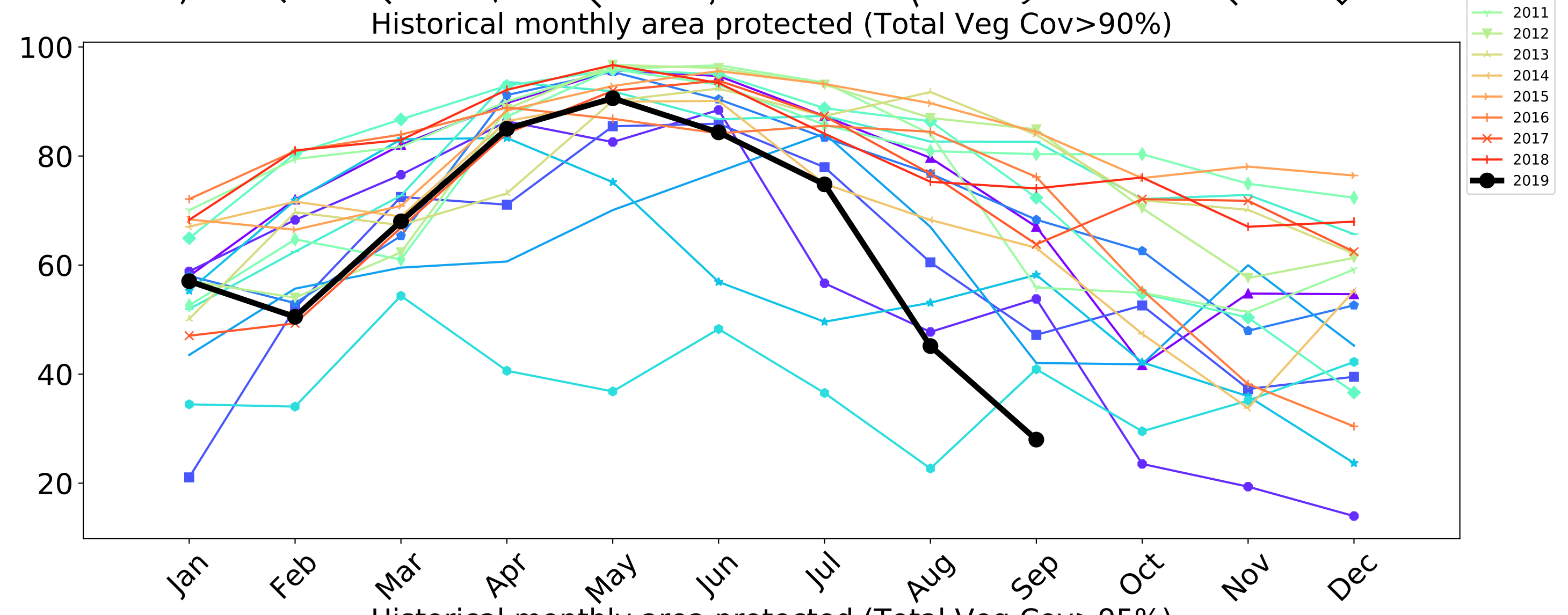
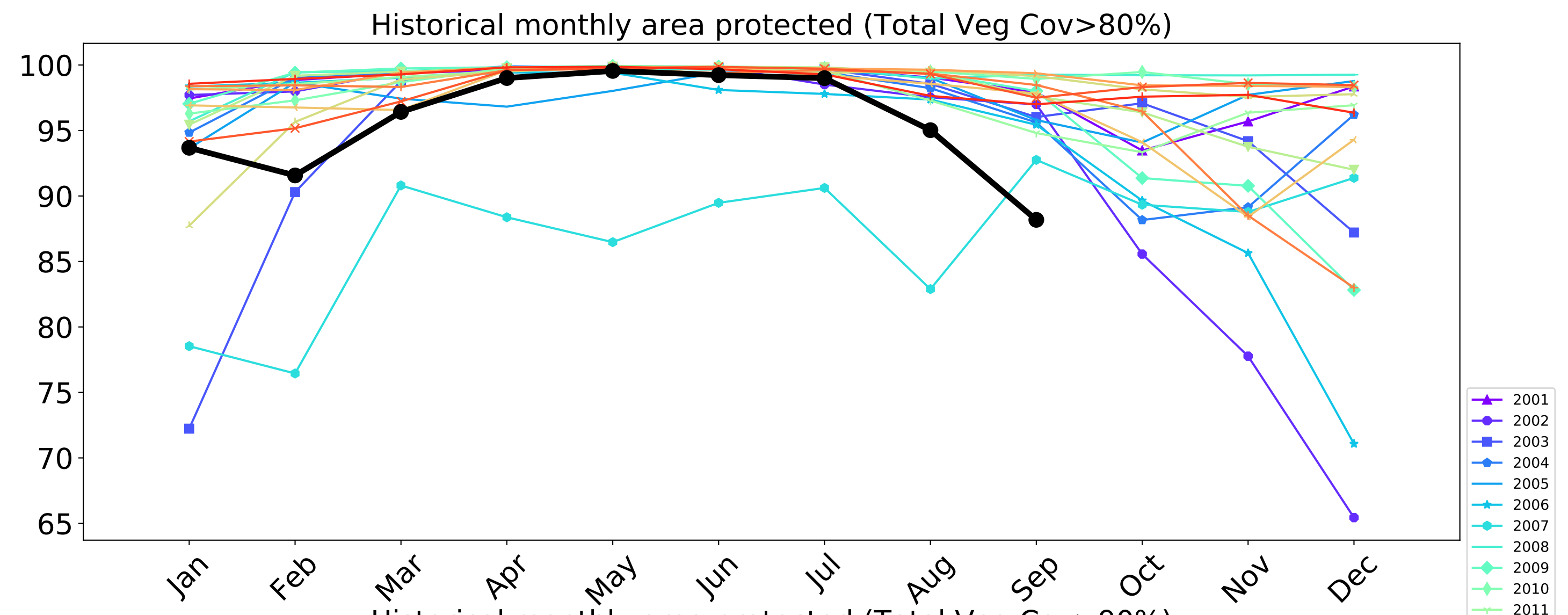
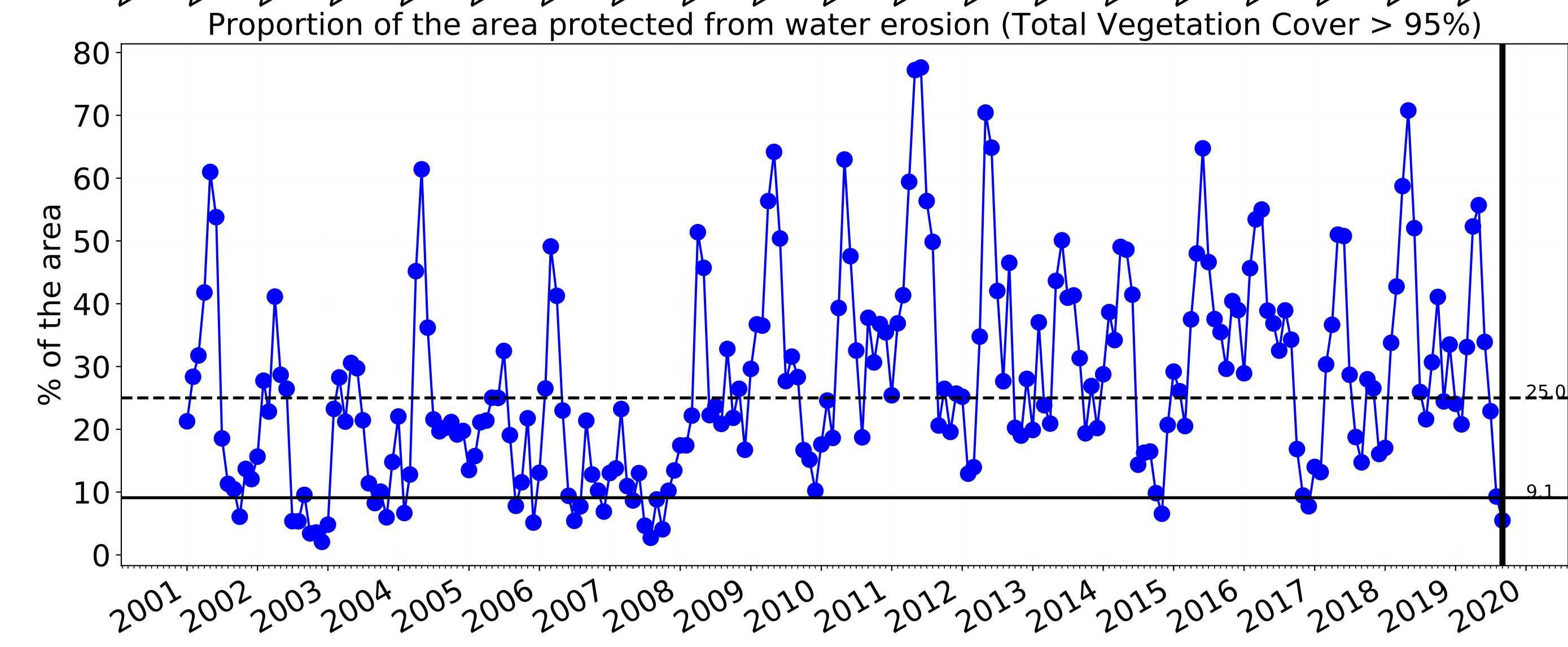
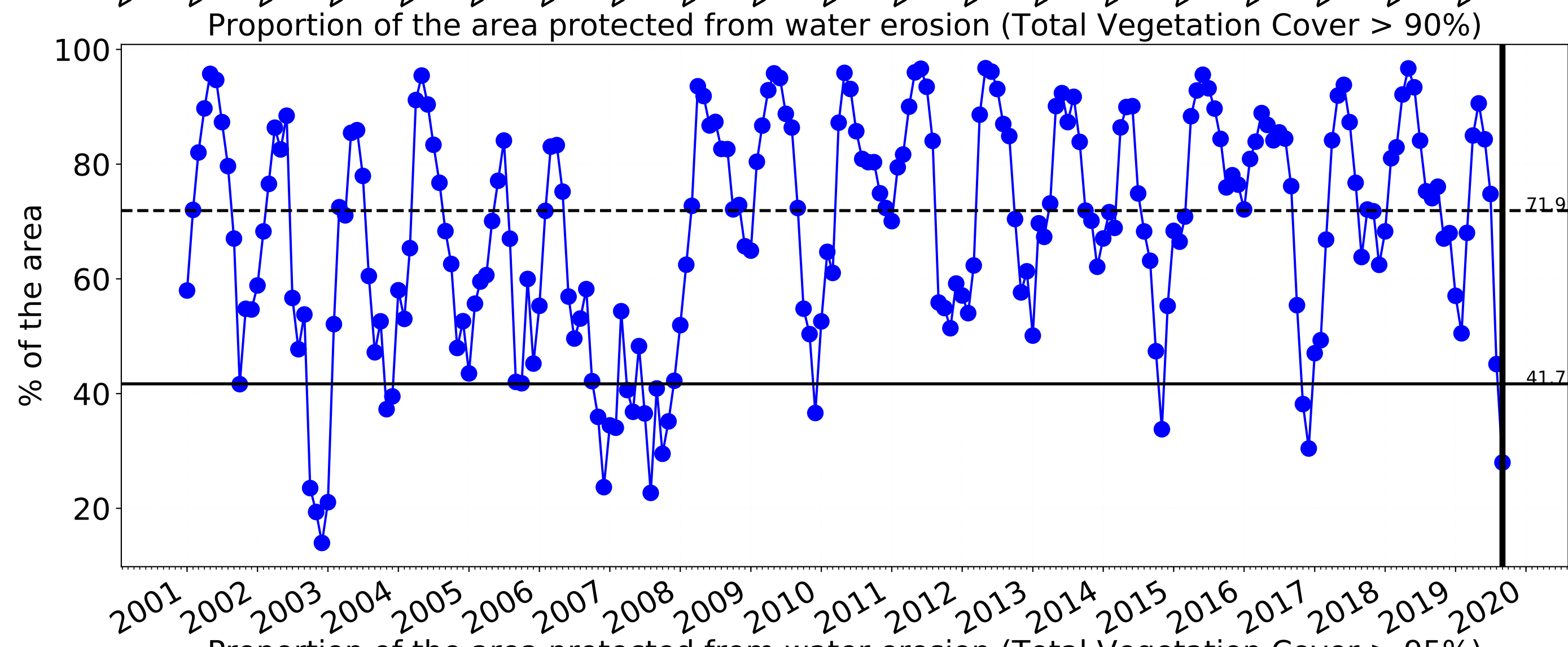
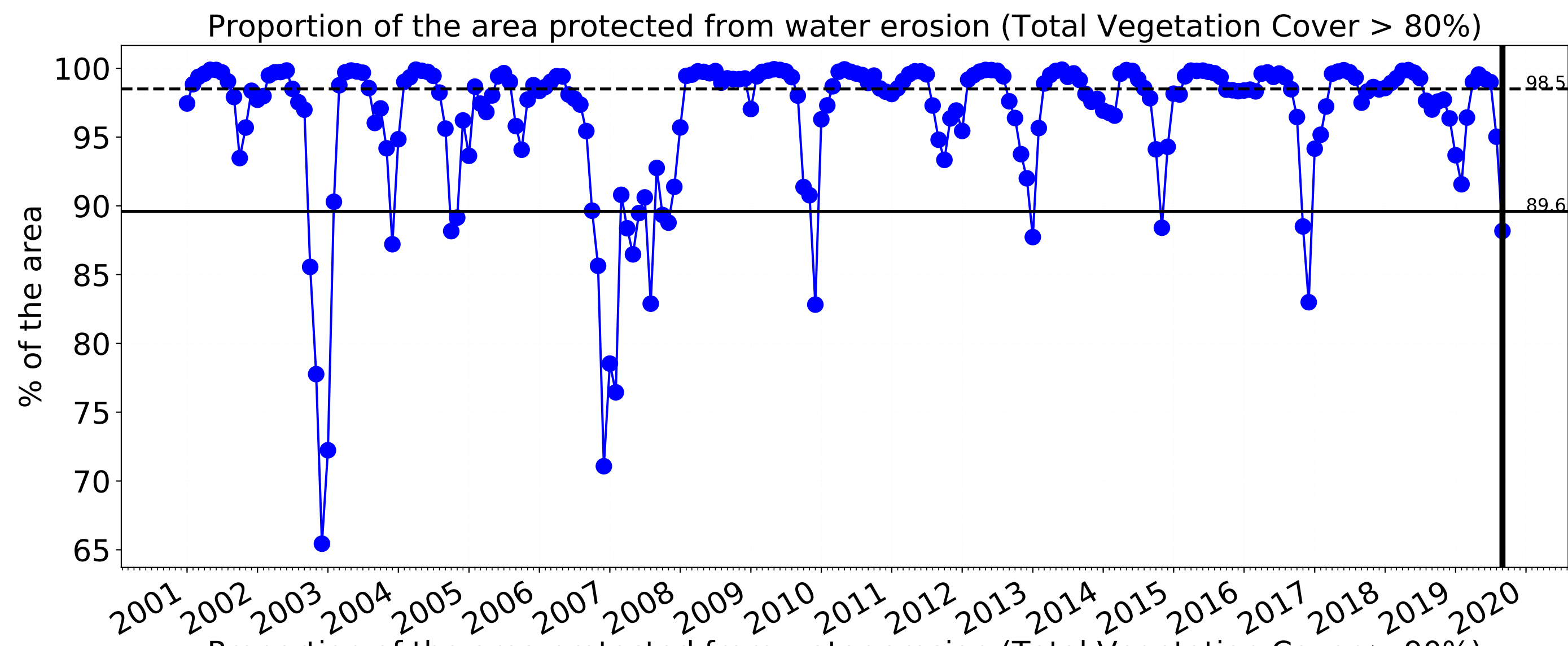
National
Landcare
Programme



Planning,
Industry &
Environment

Grazing non forest timeseries

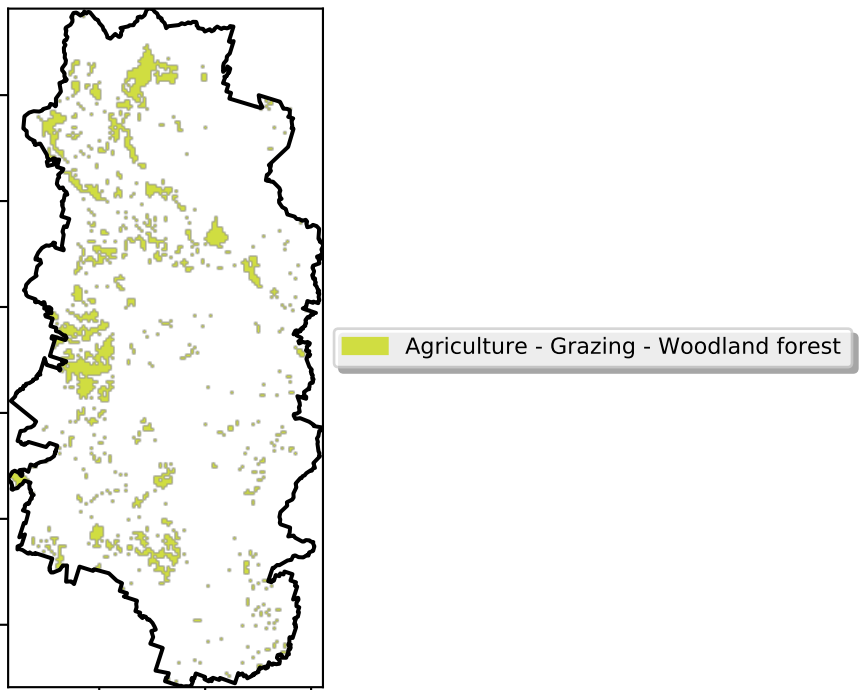




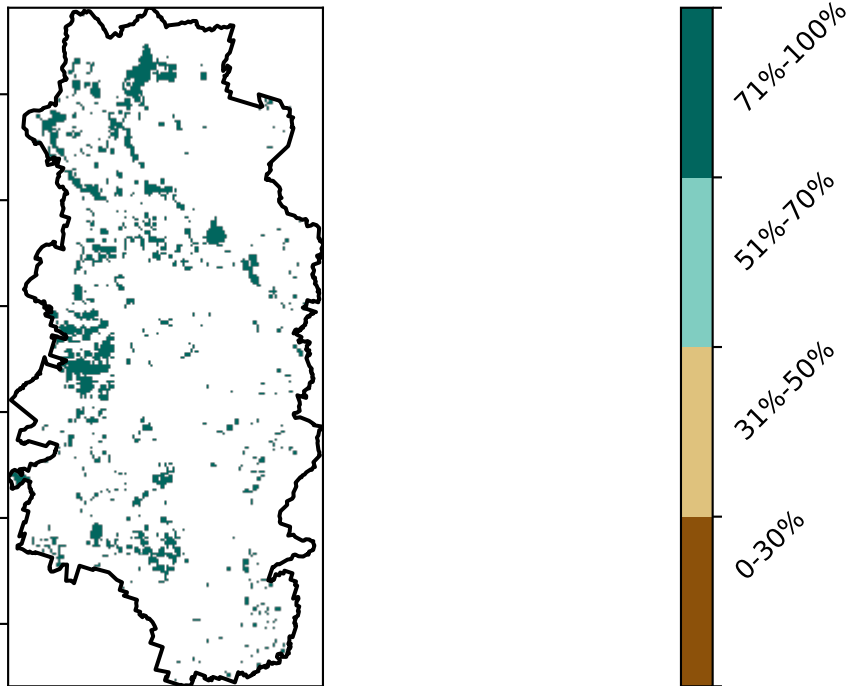
Grazing Woodland forest

Land use and forest cover

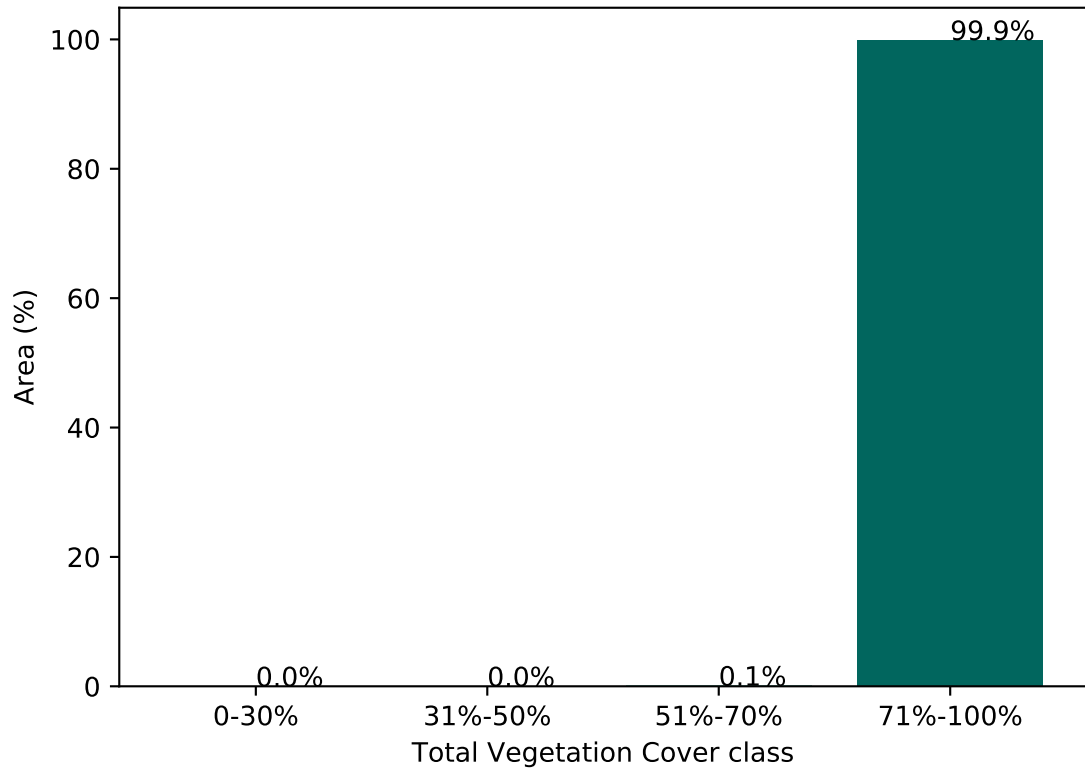
Landuse map of area based on 2015 catchment scale landuse and Australia's National Forest Inventory, where no forest is < 20% tree cover, sparse is 20 to 50% and dense > 50% tree cover.



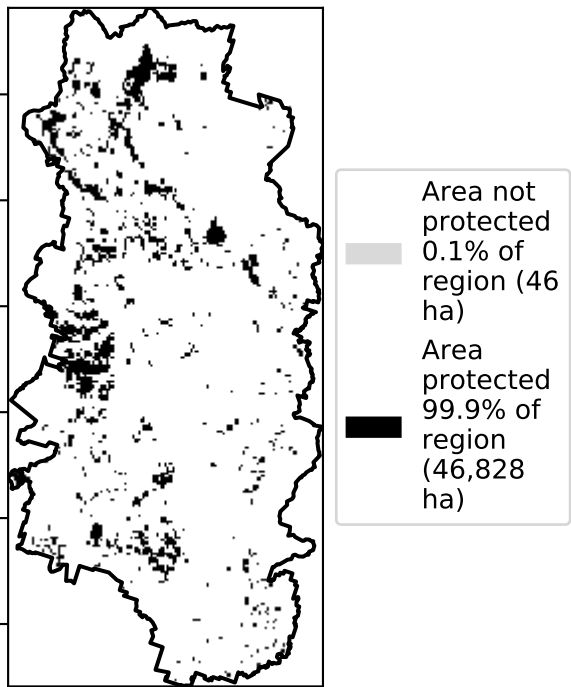
Total Vegetation Cover [%]



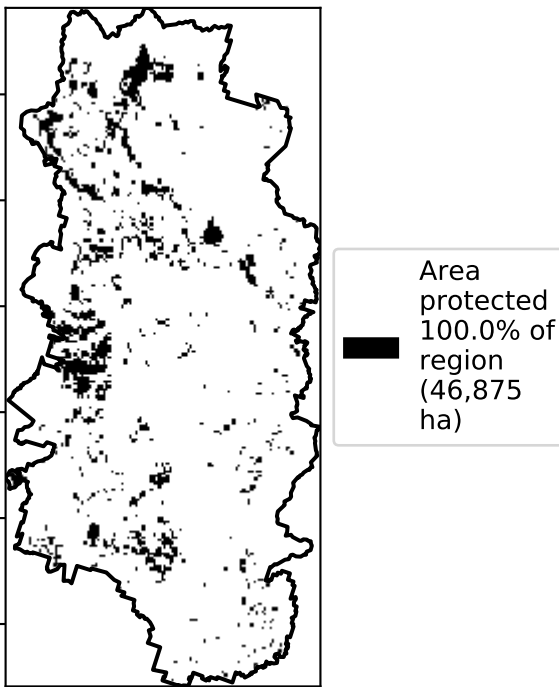
Proportion of vegetation cover class in area



% Area protected from water erosion (>70%)

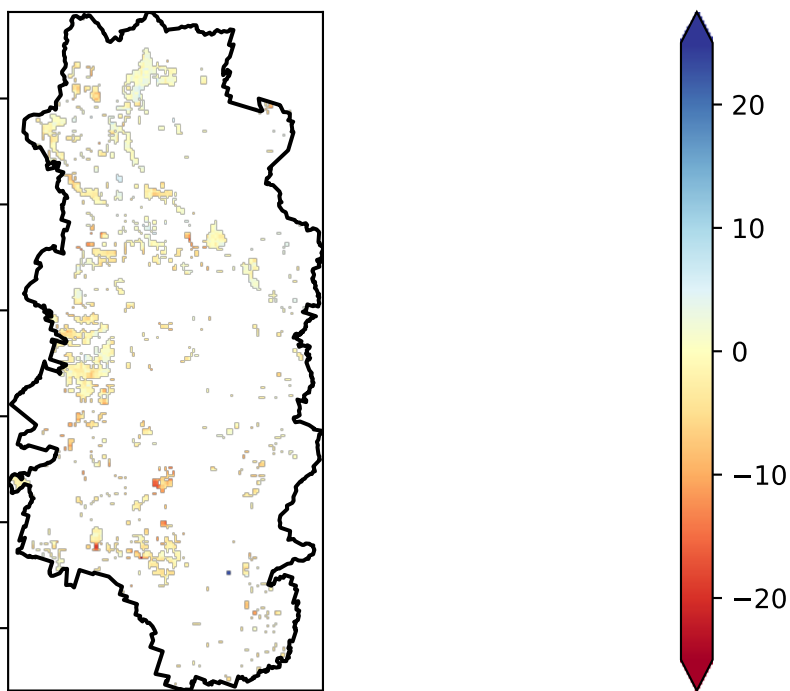


% Area protected from wind erosion (>50%)



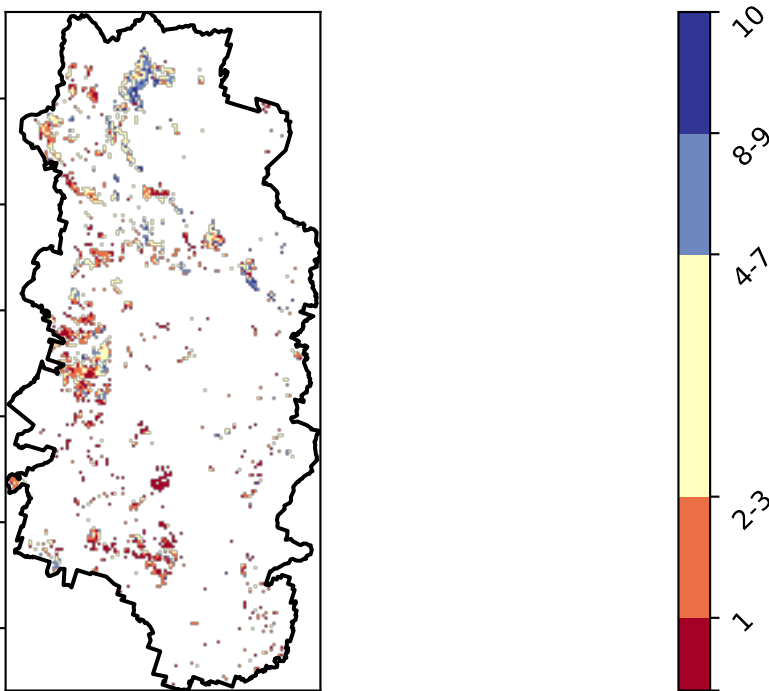
Total Vegetation Cover Anomaly [%]

Anomaly show how many percentage 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.



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.

Total Vegetation Cover Decile [%]



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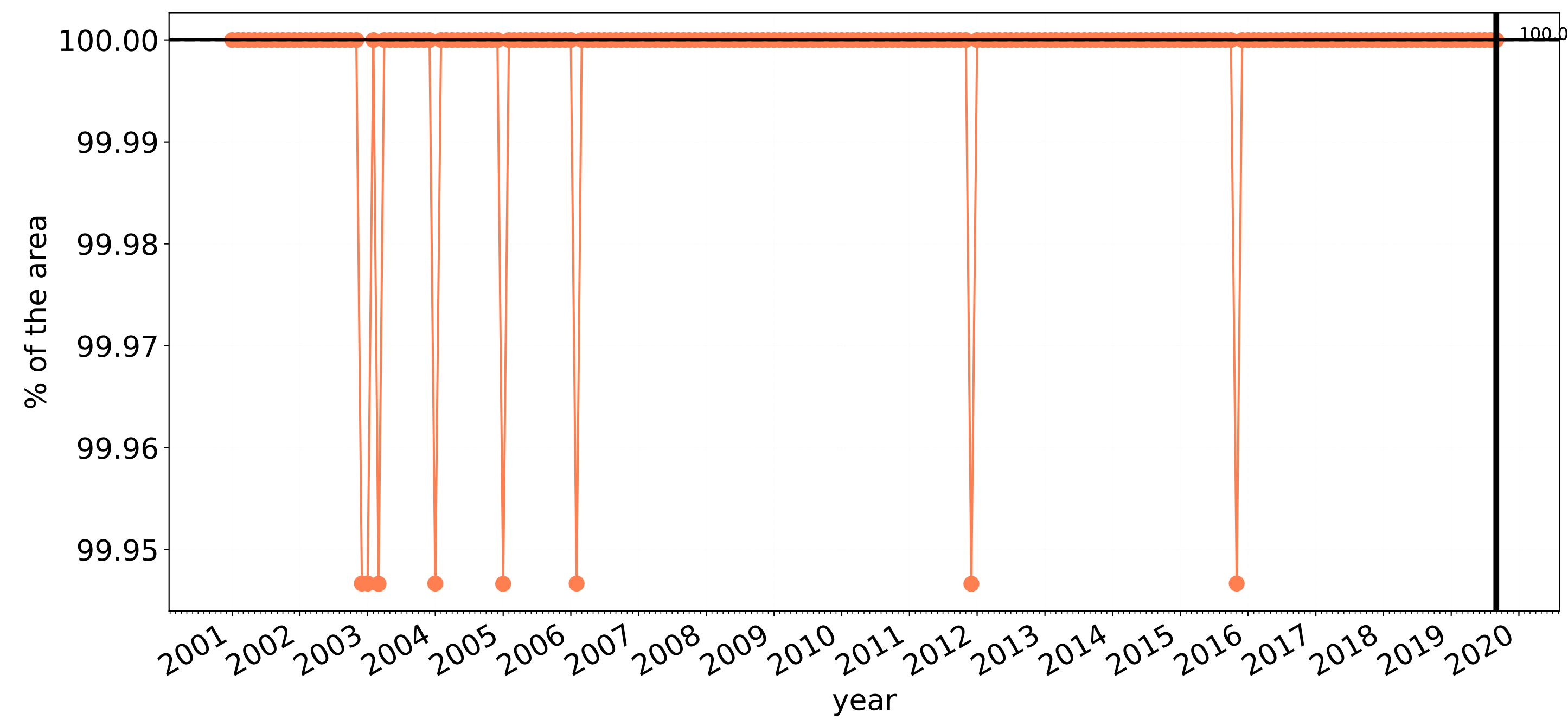
National
Landcare
Programme



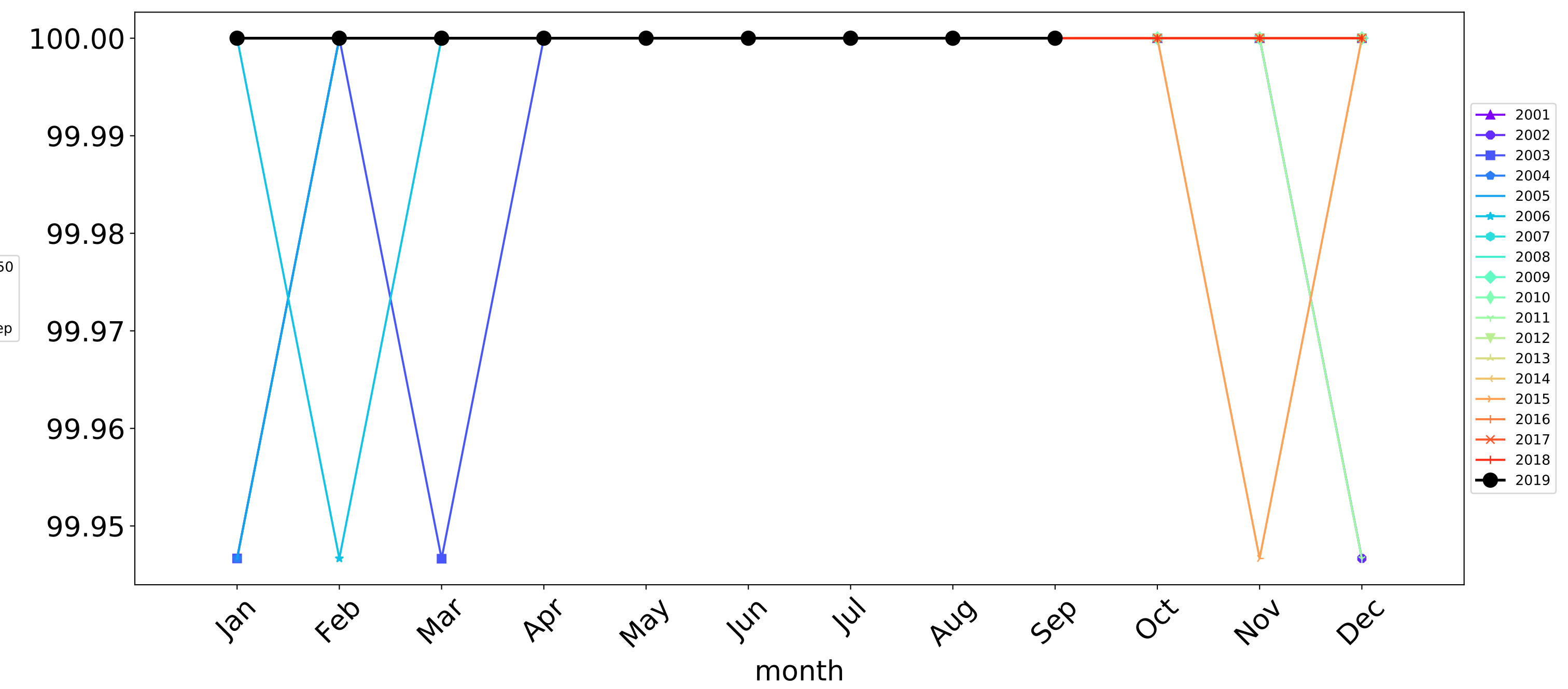
Planning,
Industry &
Environment

Grazing Woodland forest timeseries

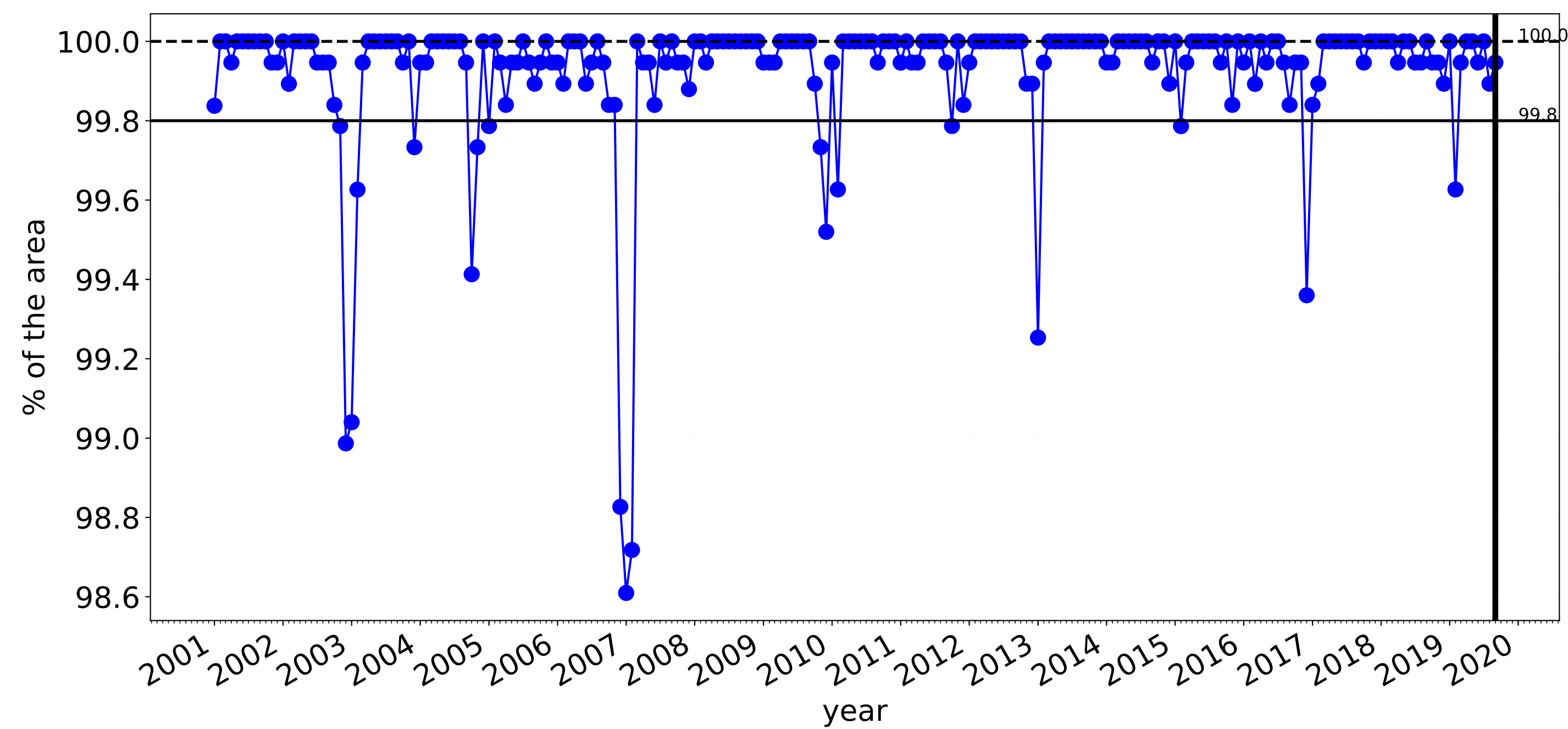
Proportion of the area protected from wind erosion (Total Vegetation Cover > 50%)



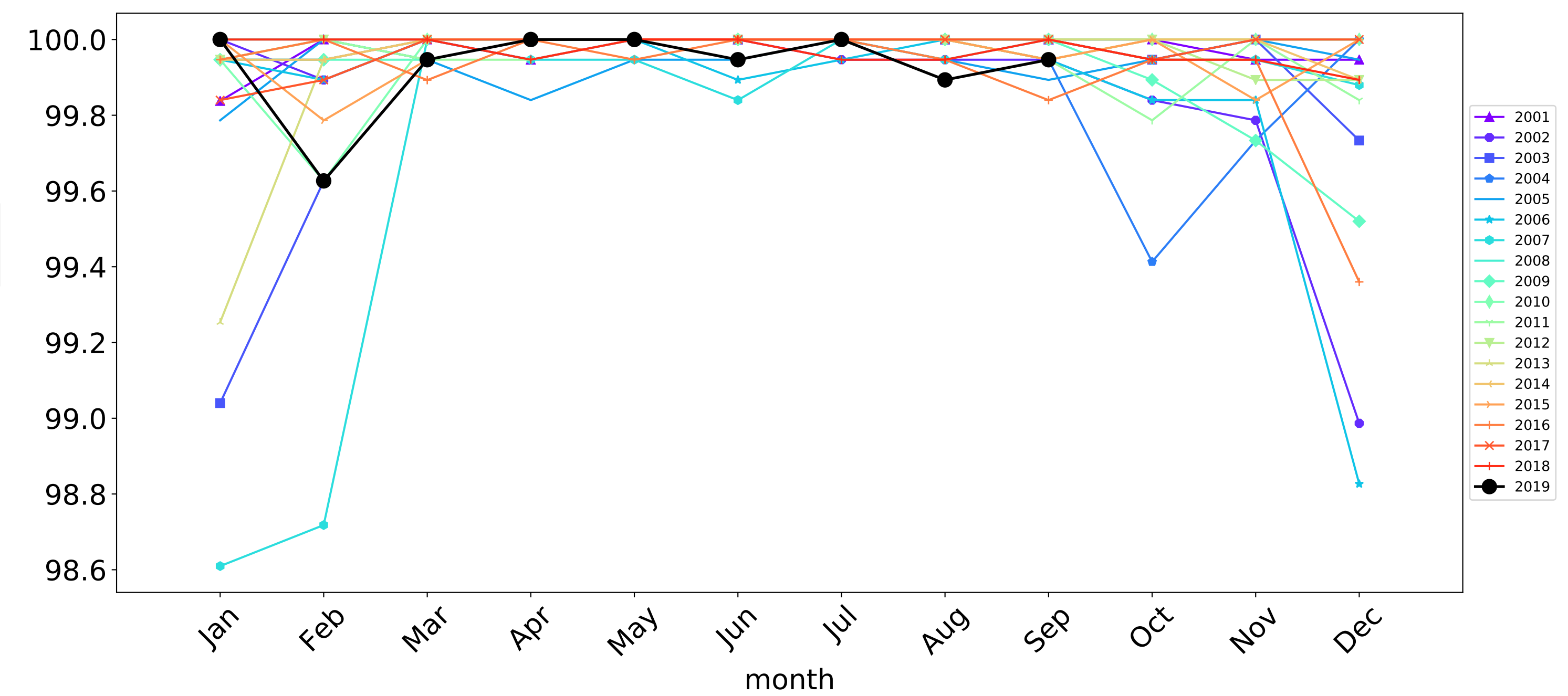
Wind erosion historical monthly area protected (Total Veg Cov >50%)

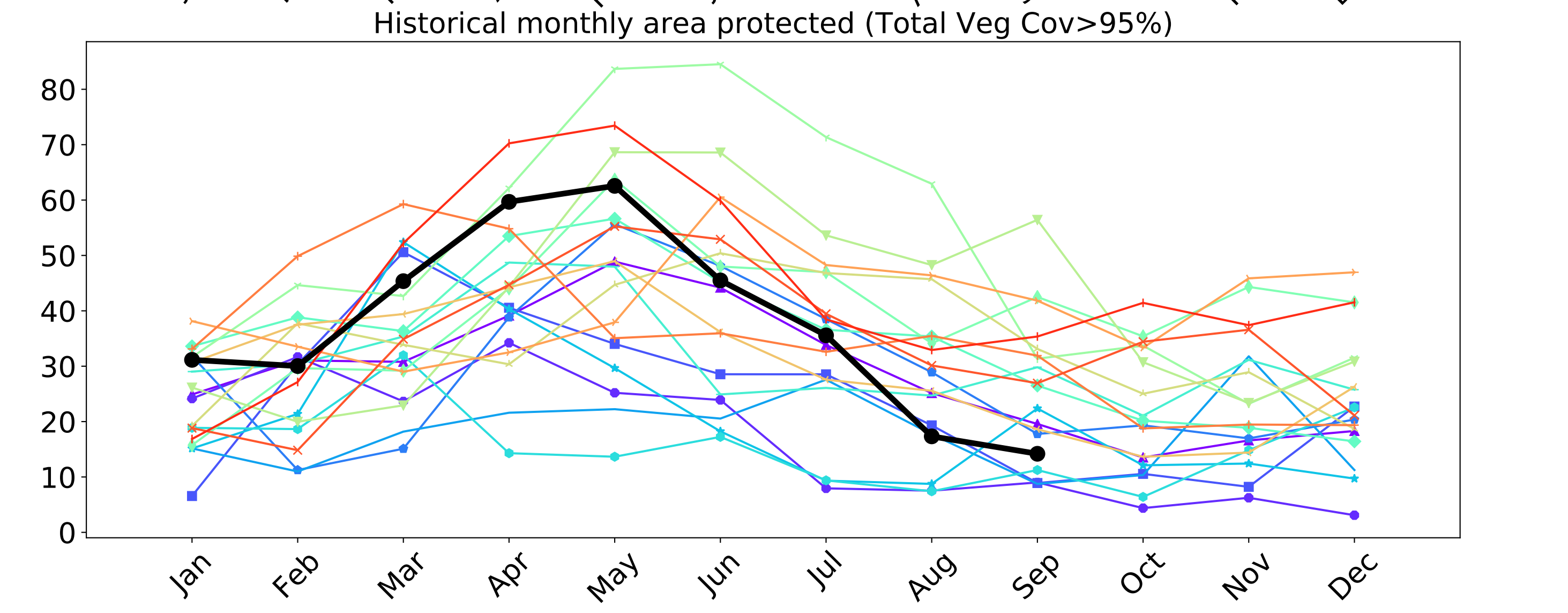
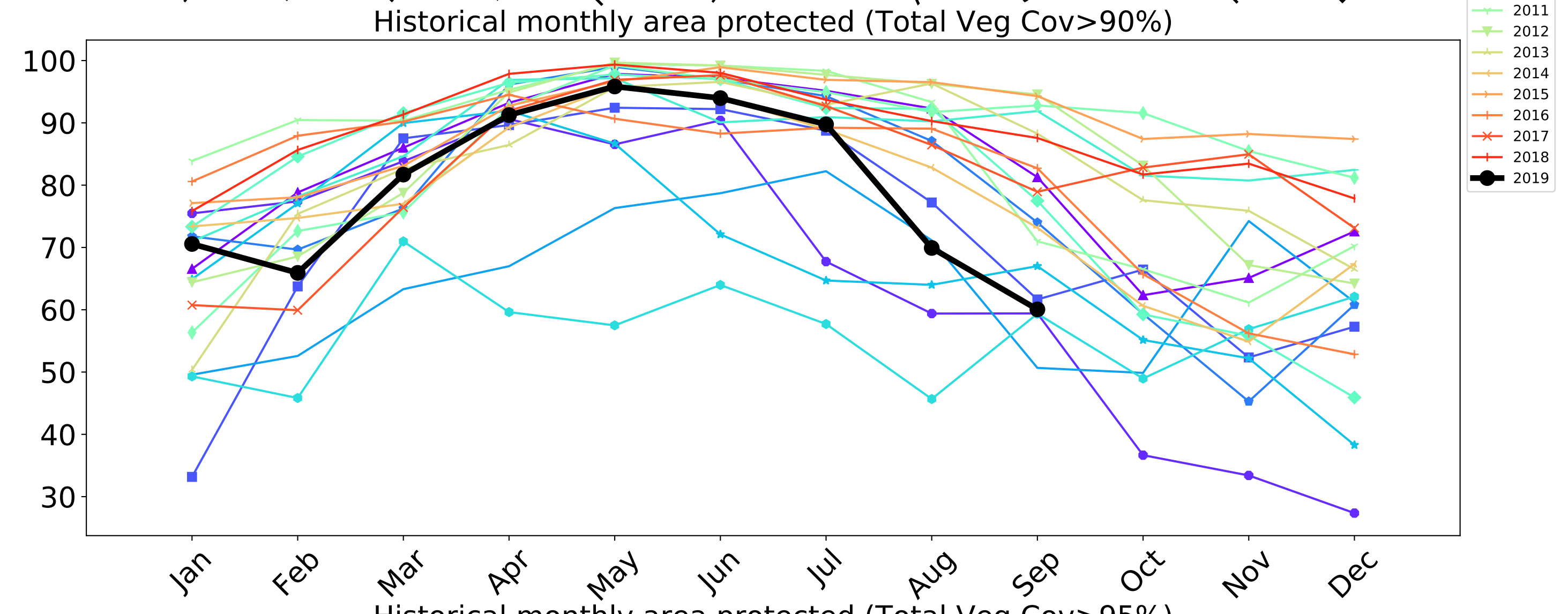
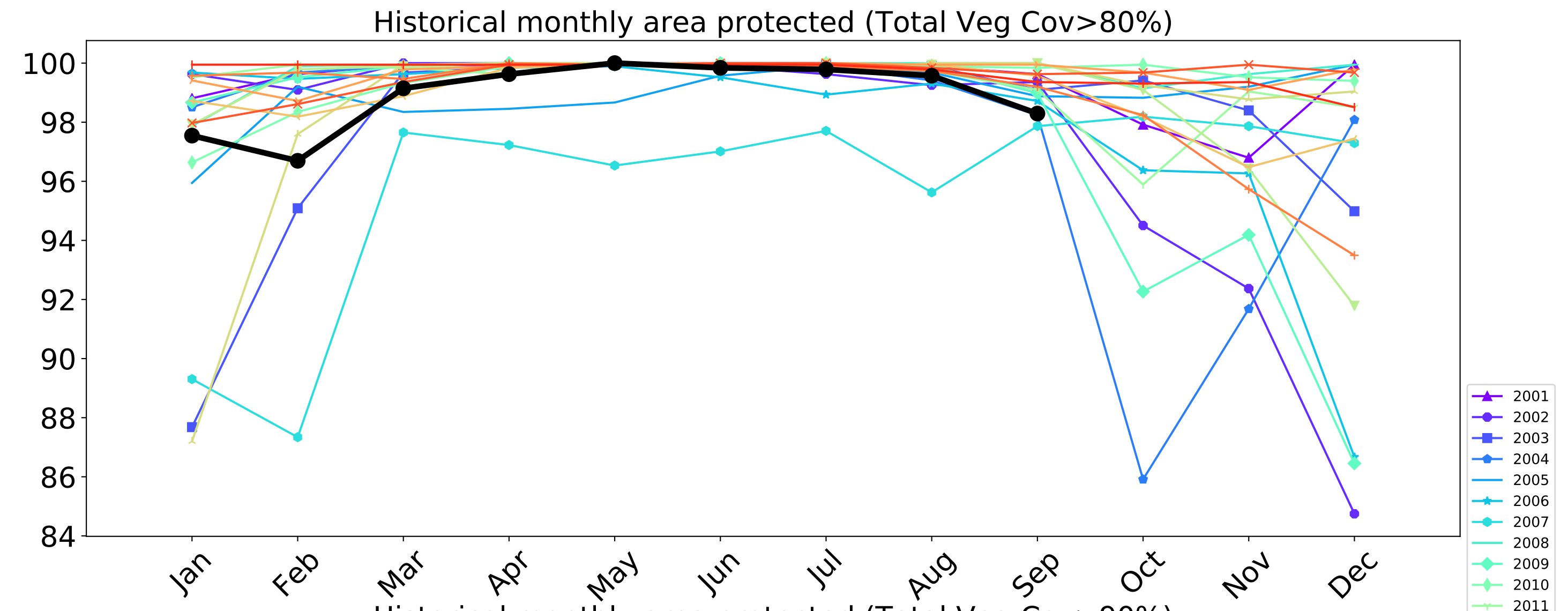
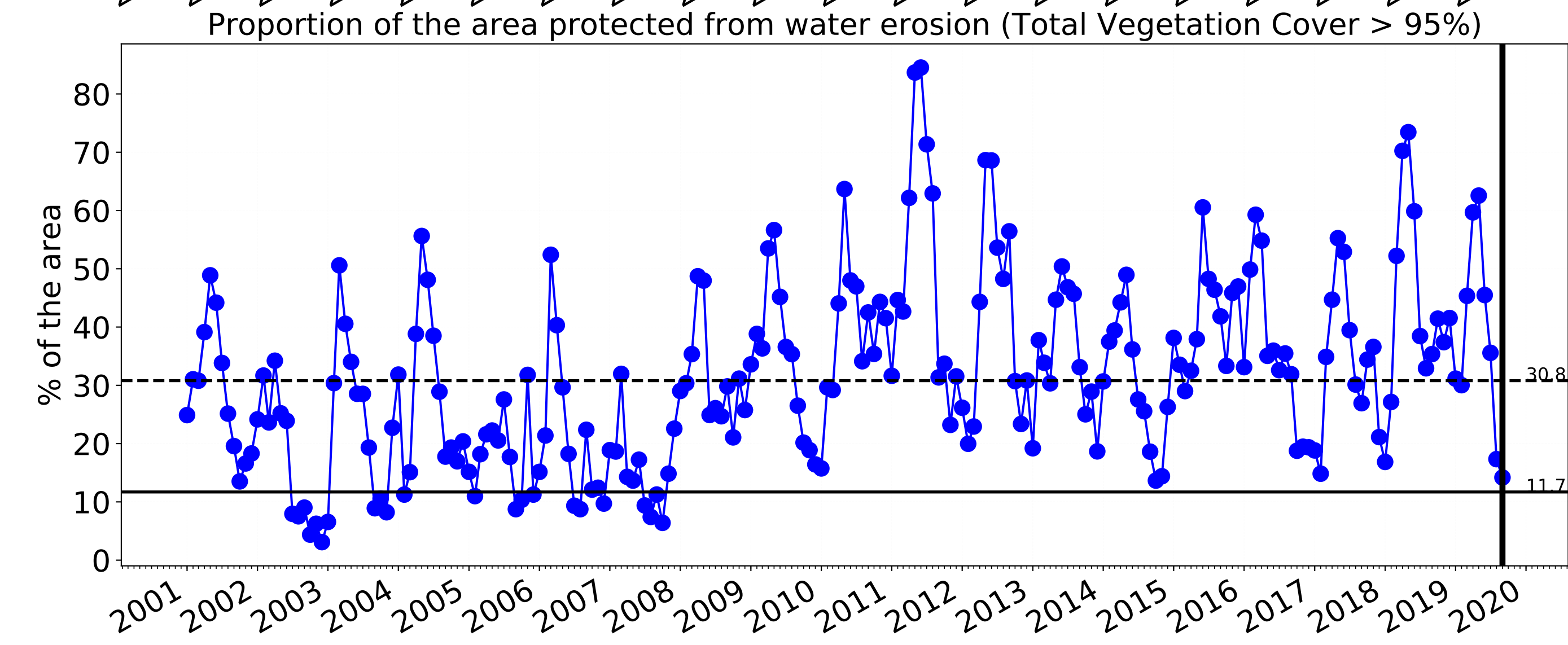
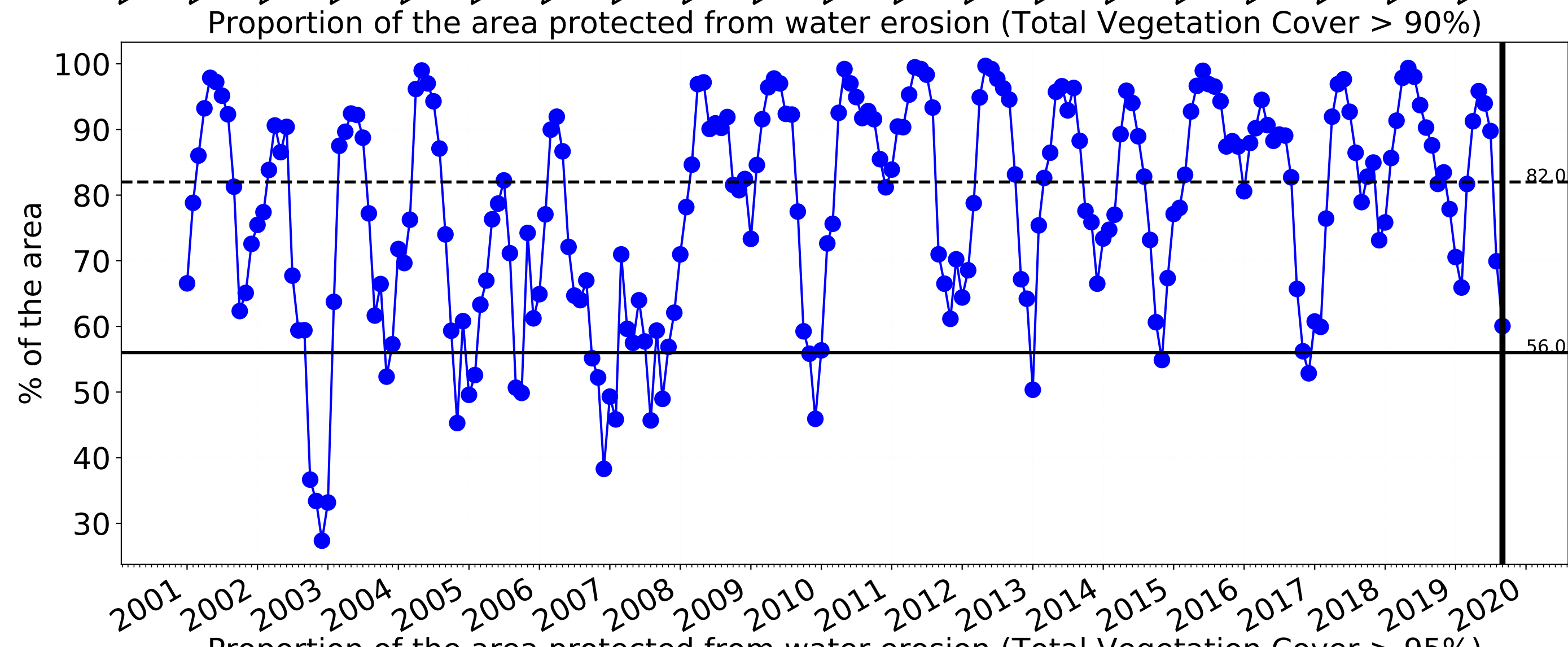
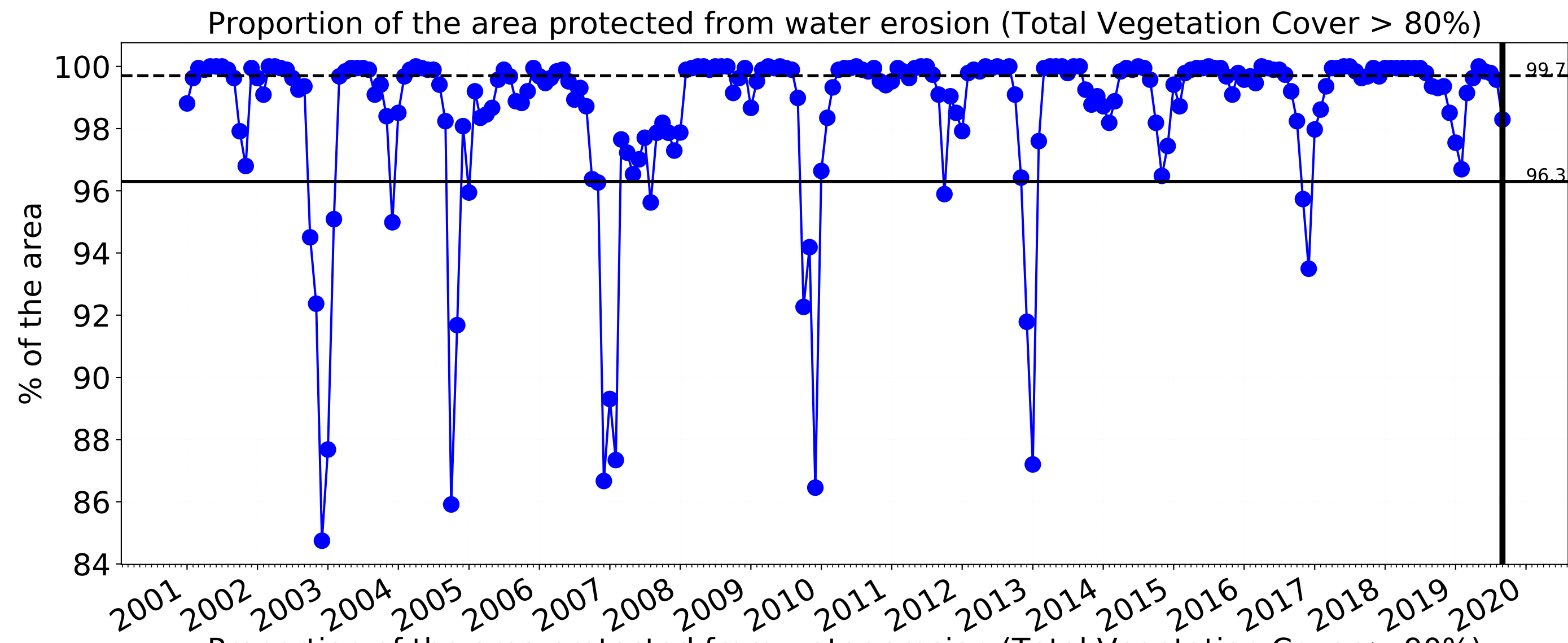


Proportion of the area protected from water erosion (Total Vegetation Cover > 70%)



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

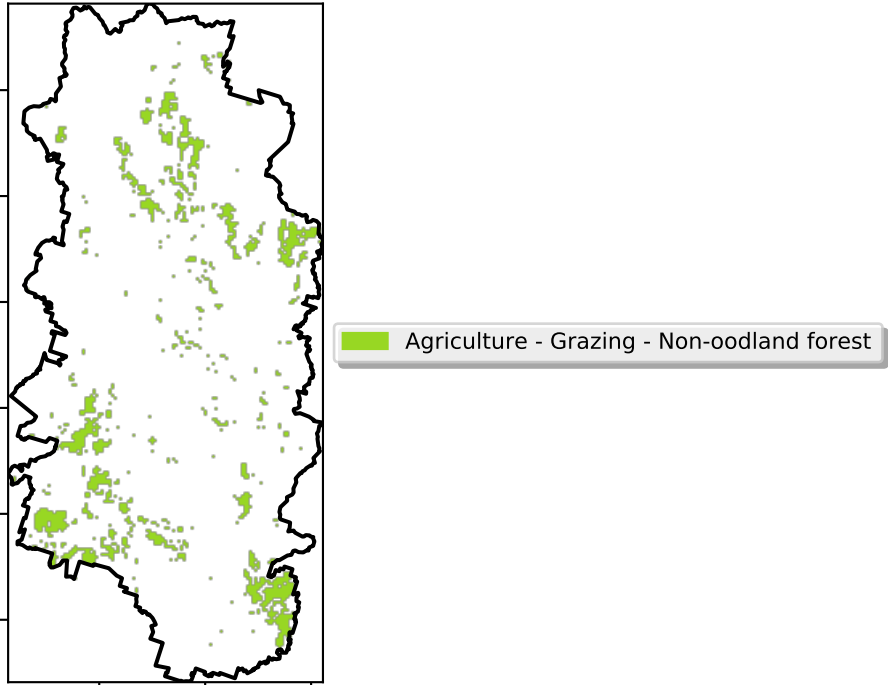




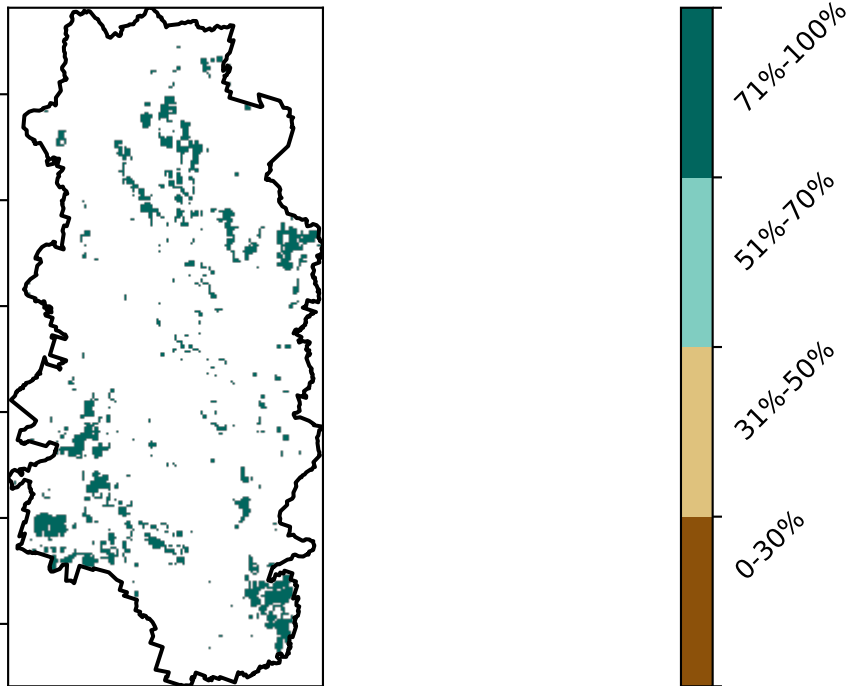
Grazing - Forest (non woodland)

Land use and forest cover

Landuse map of area based on 2015 catchment scale landuse and Australia's National Forest Inventory, where no forest is < 20% tree cover, sparse is 20 to 50% and dense > 50% tree cover.



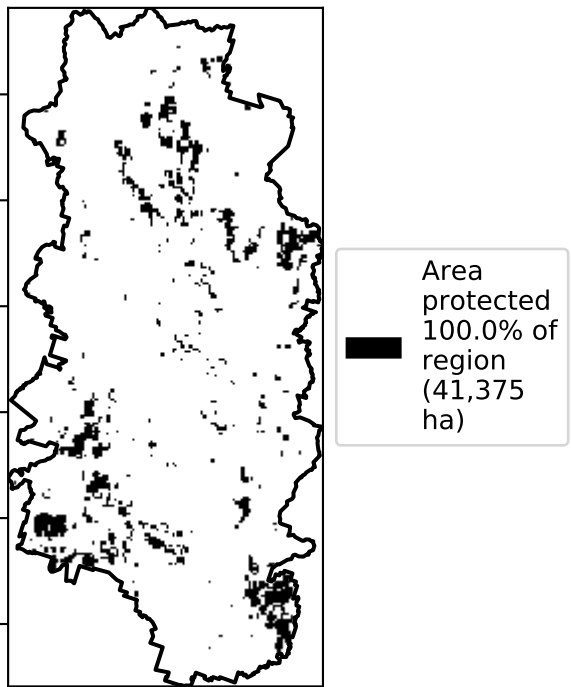
Total Vegetation Cover [%]



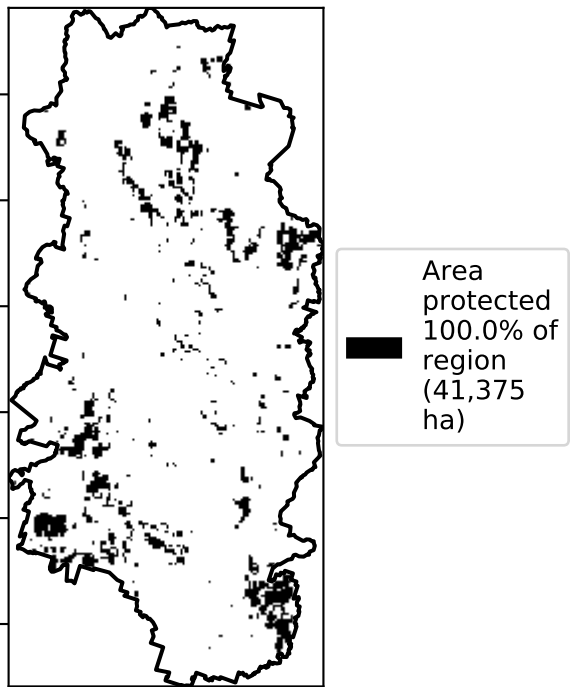
Proportion of vegetation cover class in area



% Area protected from water erosion (>70%)

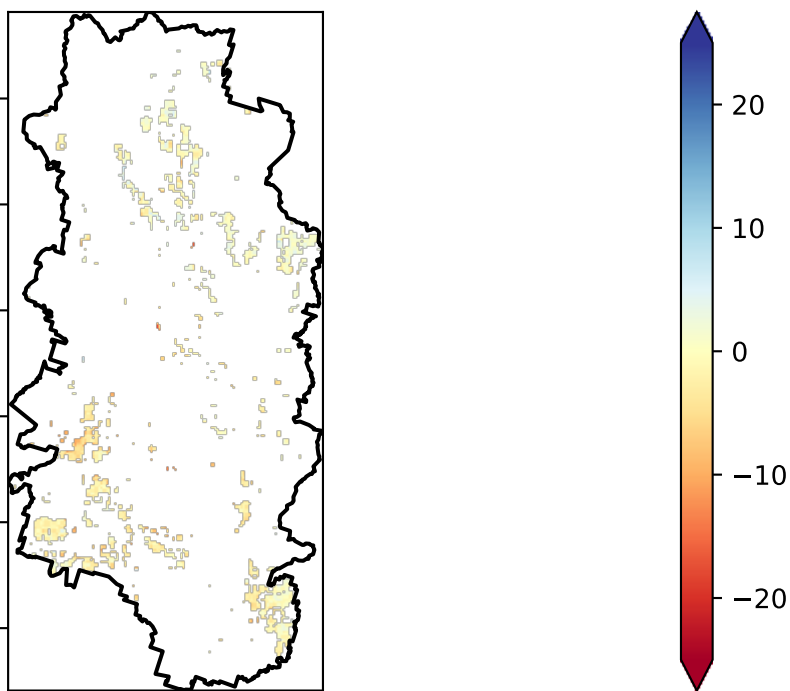


% Area protected from wind erosion (>50%)



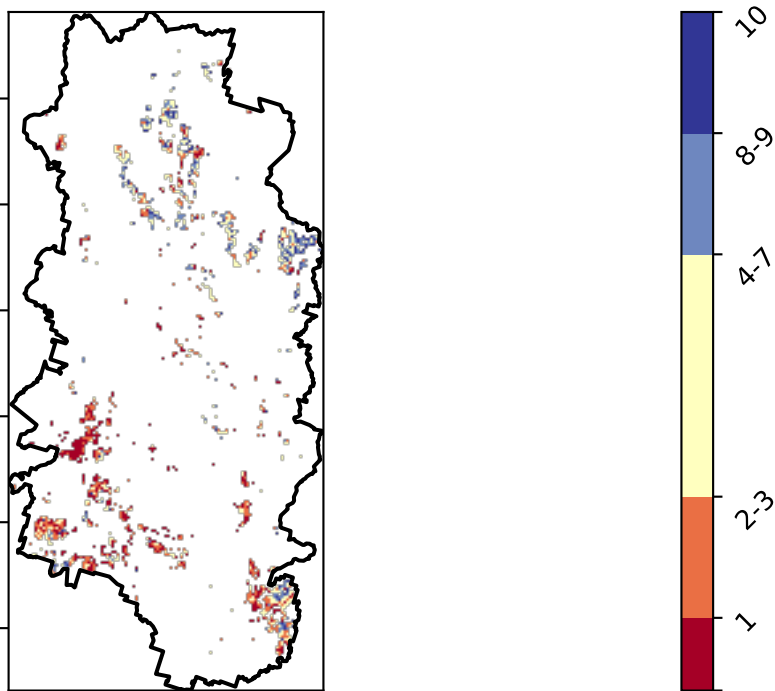
Total Vegetation Cover Anomaly [%]

Anomaly show how many percentage 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.



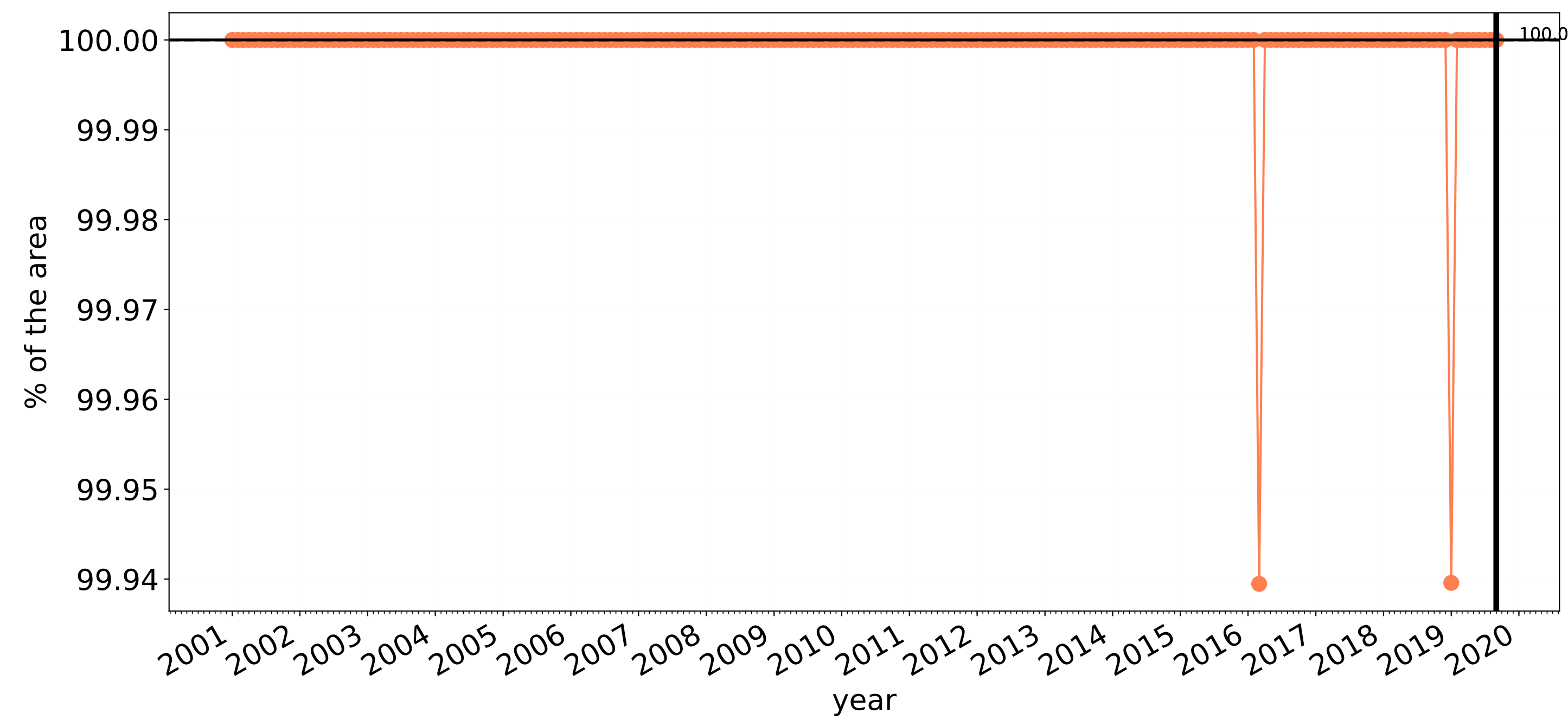
Deciles show where the pixel value lies in the record, from highest to lowest, for that month. That is, red pixels are in the lowest 10% of records for that month of the map using baseline from 2001 to 2019.

Total Vegetation Cover Decile [%]

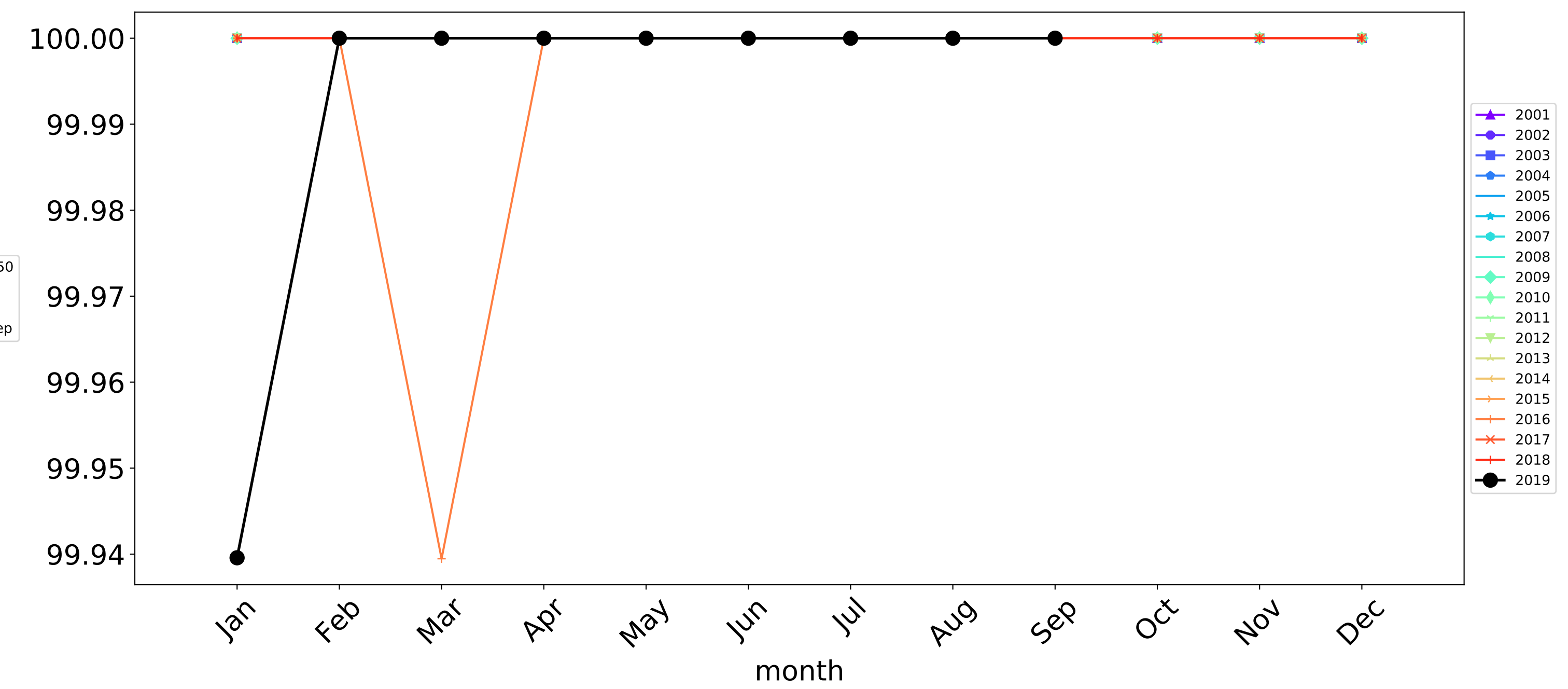


Grazing - Forest (non woodland) timeseries

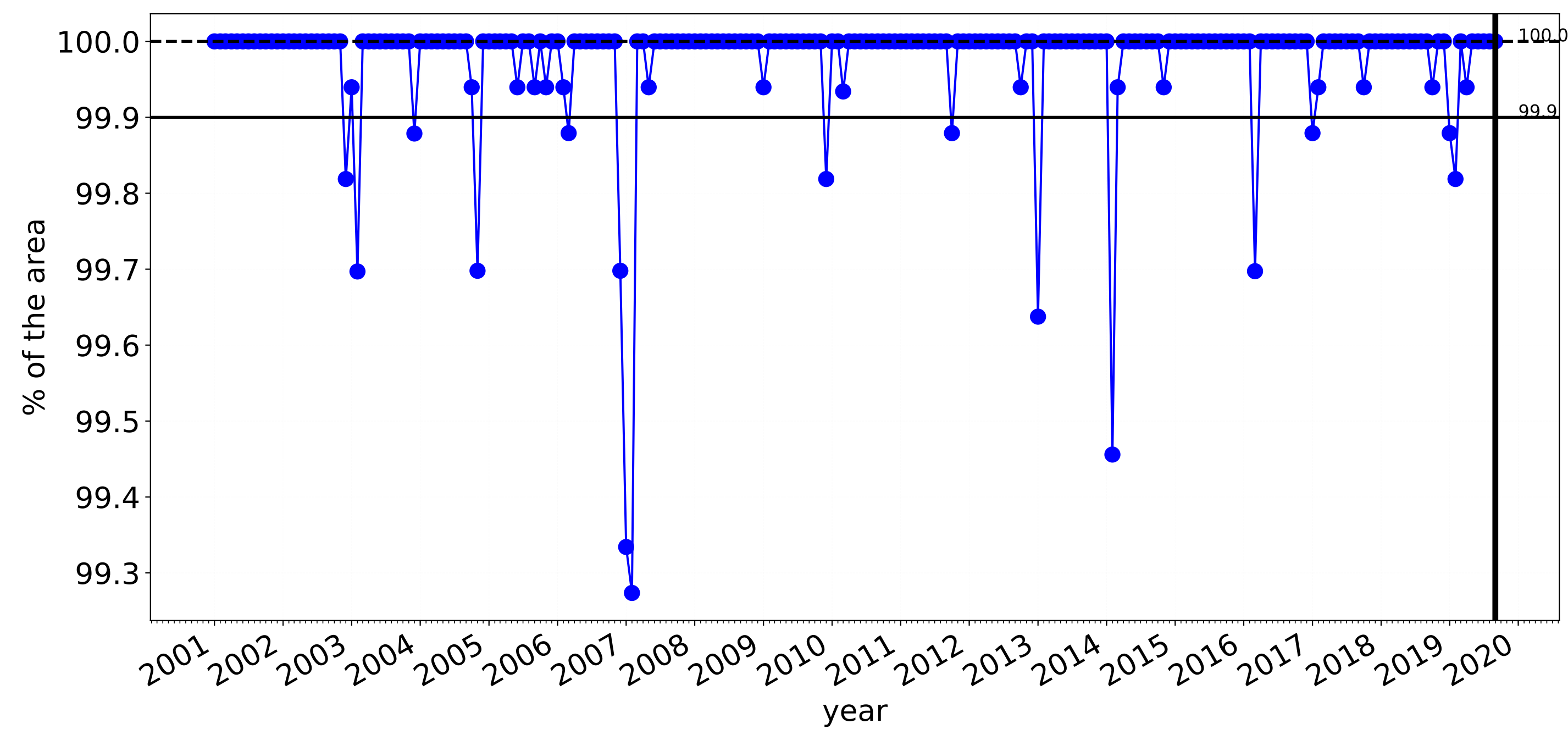
Proportion of the area protected from wind erosion (Total Vegetation Cover > 50%)



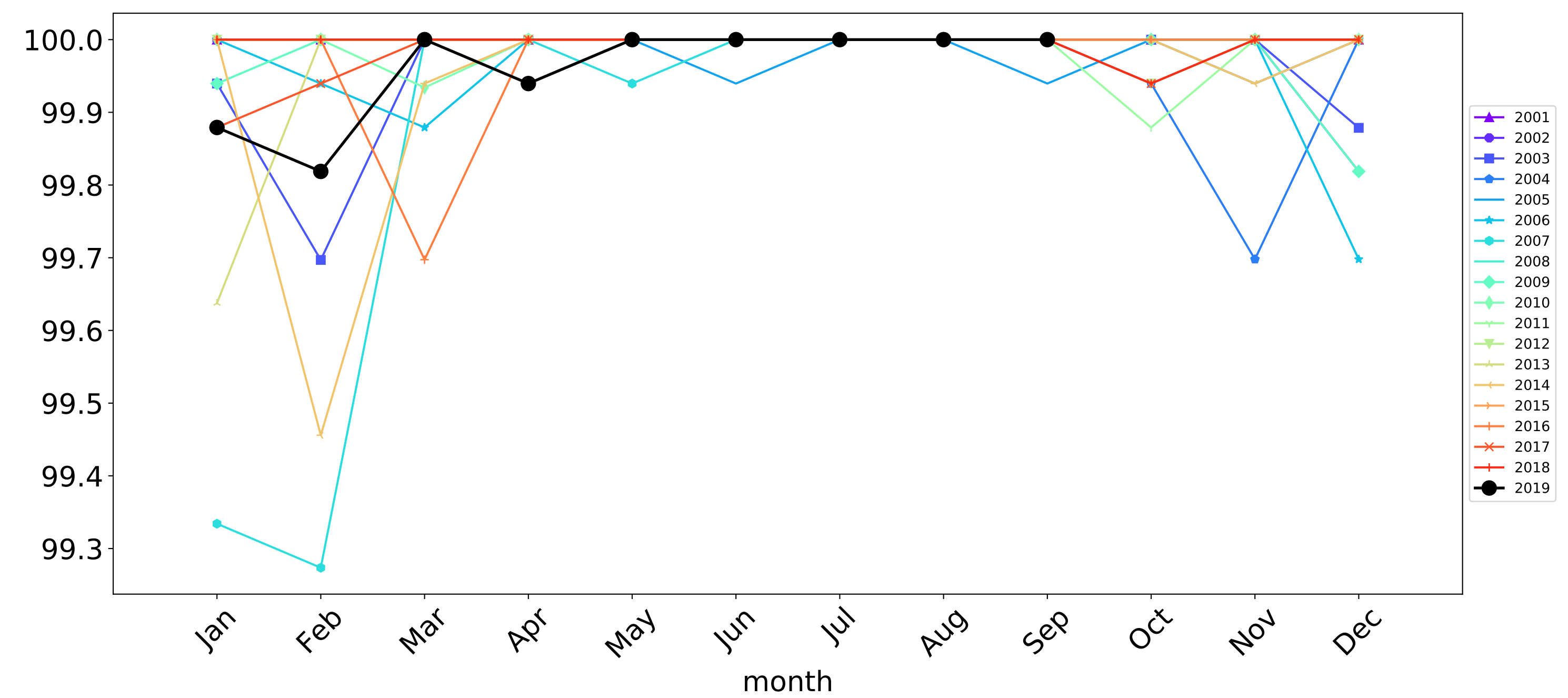
Wind erosion historical monthly area protected (Total Veg Cov >50%)

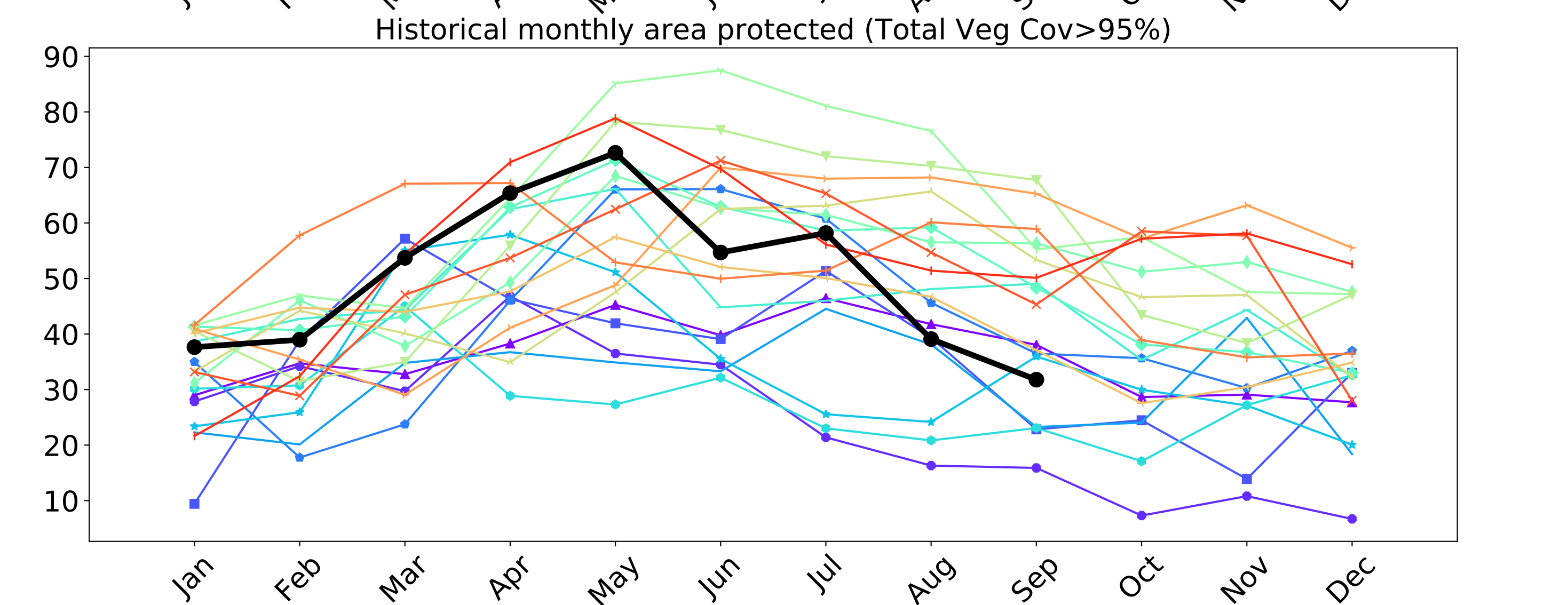
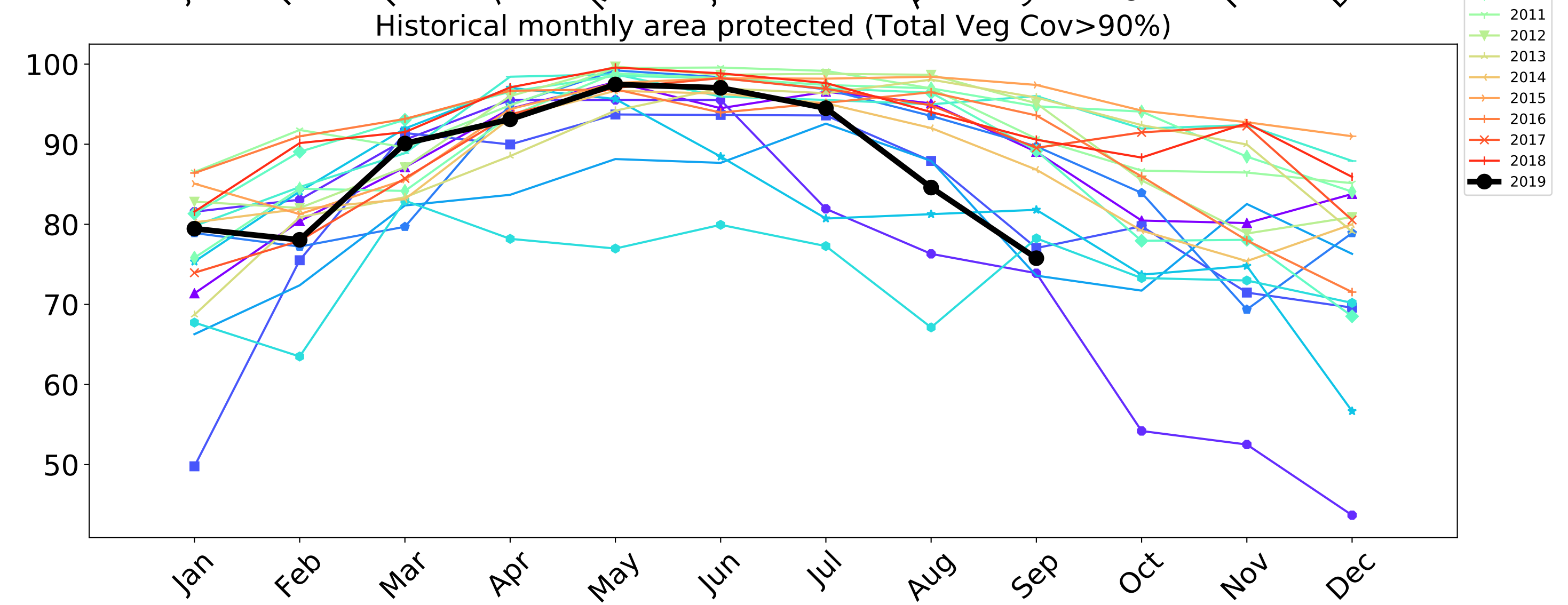
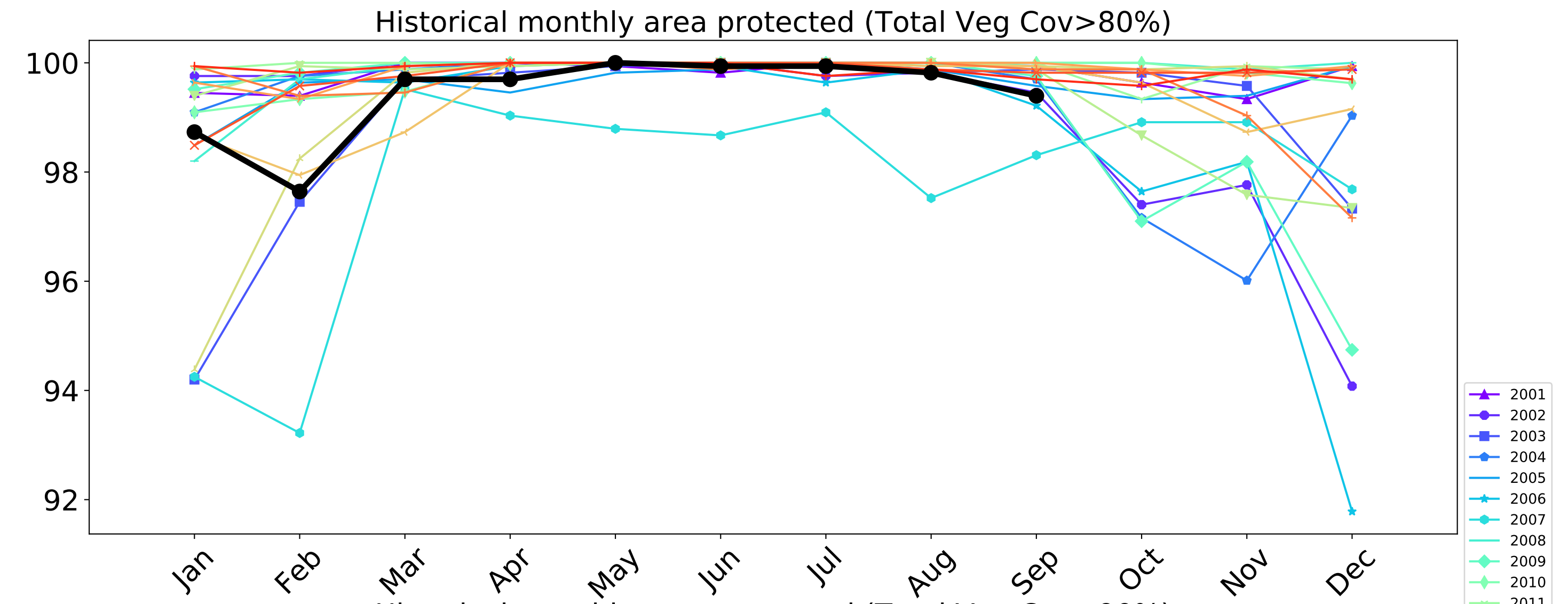
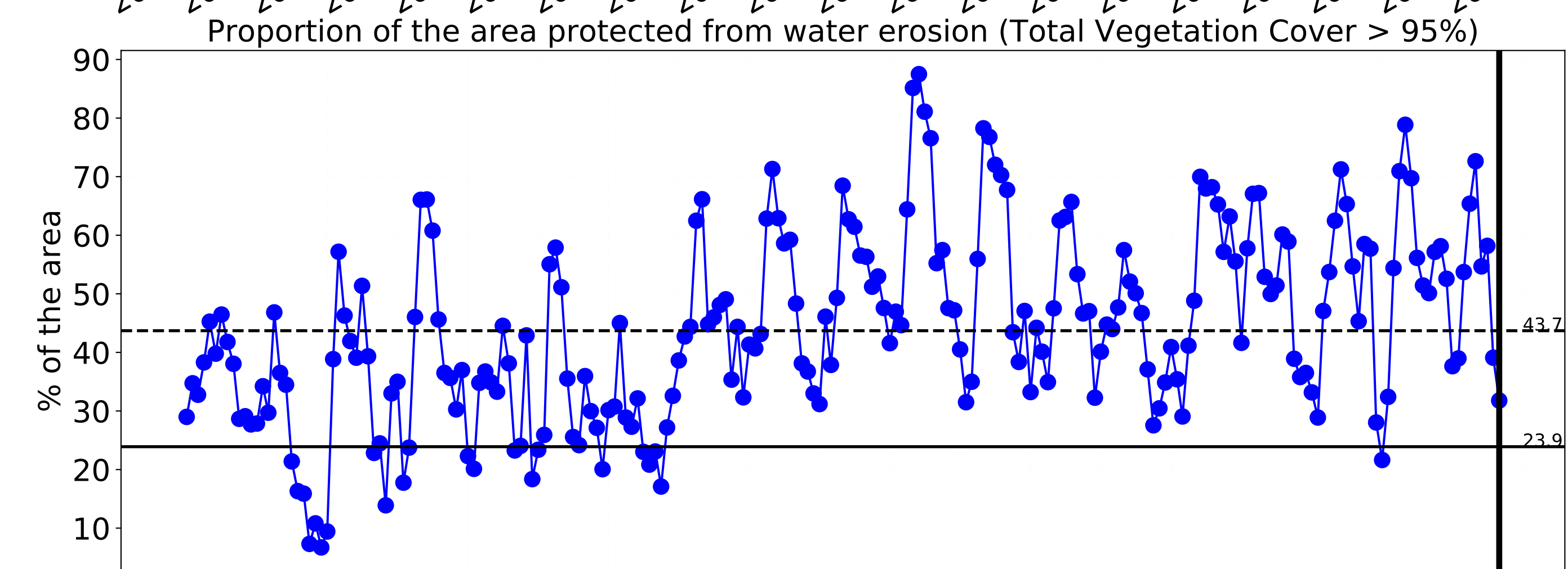
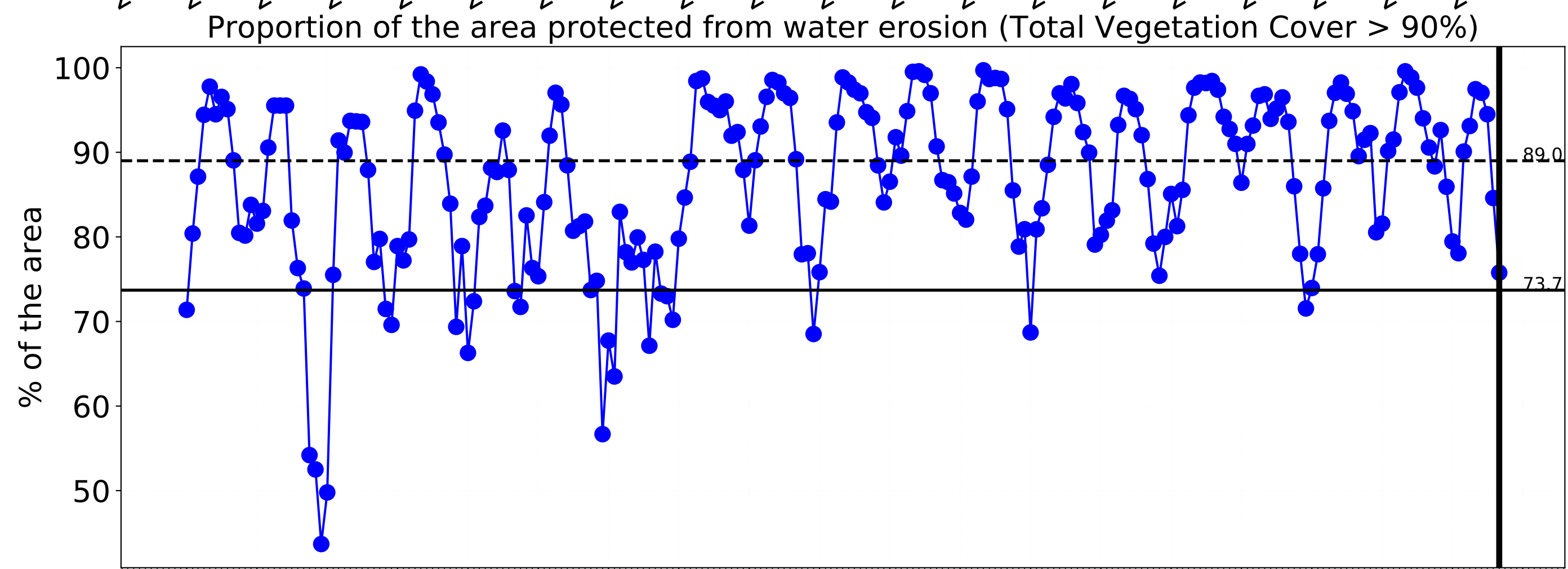
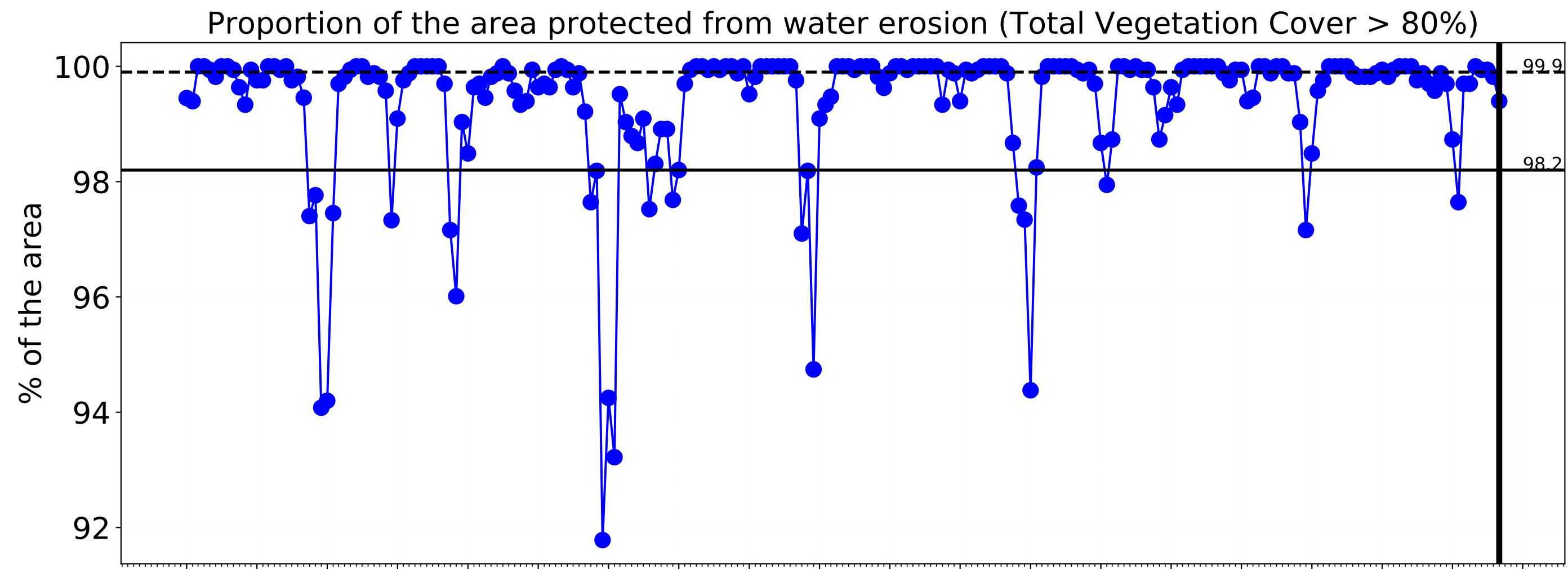


Proportion of the area protected from water erosion (Total Vegetation Cover > 70%)



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

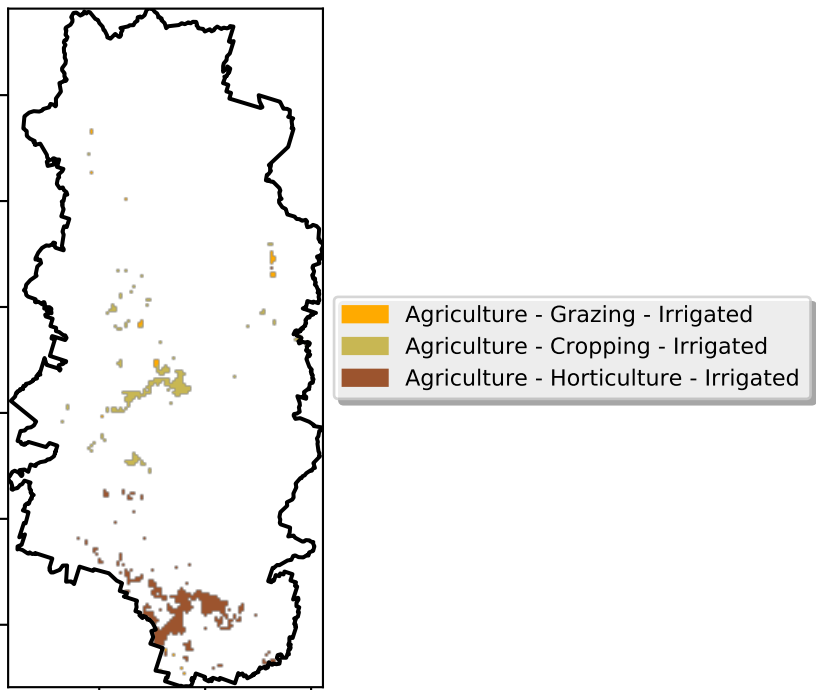




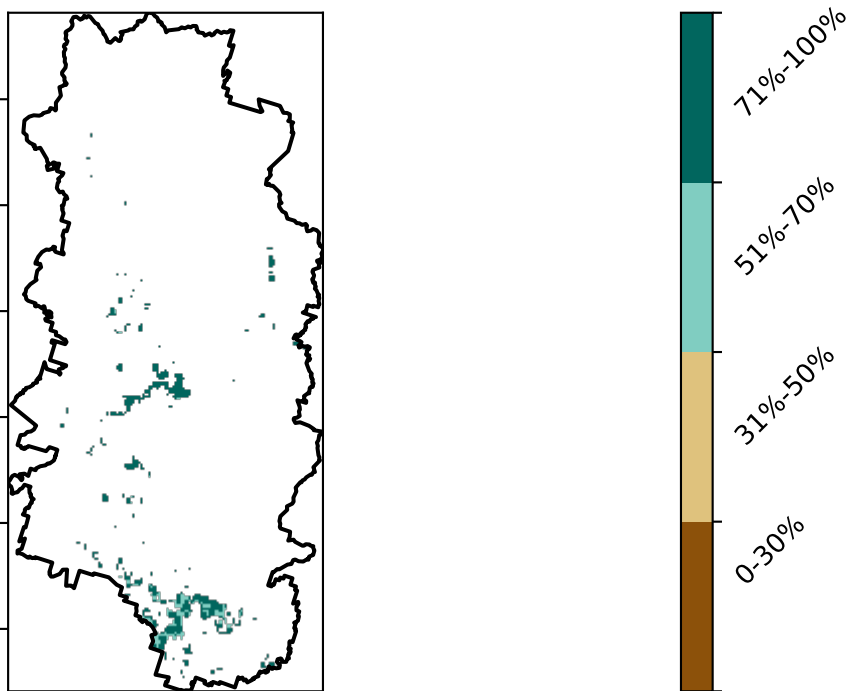
Irrigation

Land use and forest cover

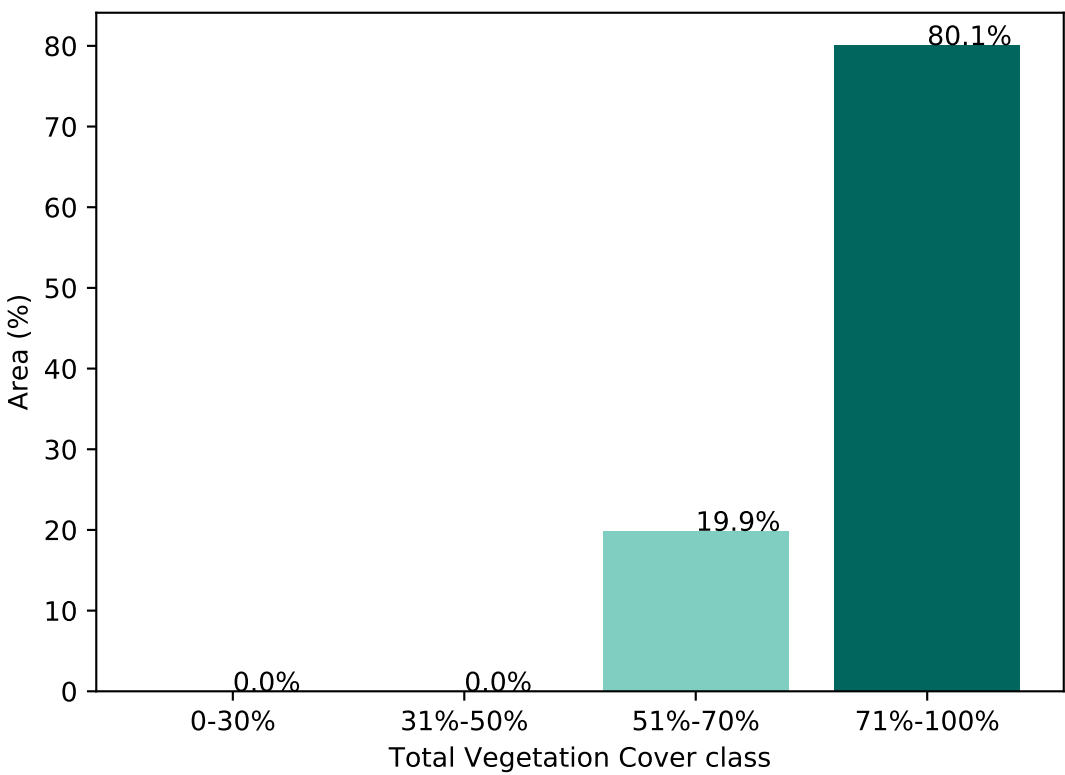
Landuse map of area based on 2015 catchment scale landuse and Australia's National Forest Inventory, where no forest is < 20% tree cover, sparse is 20 to 50% and dense > 50% tree cover.



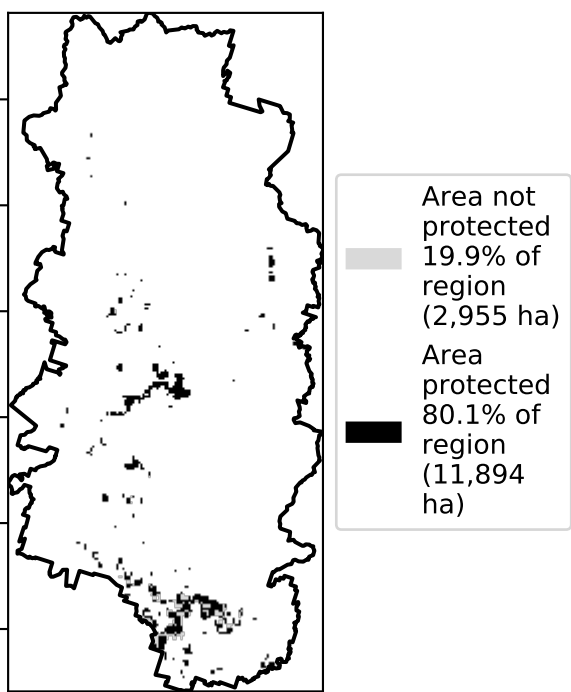
Total Vegetation Cover [%]



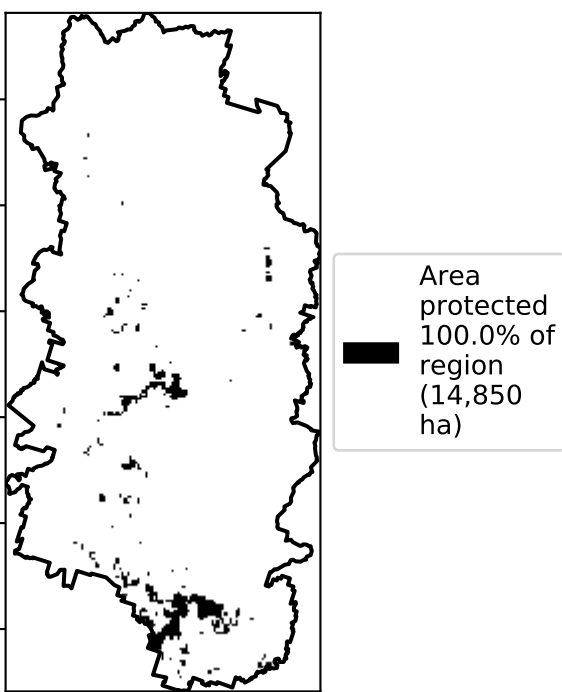
Proportion of vegetation cover class in area



% Area protected from water erosion (>70%)

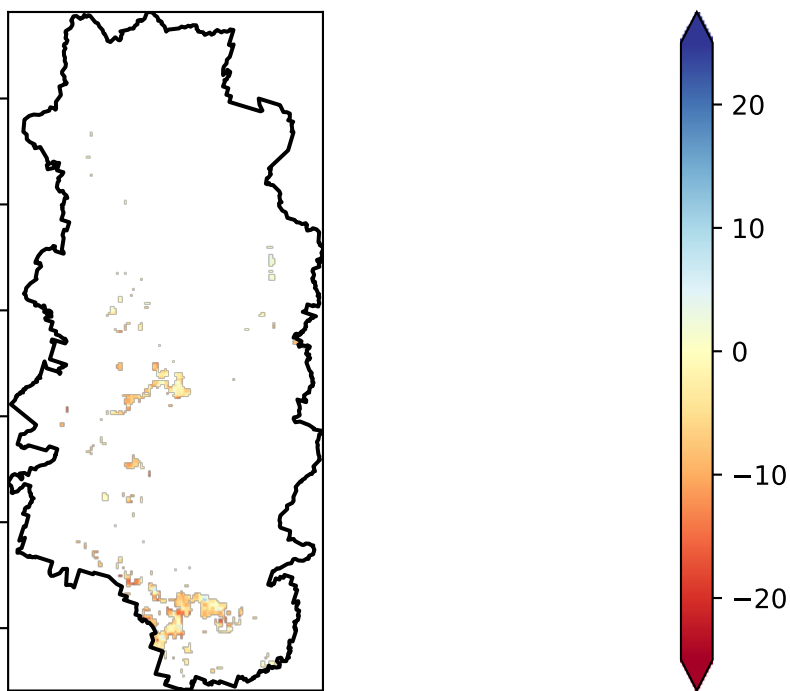


% Area protected from wind erosion (>50%)



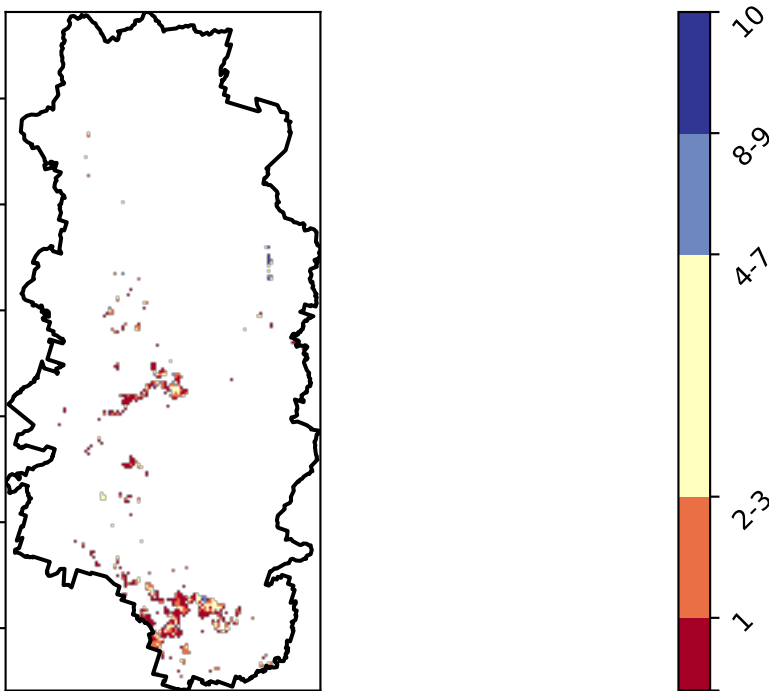
Total Vegetation Cover Anomaly [%]

Anomaly show how many percentage 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.



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.

Total Vegetation Cover Decile [%]



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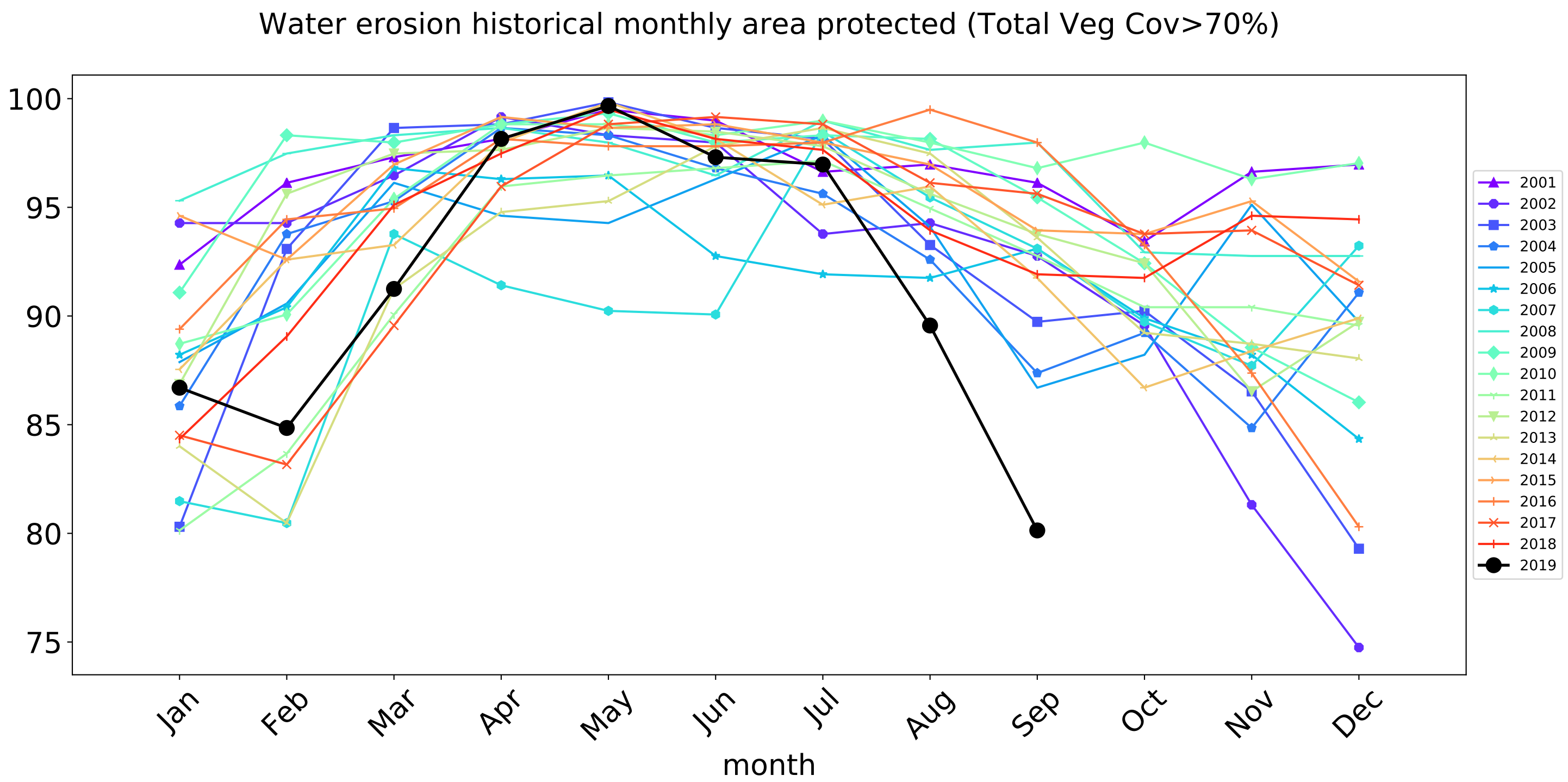
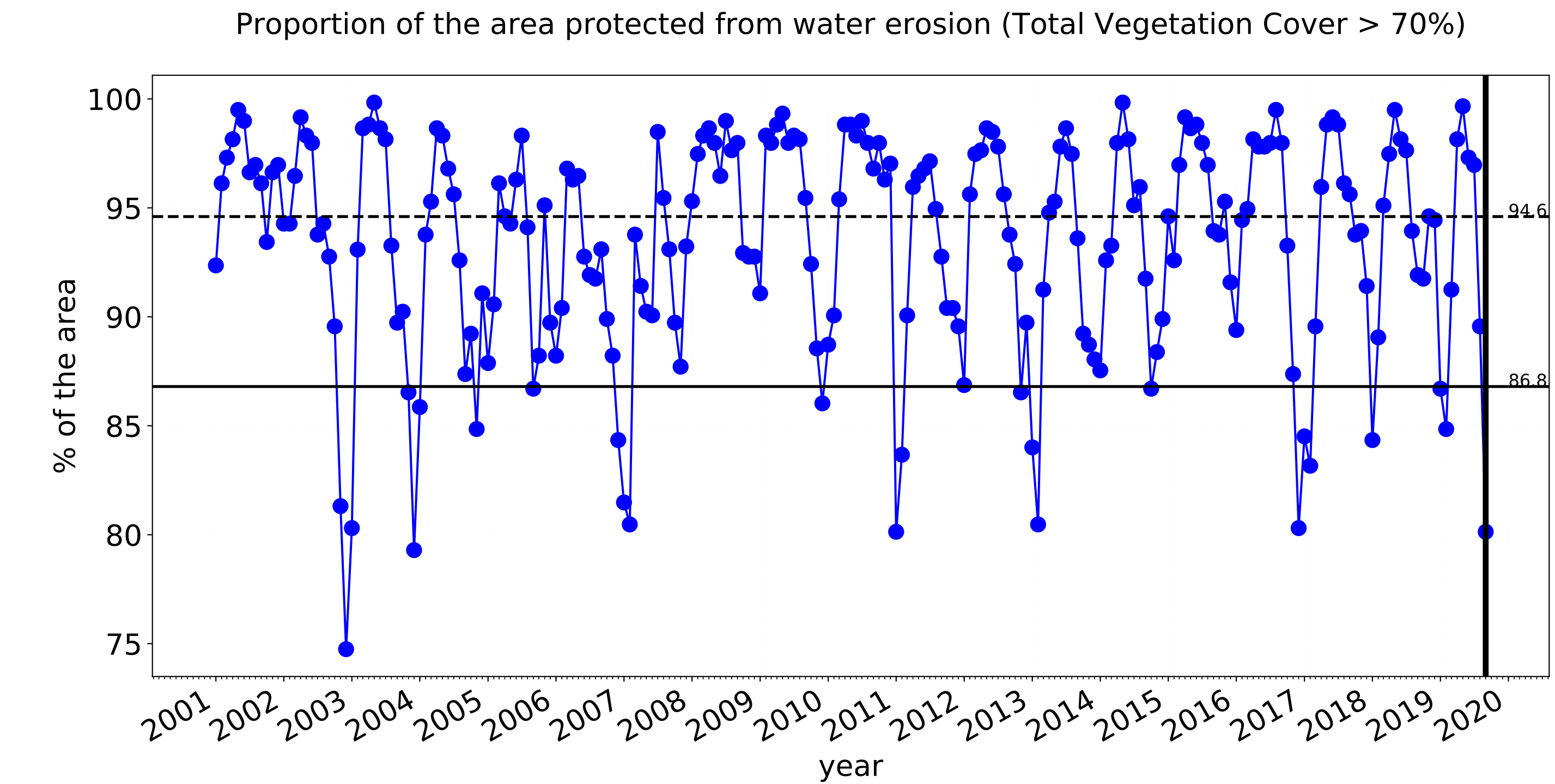
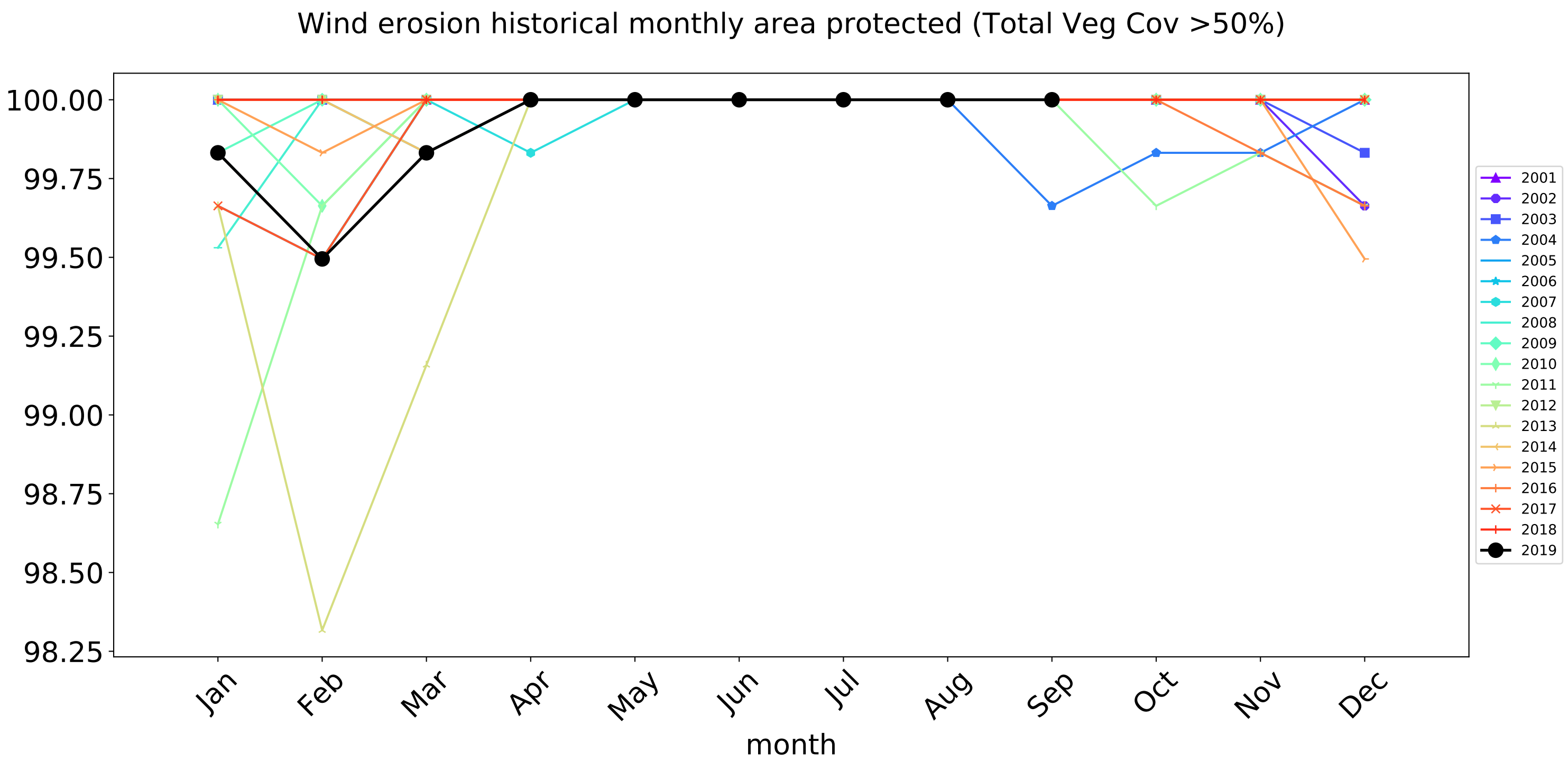
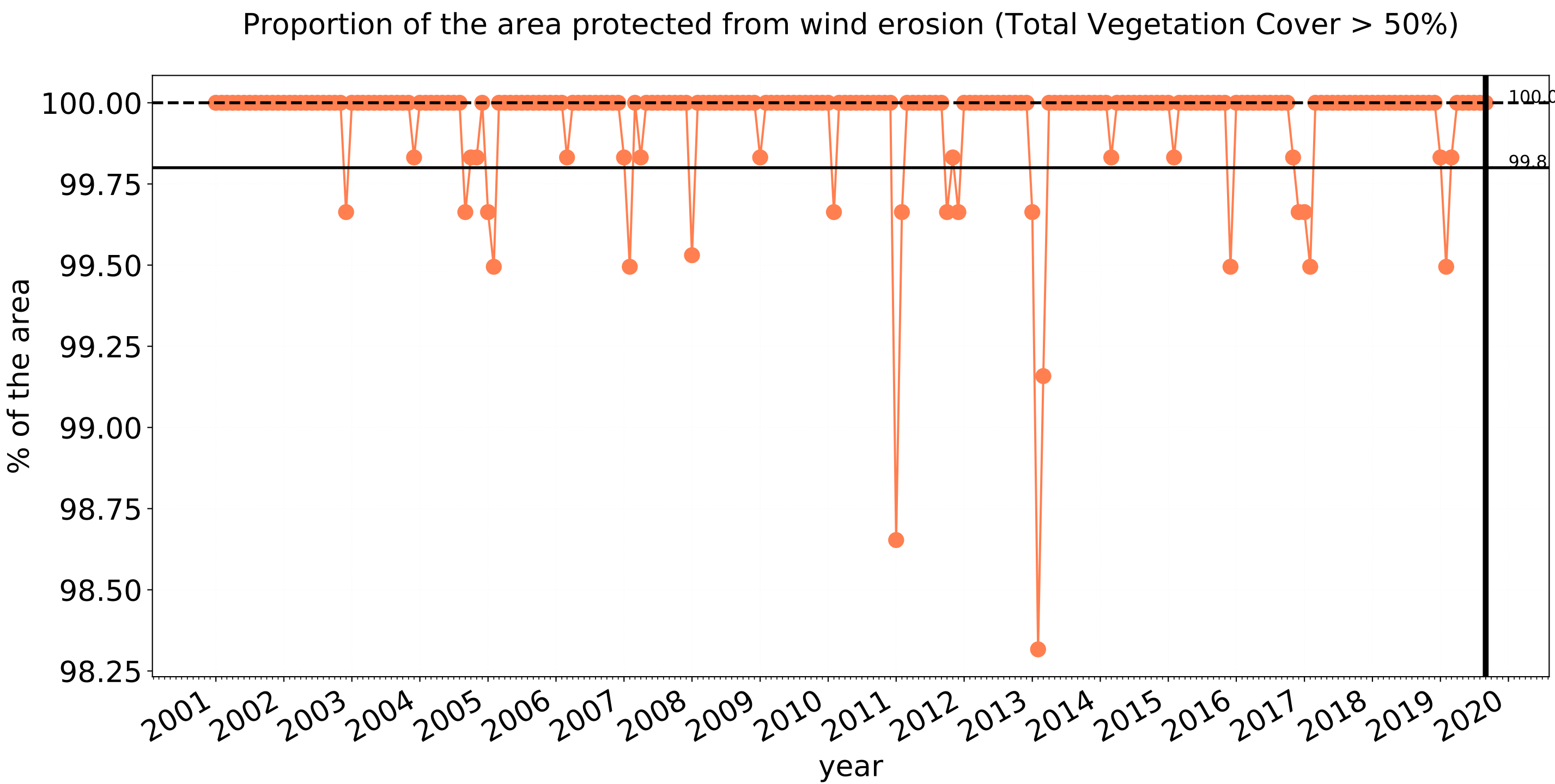


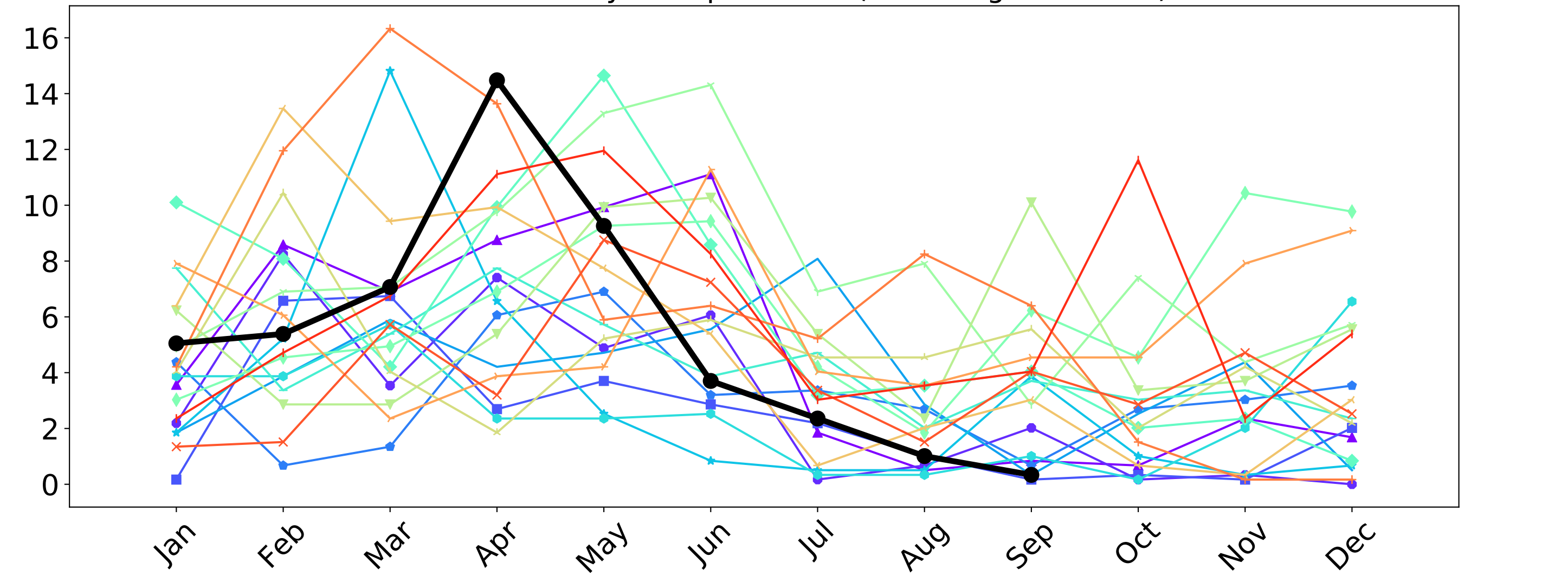
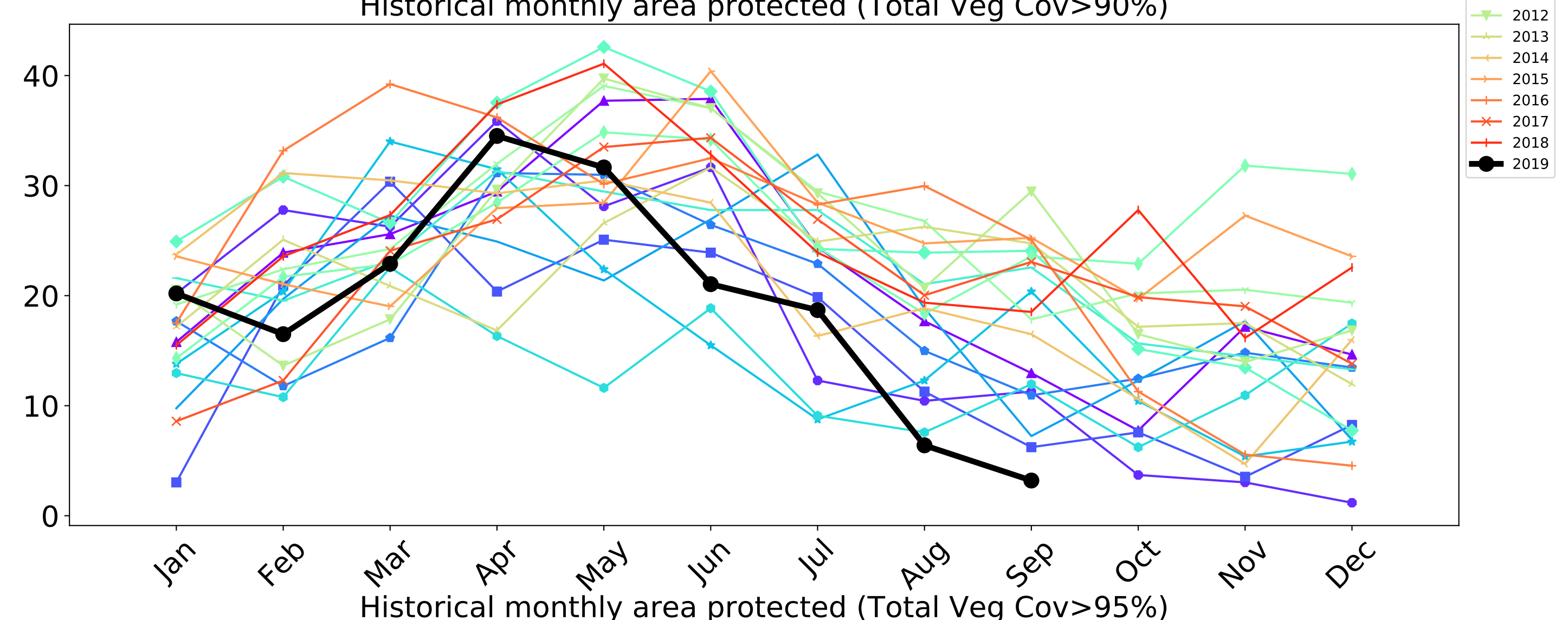
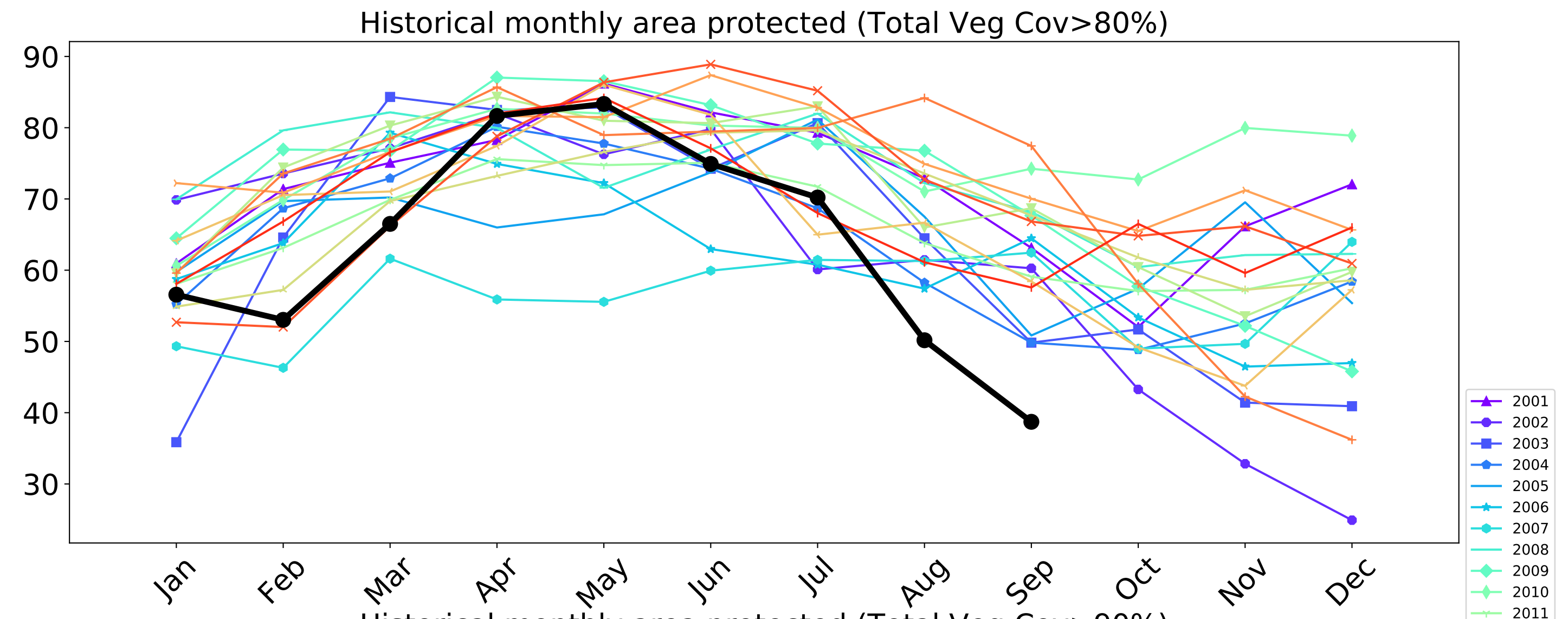
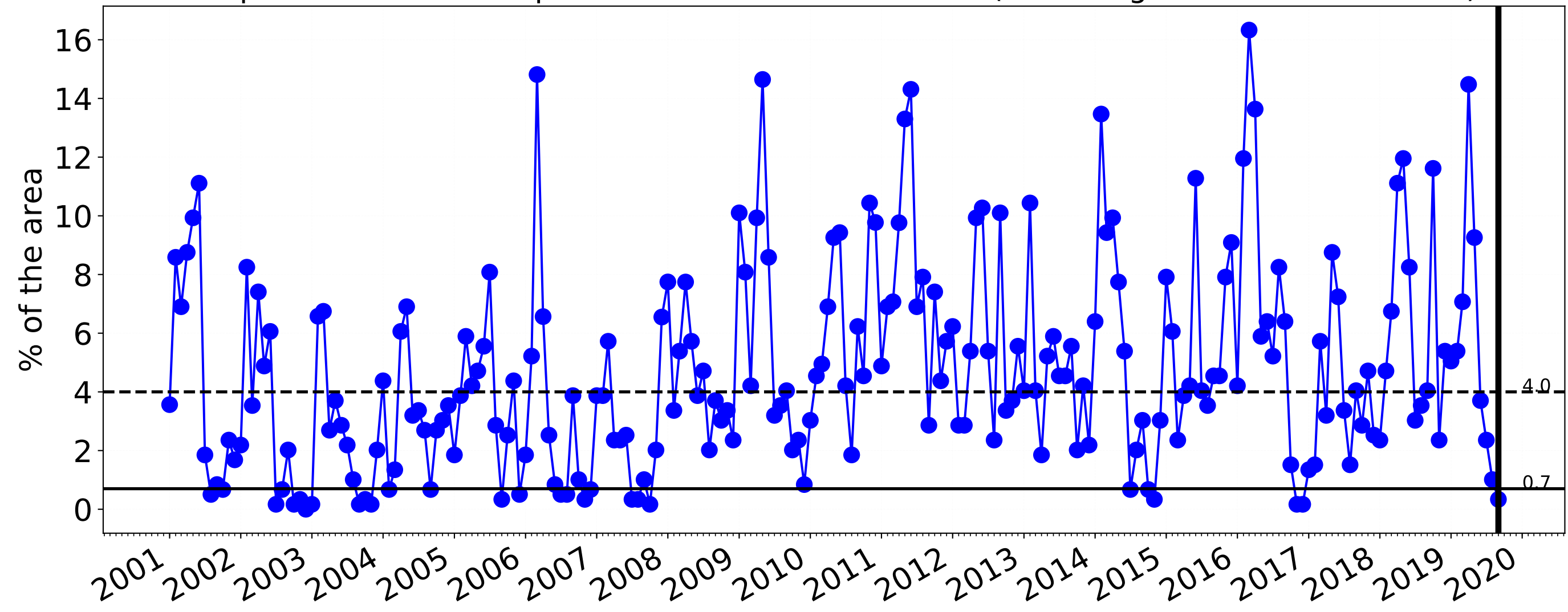
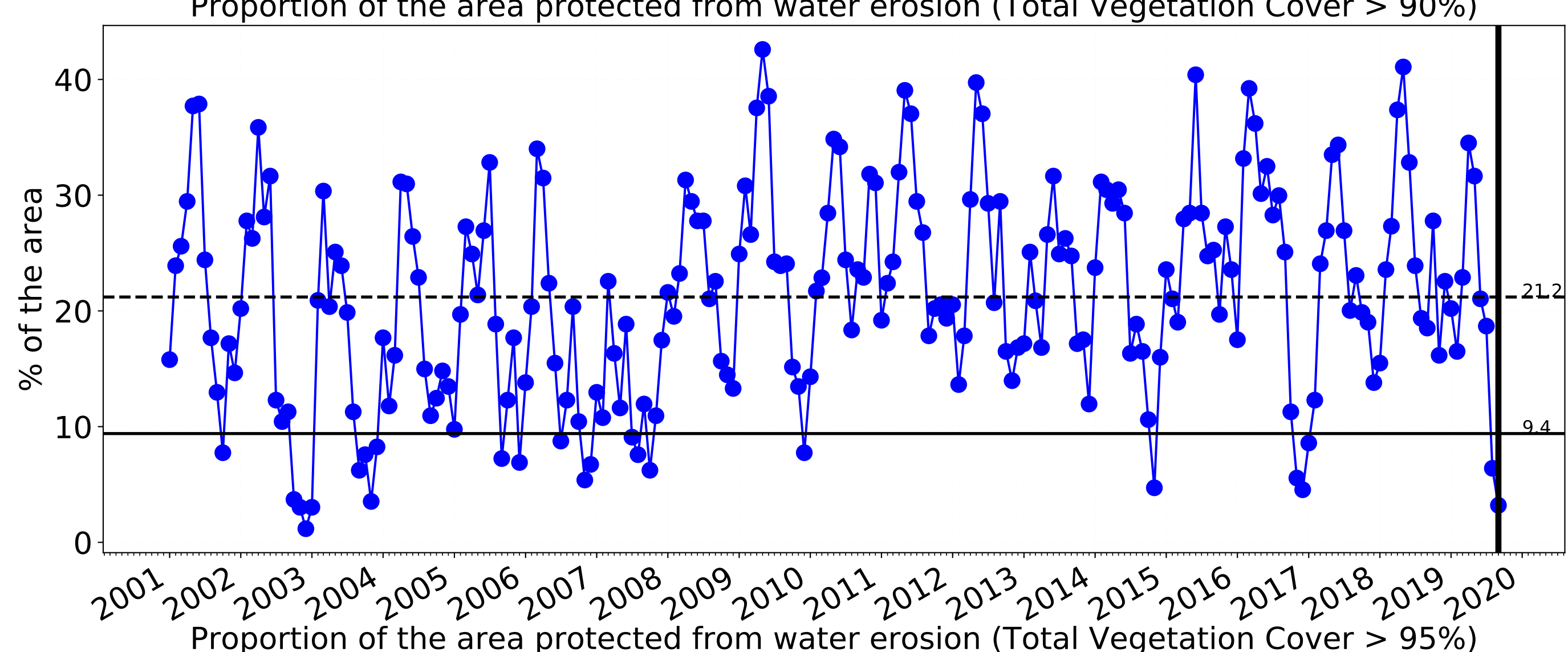
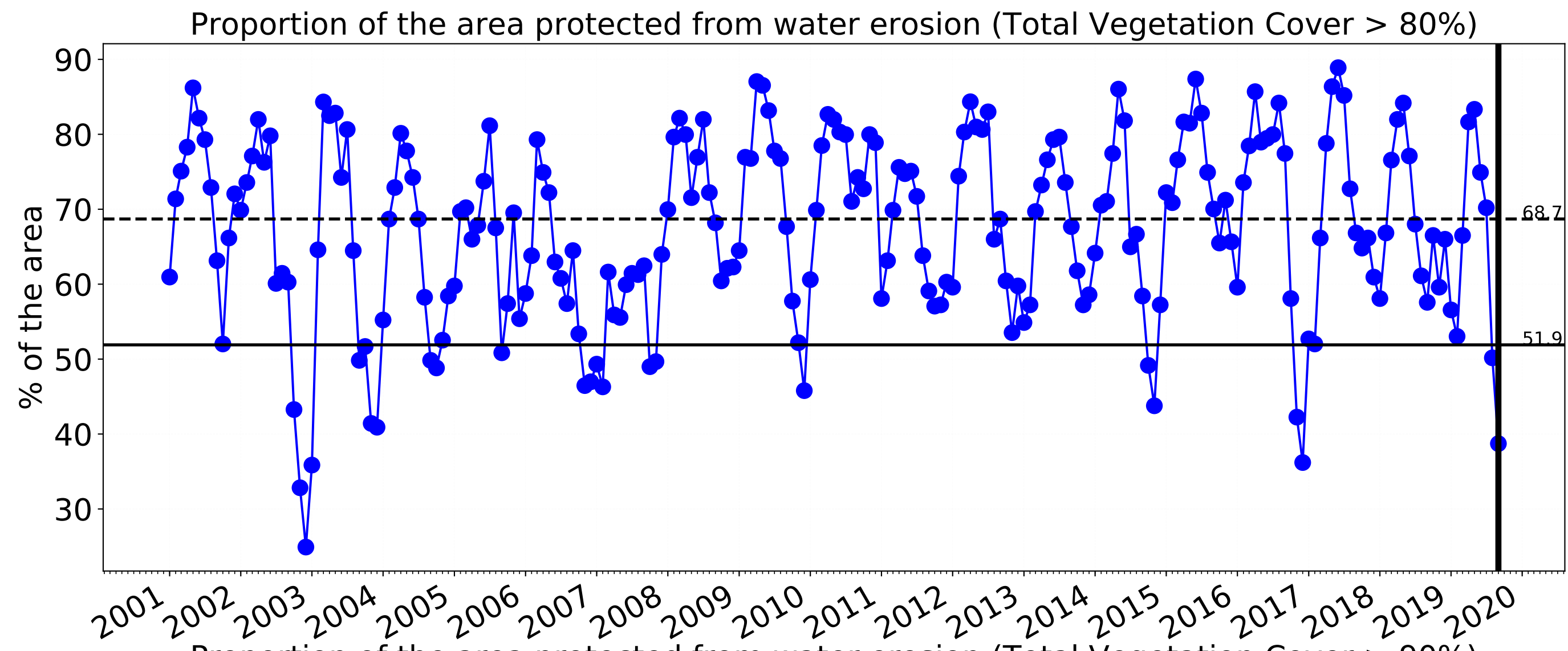
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Irrigation timeseries

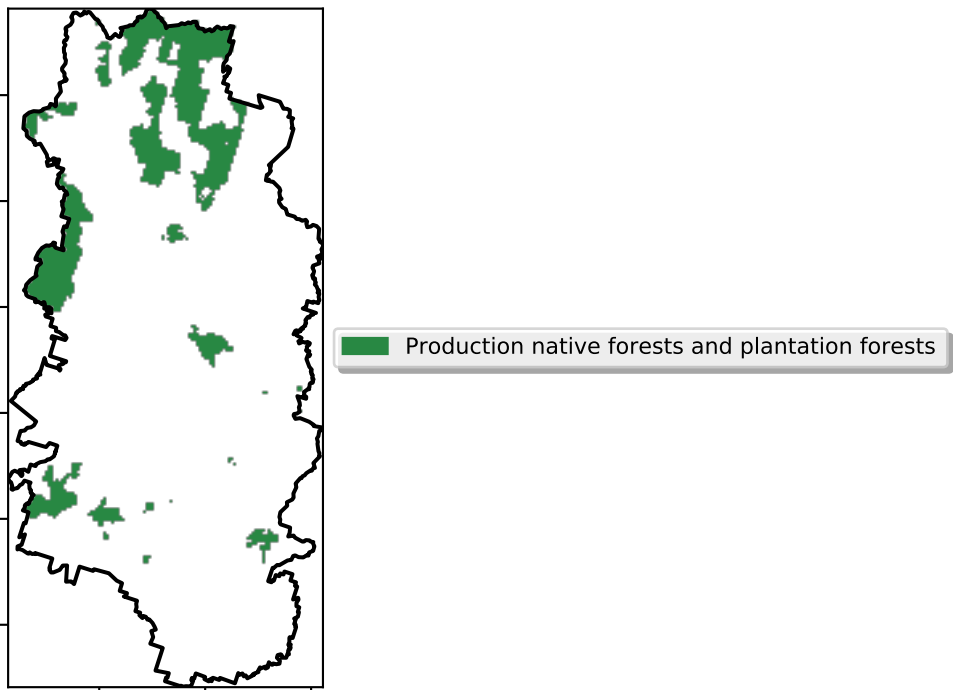




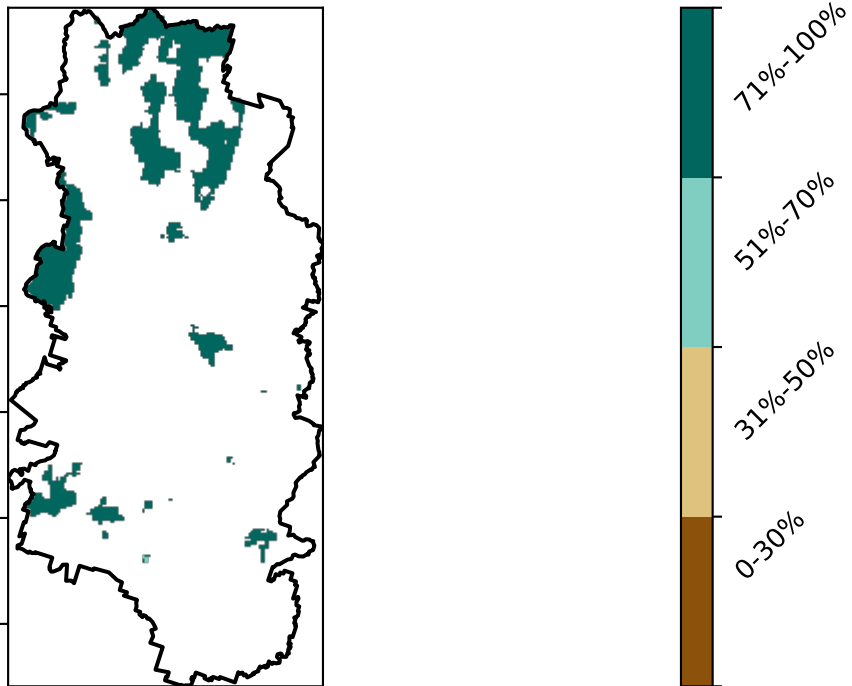
Production native forests and plantation forests

Land use and forest cover

Landuse map of area based on 2015 catchment scale landuse and Australia's National Forest Inventory, where no forest is < 20% tree cover, sparse is 20 to 50% and dense > 50% tree cover.



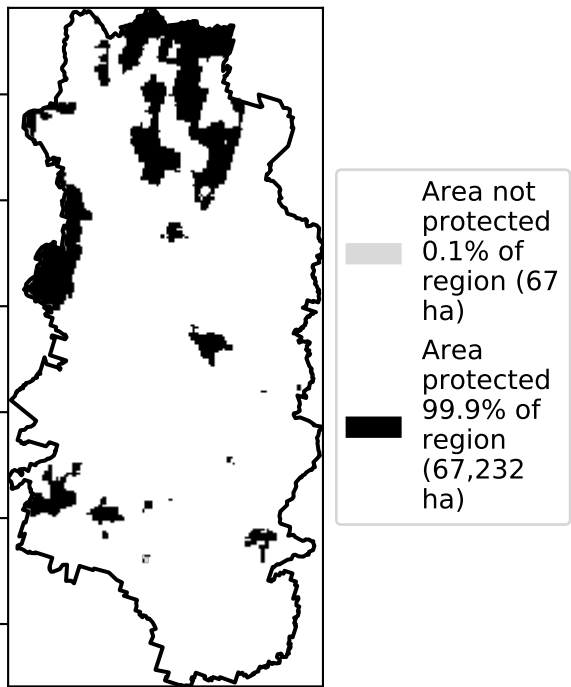
Total Vegetation Cover [%]



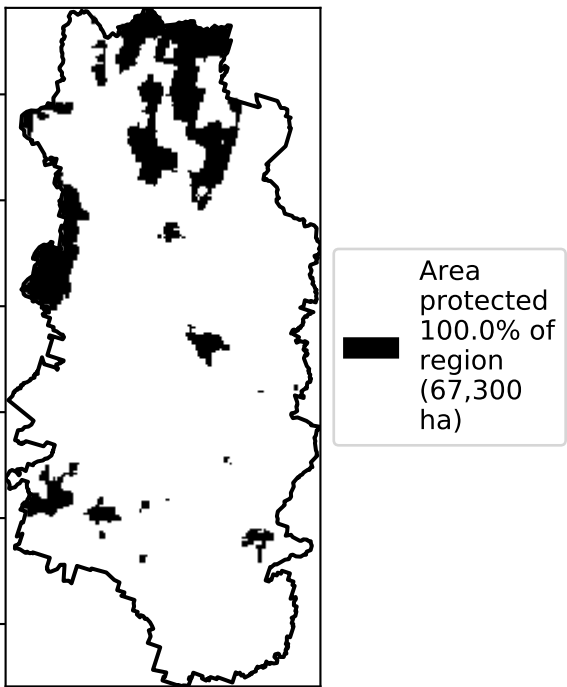
Proportion of vegetation cover class in area



% Area protected from water erosion (>70%)

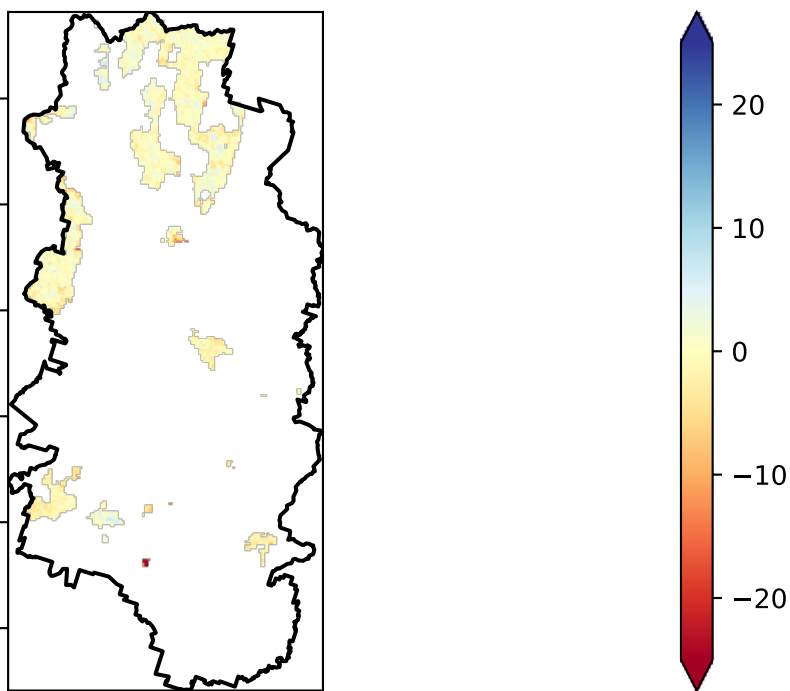


% Area protected from wind erosion (>50%)



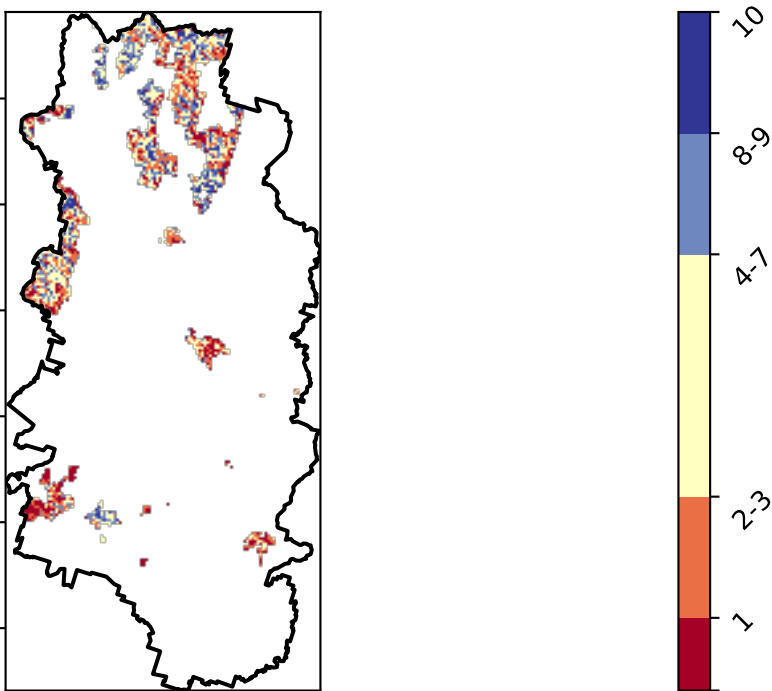
Total Vegetation Cover Anomaly [%]

Anomaly show how many percentage 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.



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.

Total Vegetation Cover Decile [%]



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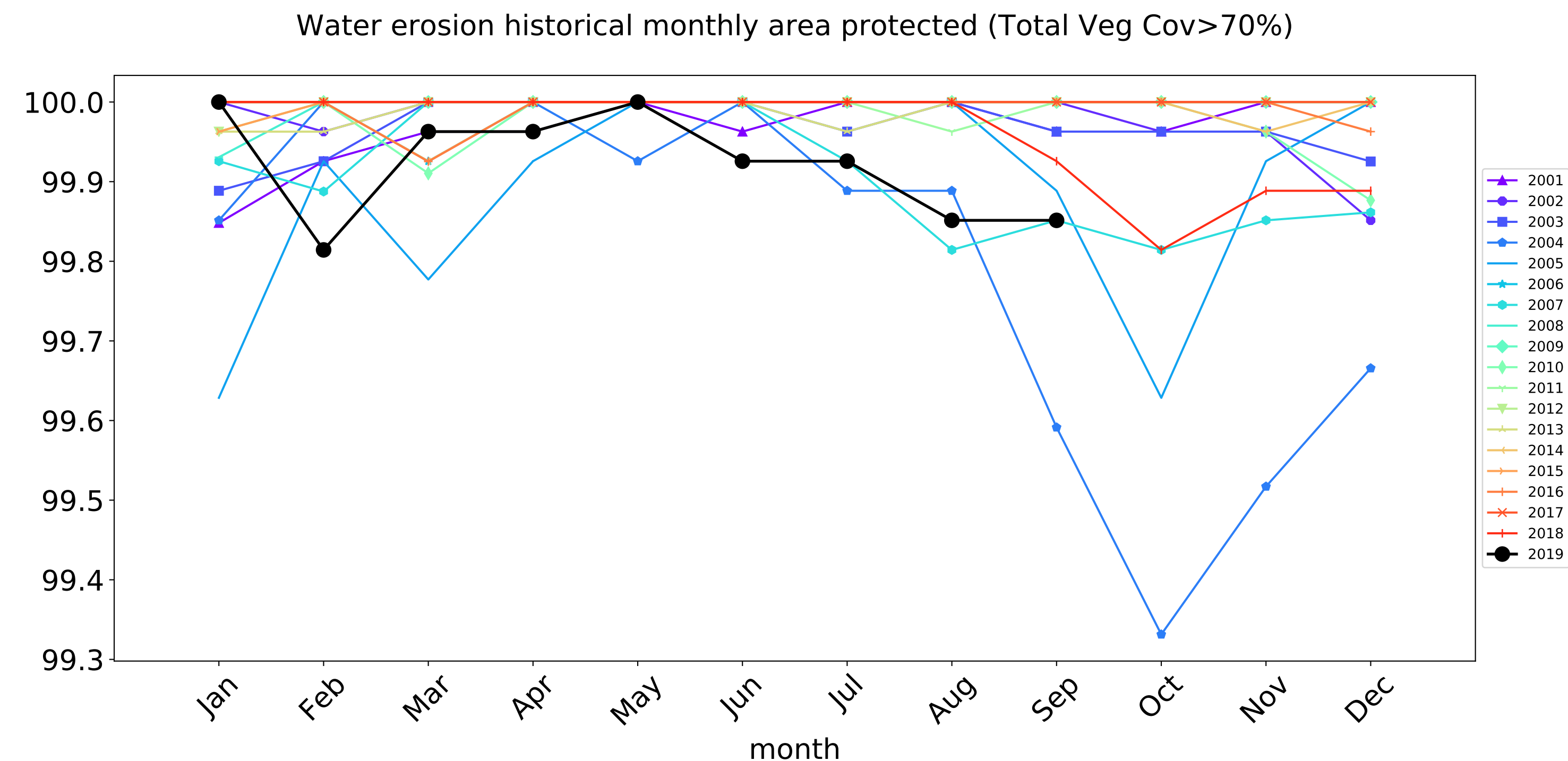
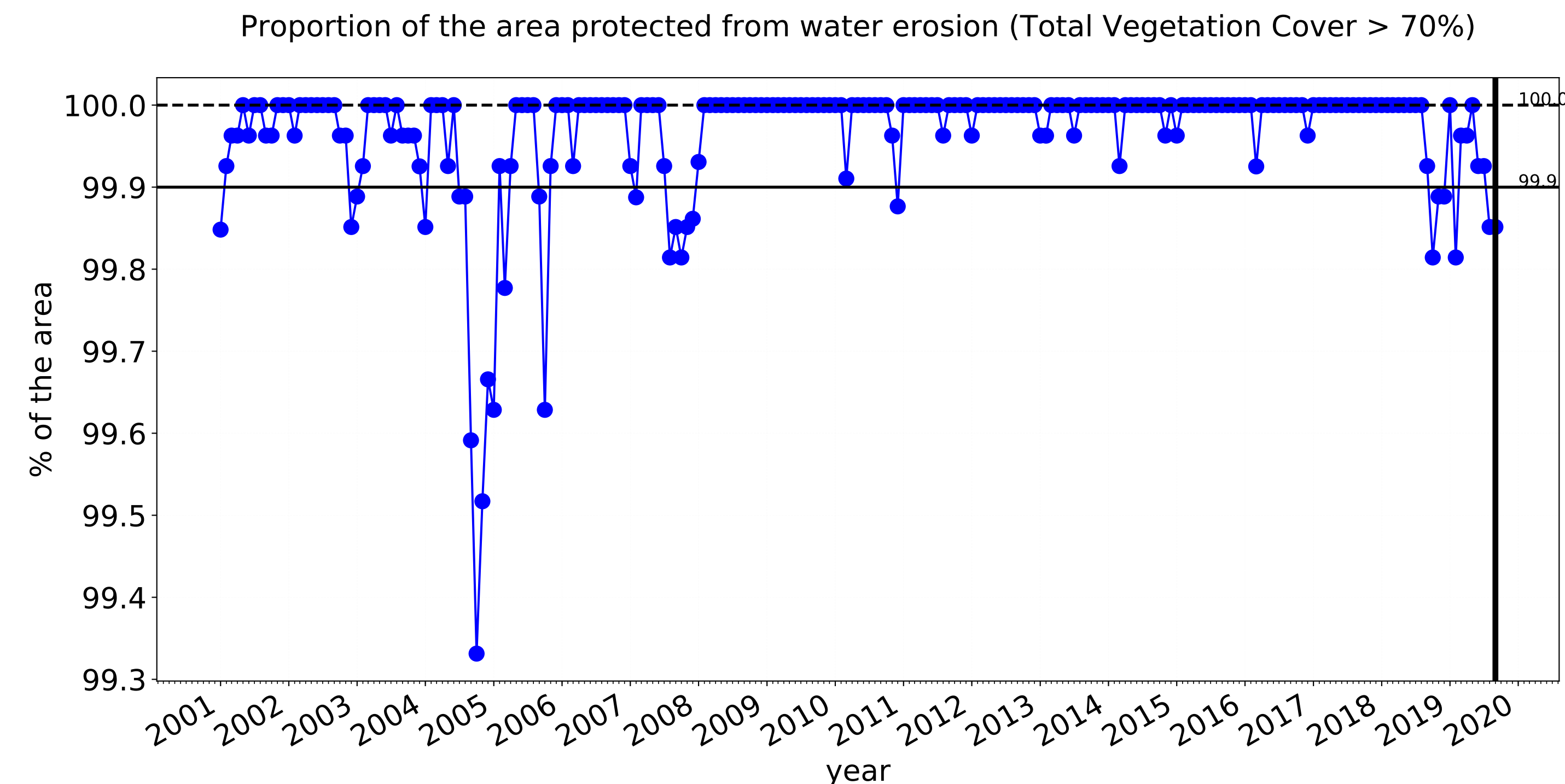
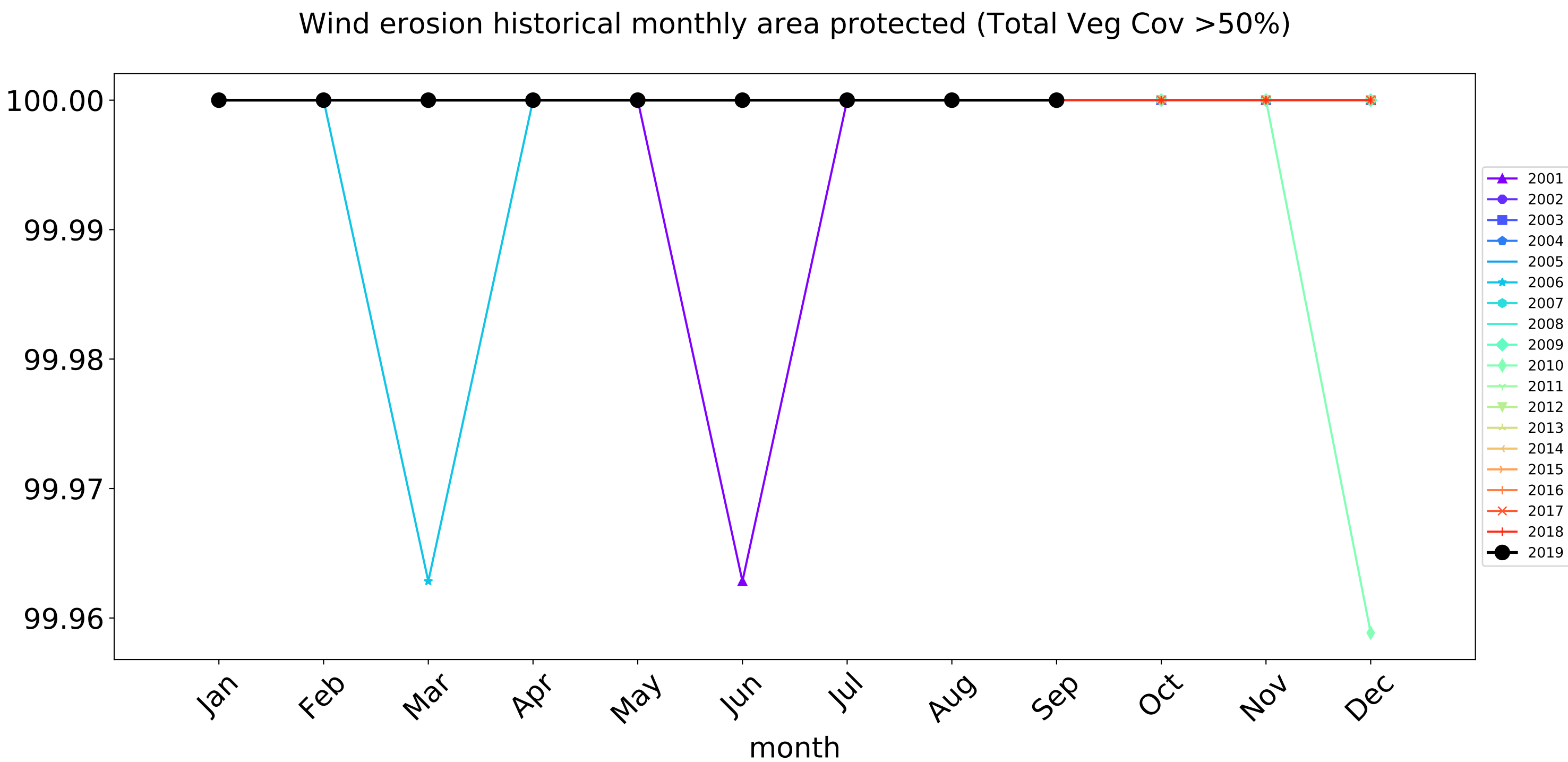
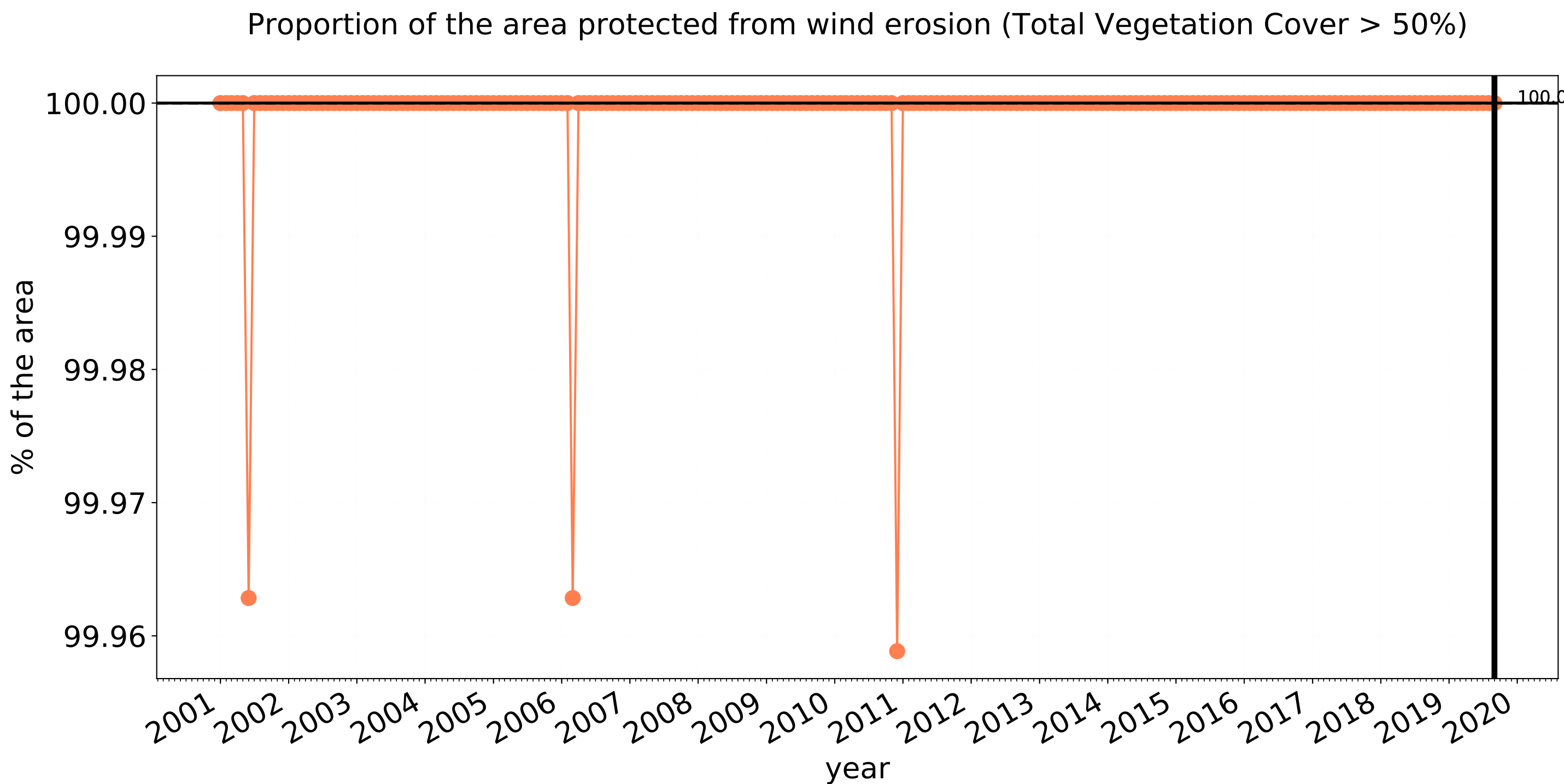


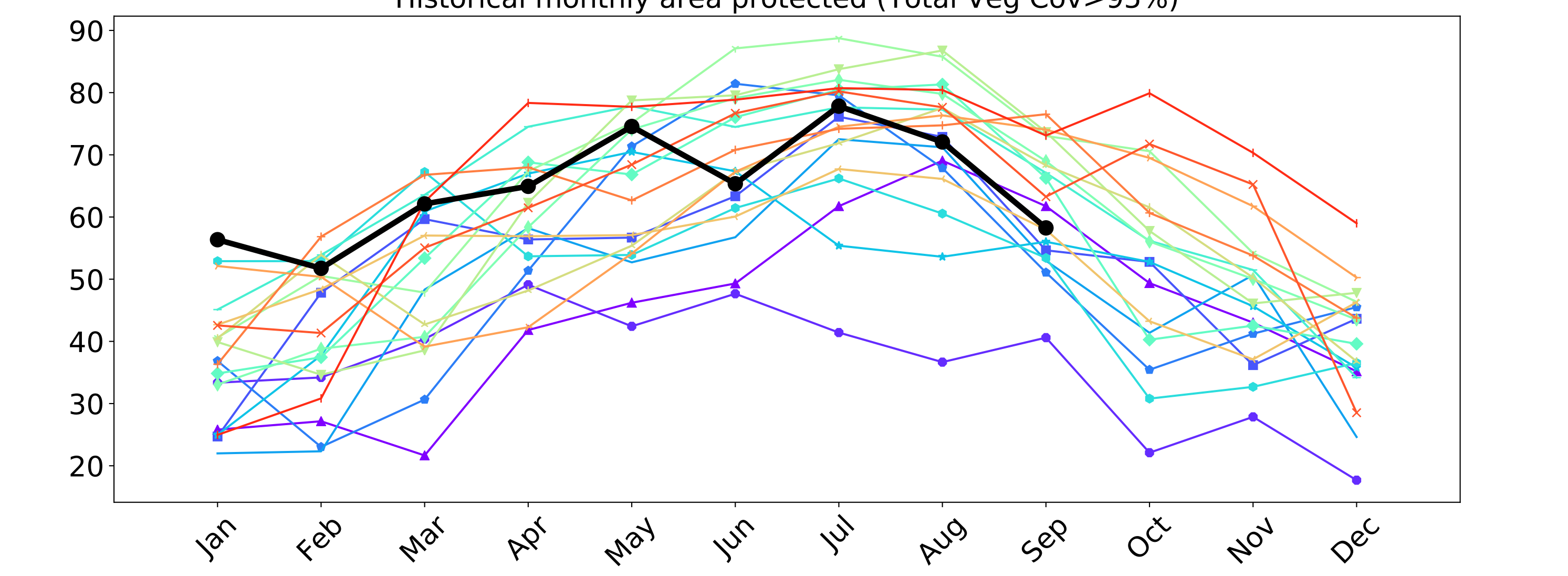
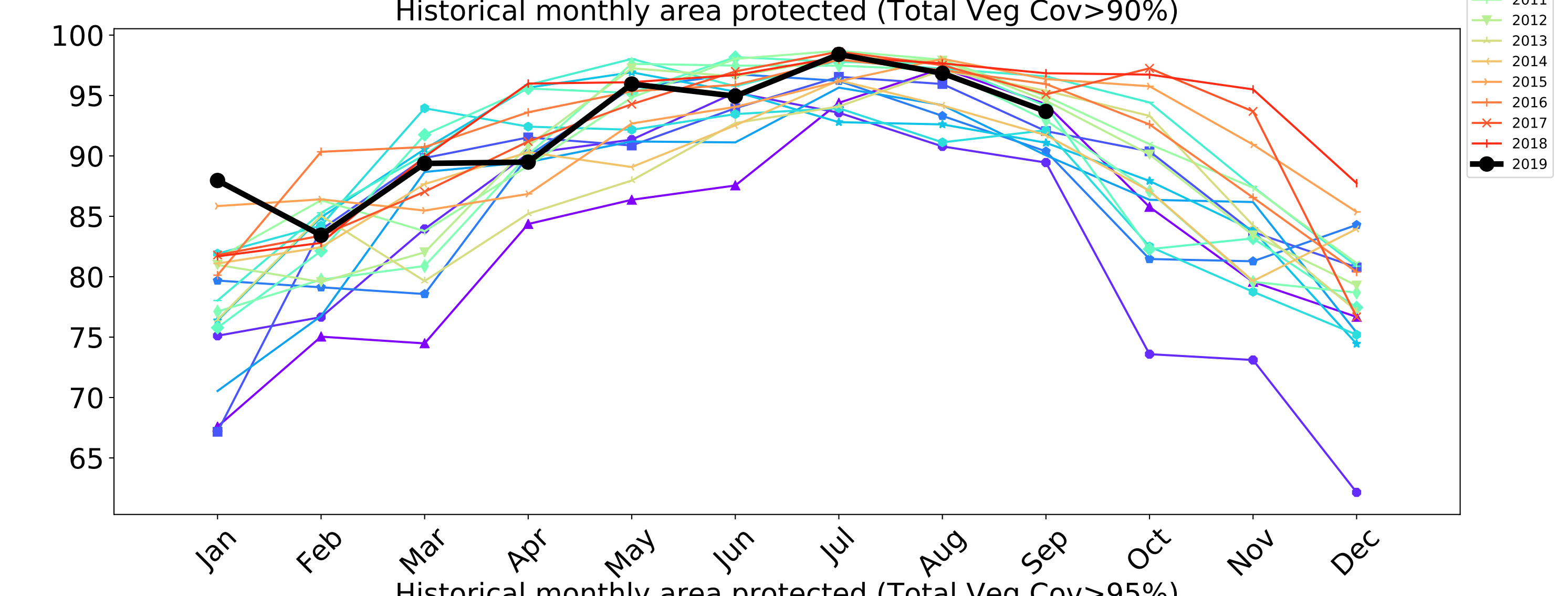
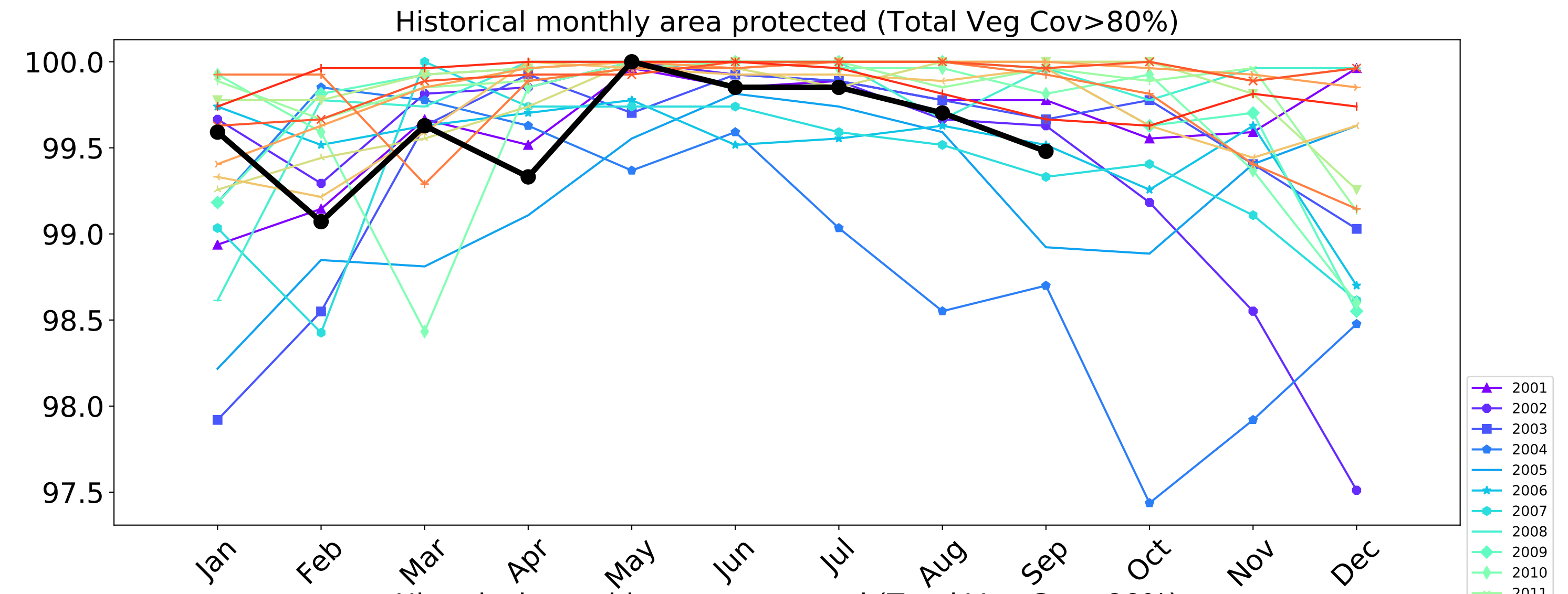
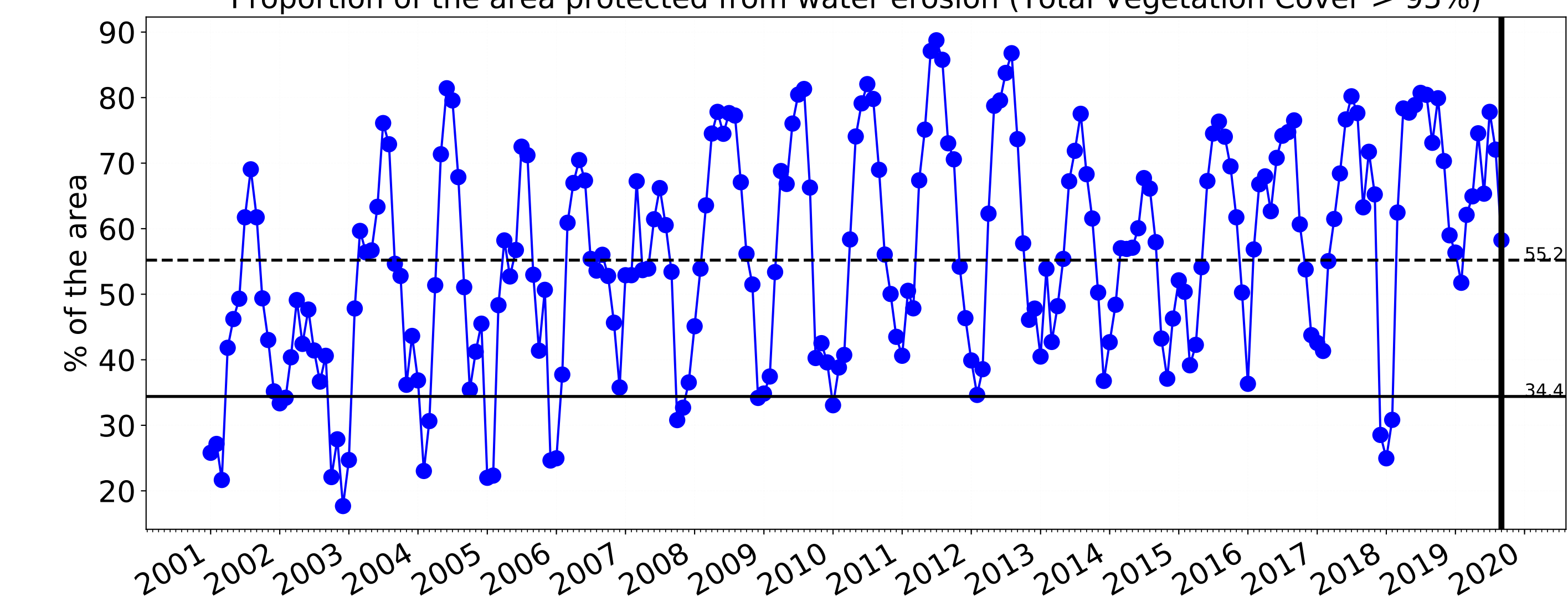
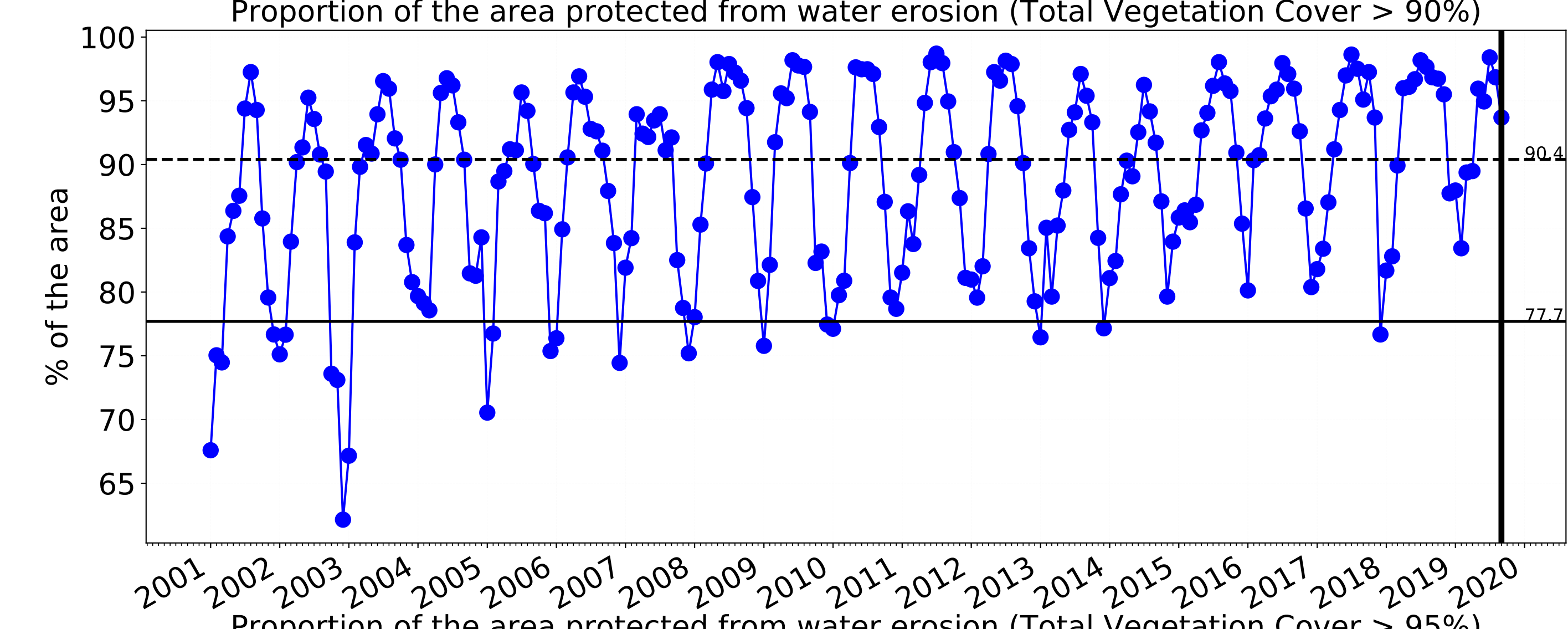
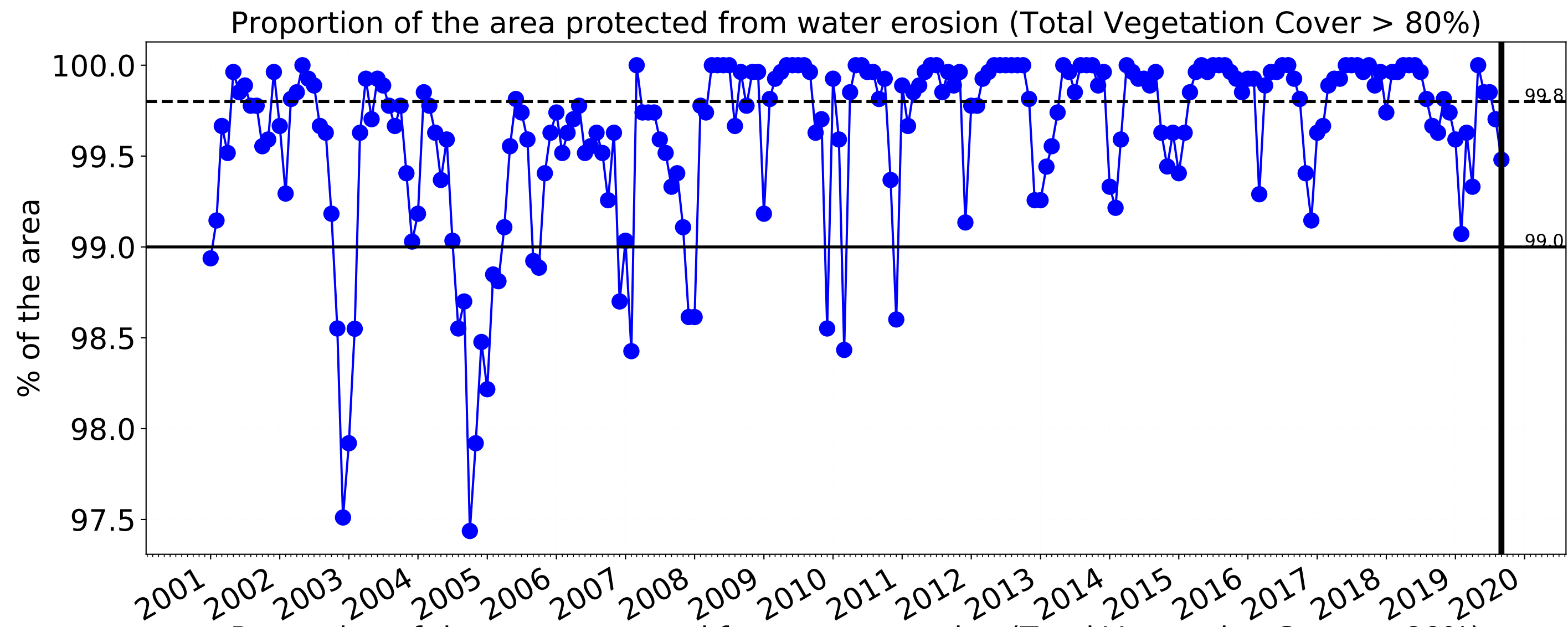
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Production native forests and plantation forests timeseries





Somerset_(R) (522,175 ha and no data 15,077 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	522,175	100.0% 522,175	100.0% 522,075	98.9% 516,175	91.4% 477,075	51.7% 270,050	24.4% 127,200
Conservation and natural environments	78,326	100.0% 78,326	100.0% 78,326	100.0% 78,326	99.8% 78,179	92.5% 72,474	67.5% 52,837
Conservation and natural environments Woodland forest	9,921	100.0% 9,921	100.0% 9,921	100.0% 9,921	99.5% 9,872	78.1% 7,746	27.1% 2,688
Conservation and natural environments Forest (non woodland)	65,271	100.0% 65,271	100.0% 65,271	100.0% 65,271	99.9% 65,223	97.0% 63,300	76.4% 49,842
Agriculture	354,034	100.0% 354,034	100.0% 353,984	98.4% 348,520	88.8% 314,210	36.8% 130,250	9.5% 33,634
Grazing	330,536	100.0% 330,536	100.0% 330,487	99.2% 328,041	91.0% 300,641	38.3% 126,578	9.9% 32,782
Grazing non forest	244,900	100.0% 244,900	100.0% 244,851	99.0% 242,421	88.2% 215,946	28.0% 68,555	5.5% 13,446
Grazing Woodland forest	45,429	100.0% 45,429	100.0% 45,429	99.9% 45,404	98.3% 44,653	60.1% 27,281	14.2% 6,444
Grazing - Forest (non woodland)	40,207	100.0% 40,207	100.0% 40,207	100.0% 40,207	99.4% 39,964	75.8% 30,465	31.8% 12,778
Irrigation	14,098	100.0% 14,098	100.0% 14,098	80.1% 11,297	38.7% 5,459	3.2% 450	0.3% 47
Production native forests and plantation forests	65,271	100.0% 65,271	100.0% 65,271	99.9% 65,174	99.5% 64,932	93.7% 61,149	58.2% 38,018



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