

Total vegetation cover soil protection

Region:LGA Gingin_(S) WA

Date: June 2026

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>



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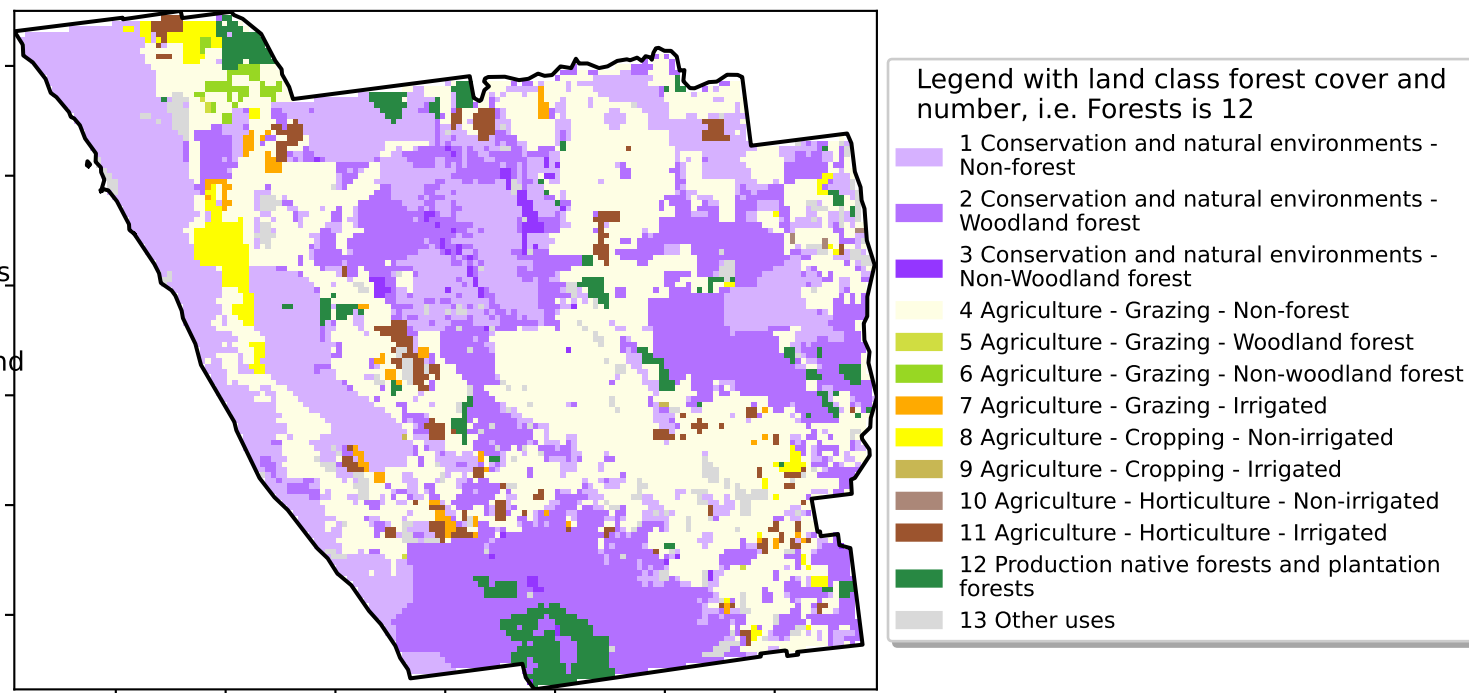
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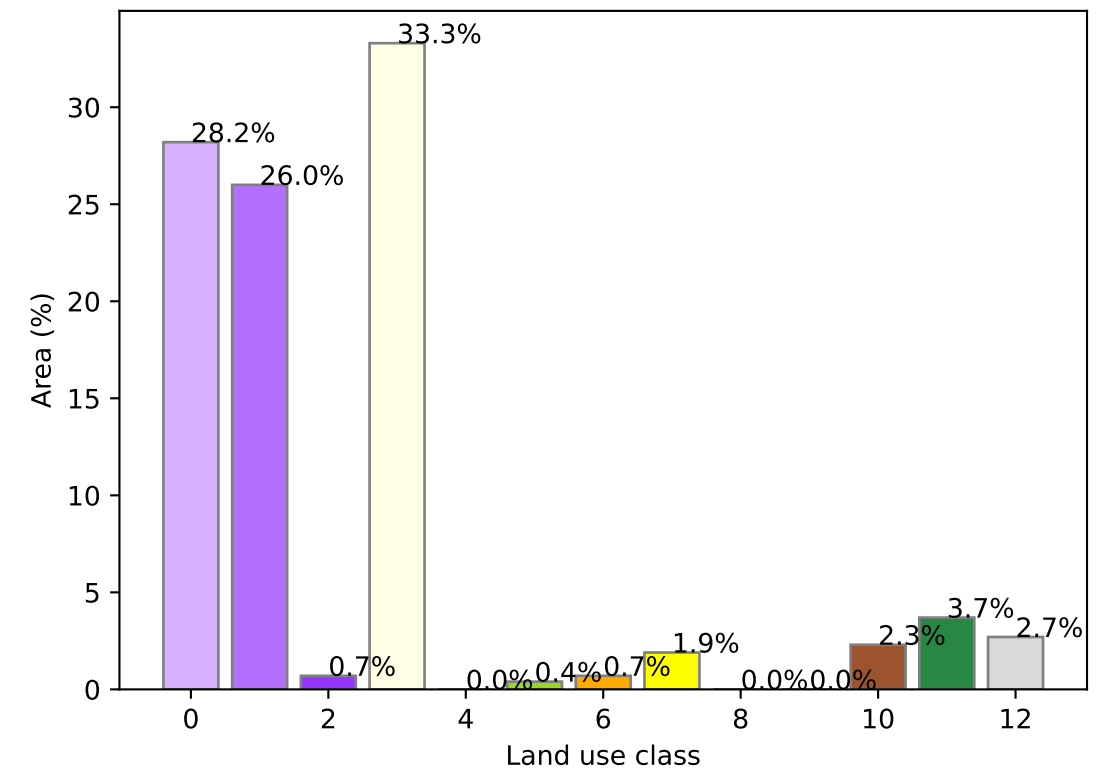
Vegetation Cover Jun 2026

Land use and forest cover

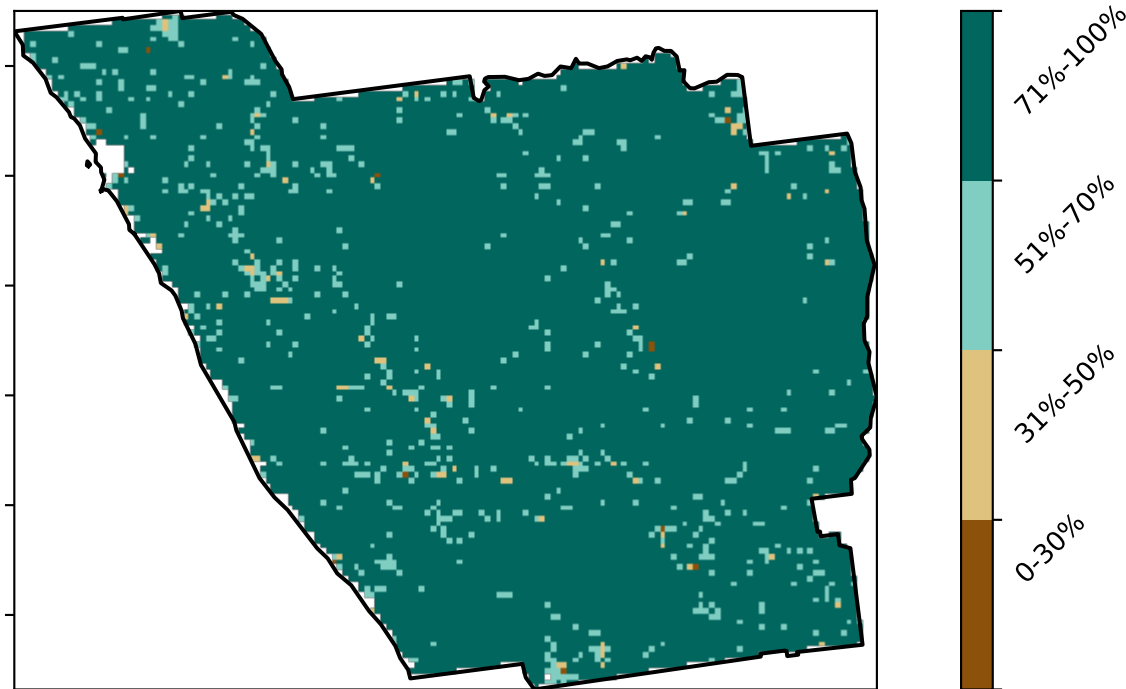
Catchment Scale
Land Use and Forests
of Australia (2018)
Derived from
Catchment Scale Land
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(2018) and Forests
of Australia (2018)



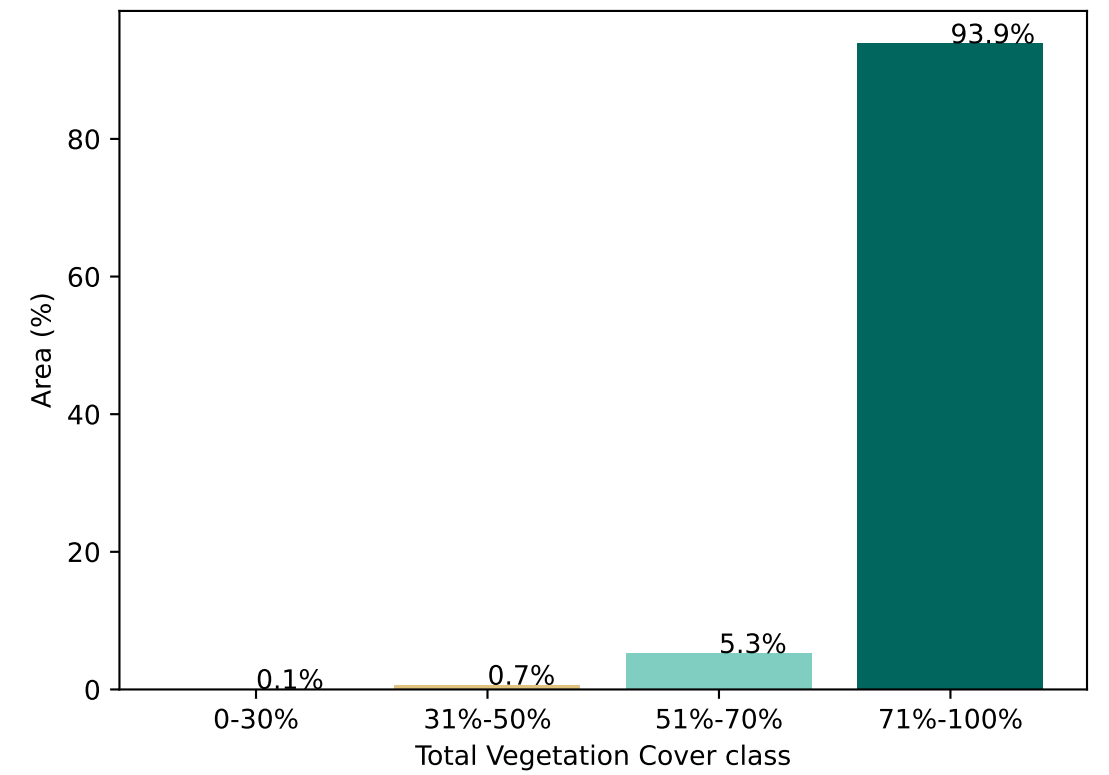
Proportion of each land class in area



Total Vegetation Cover [%]



Proportion of vegetation cover class in area



% Area protected from water erosion (>70%)

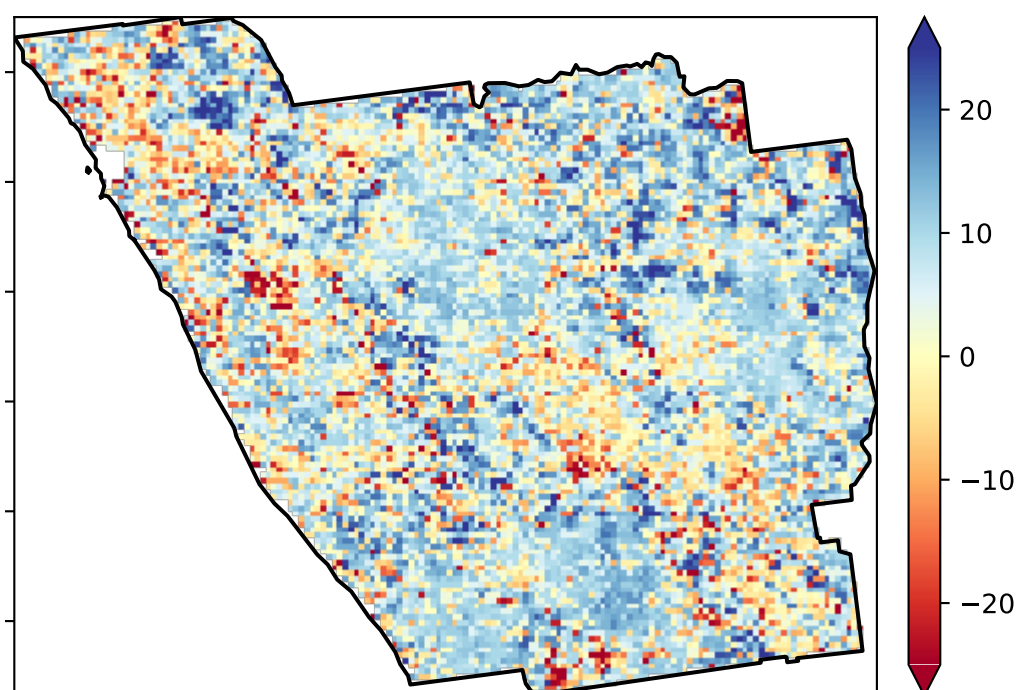


% Area protected from wind erosion (>50%)



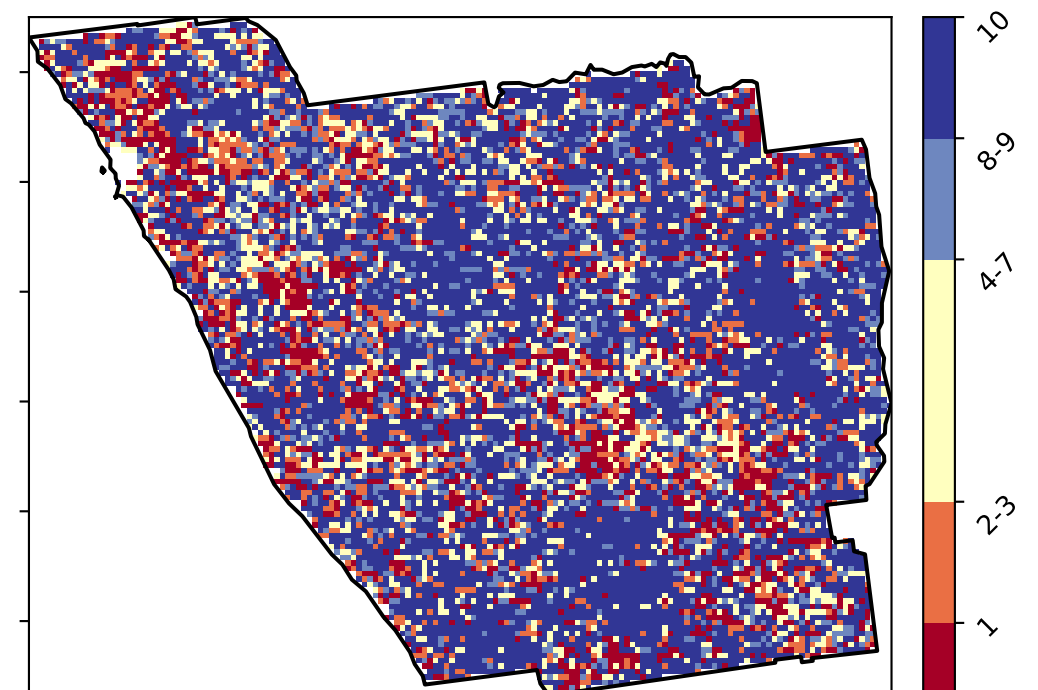
Total Vegetation Cover Anomaly [%]

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Total Vegetation Cover Decile [%]



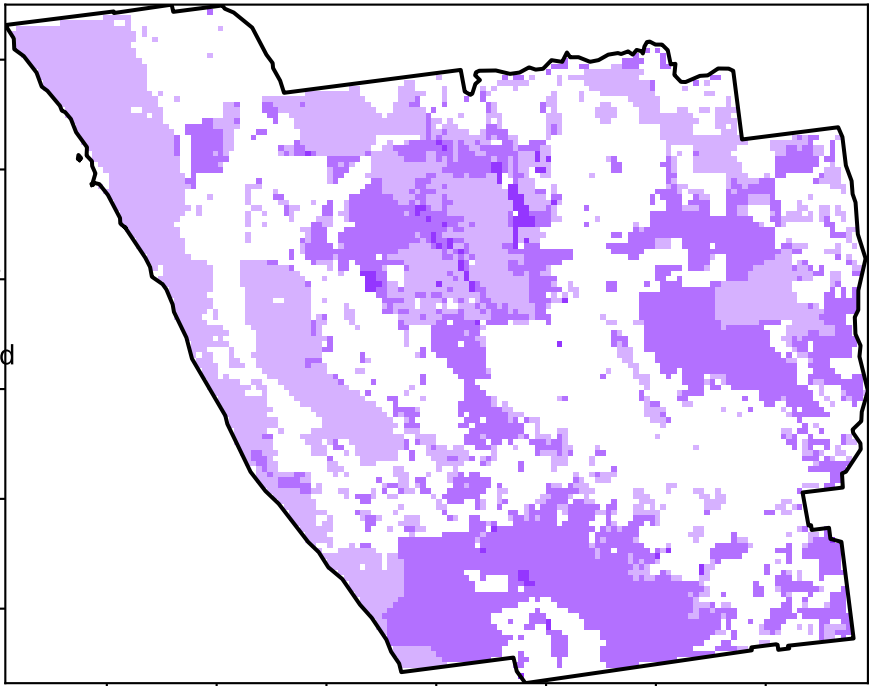
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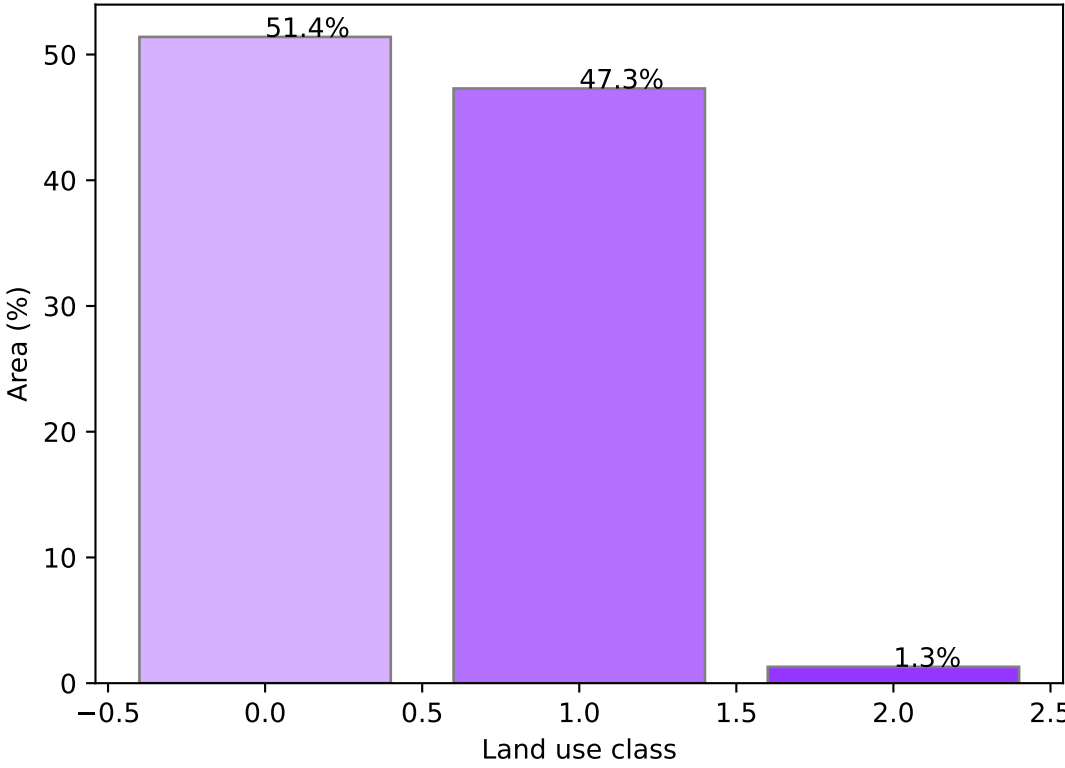
Conservation and natural environments

Land use and forest cover

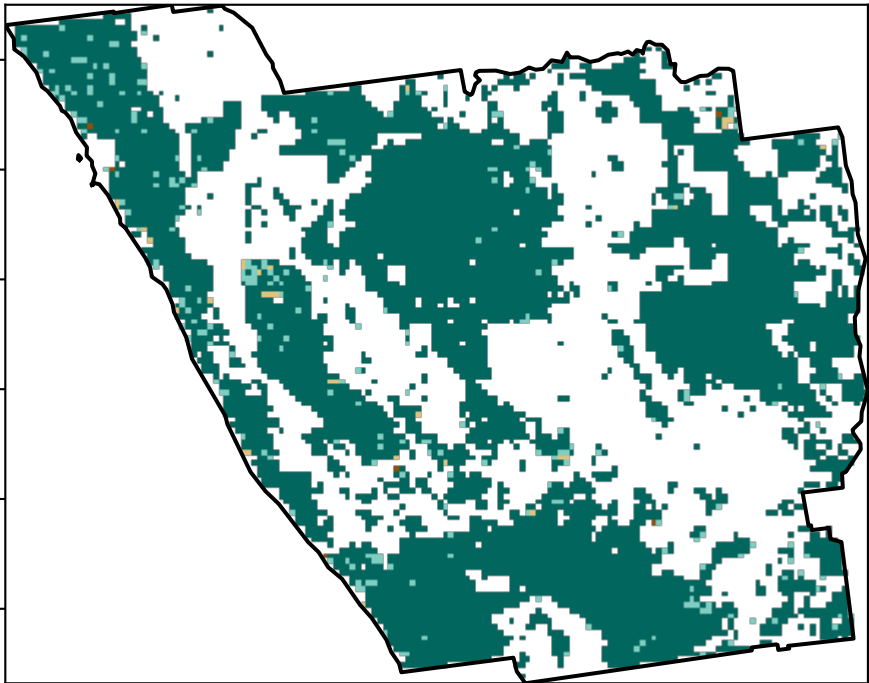
Catchment Scale Land Use and Forests of Australia (2018)
Derived from Catchment Scale Land Use of Australia (2018) and Forests of Australia (2018)



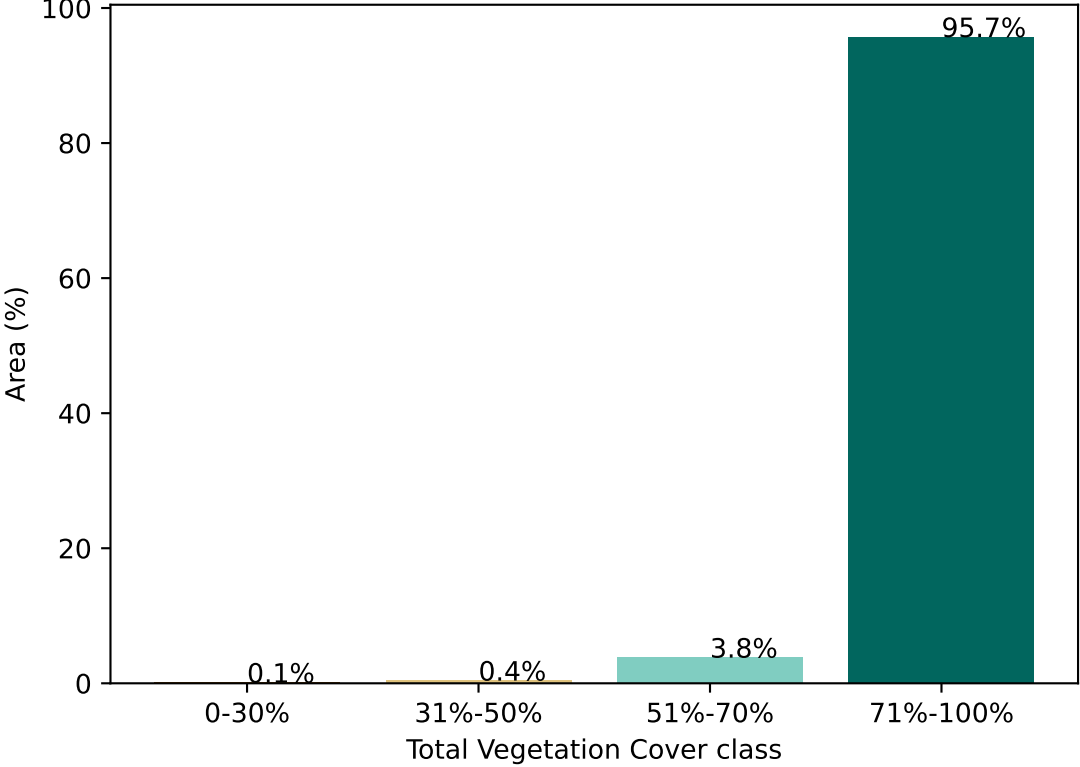
Proportion of each land class in area



Total Vegetation Cover [%]



Proportion of vegetation cover class in area



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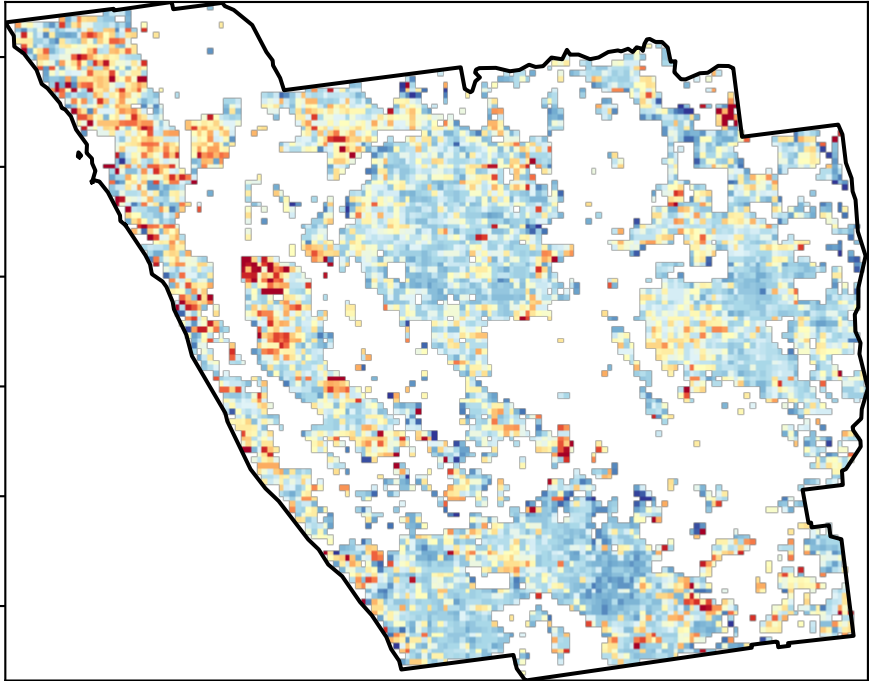


% Area protected from wind erosion (>50%)



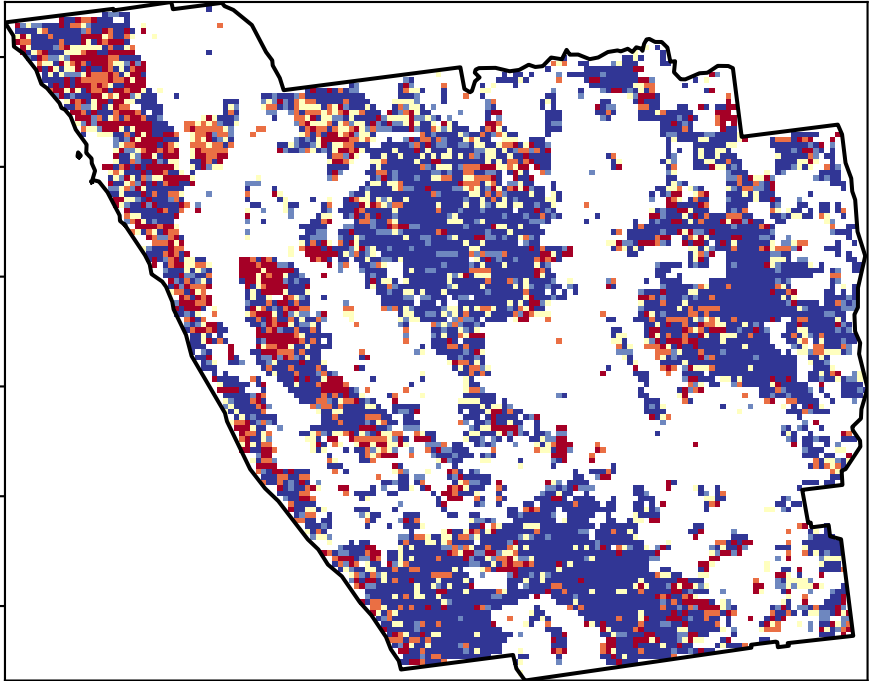
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Total Vegetation Cover Decile [%]



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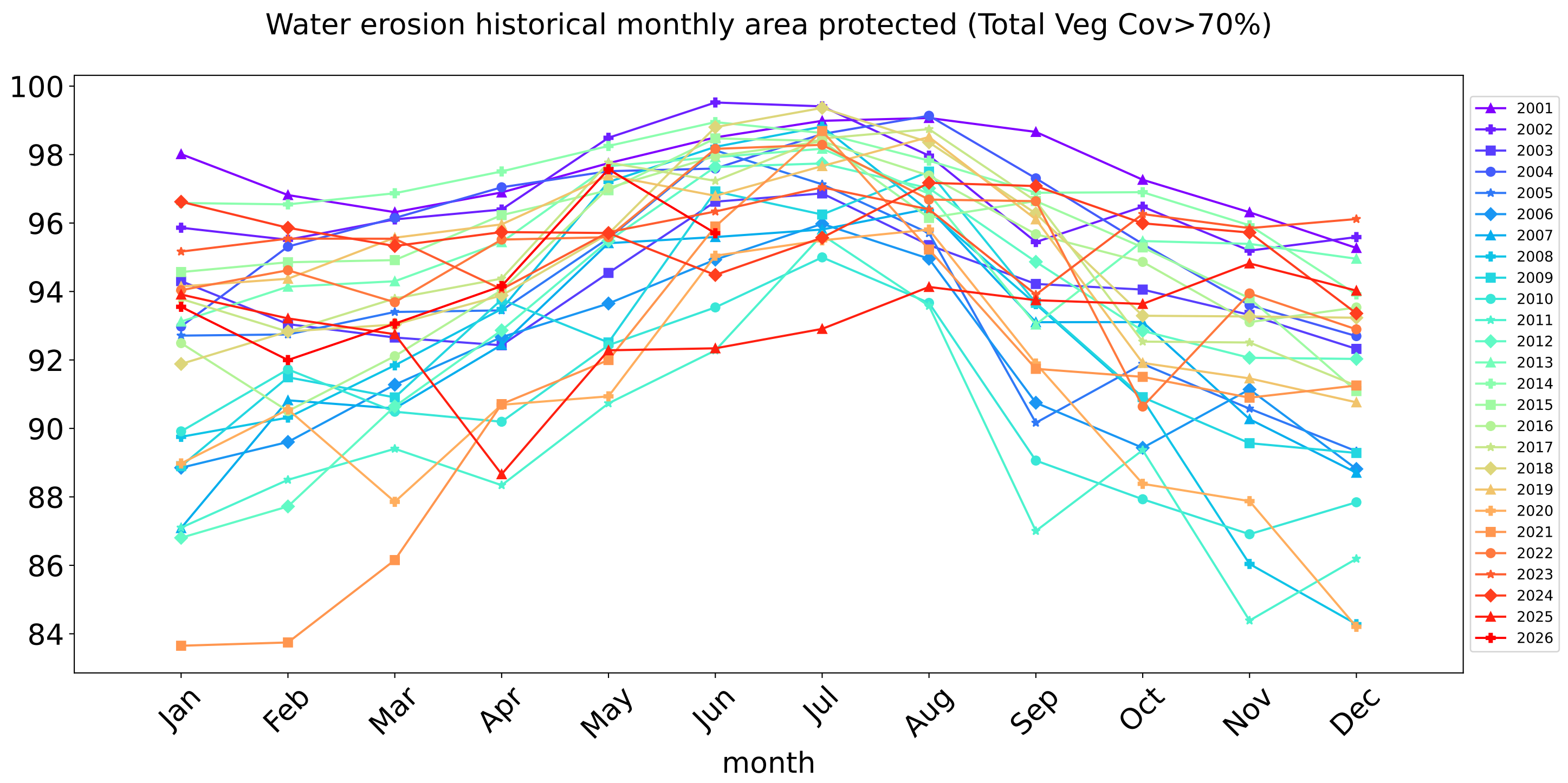
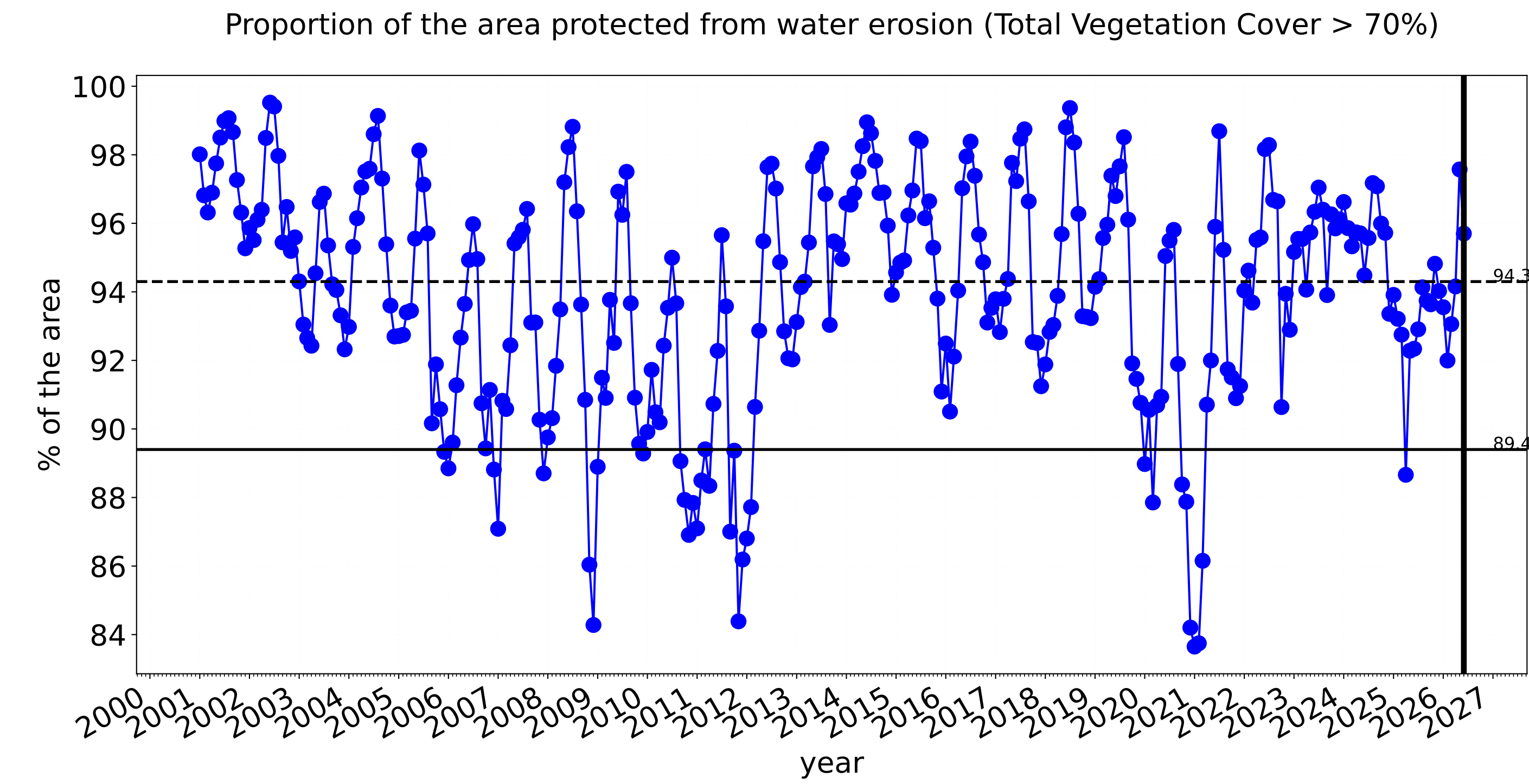
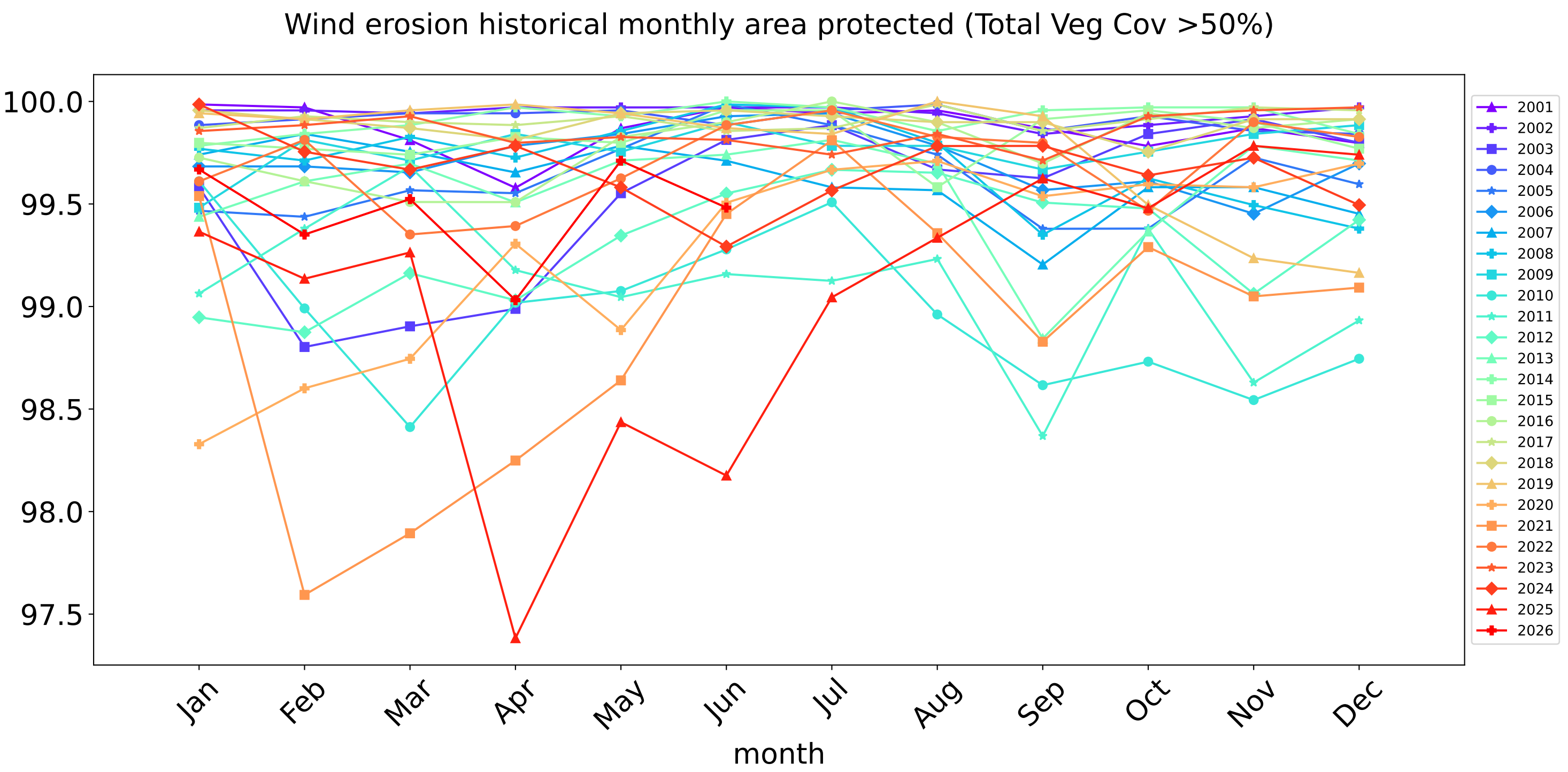
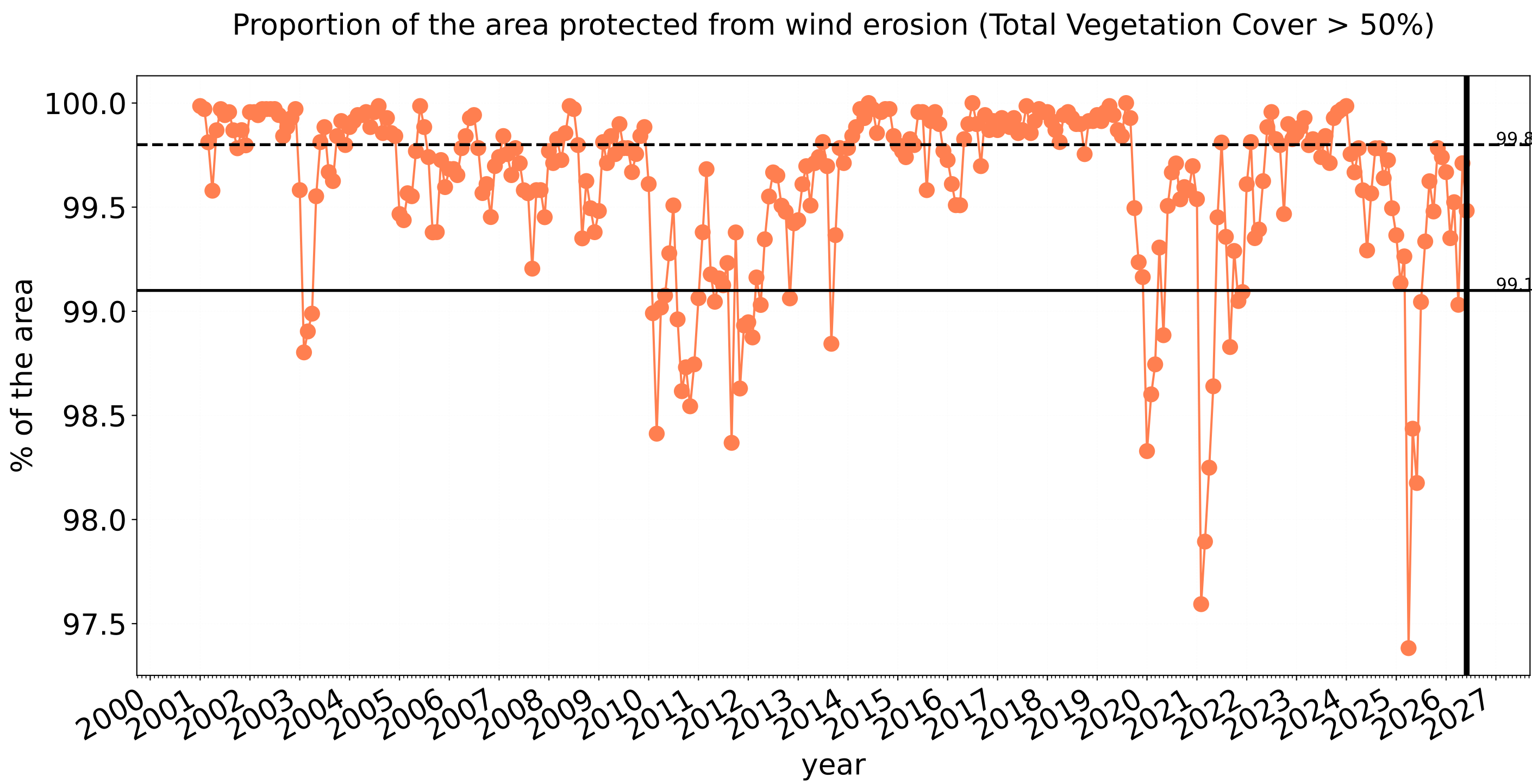


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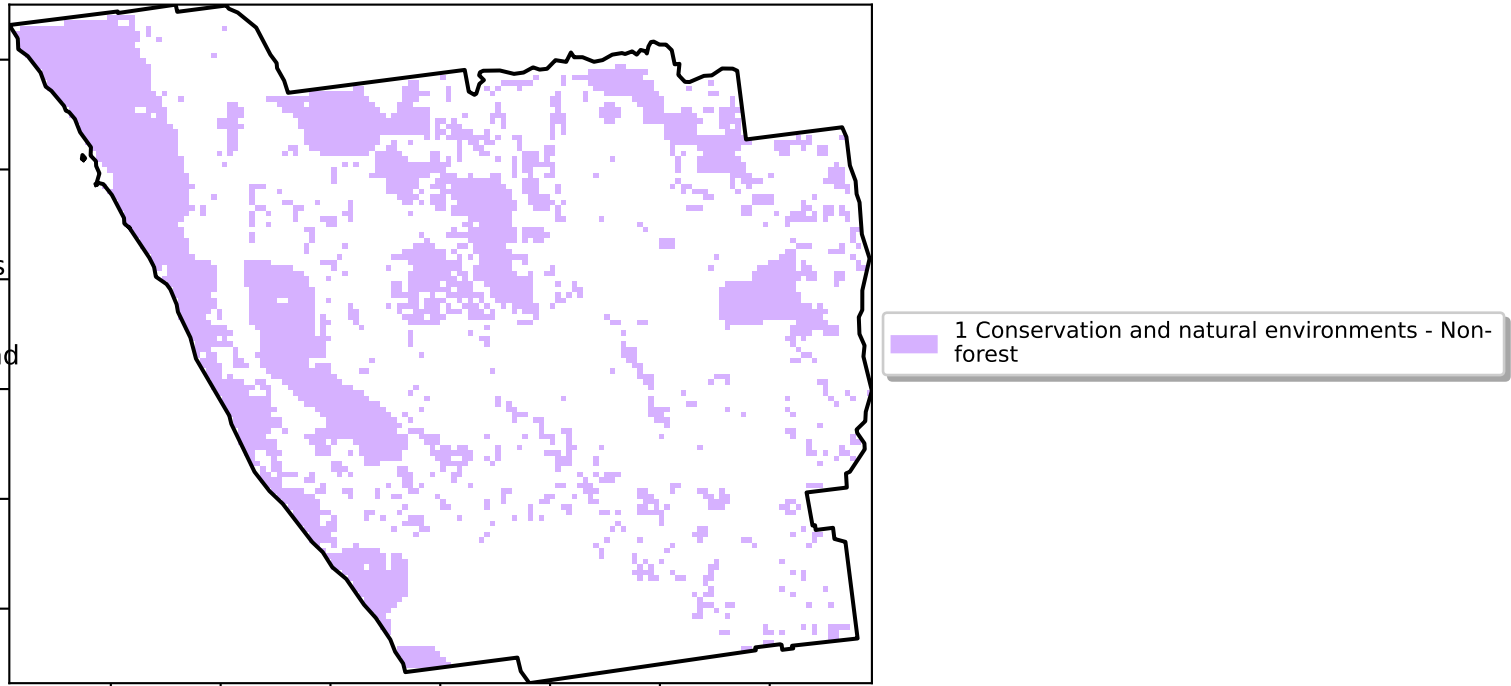


Conservation and natural environments timeseries

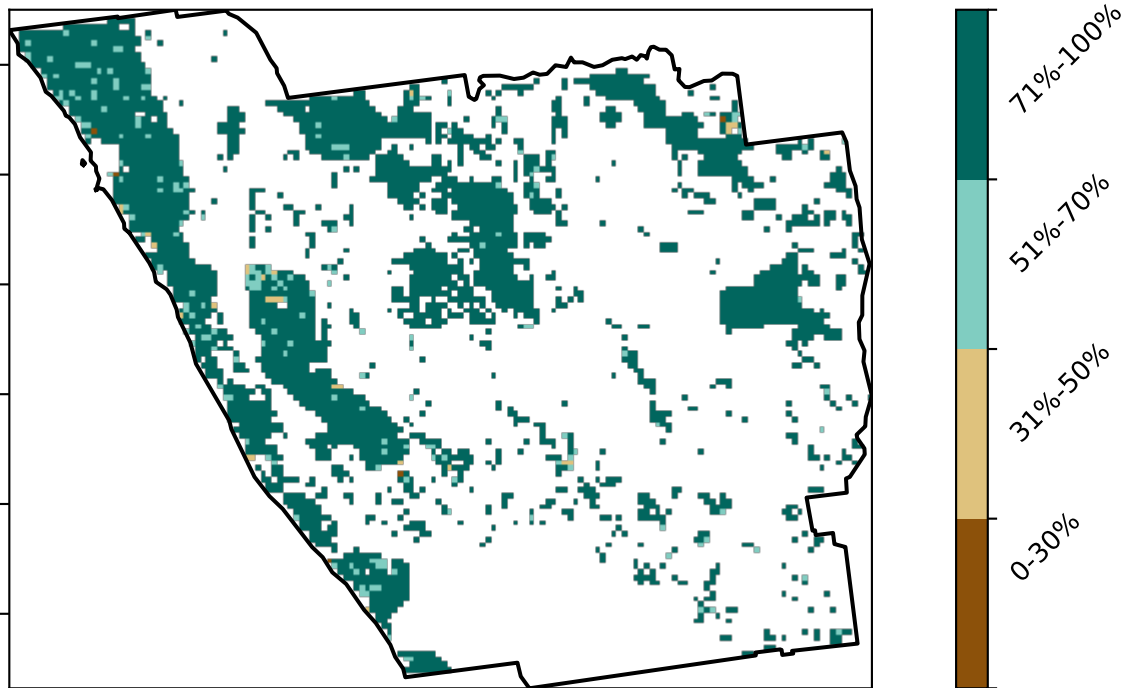


Conservation and natural environments non forest

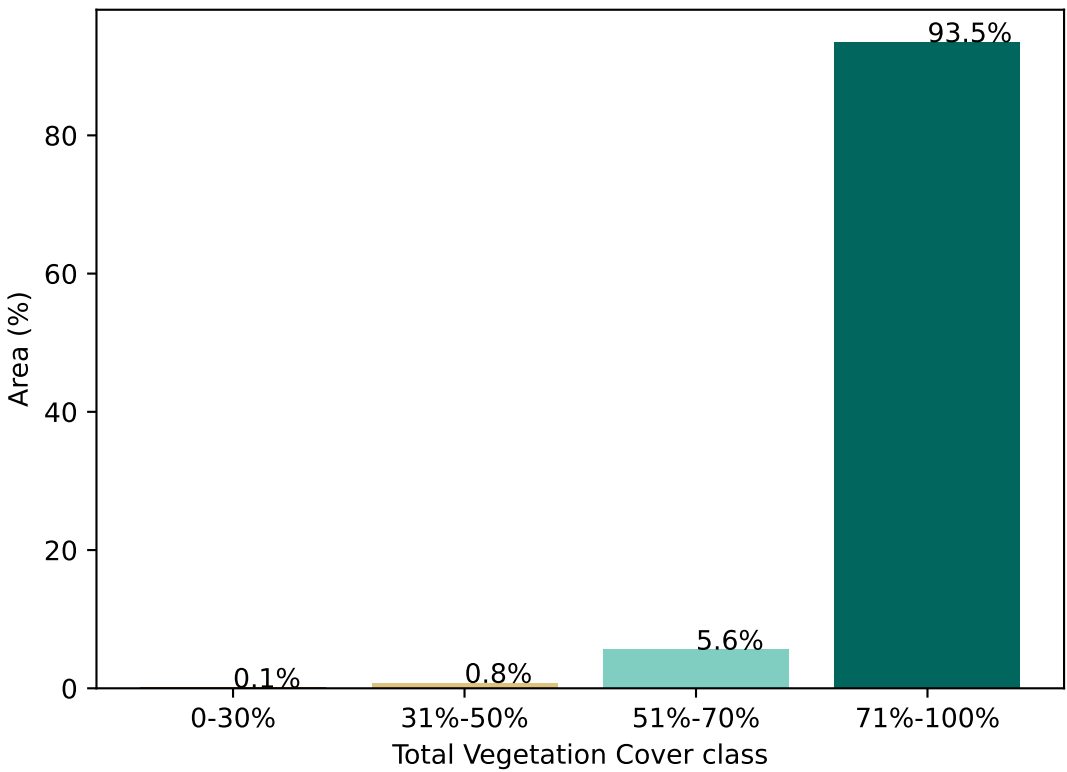
Land use and forest cover



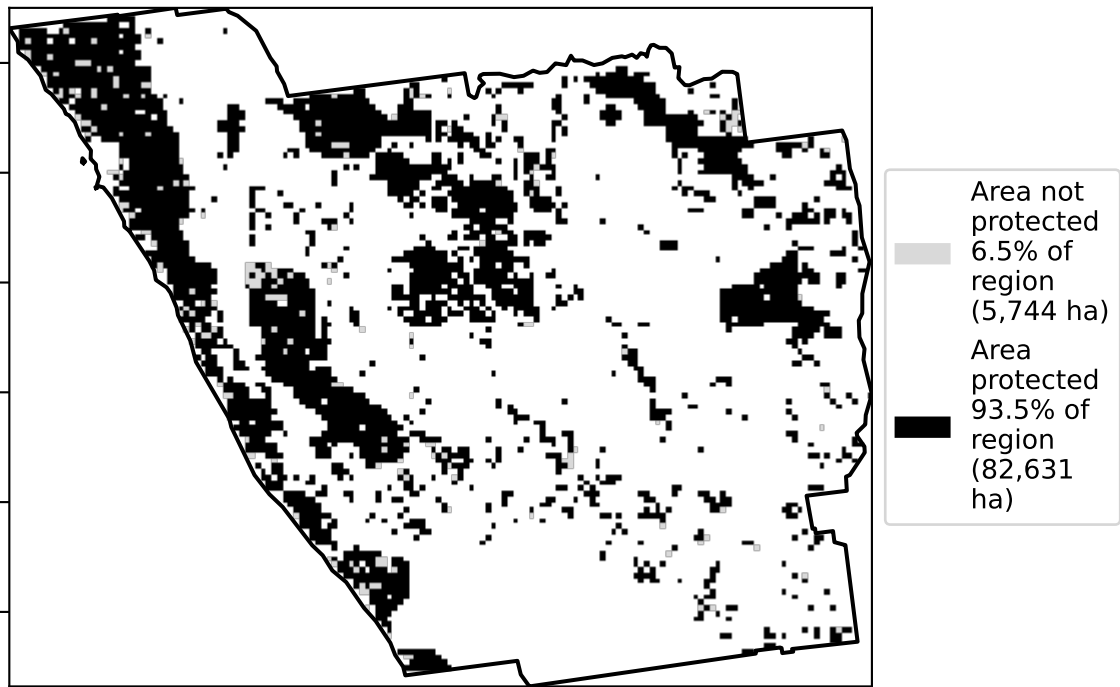
Total Vegetation Cover [%]



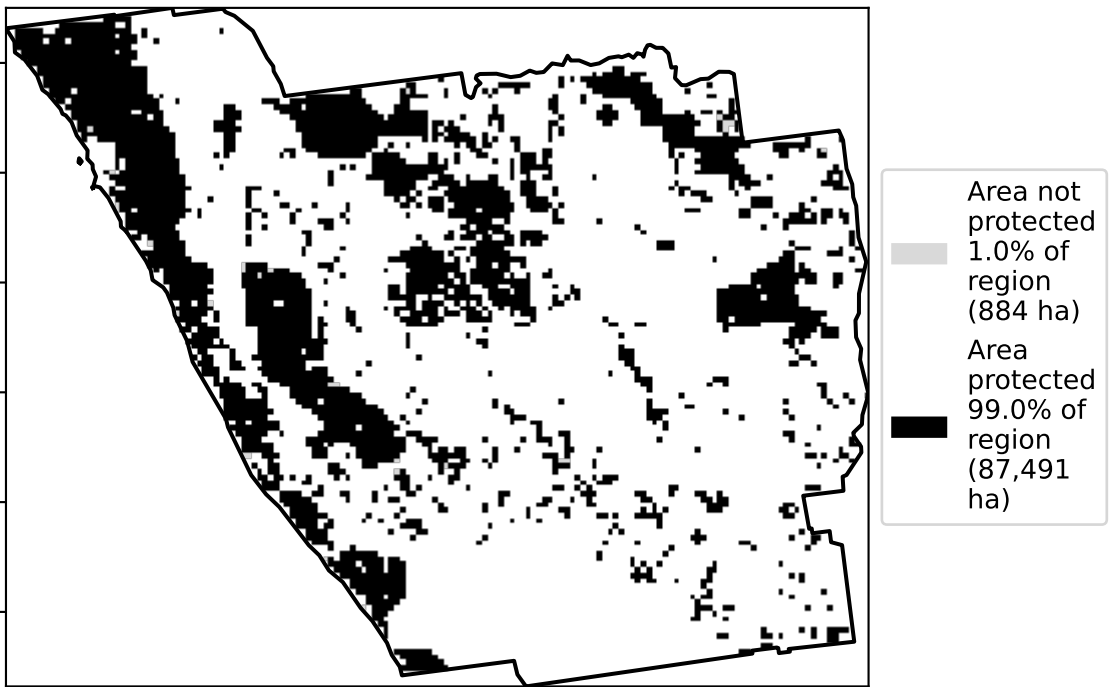
Proportion of vegetation cover class in area



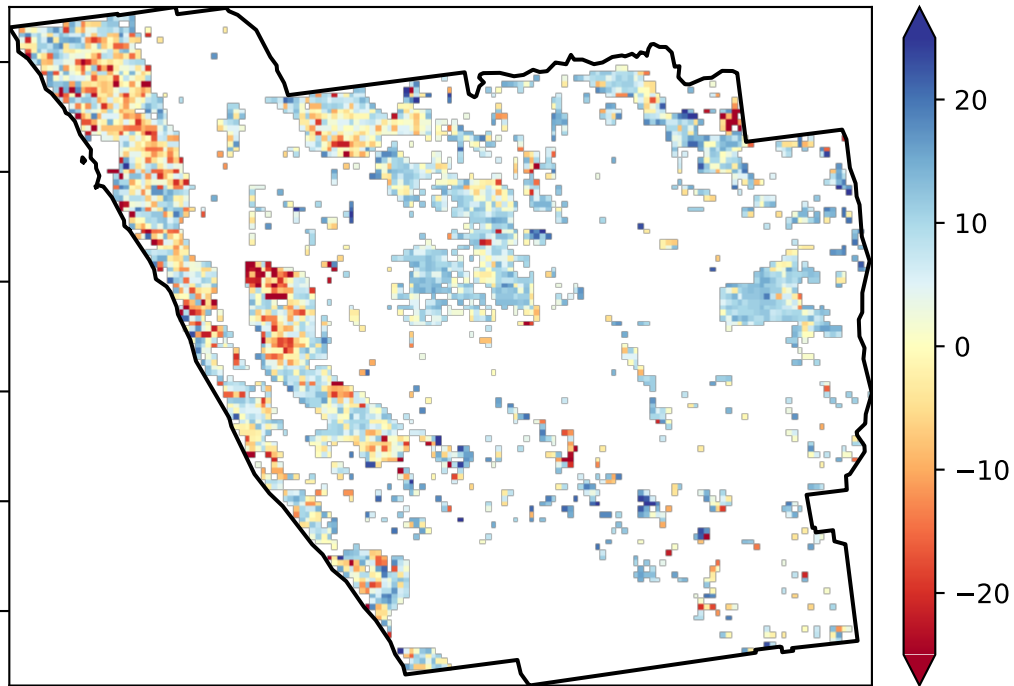
% Area protected from water erosion (>70%)



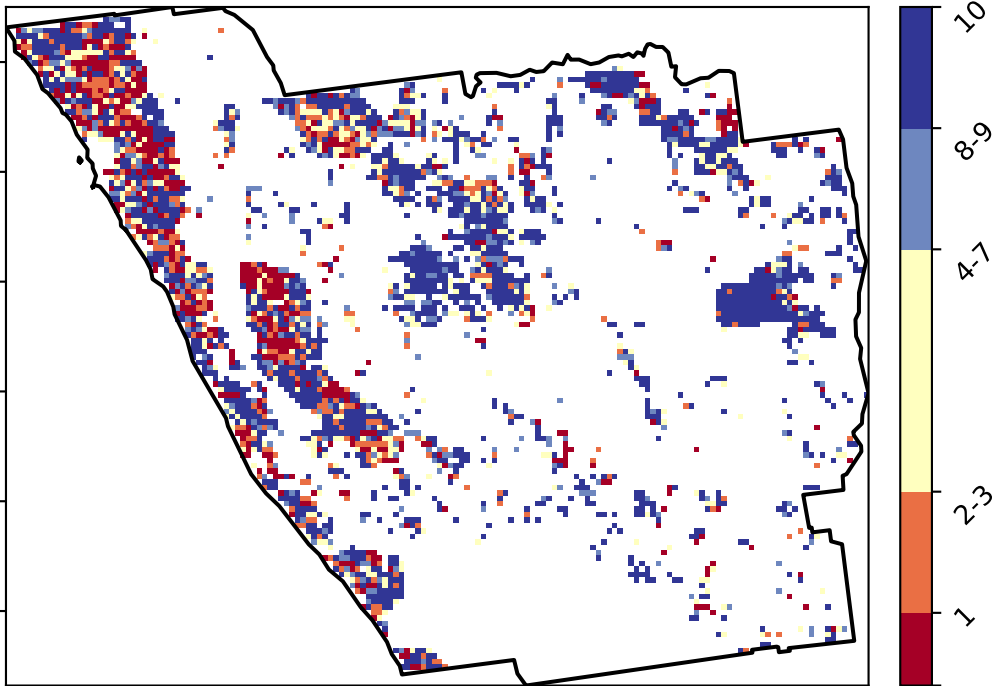
% Area protected from wind erosion (>50%)



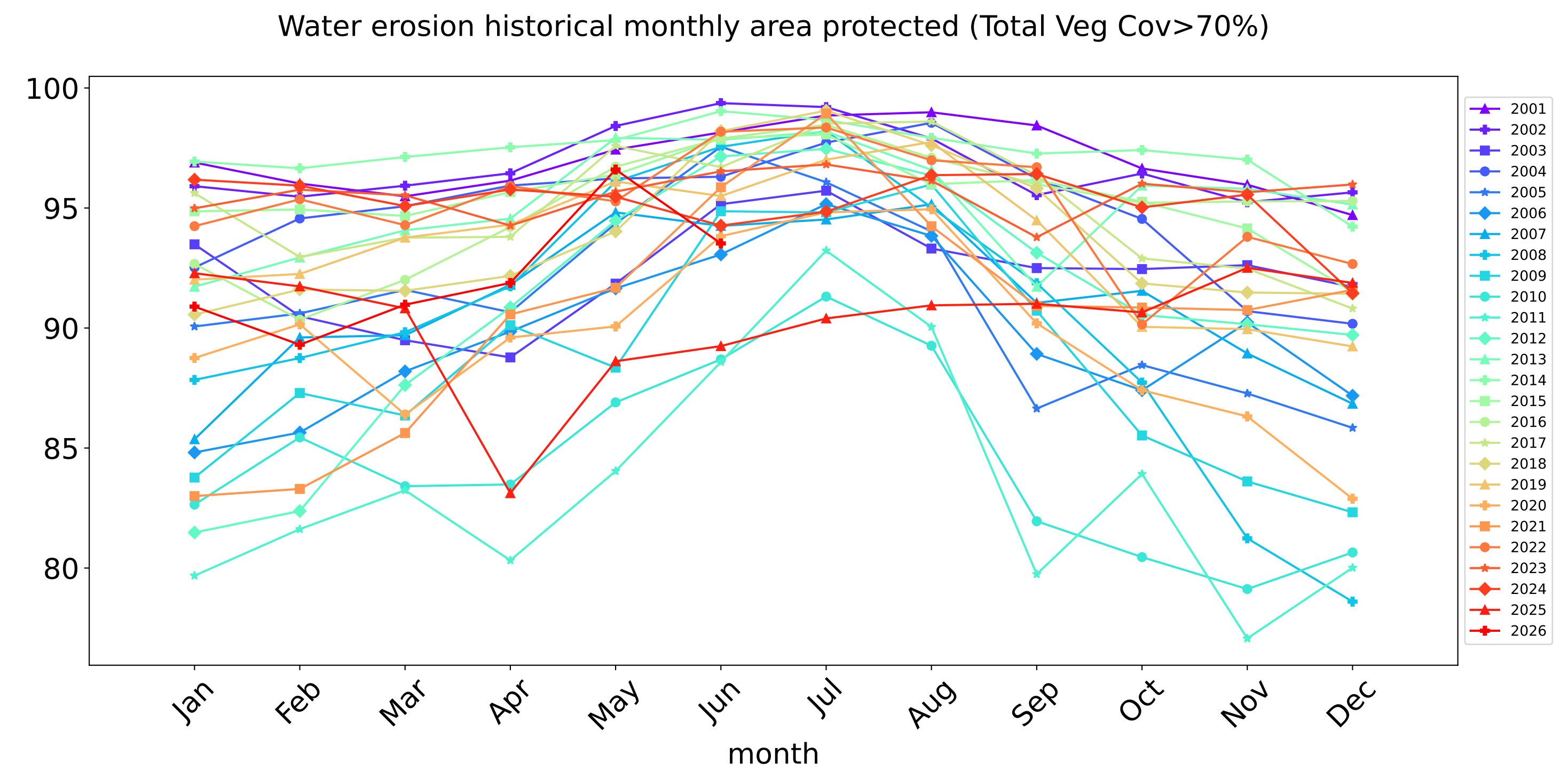
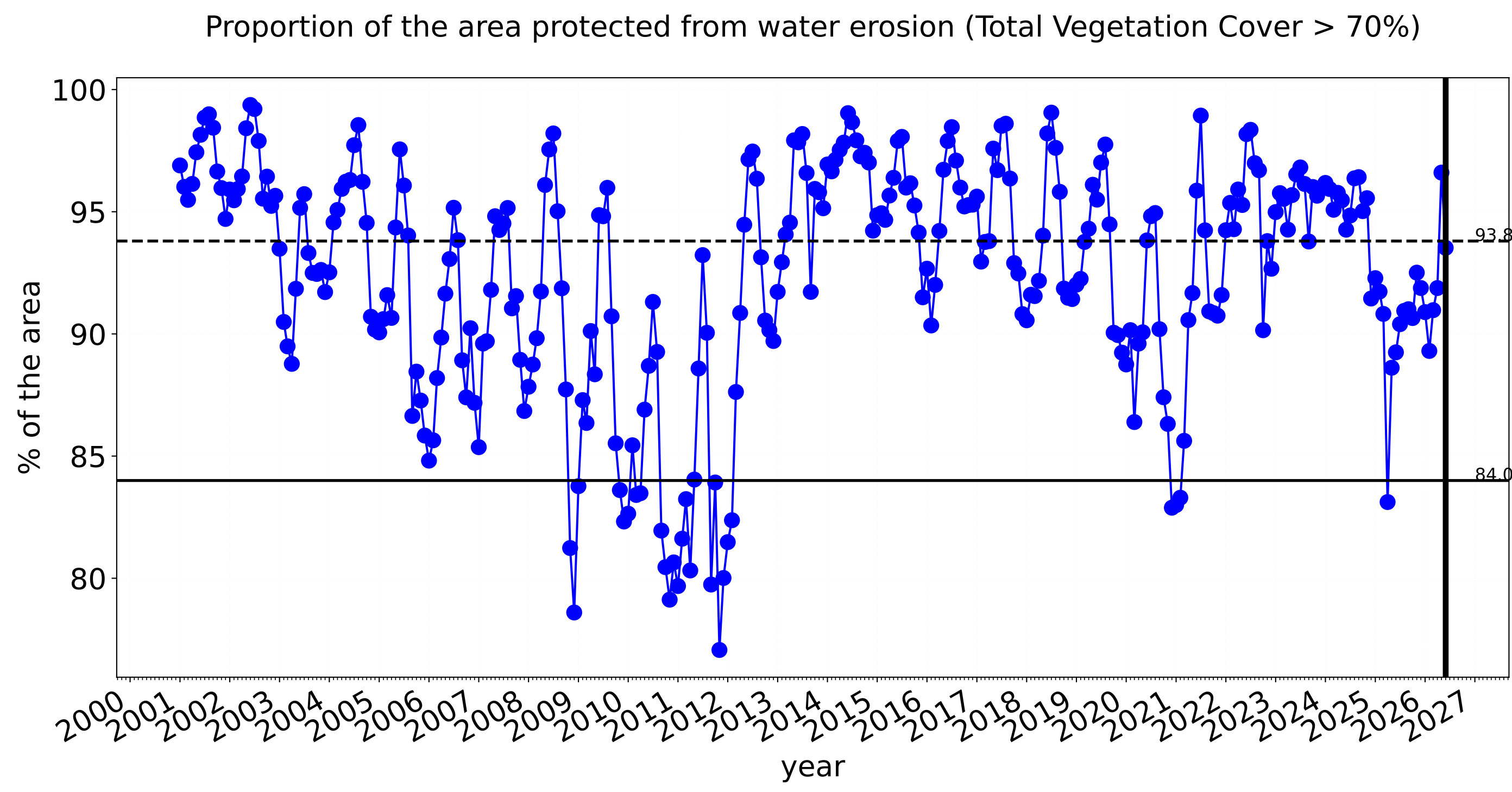
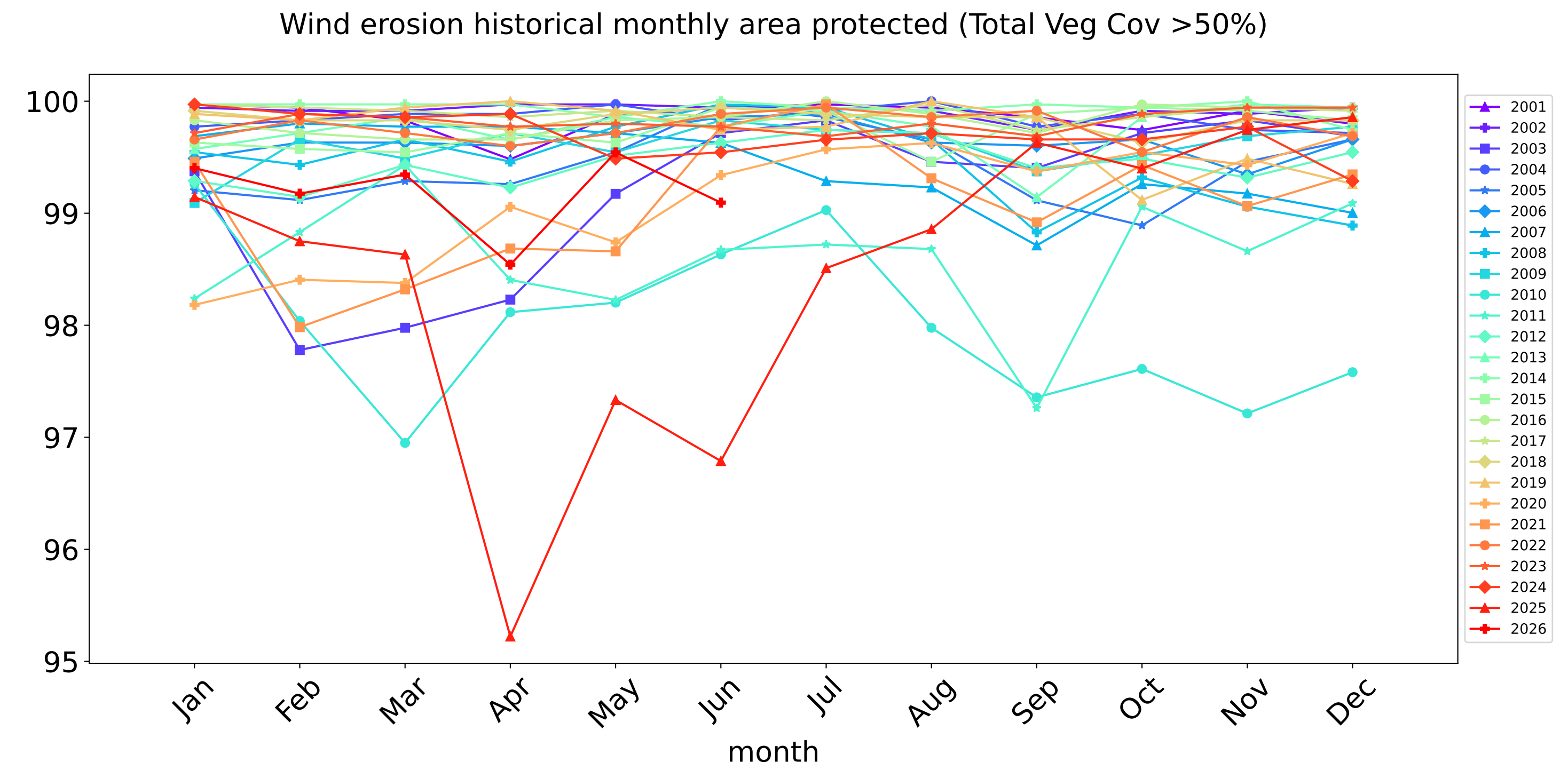
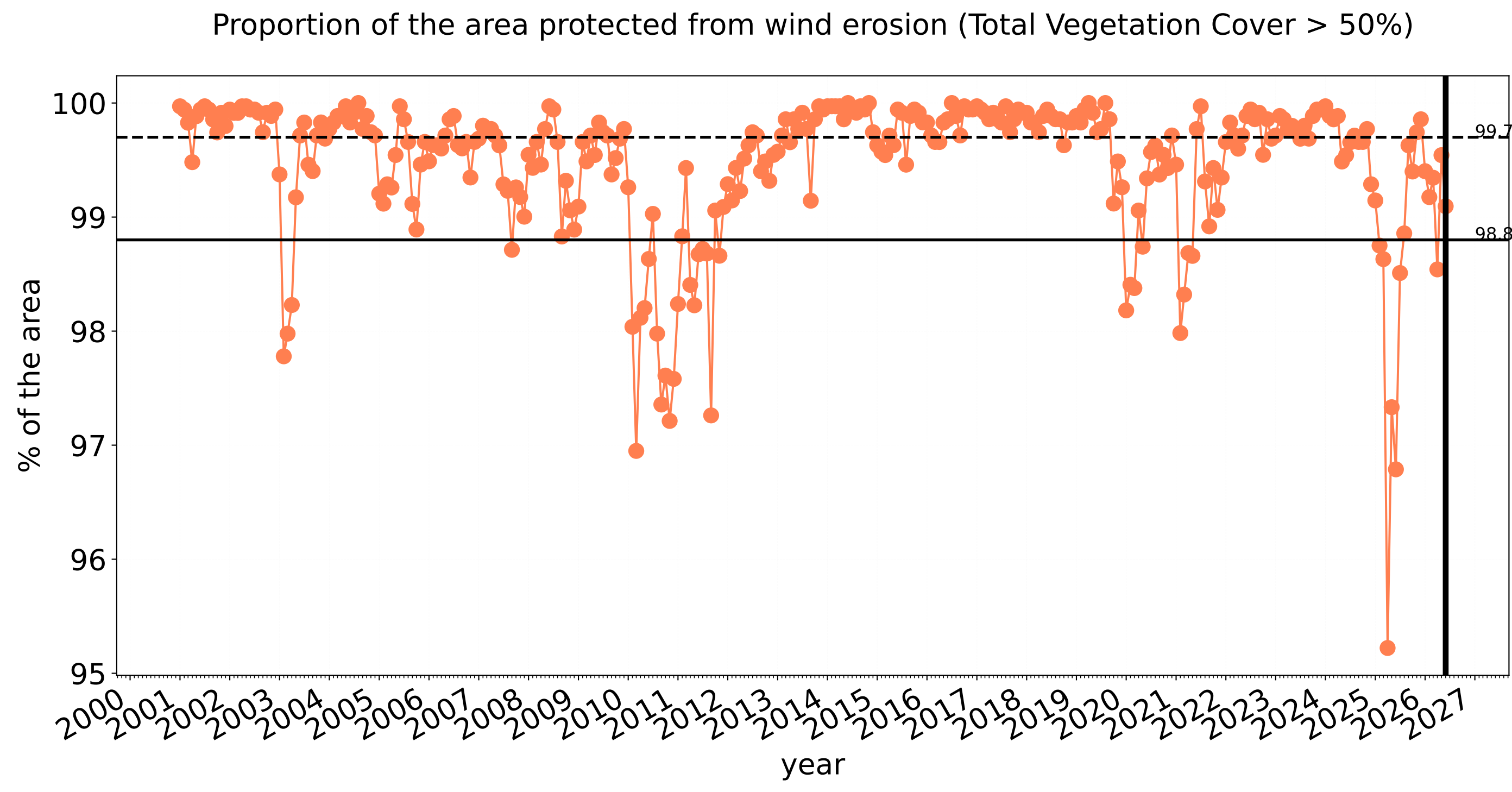
Total Vegetation Cover Anomaly [%]



Total Vegetation Cover Decile [%]

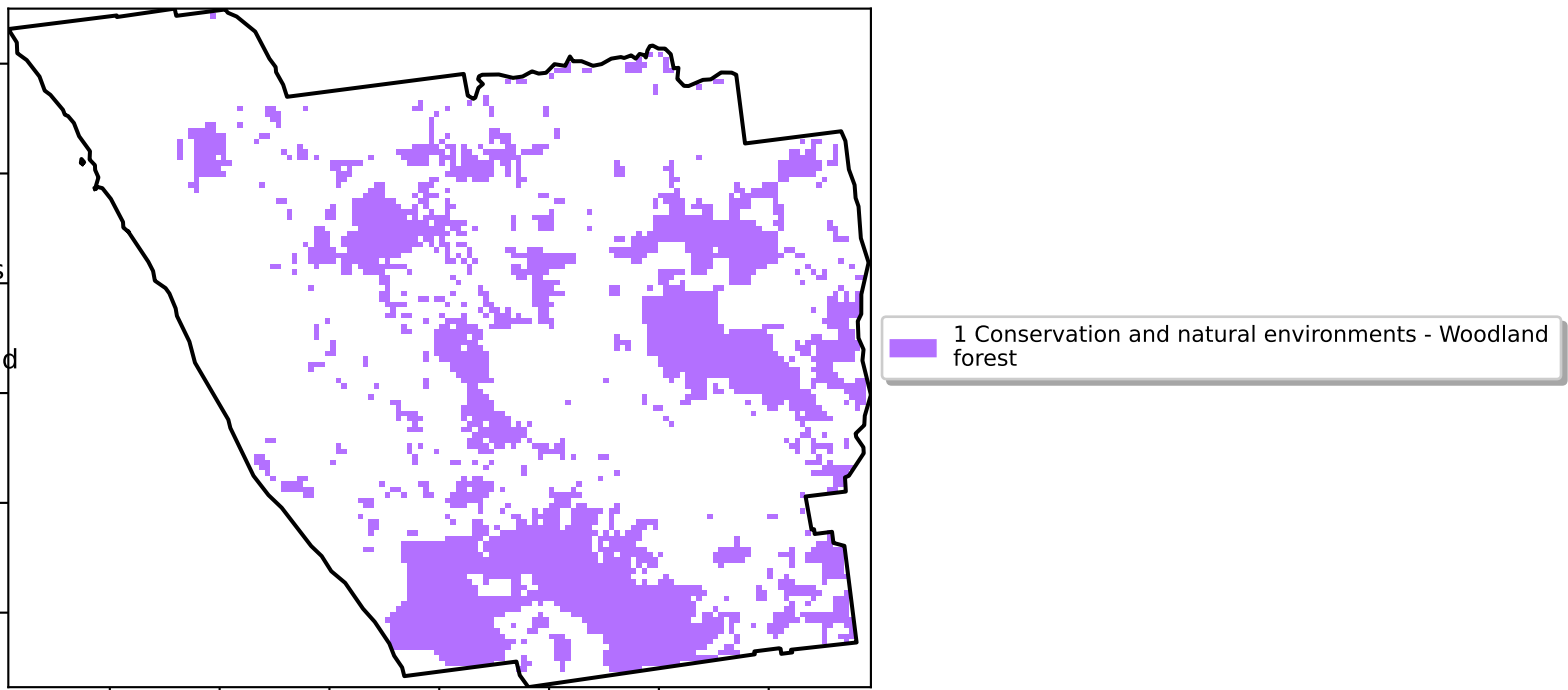


Conservation and natural environments non forest timeseries

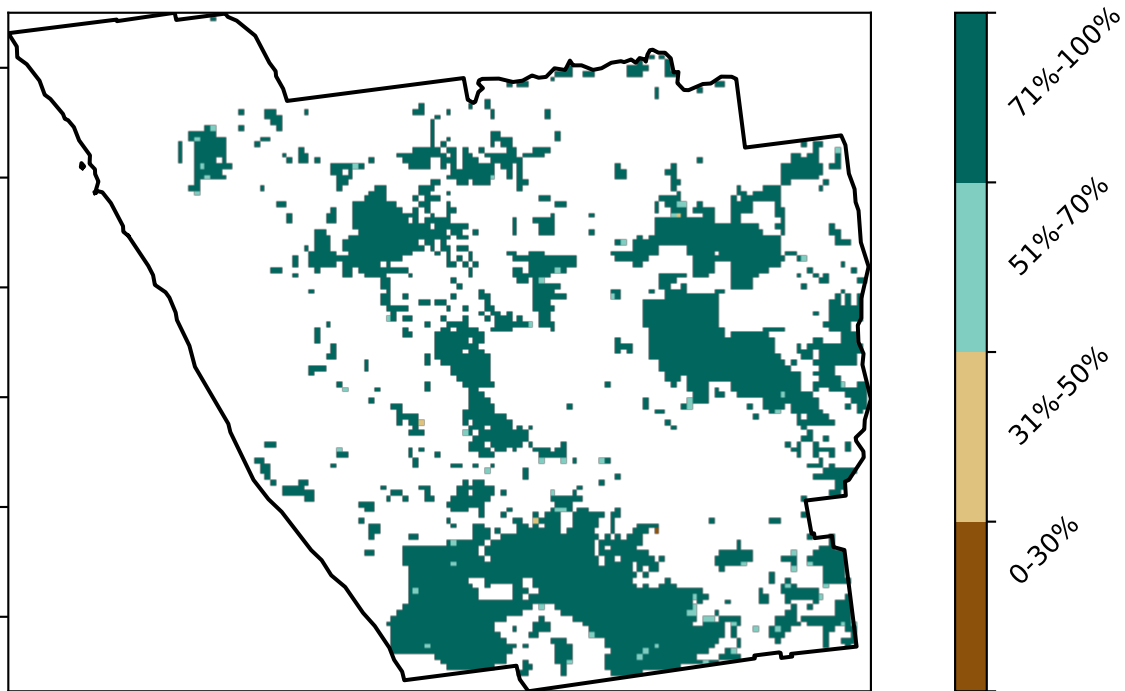


Conservation and natural environments Woodland forest

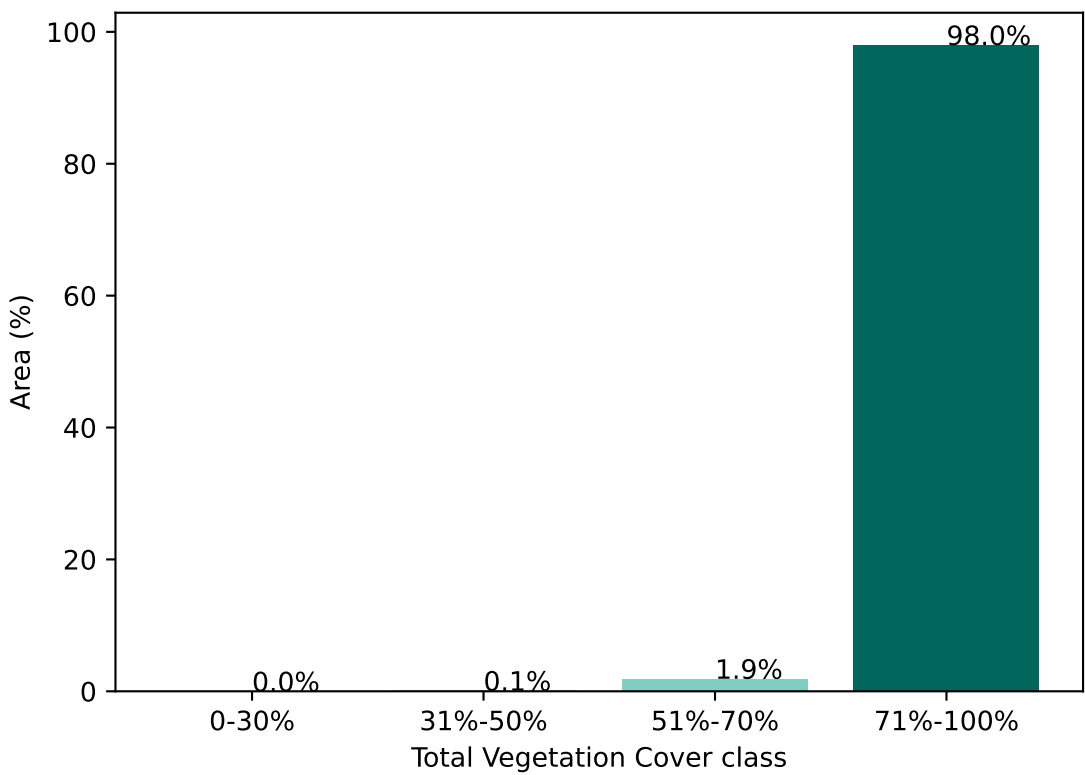
Land use and forest cover



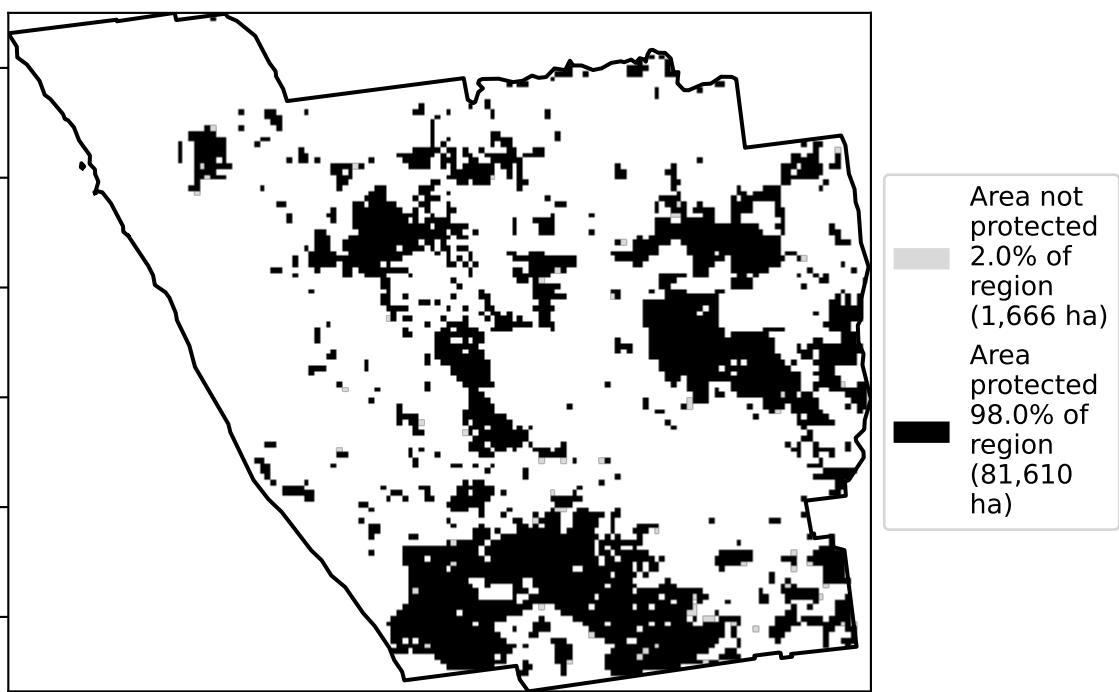
Total Vegetation Cover [%]



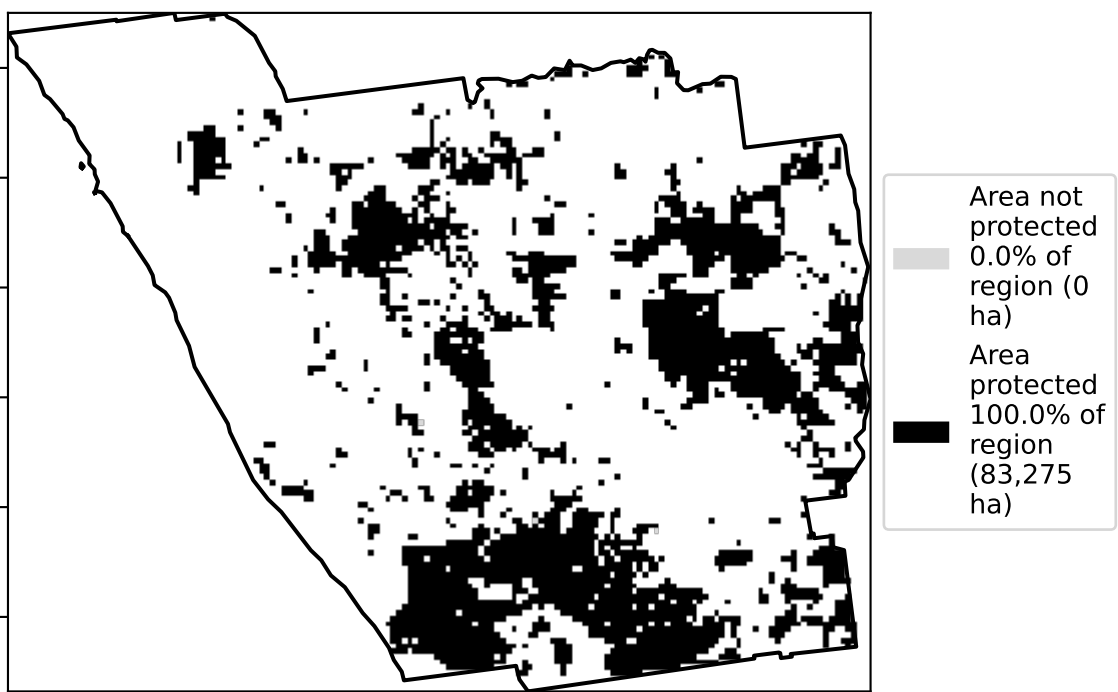
Proportion of vegetation cover class in area



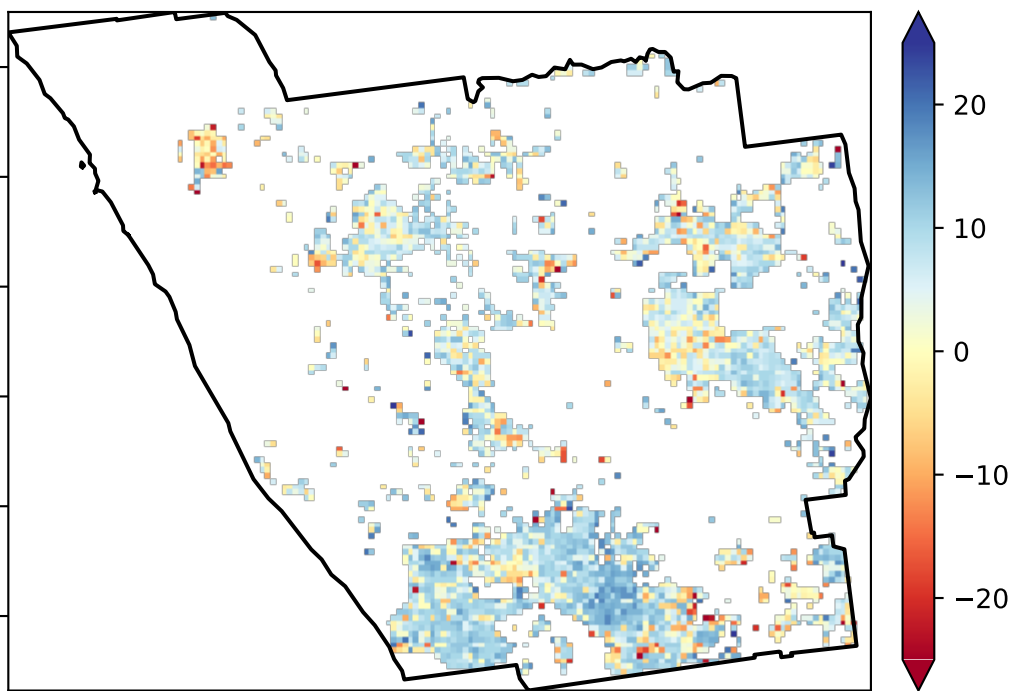
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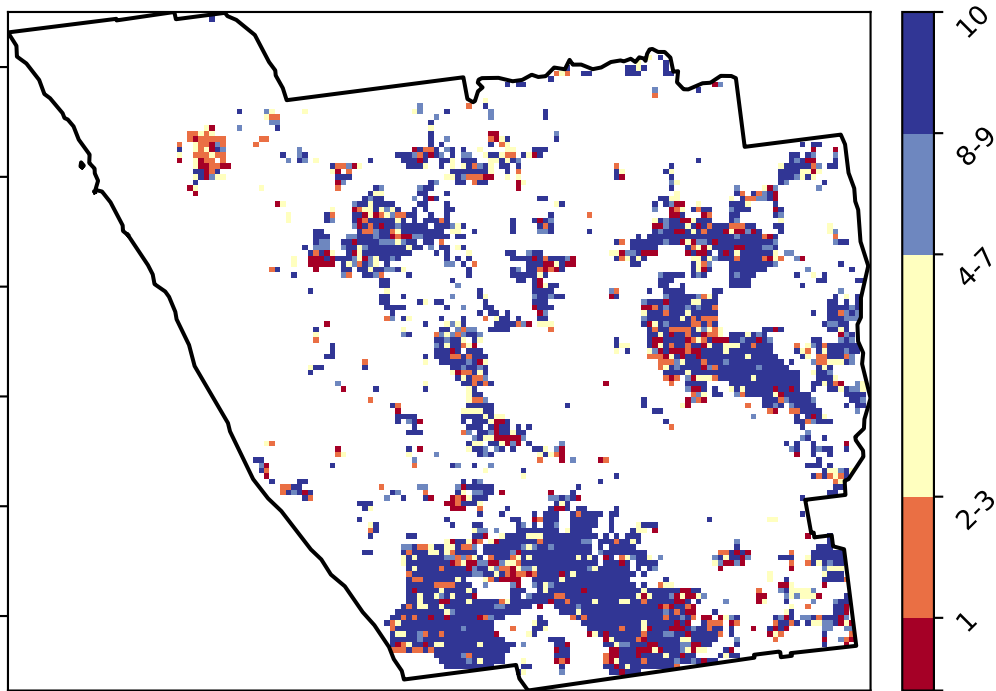
% Area protected from wind erosion (>50%)



Total Vegetation Cover Anomaly [%]



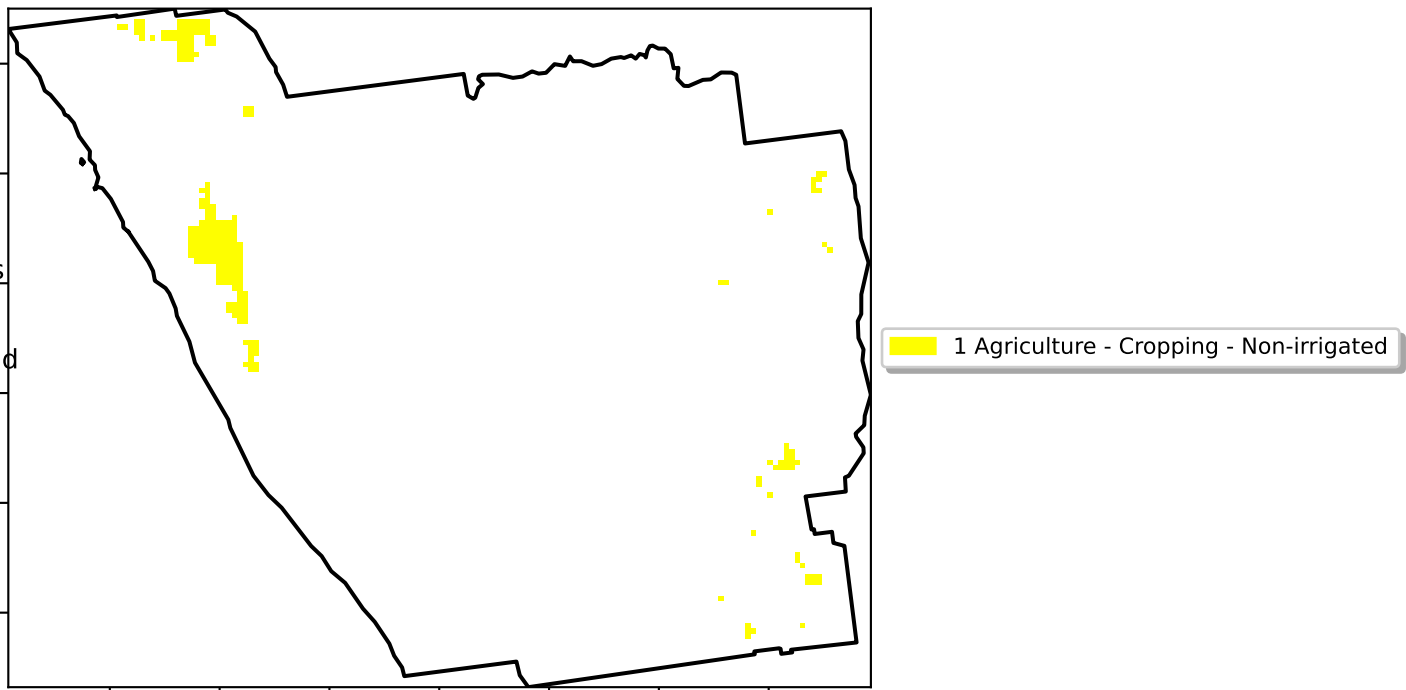
Total Vegetation Cover Decile [%]



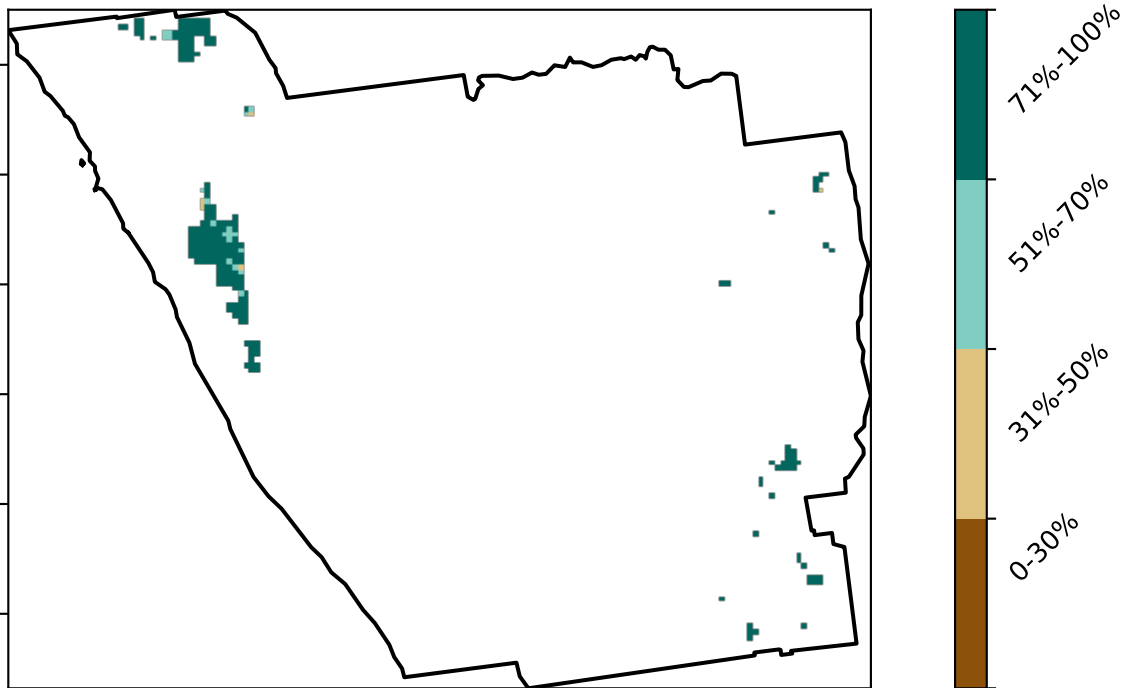
Cropping

Land use and forest cover

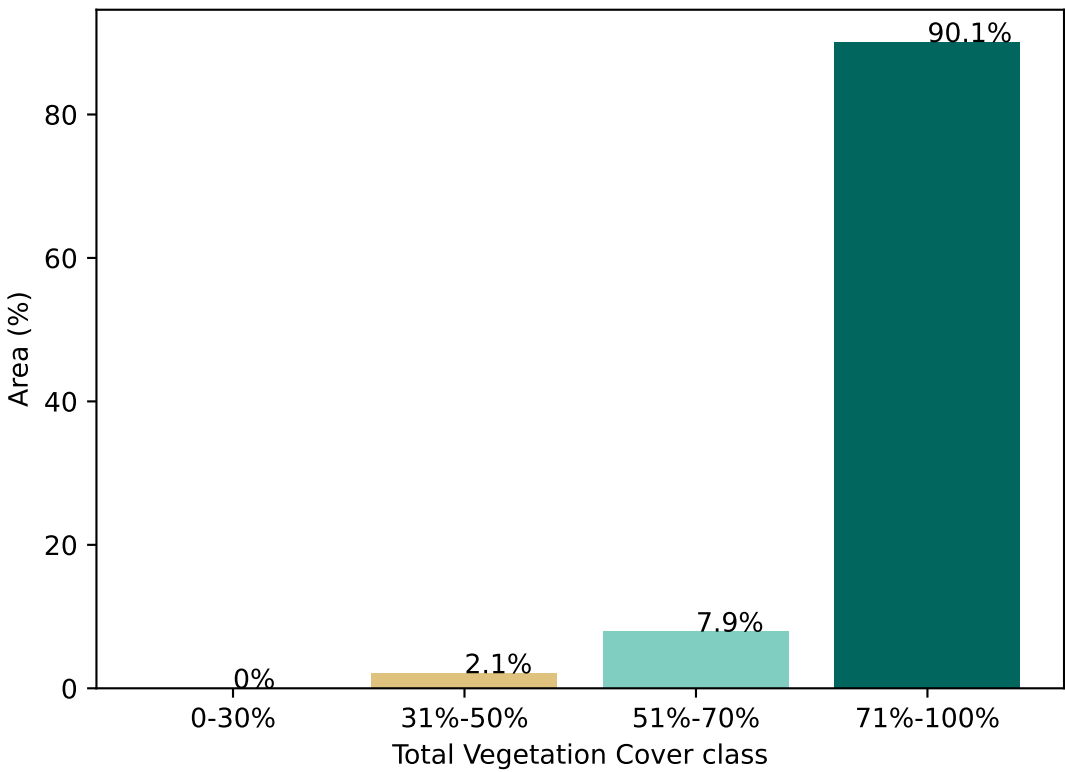
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Total Vegetation Cover [%]



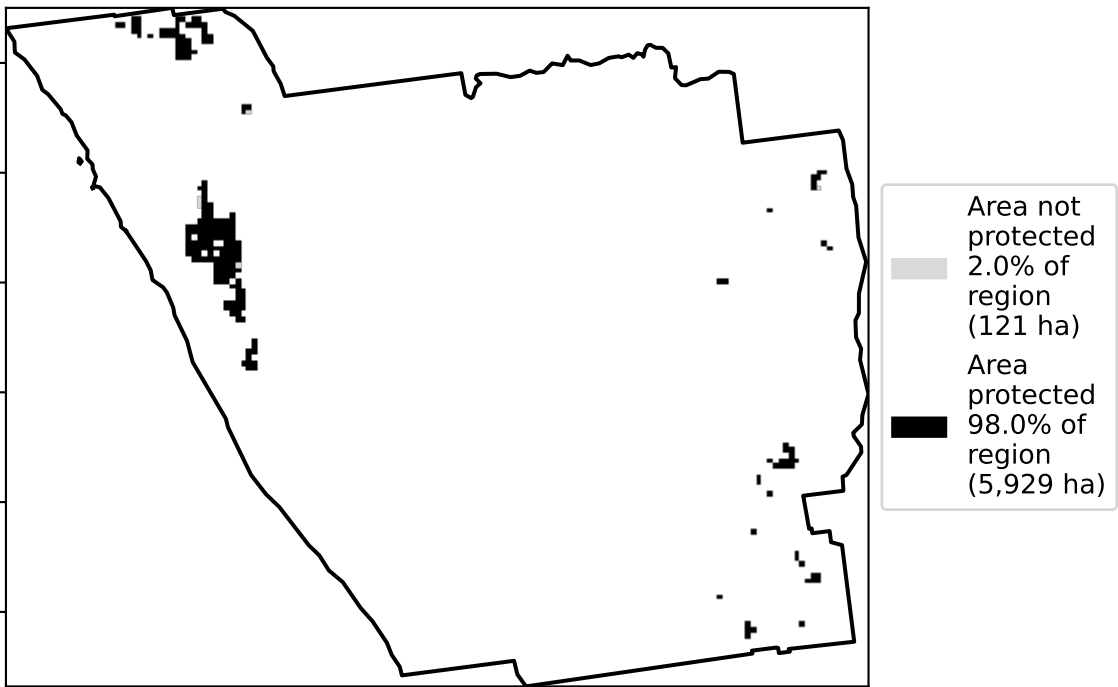
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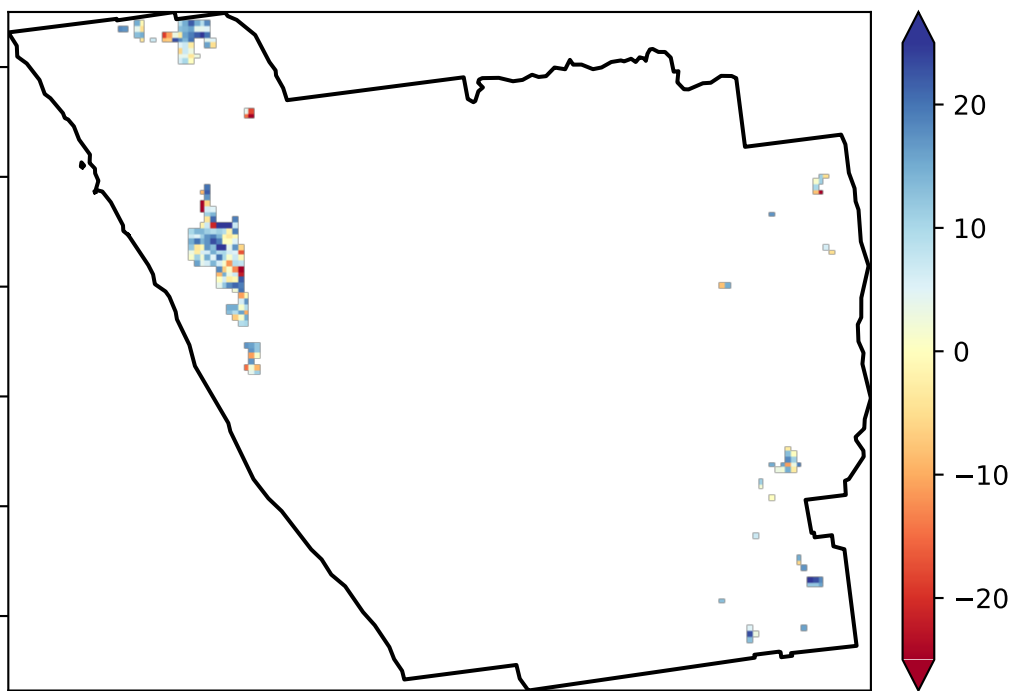


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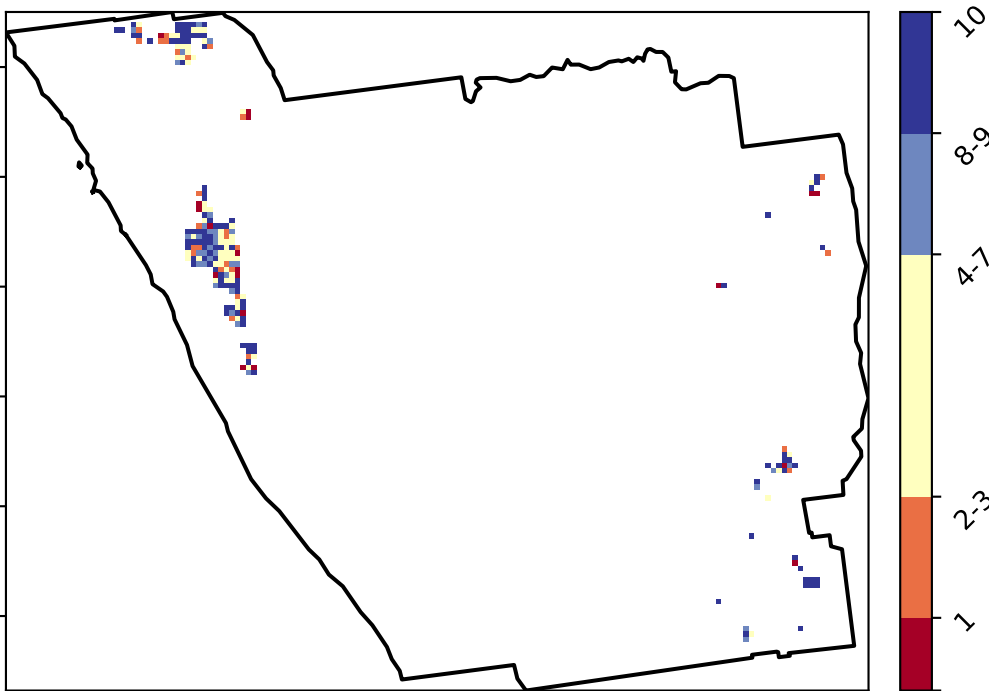
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Total Vegetation Cover Decile [%]



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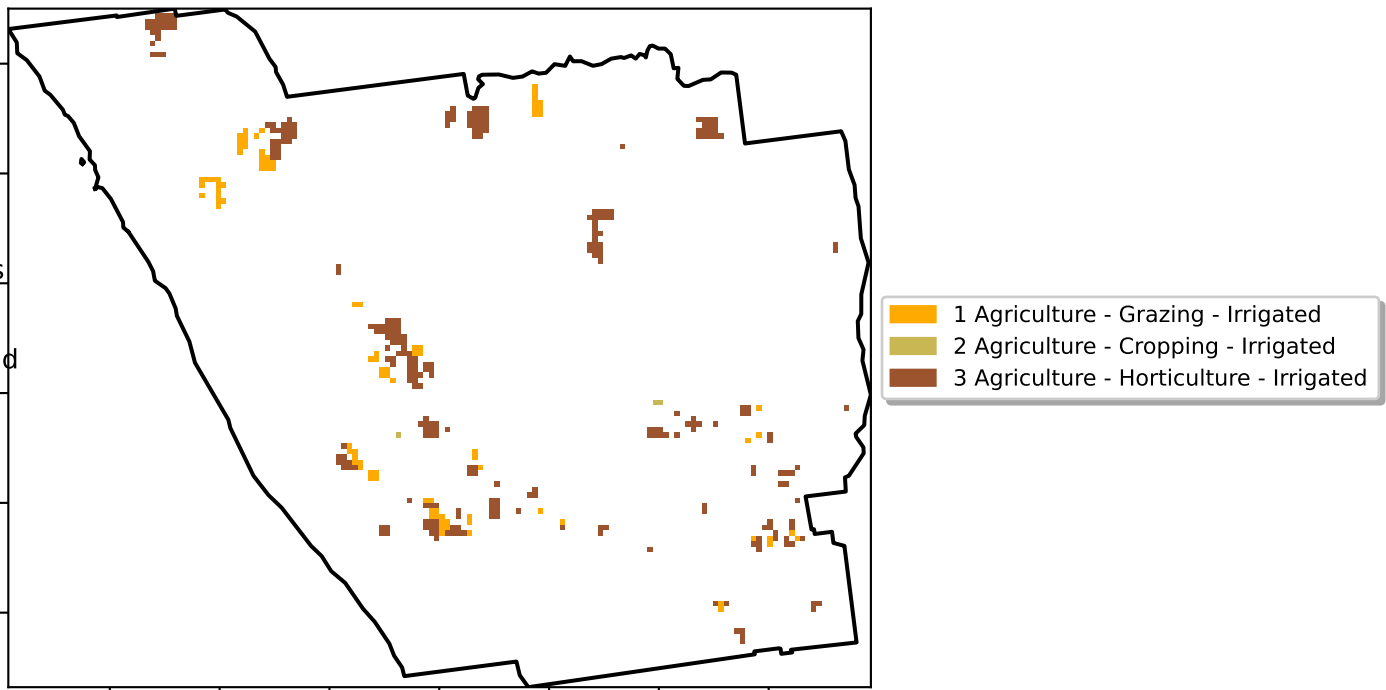
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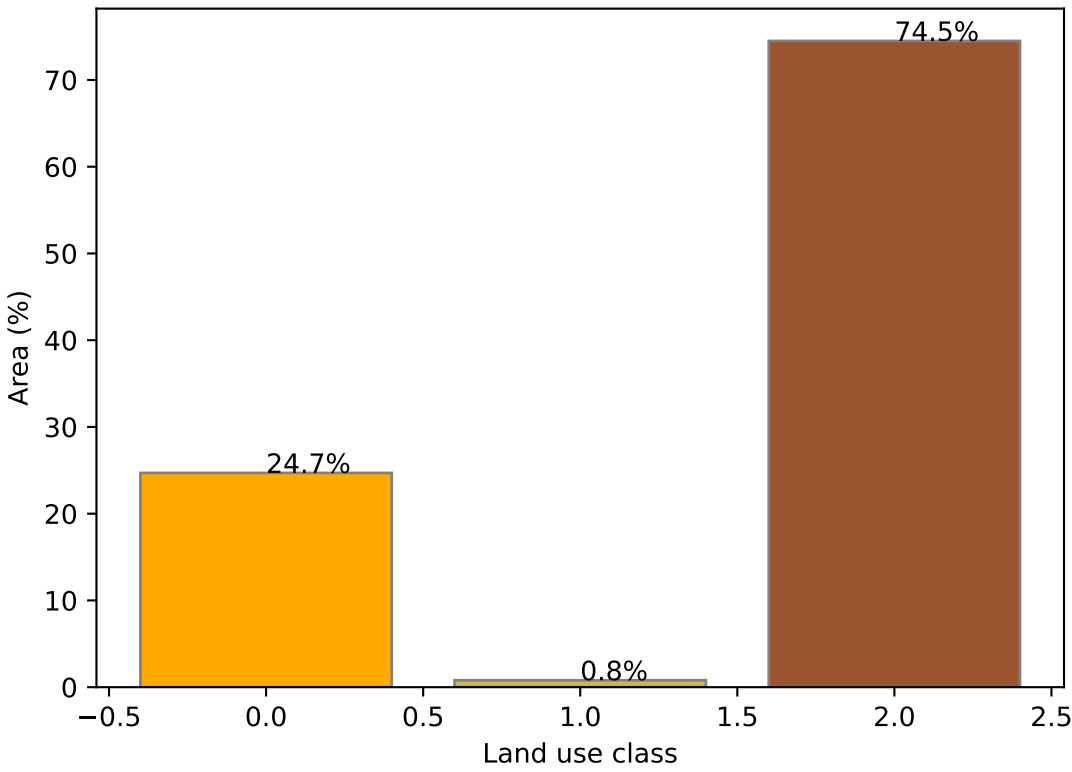
Irrigation

Land use and forest cover

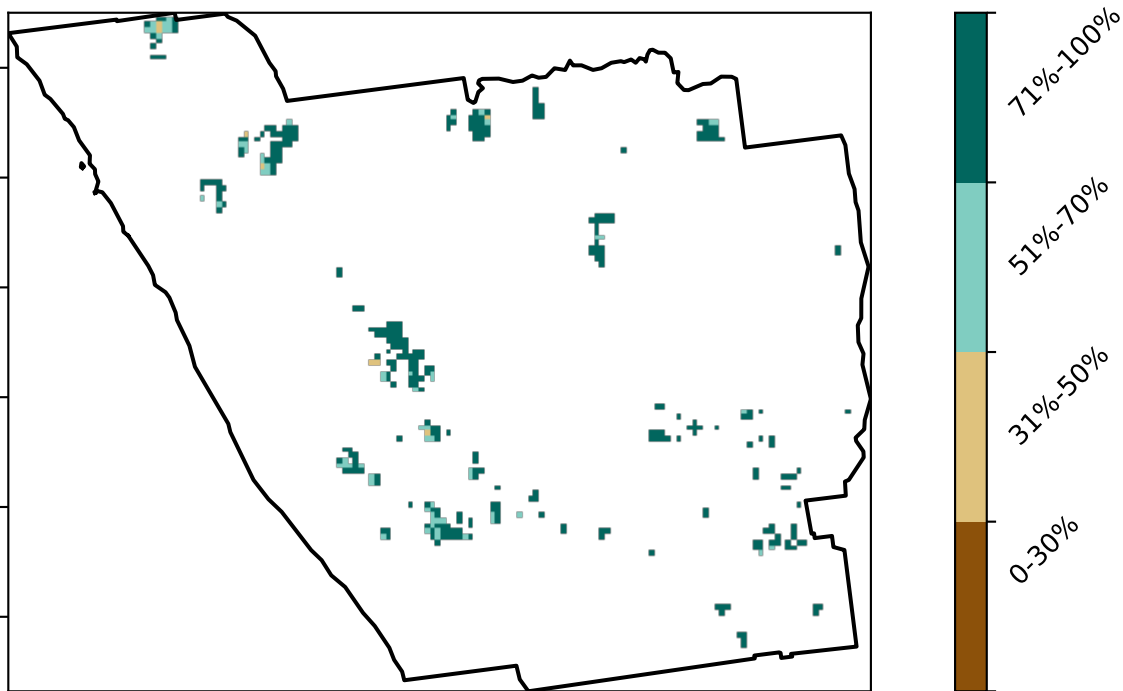
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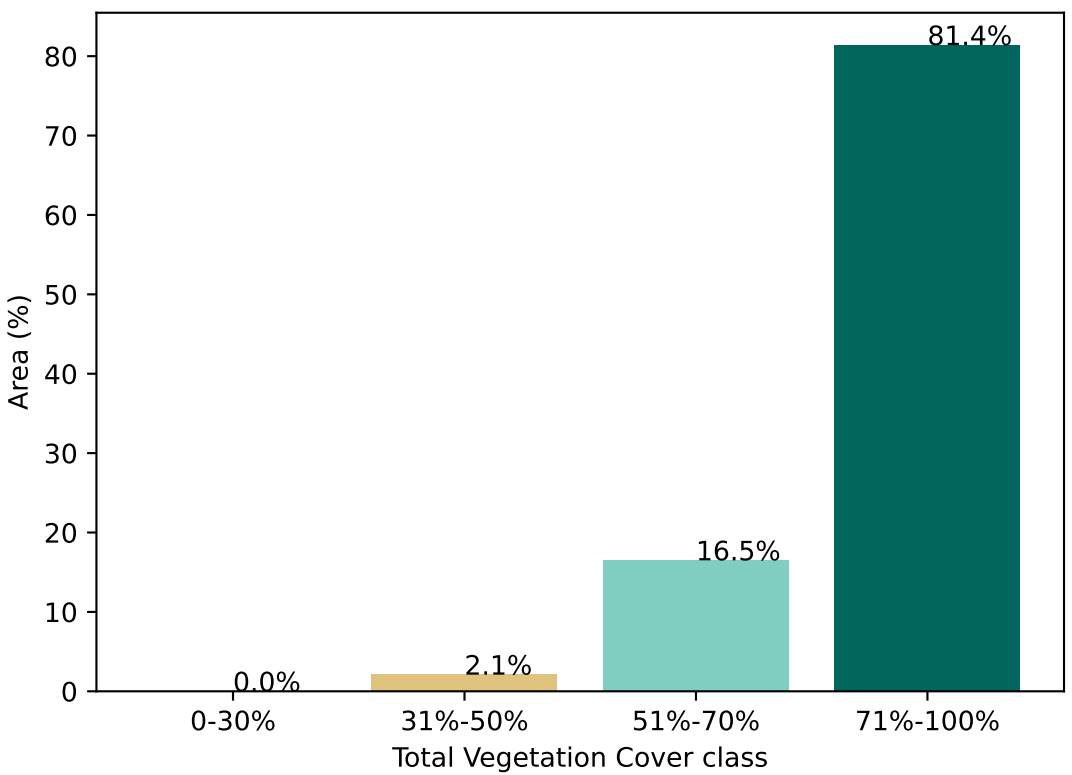
Proportion of each land class in area



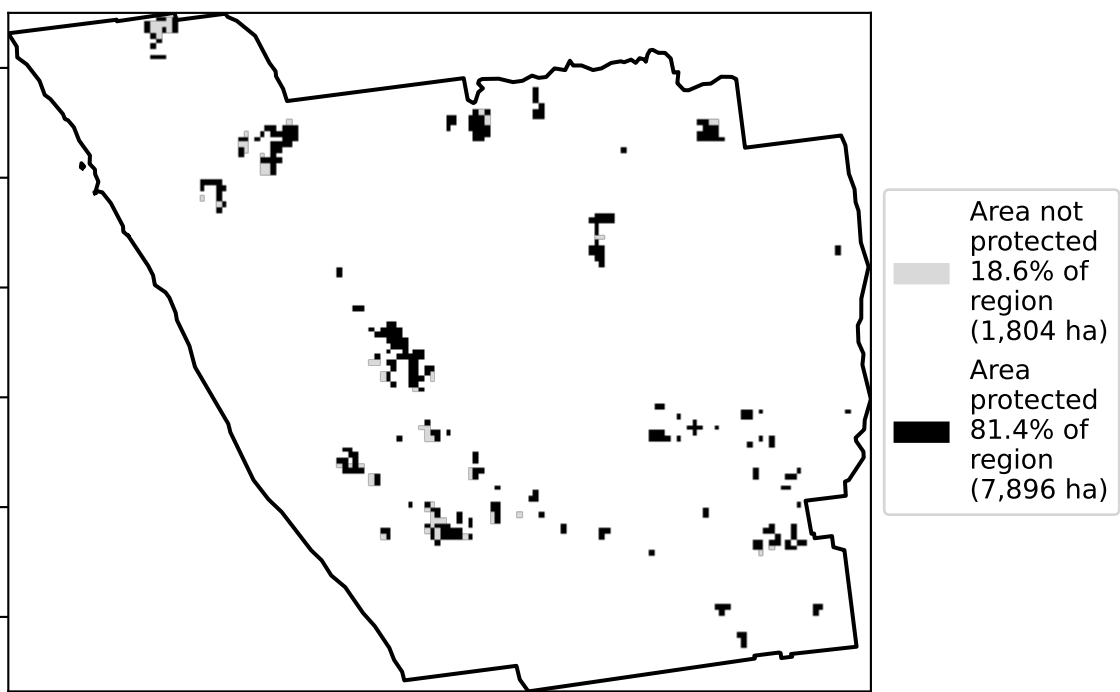
Total Vegetation Cover [%]



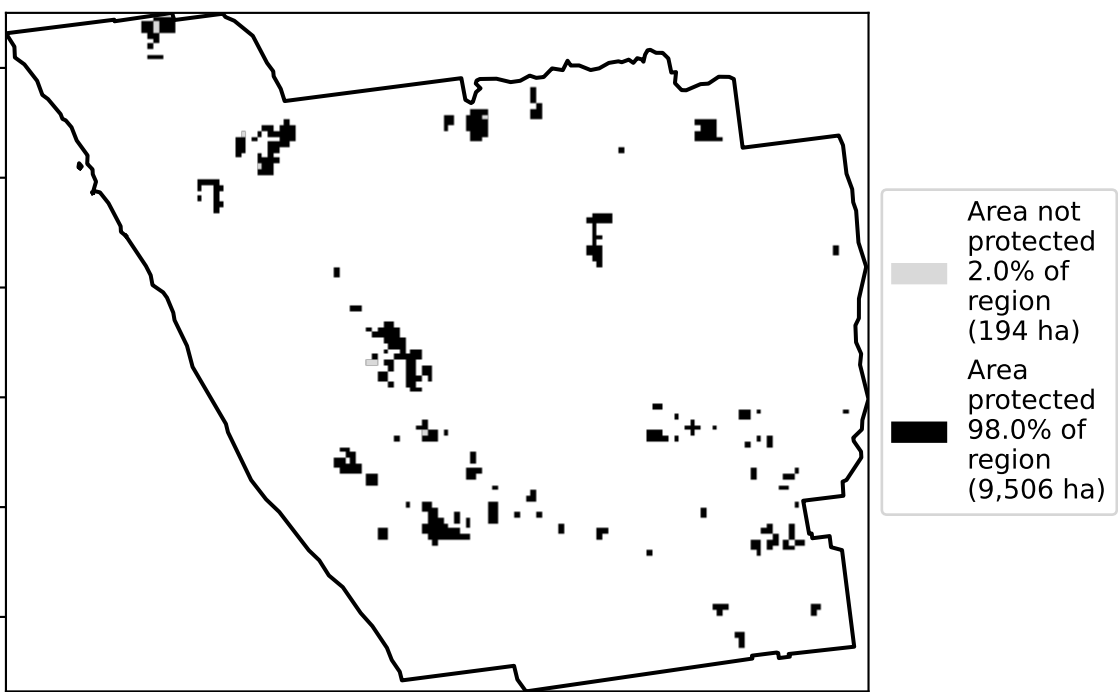
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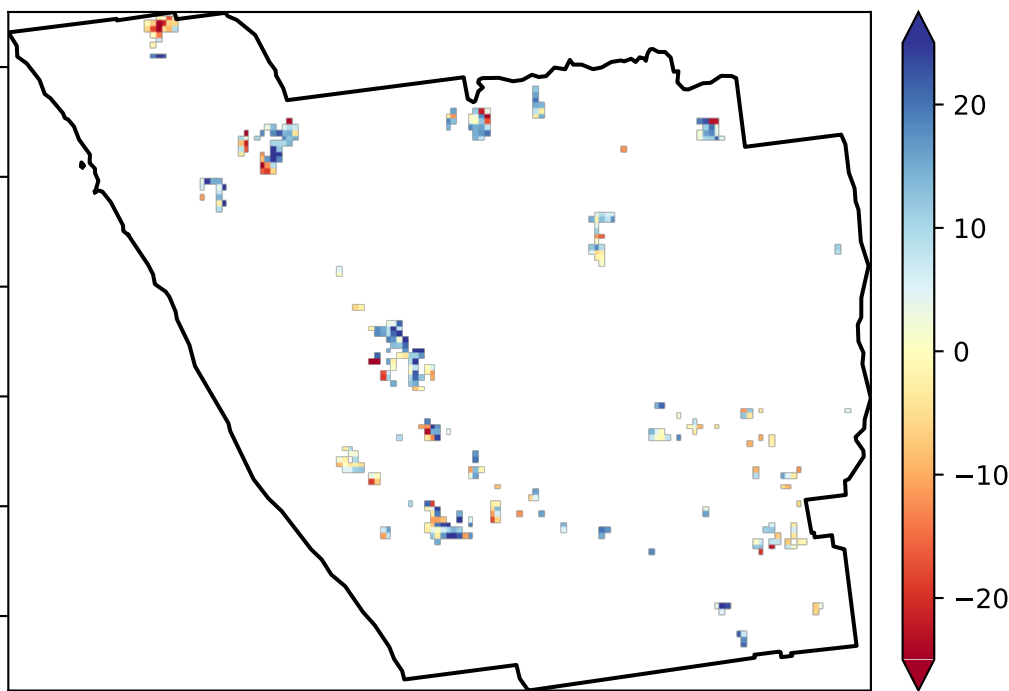


% Area protected from wind erosion (>50%)



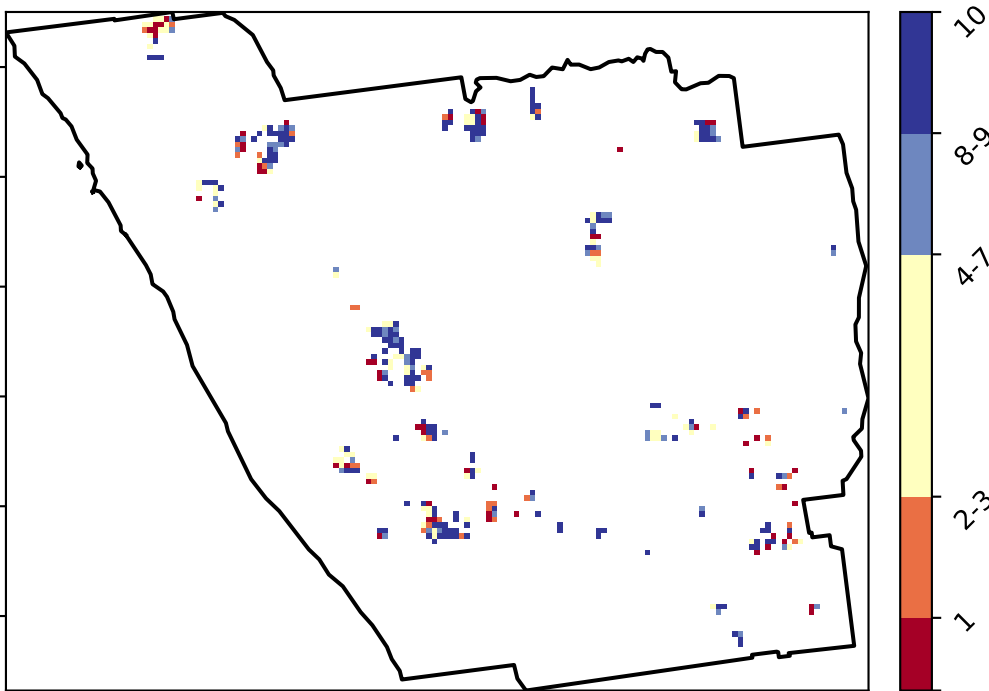
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Total Vegetation Cover Decile [%]



Gingin_(S) (318,300 ha and no data 2,512 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	318,300	99.9% 318,000	99.3% 315,925	93.9% 299,000	82.6% 262,800	54.1% 172,325	36.8% 117,025
Conservation and natural environments	173,875	99.9% 173,725	99.5% 172,975	95.7% 166,400	87.2% 151,600	60.8% 105,775	41.3% 71,750
Conservation and natural environments non forest	88,375	99.9% 88,250	99.1% 87,575	93.5% 82,650	82.7% 73,075	54.9% 48,525	36.9% 32,600
Conservation and natural environments Woodland forest	83,275	100.0% 83,250	99.9% 83,175	98.0% 81,600	91.9% 76,525	66.9% 55,700	45.8% 38,175
Agriculture	124,200	99.9% 124,075	99.0% 123,000	92.2% 114,475	77.3% 96,025	46.2% 57,350	31.6% 39,275
Grazing	108,300	99.9% 108,175	99.2% 107,425	93.3% 101,000	78.9% 85,475	47.2% 51,100	32.2% 34,850
Grazing non forest	106,800	99.9% 106,675	99.2% 105,925	93.3% 99,600	78.8% 84,125	47.1% 50,275	32.1% 34,250
Cropping	6,050	100.0% 6,050	97.9% 5,925	90.1% 5,450	74.0% 4,475	45.9% 2,775	35.1% 2,125
Irrigation	9,700	100.0% 9,700	97.9% 9,500	81.4% 7,900	61.6% 5,975	35.6% 3,450	23.5% 2,275
Production native forests and plantation forests	11,900	99.8% 11,875	98.3% 11,700	87.6% 10,425	71.2% 8,475	39.7% 4,725	24.6% 2,925