Total vegetation cover soil protection Region:LGA Mount_Alexander_(S) VIC

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





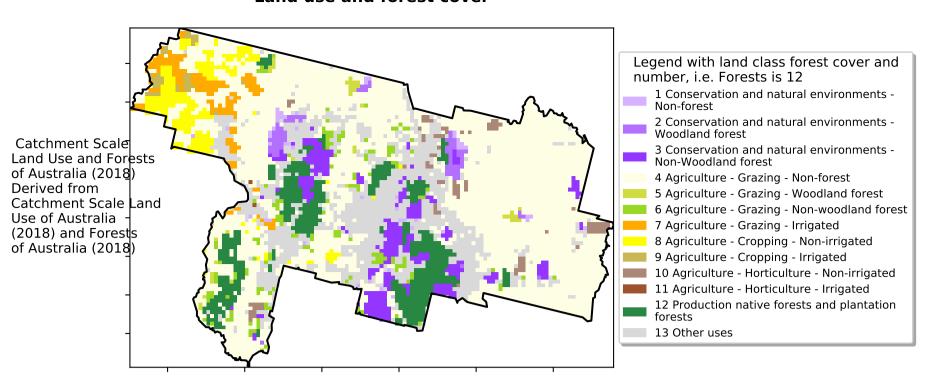




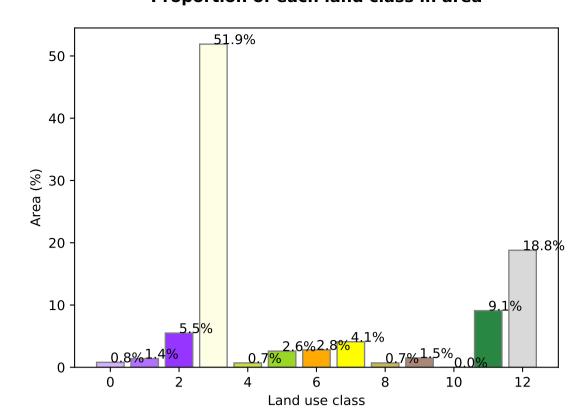
Date: May 2025

Vegetation Cover May 2025

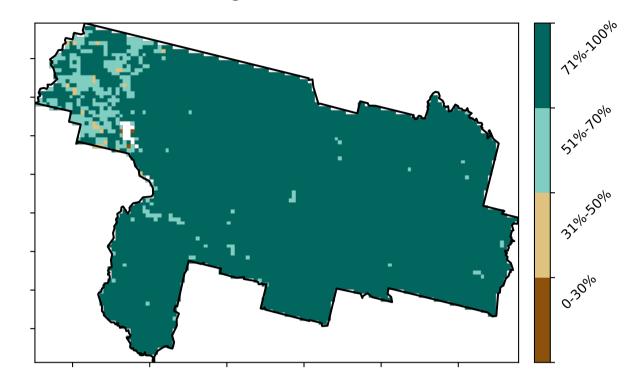
Land use and forest cover



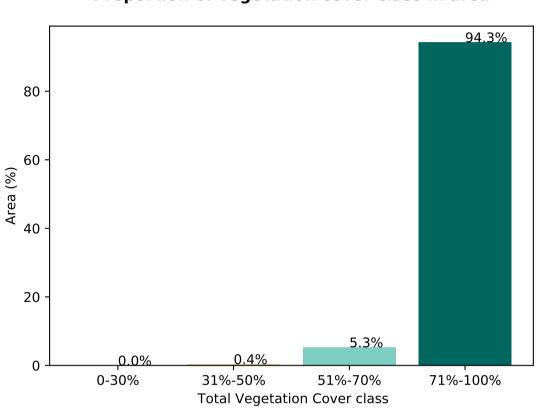
Proportion of each land class in area



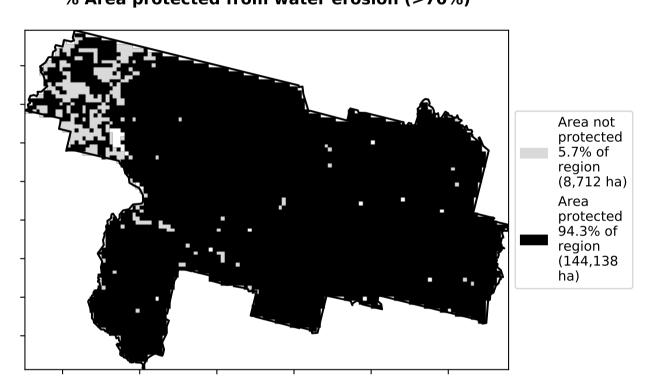
Total Vegetation Cover [%]



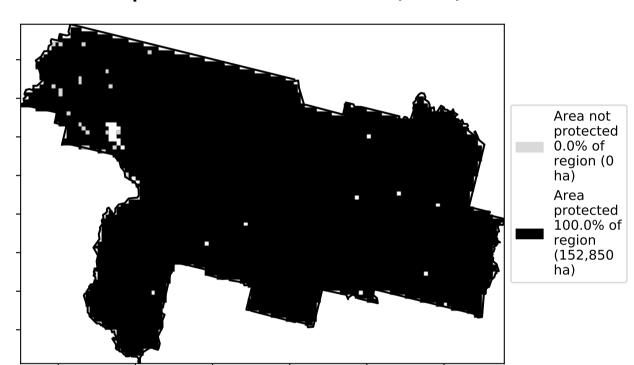
Proportion of vegetation cover class in area



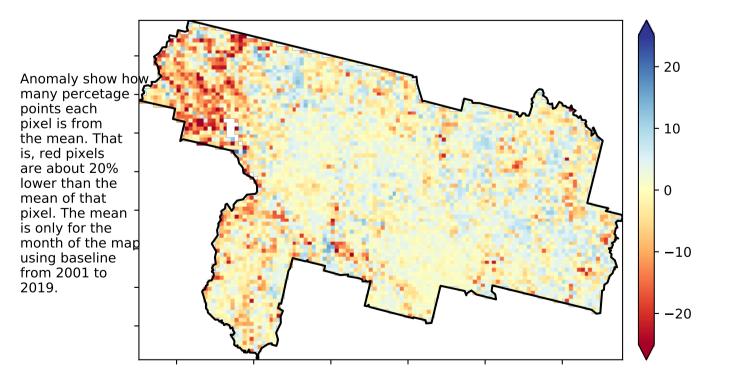
% Area protected from water erosion (>70%)



% Area protected from wind erosion (>50%)

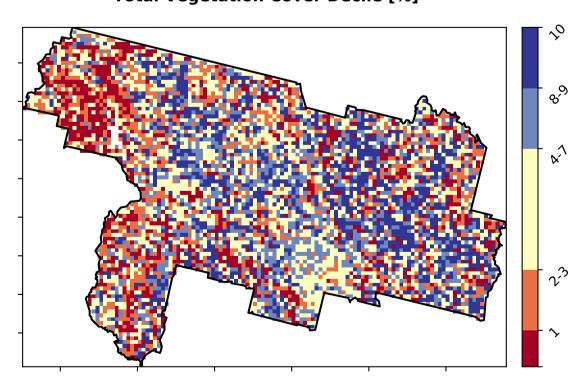


Total Vegetation Cover Anomaly [%]



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 [%]

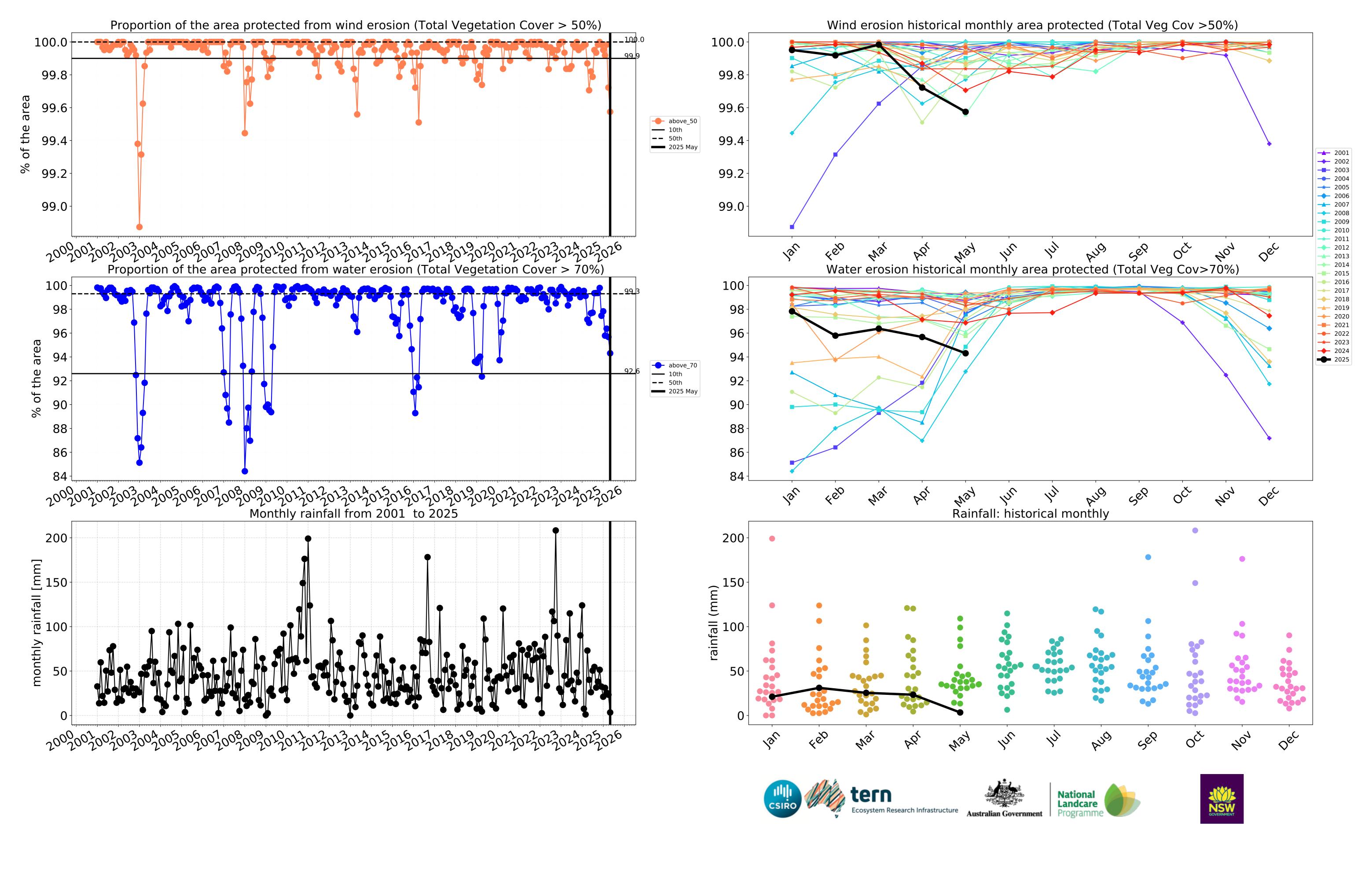


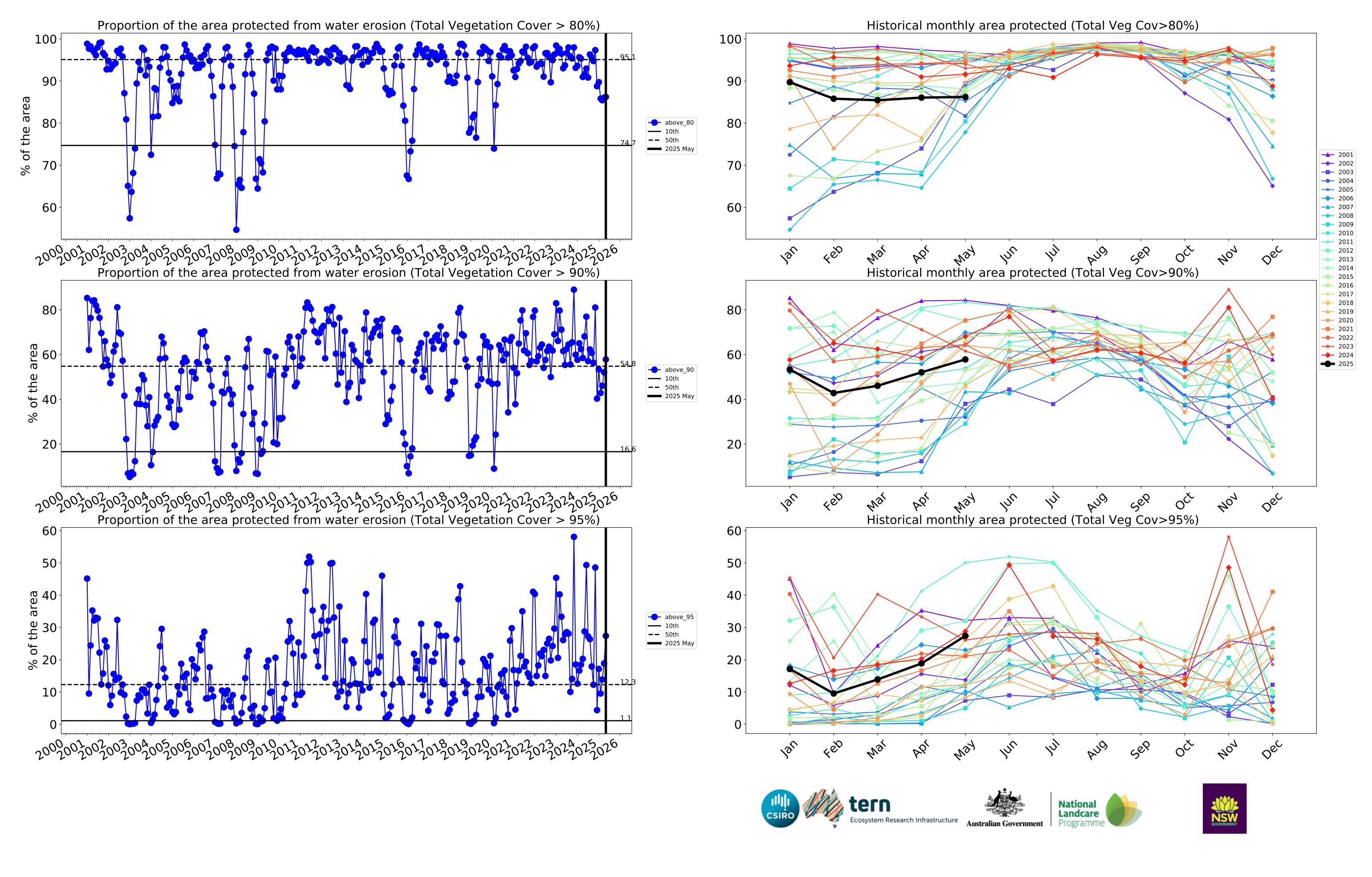




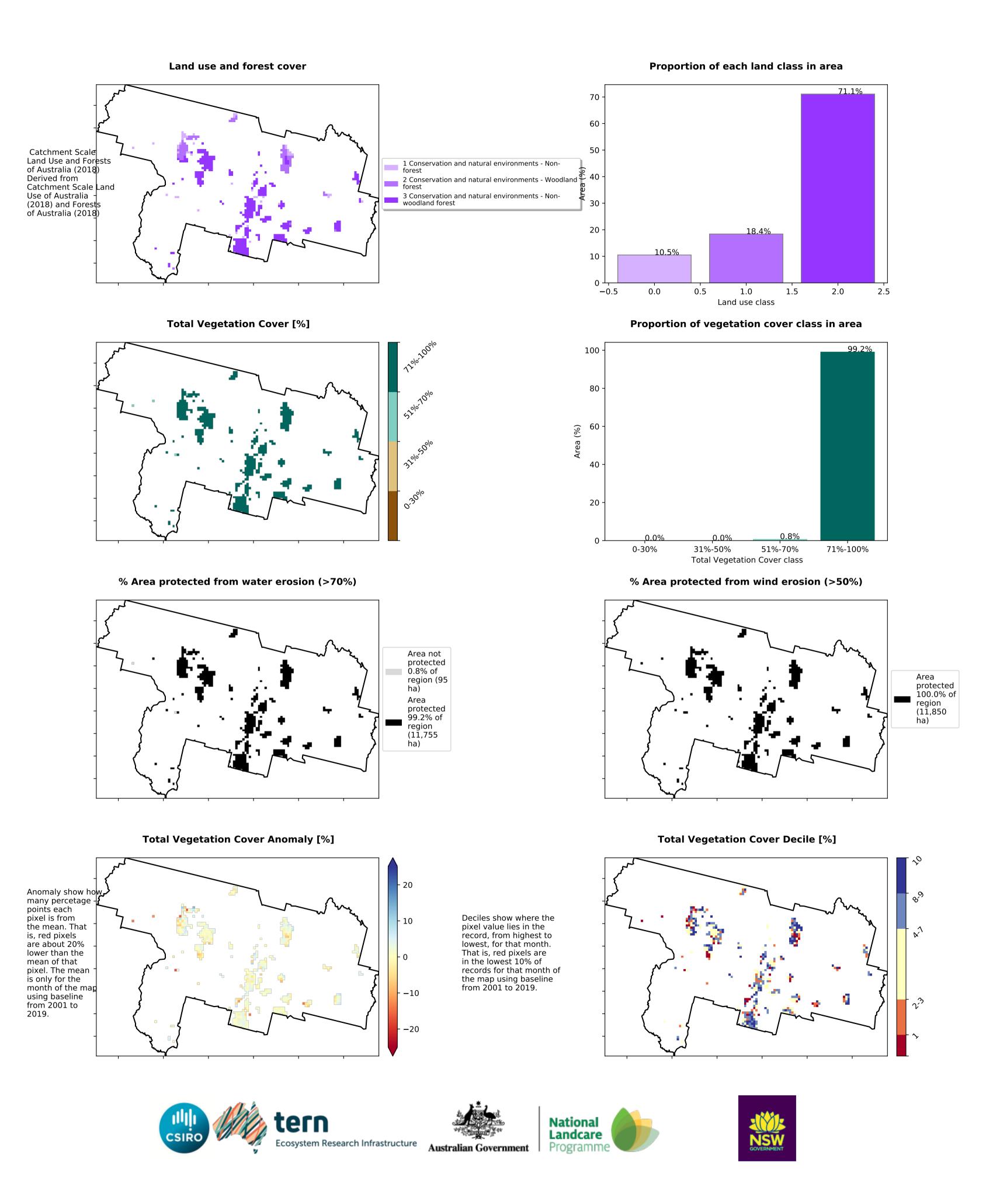




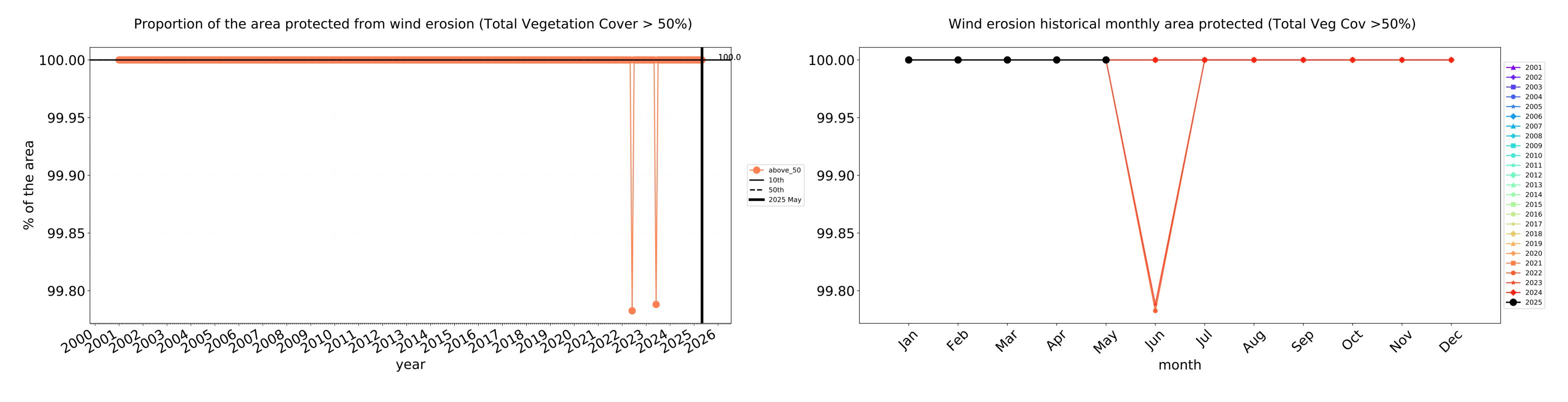


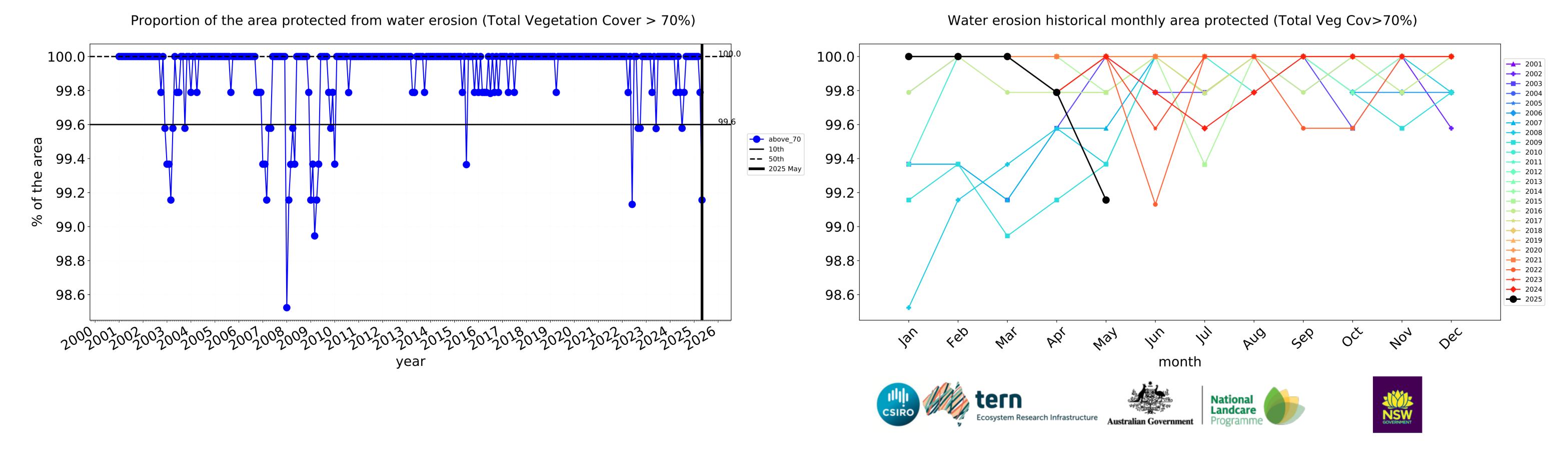


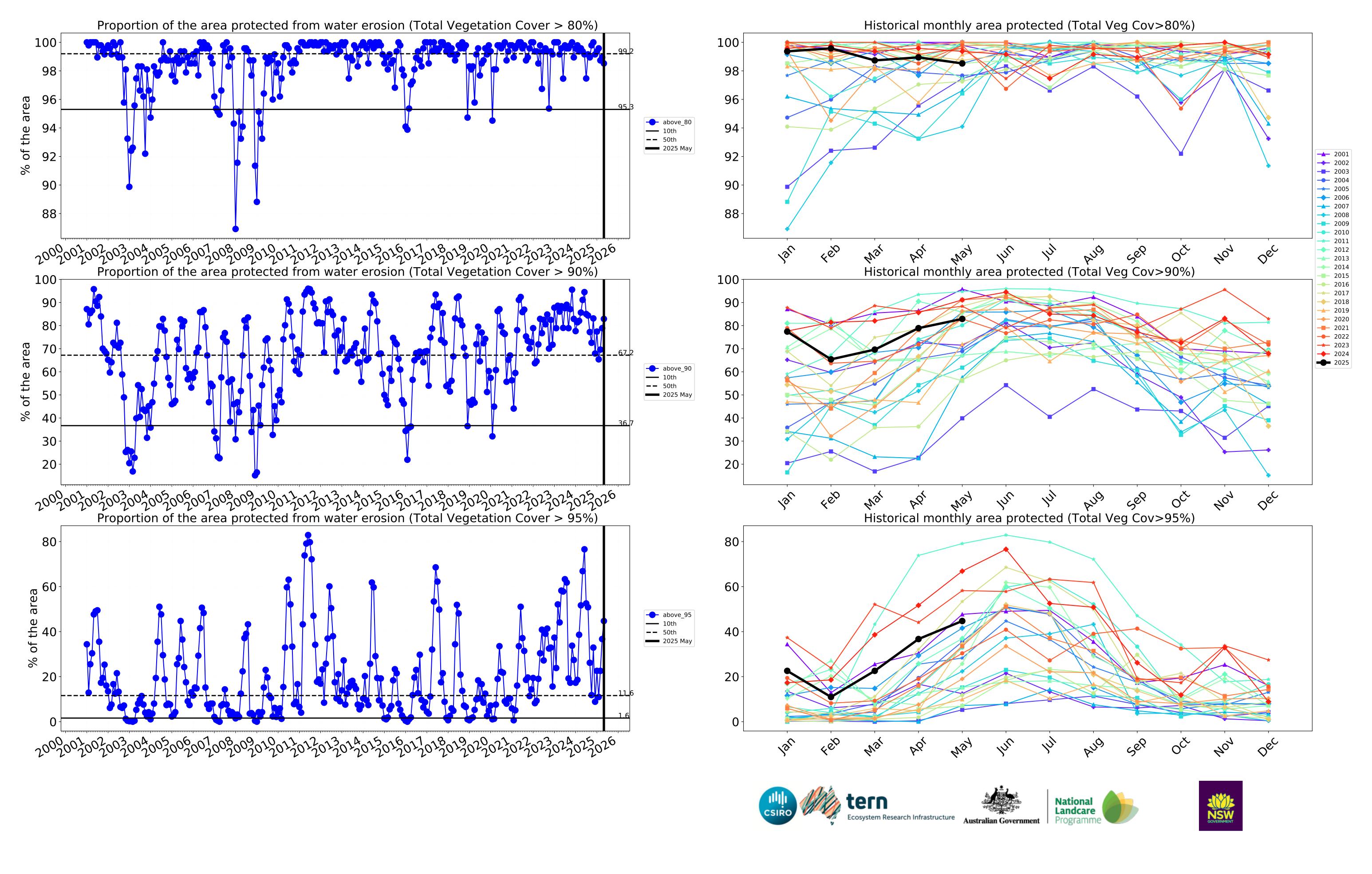
Conservation and natural environments



Conservation and natural environments timeseries





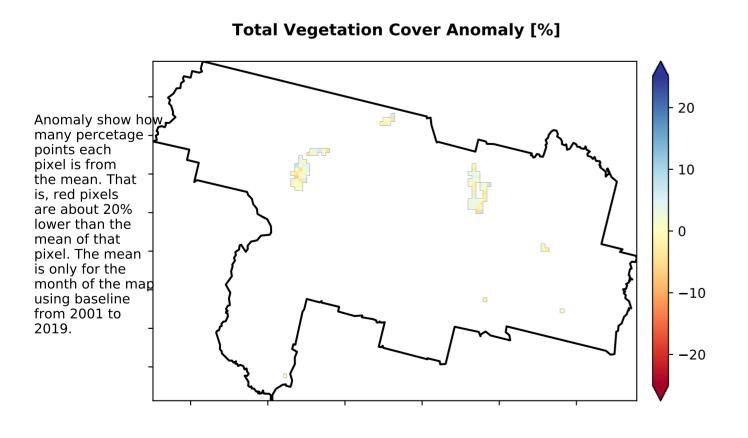


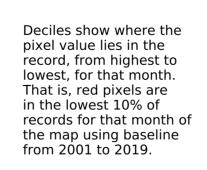
Conservation and natural environments Woodland forest

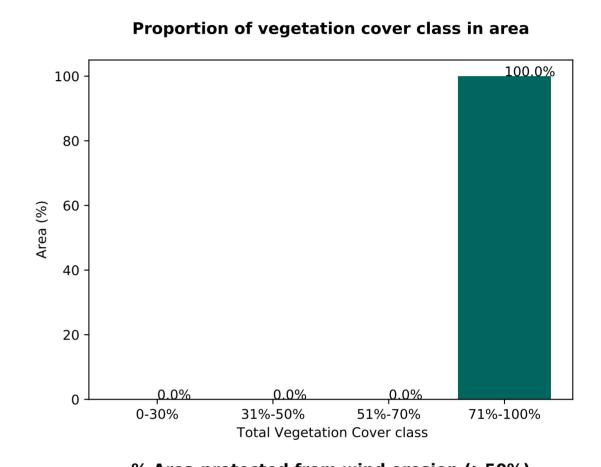
Catchment Scale Land Use and Forests of Australia (2018) Derived from Catchment Scale Land Use of Australia (2018) and Forests of Australia (2018)

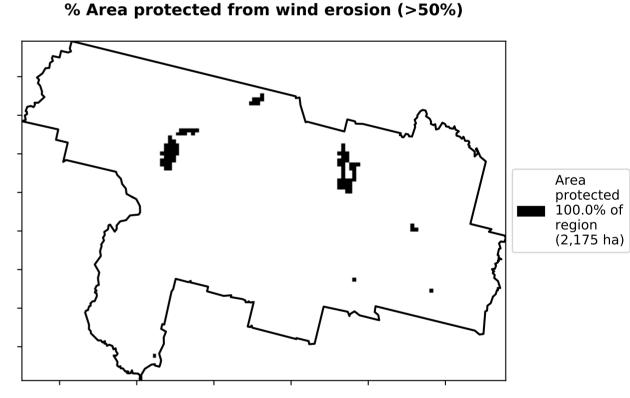
Total Vegetation Cover [%]

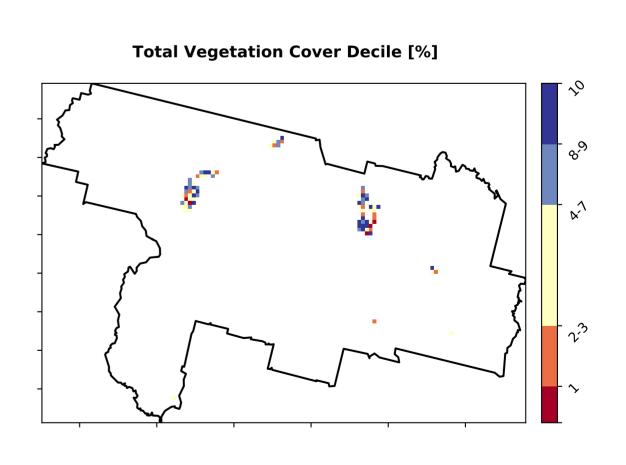
% Area protected from water erosion (>70%) Area protected 100.0% of region (2,175 ha)











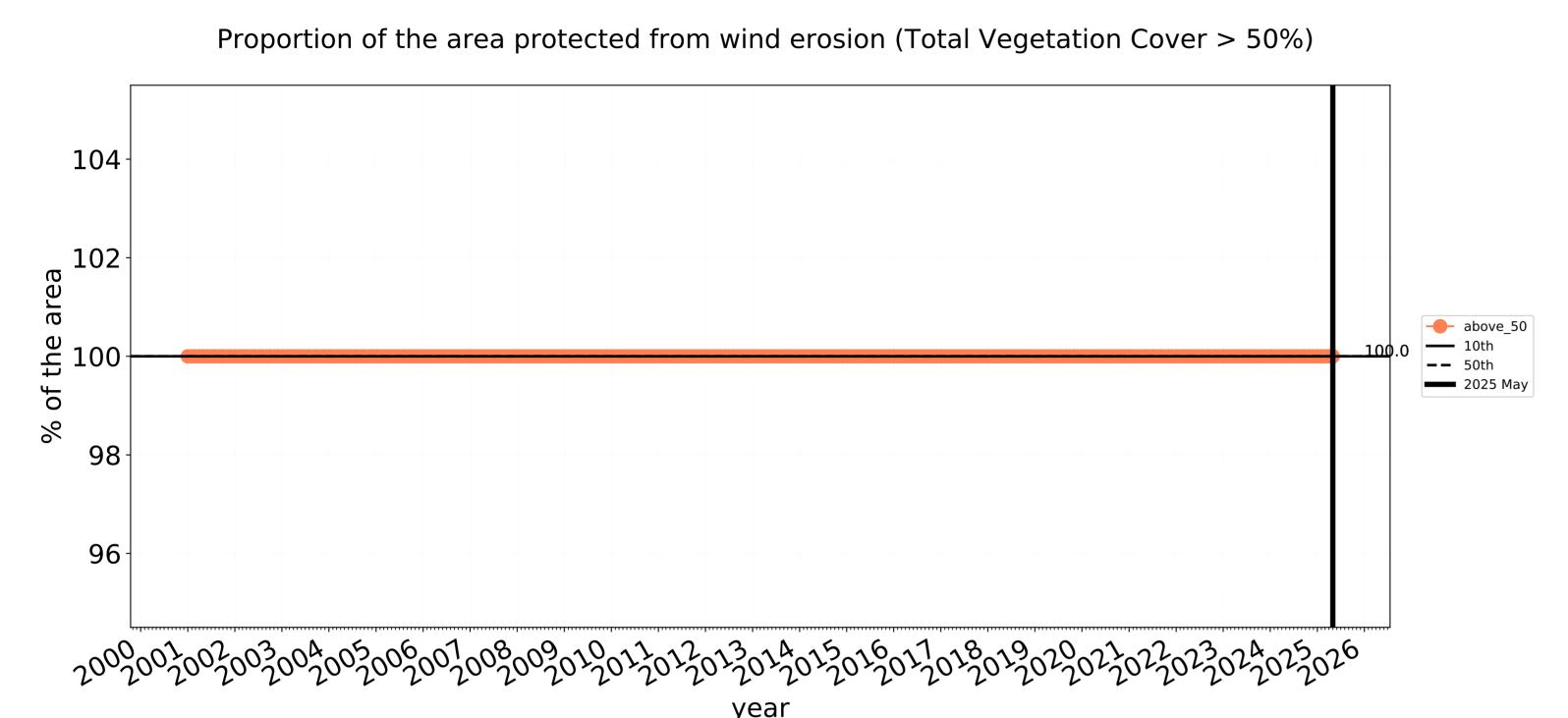




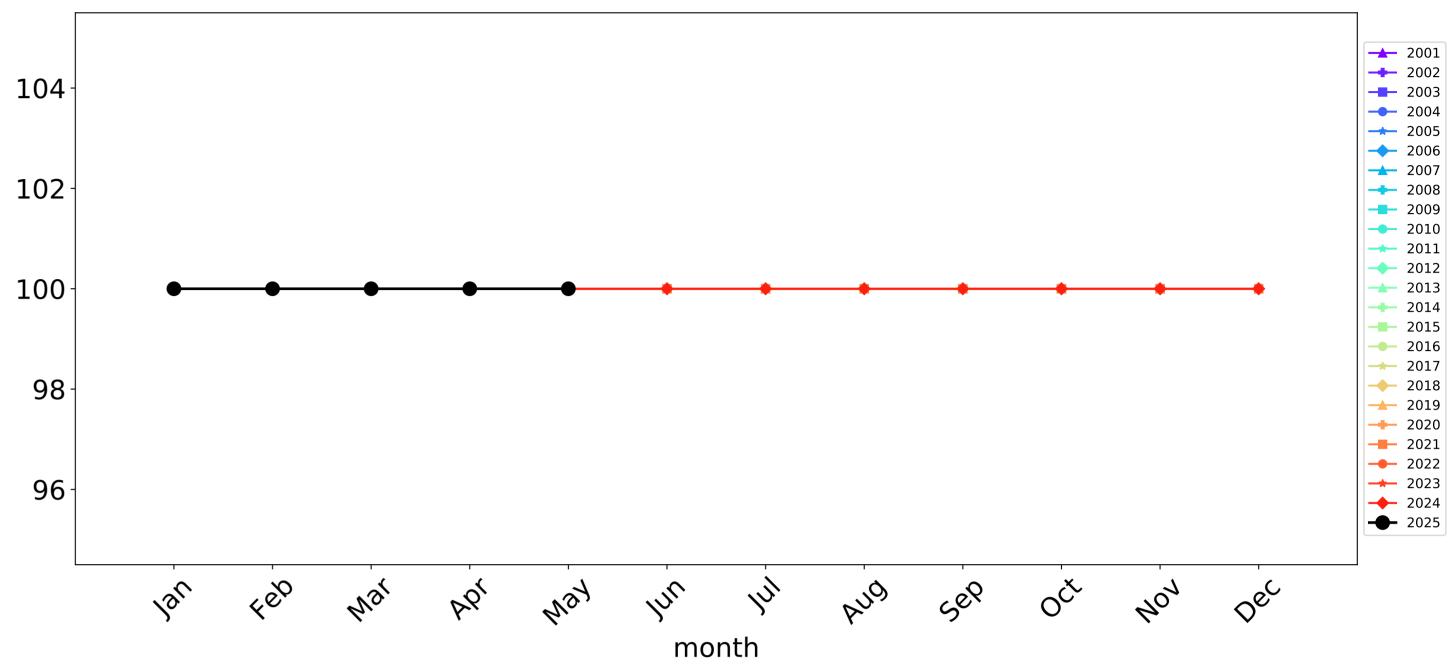


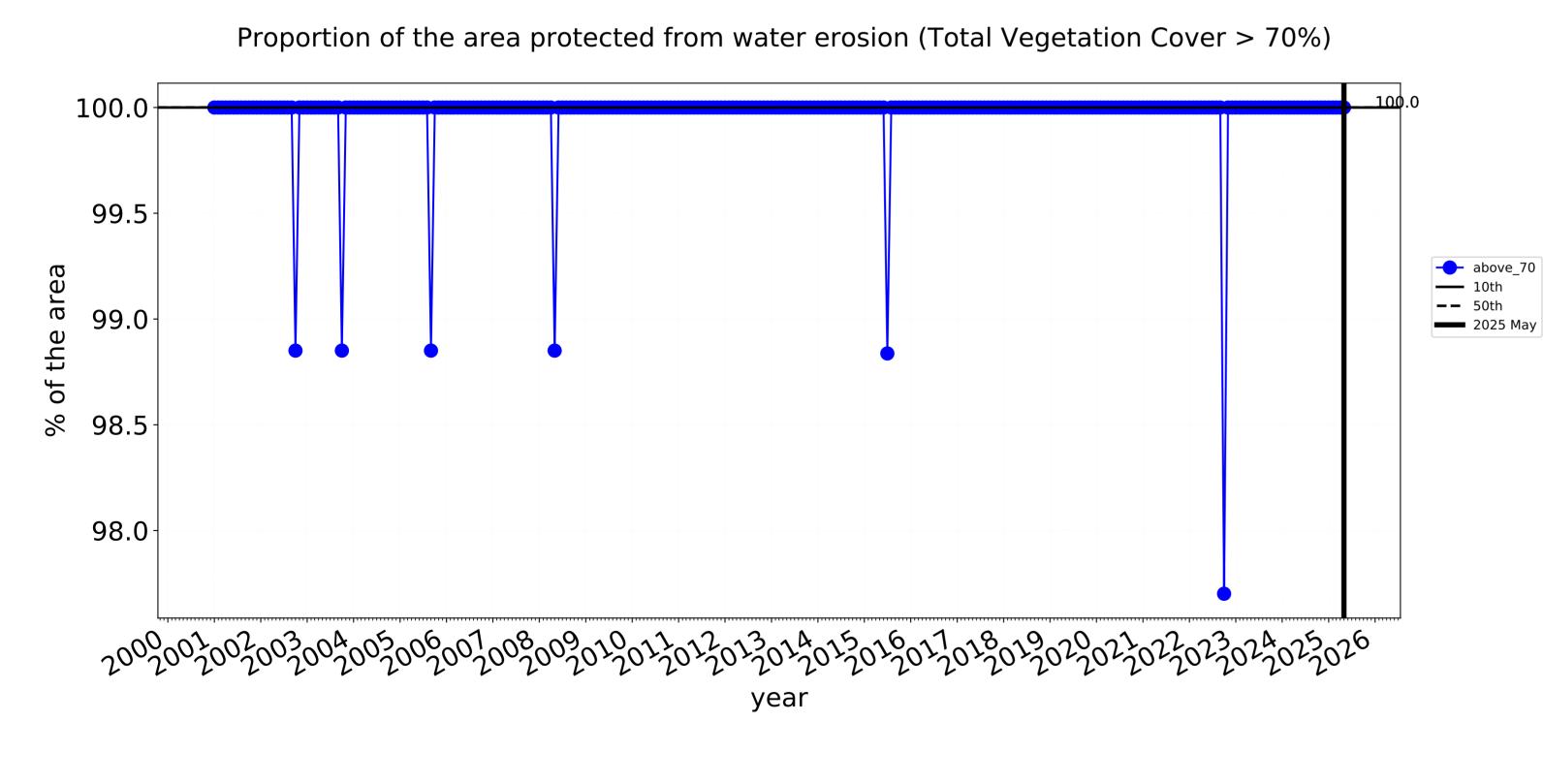


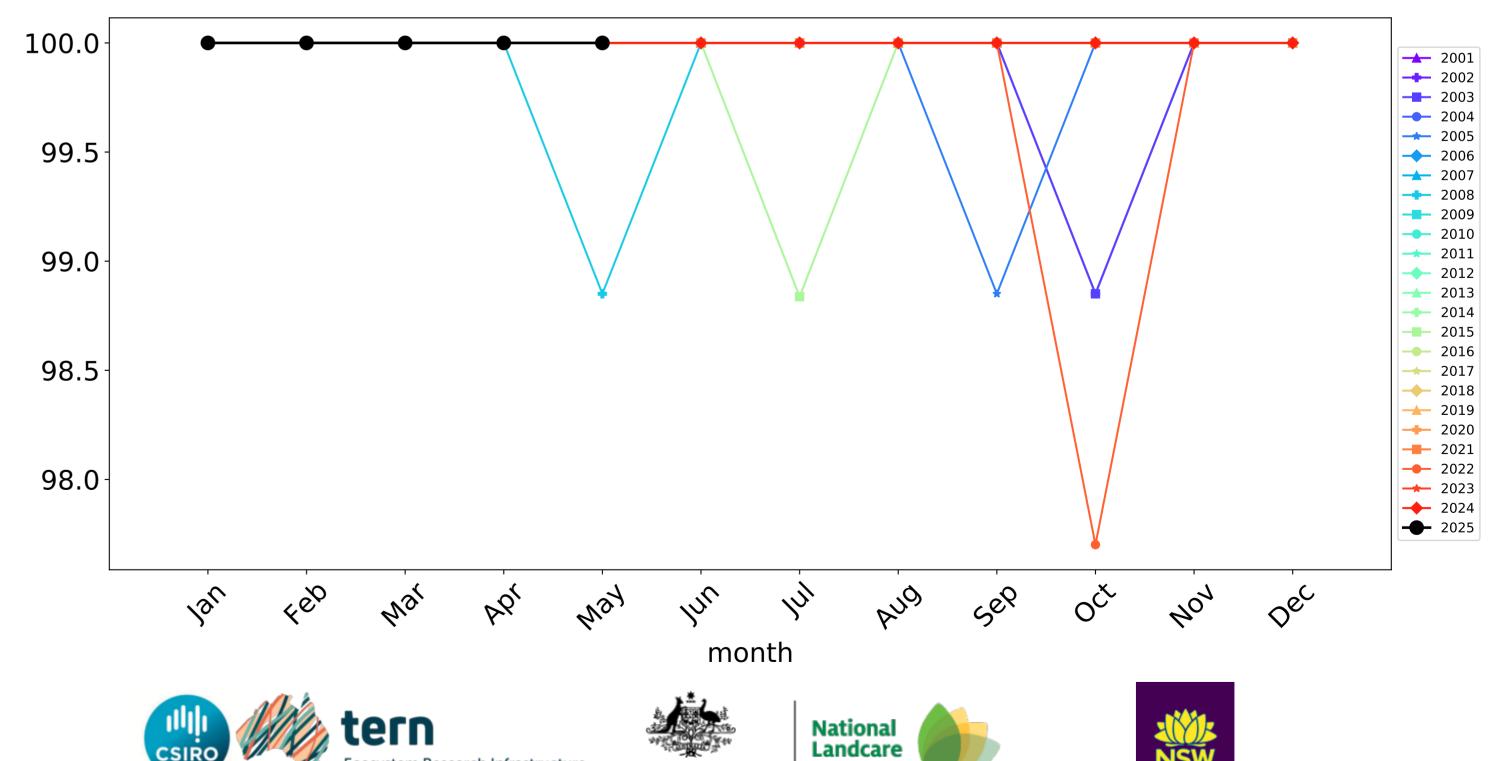
Conservation and natural environments Woodland forest timeseries



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

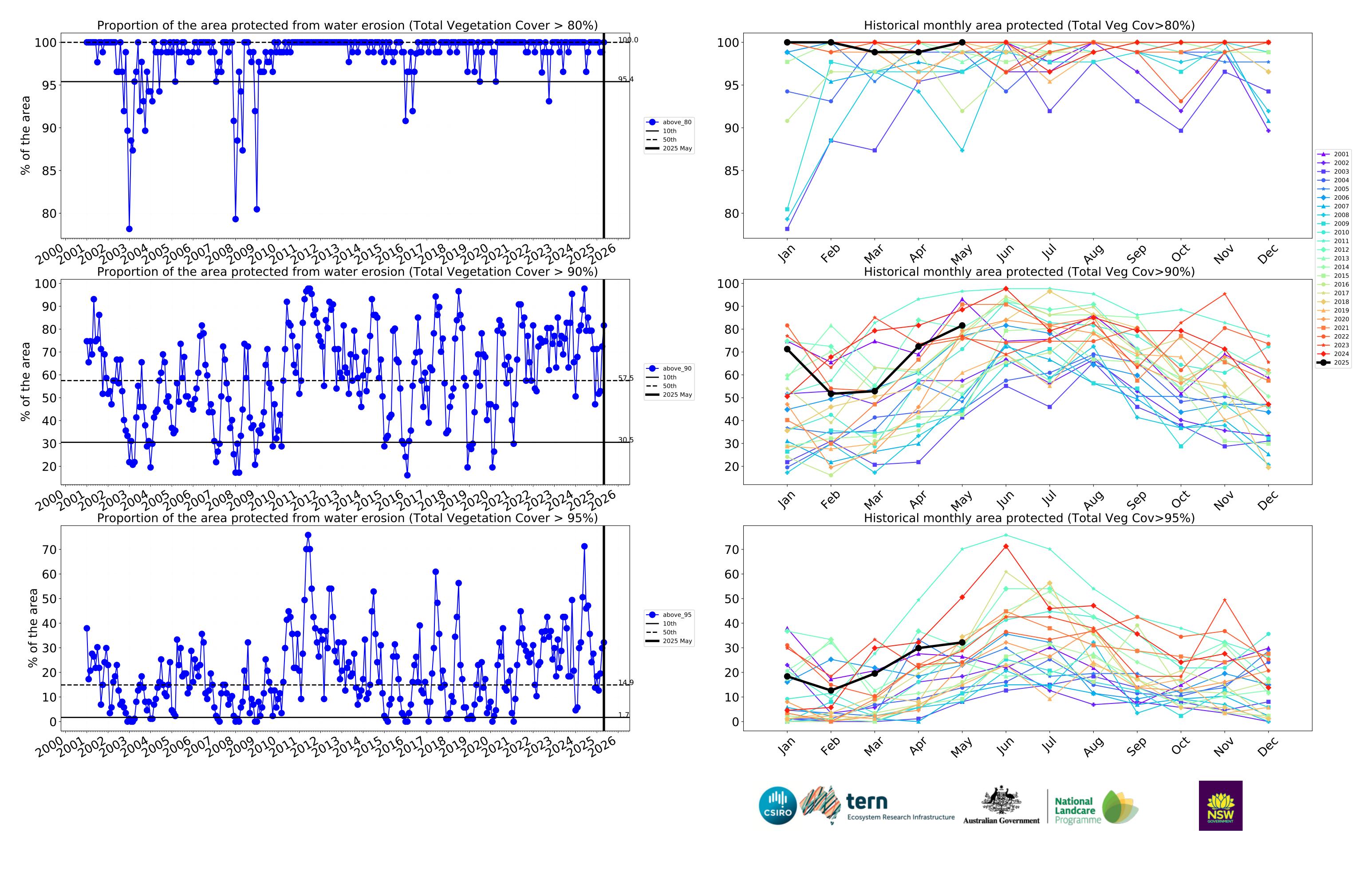




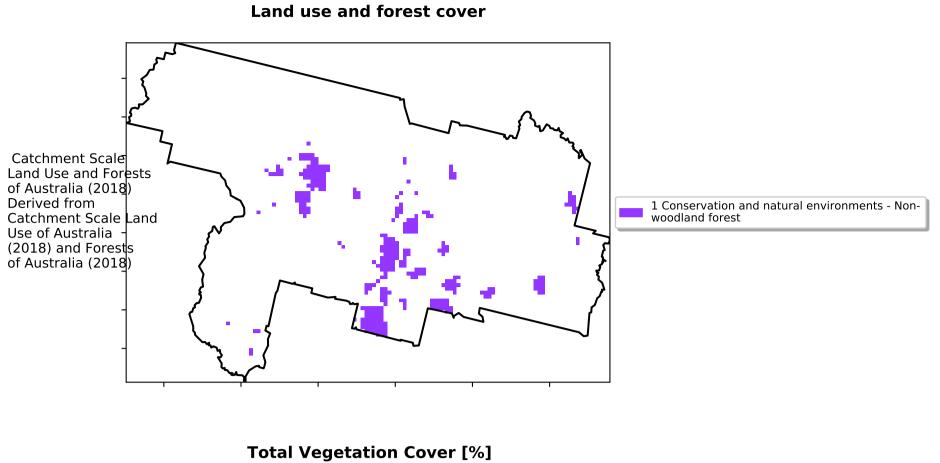


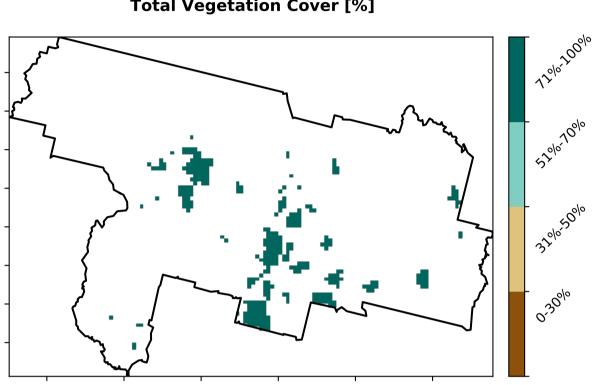
Water erosion historical monthly area protected (Total Veg Cov>70%)

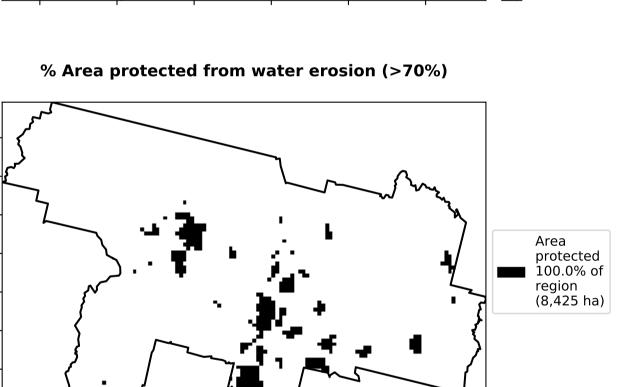
Ecosystem Research Infrastructure

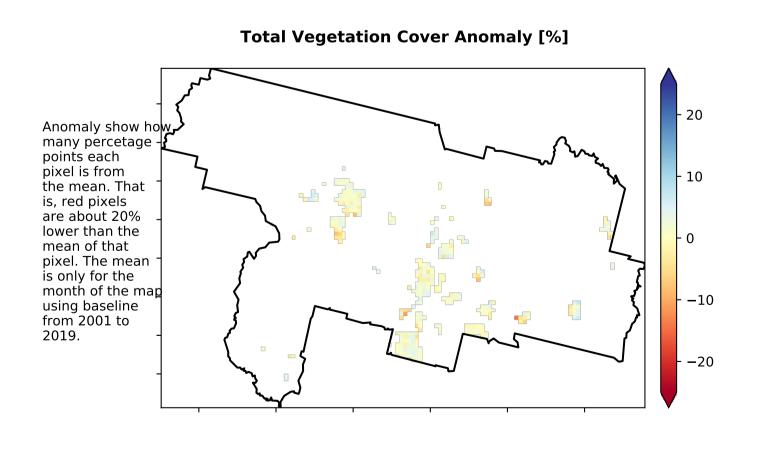


Conservation and natural environments Forest (non woodland)

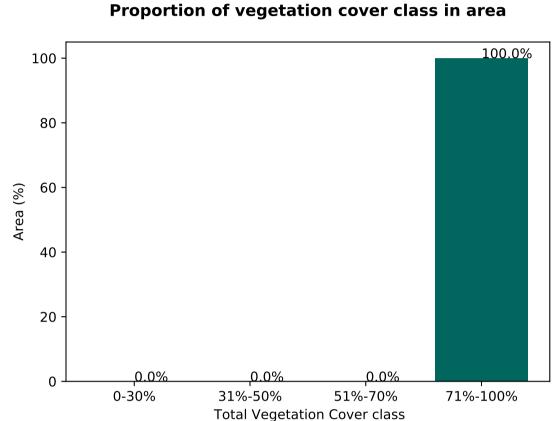


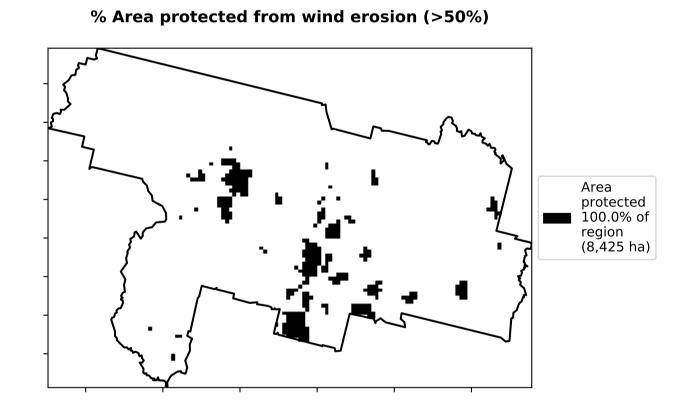


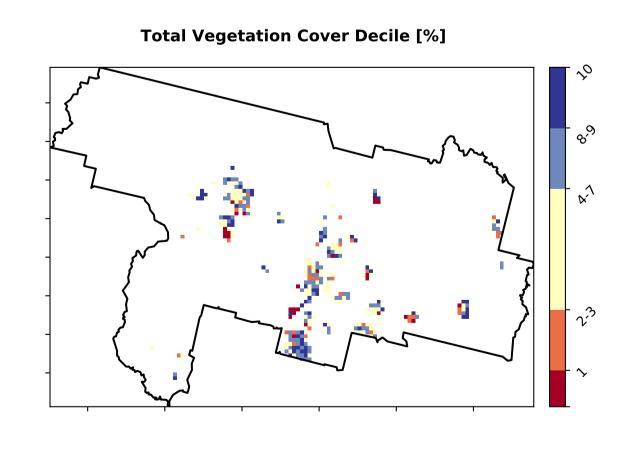




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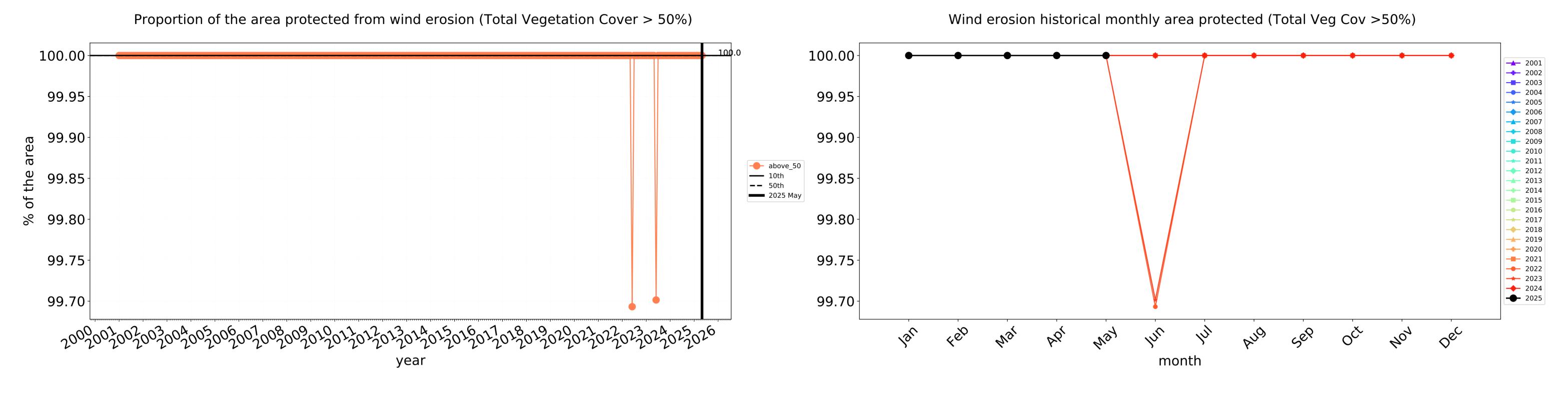


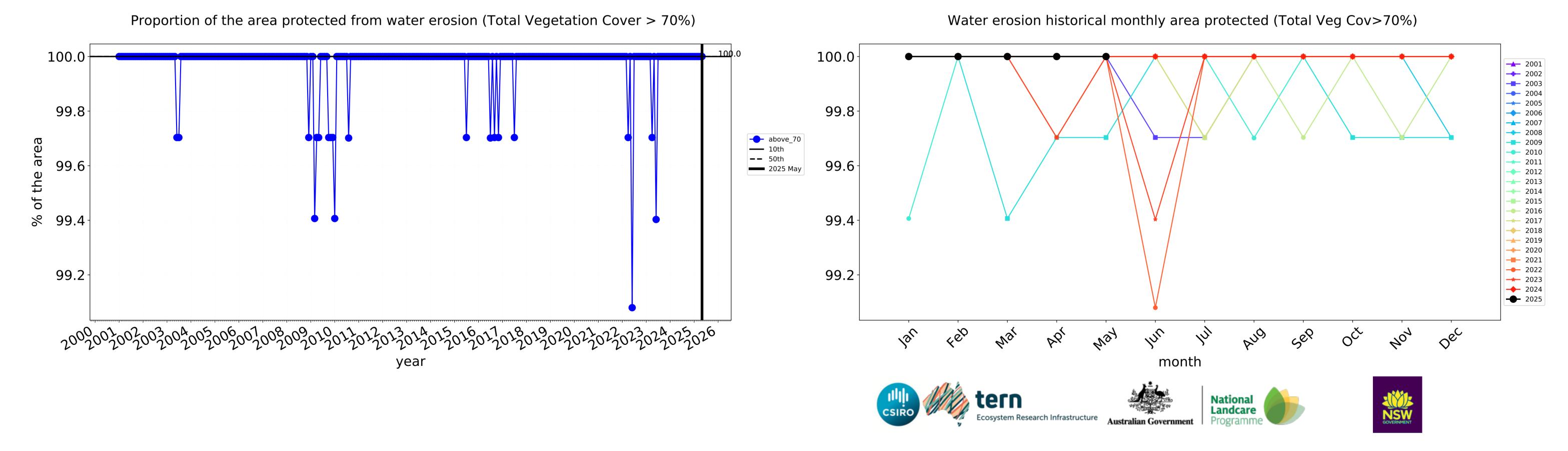


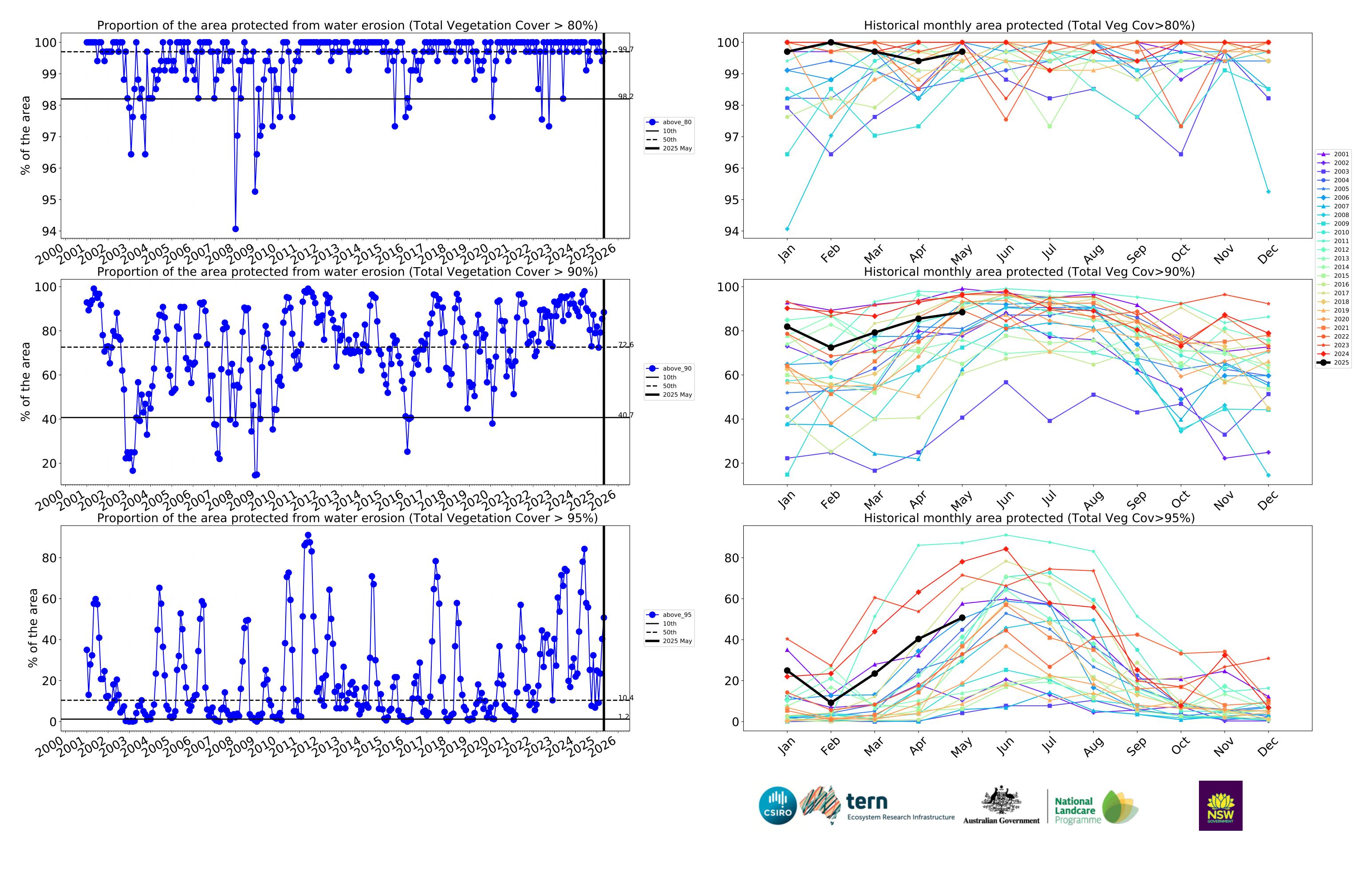






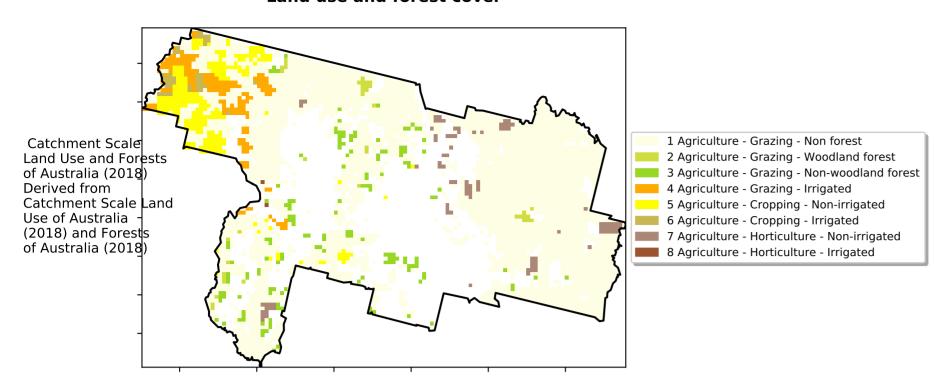




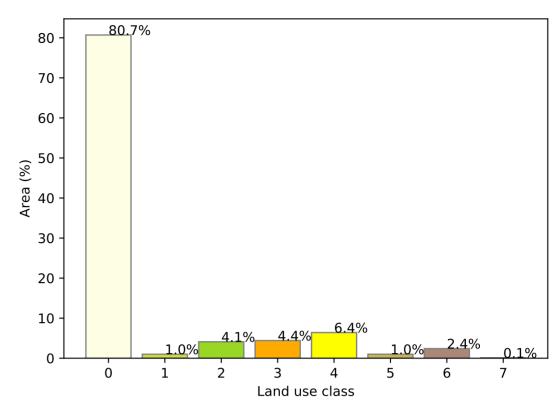


Agriculture

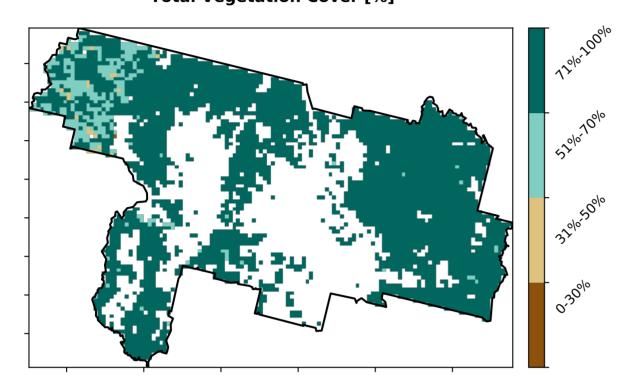
Land use and forest cover



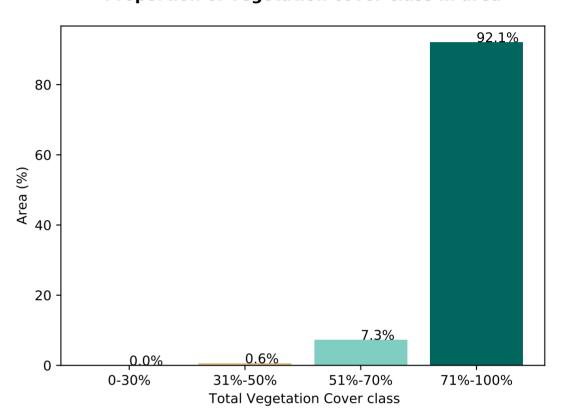
Proportion of each land class in area



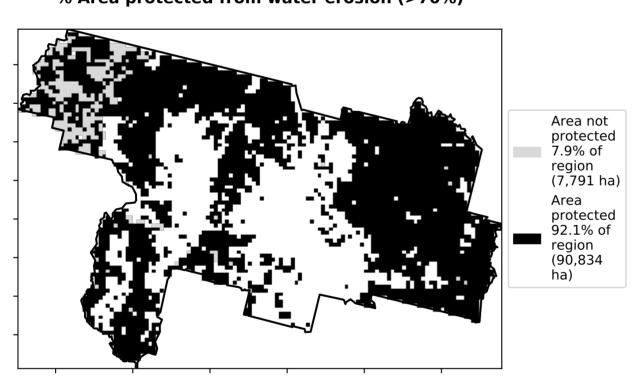
Total Vegetation Cover [%]



Proportion of vegetation cover class in area



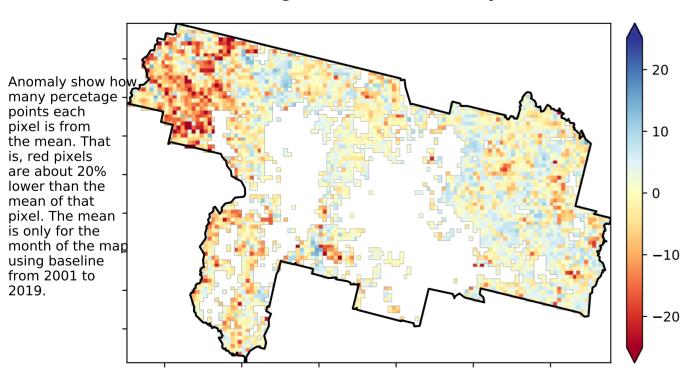
% Area protected from water erosion (>70%)



% Area protected from wind erosion (>50%)

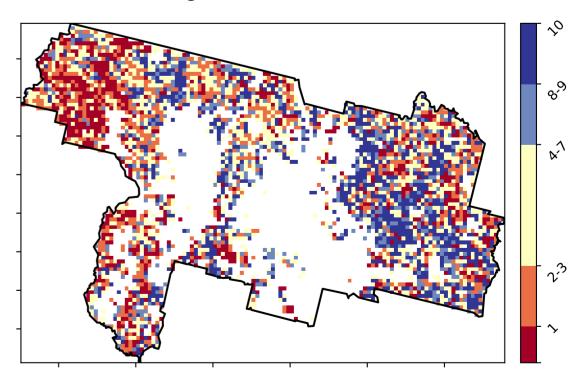


Total Vegetation Cover Anomaly [%]



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Total Vegetation Cover Decile [%]



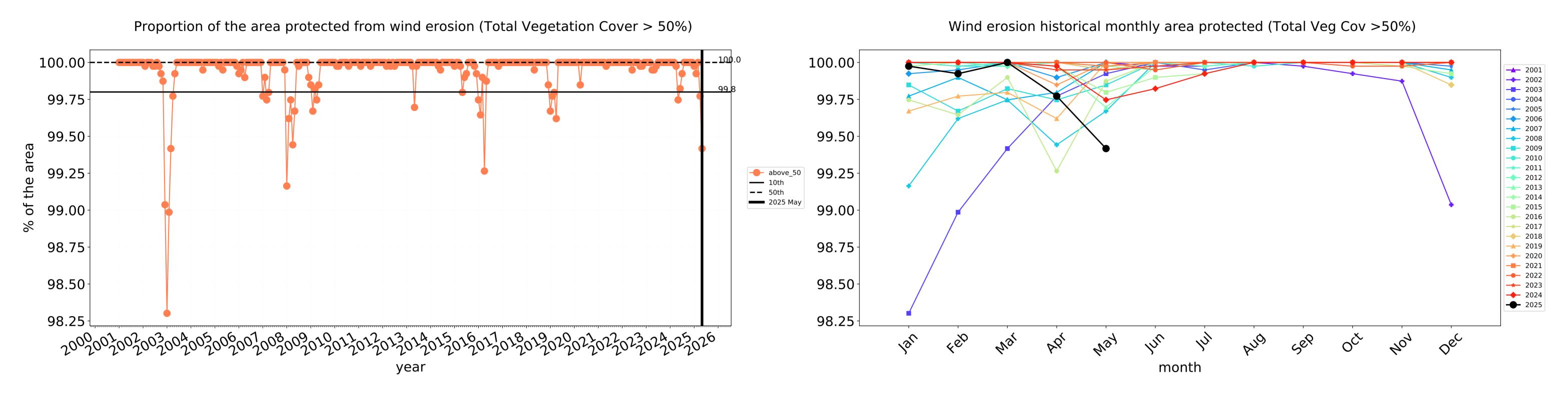


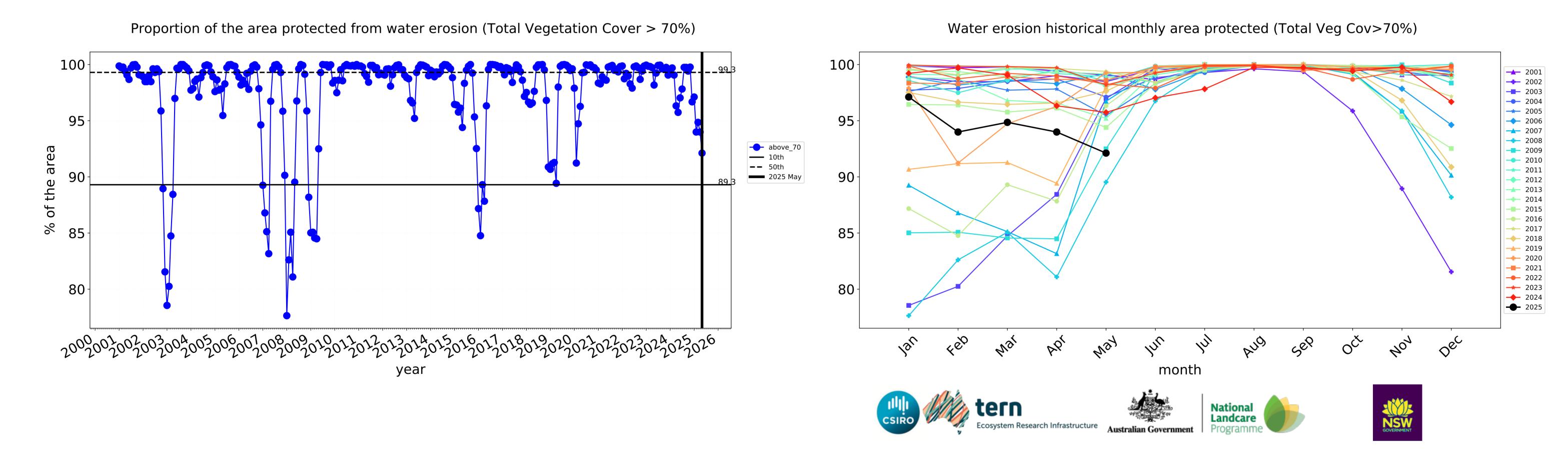


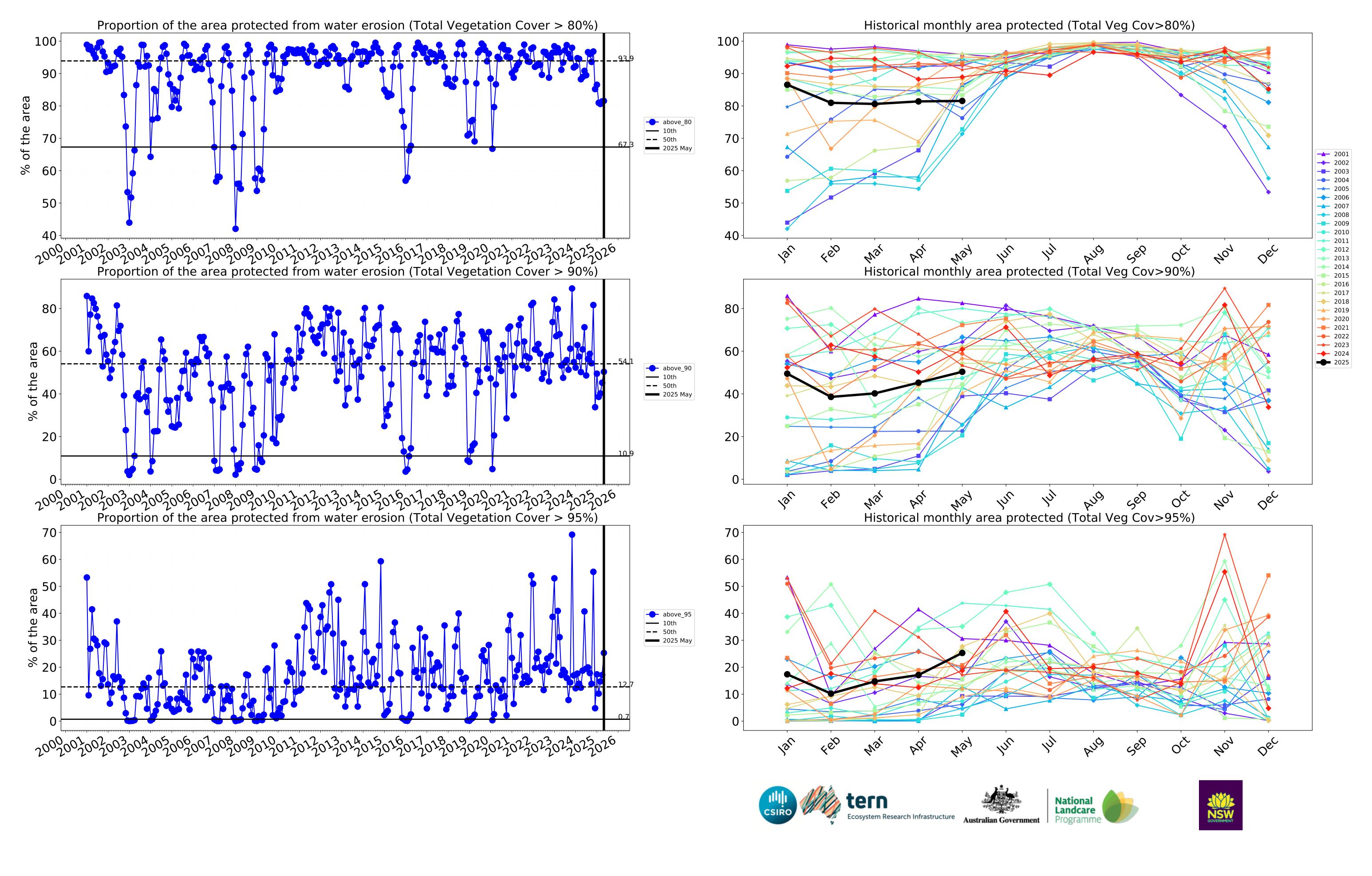




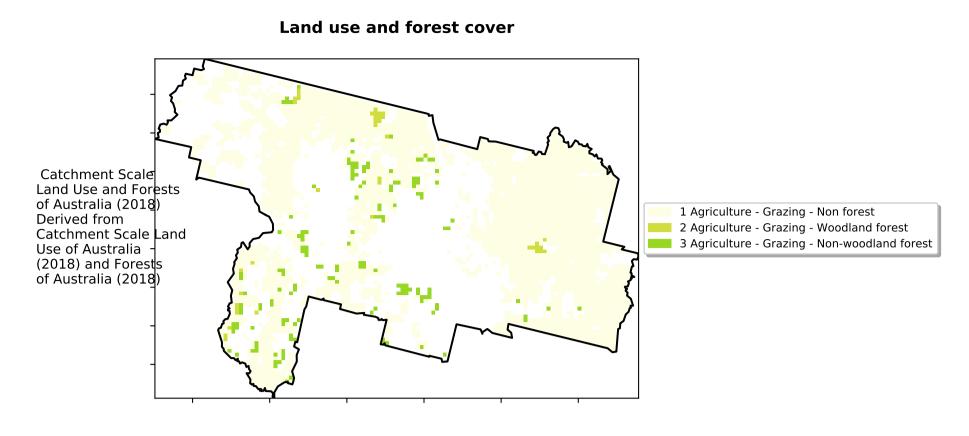
Agriculture timeseries



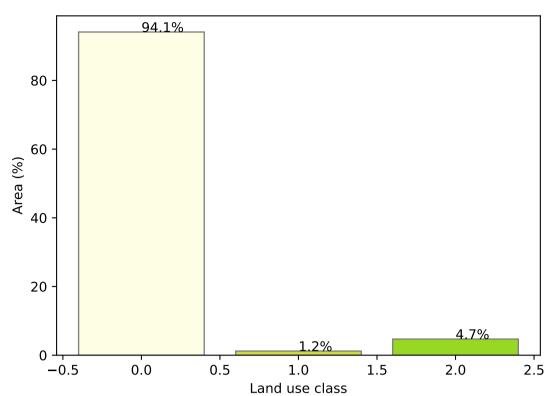




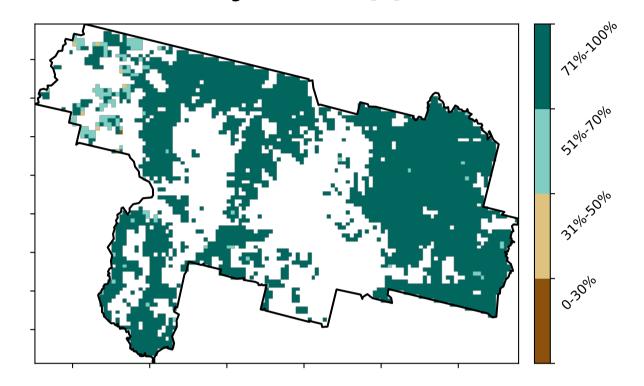
Grazing



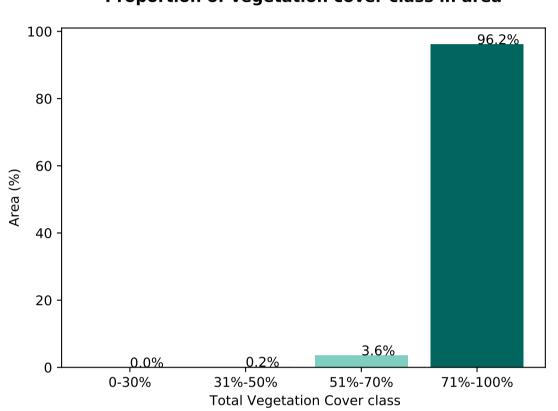
Proportion of each land class in area



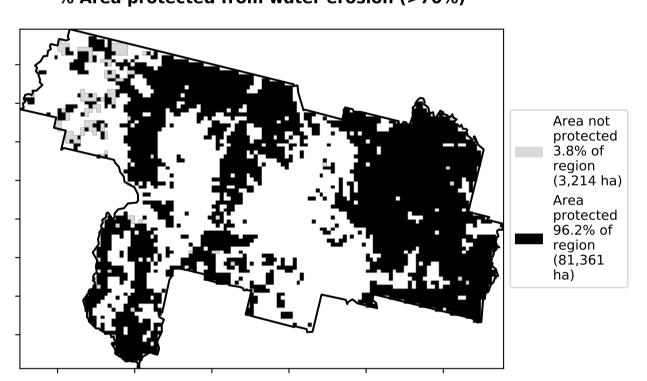
Total Vegetation Cover [%]



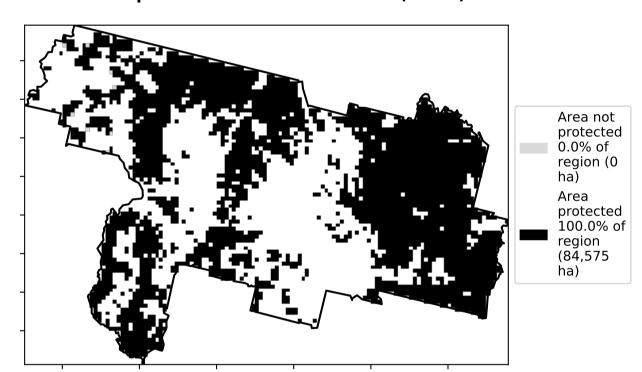
Proportion of vegetation cover class in area



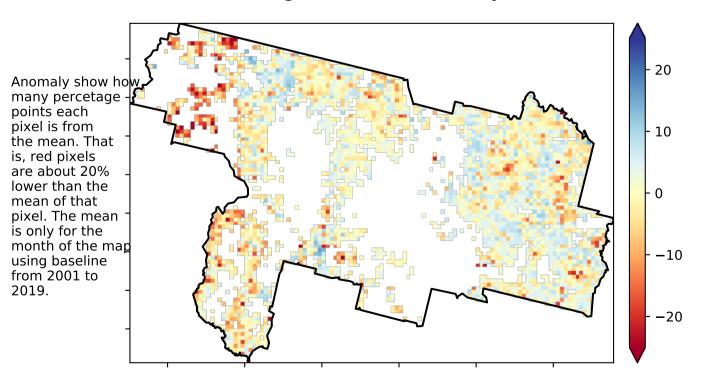
% Area protected from water erosion (>70%)



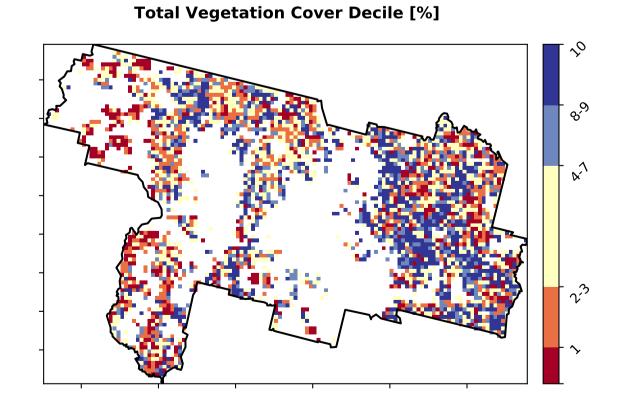
% Area protected from wind erosion (>50%)



Total Vegetation Cover Anomaly [%]



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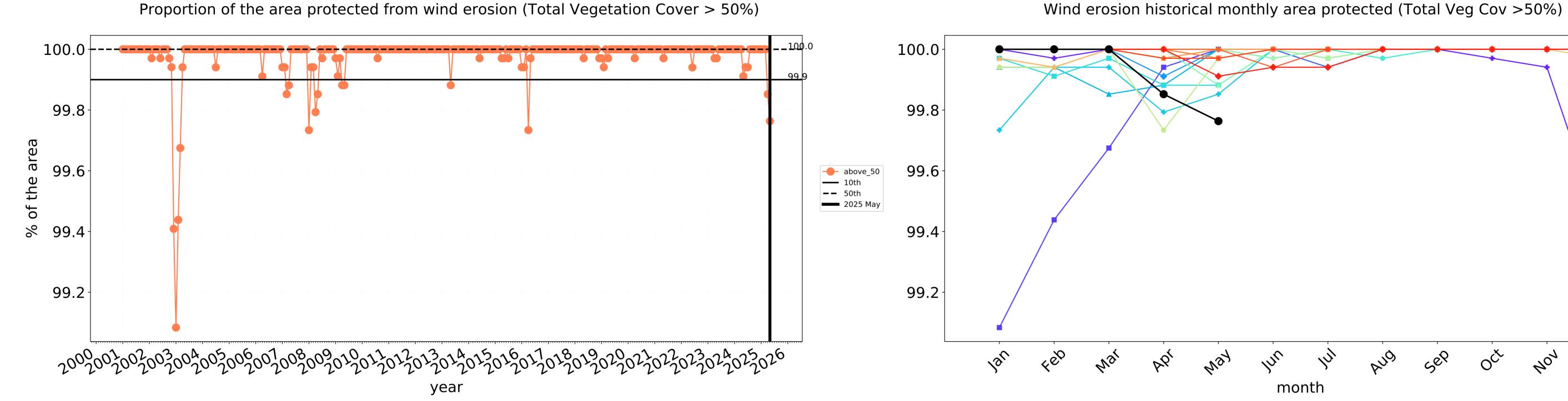


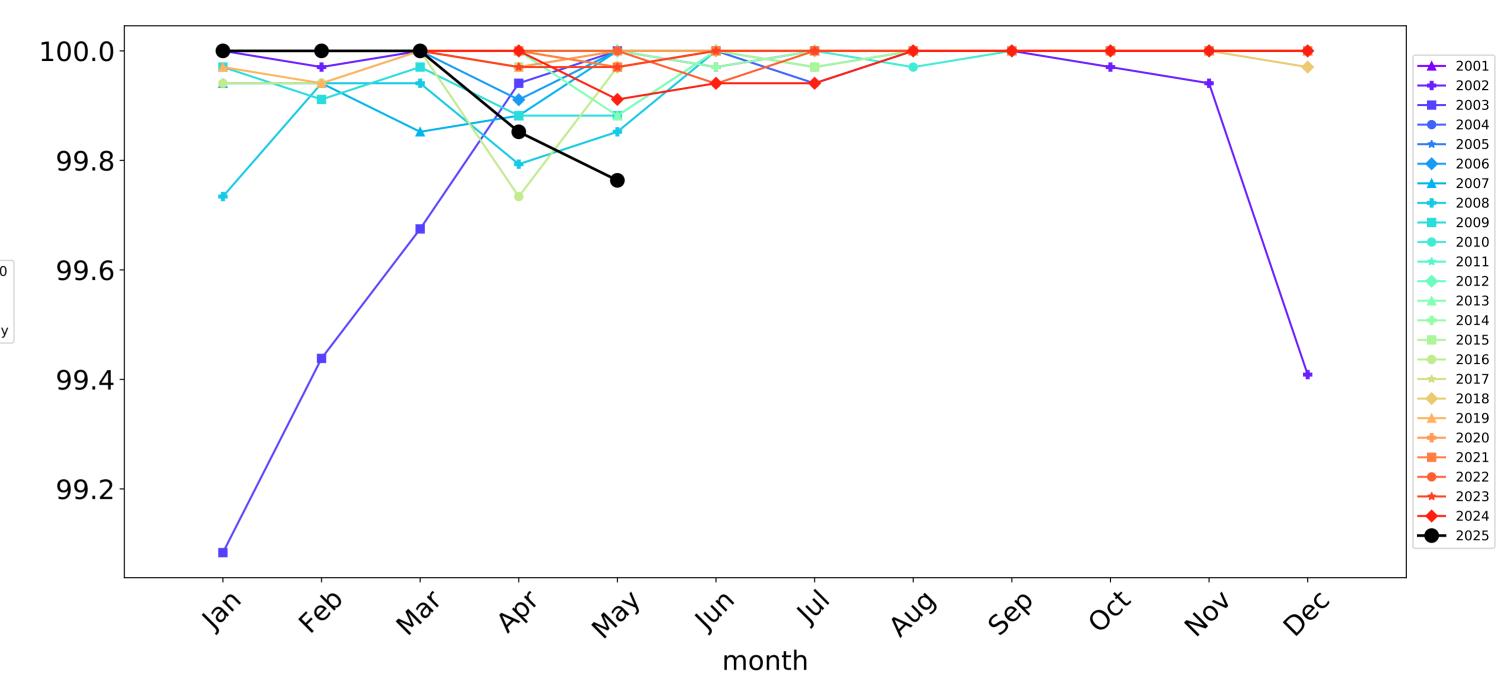


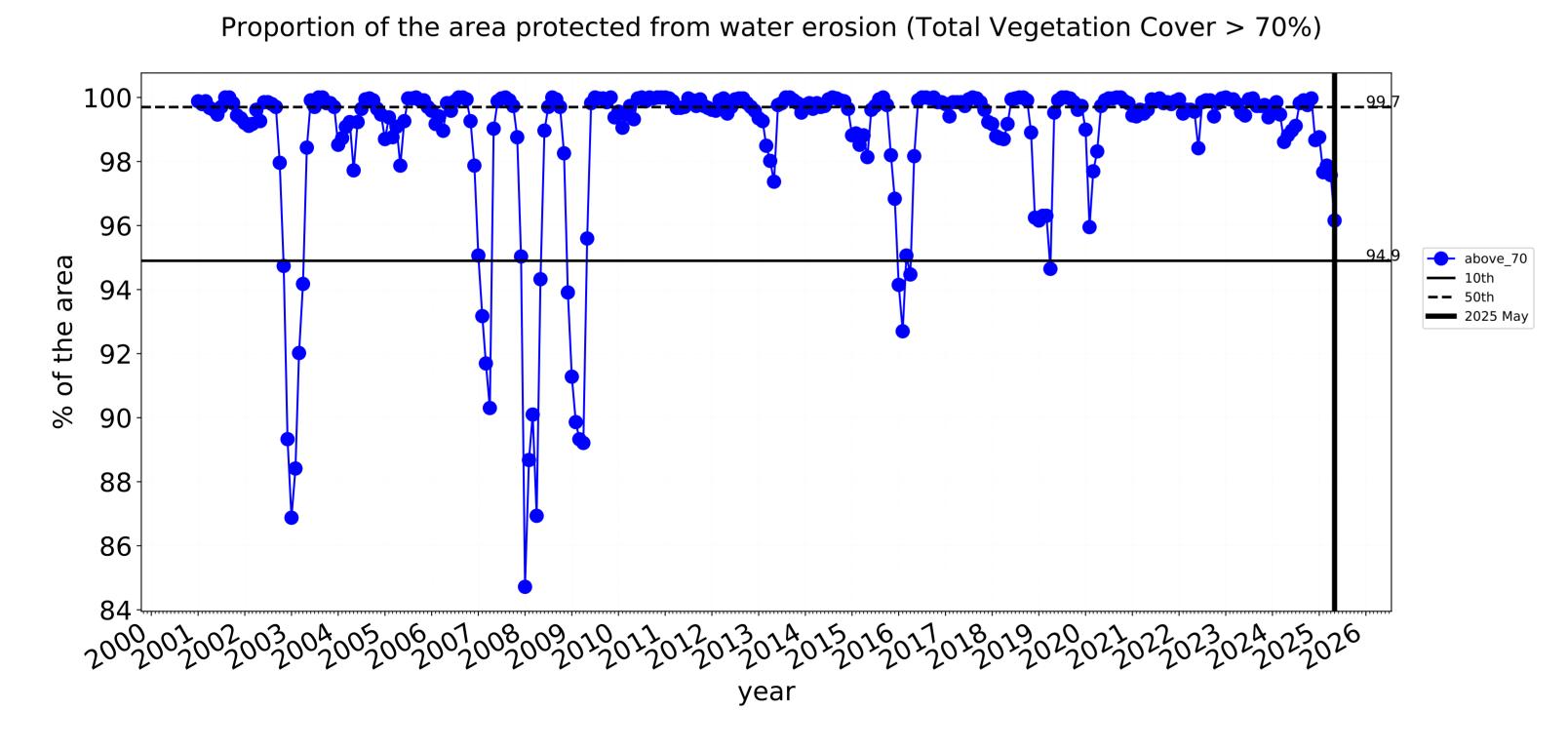


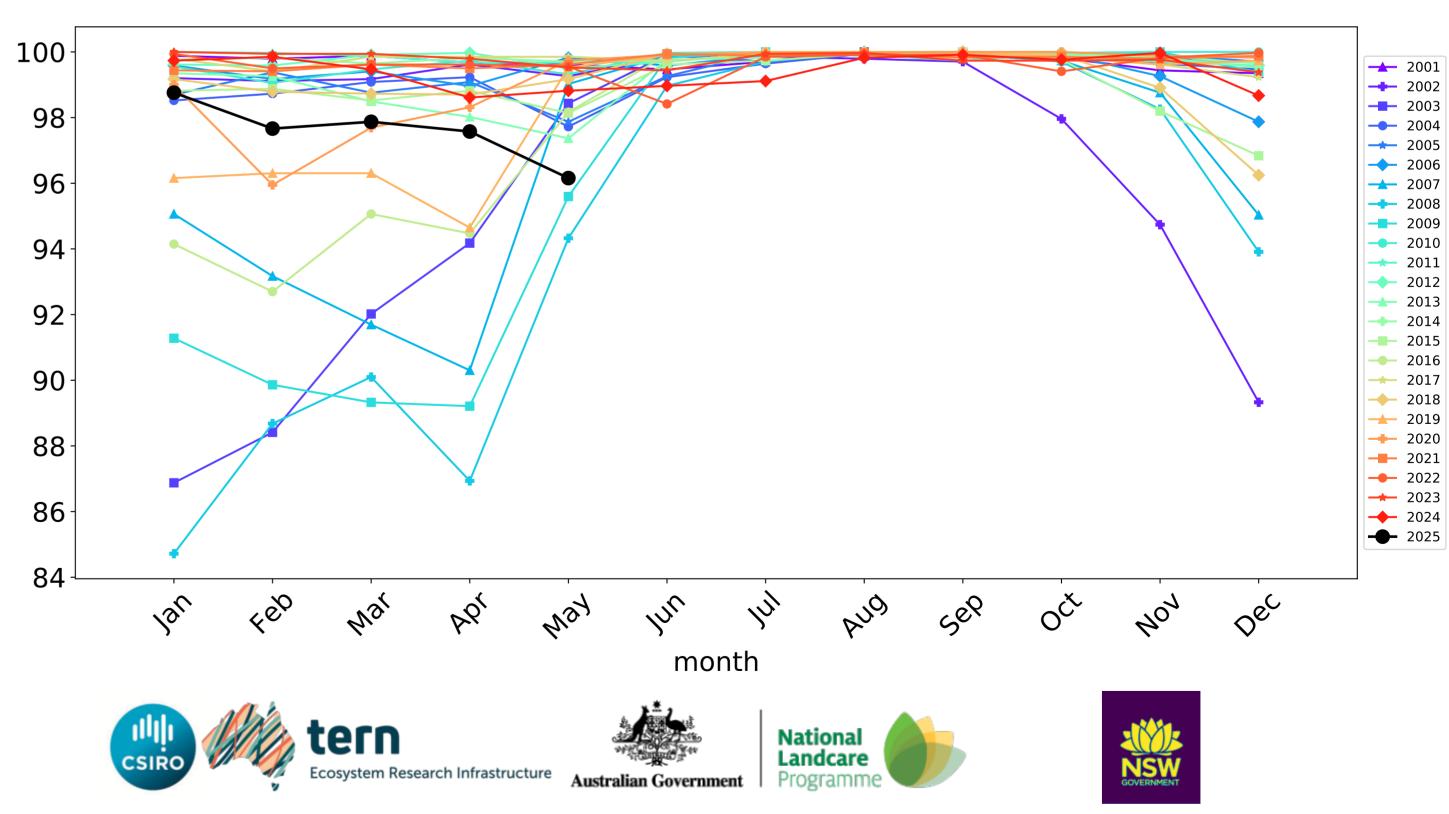


Grazing timeseries

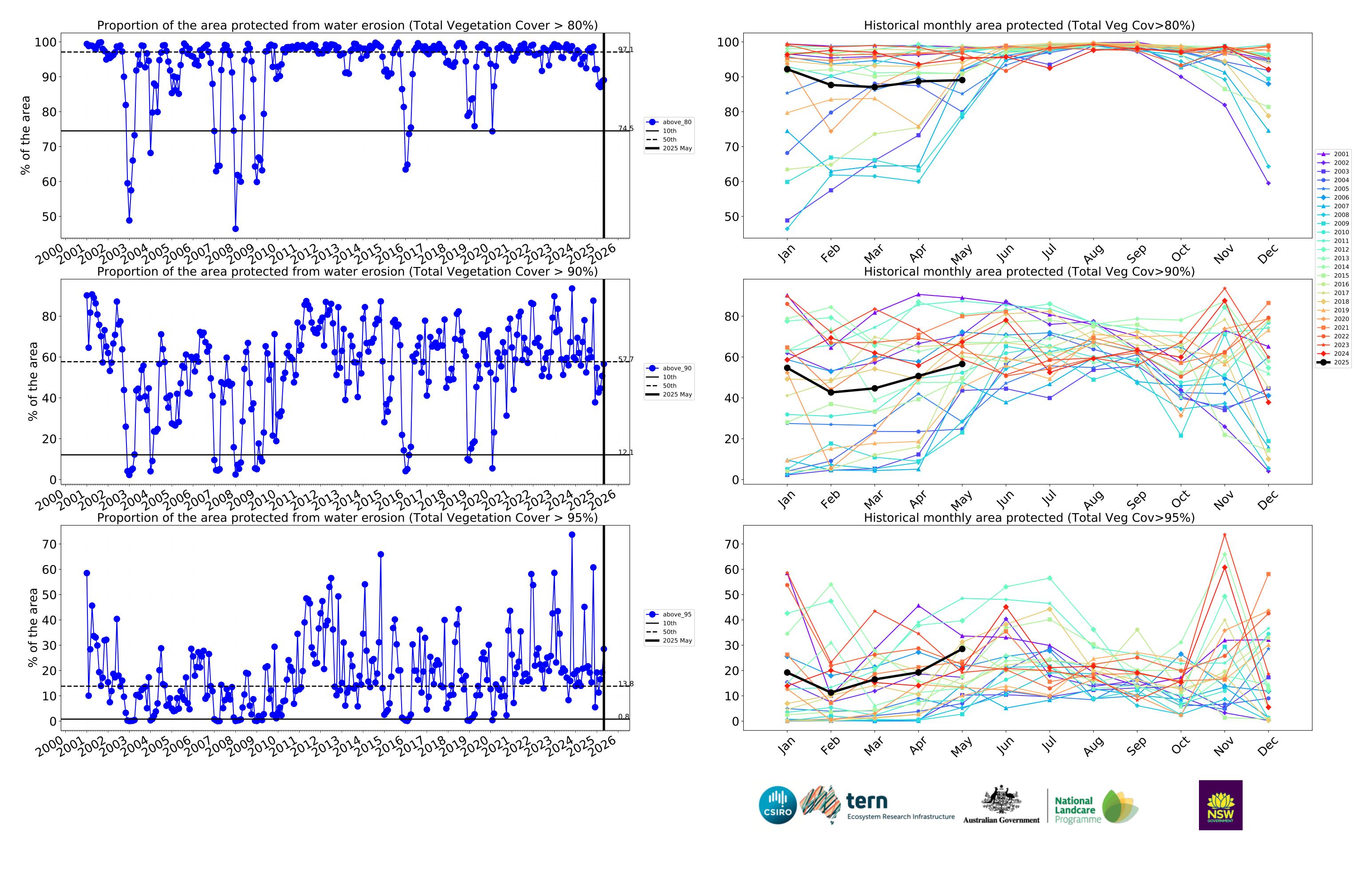






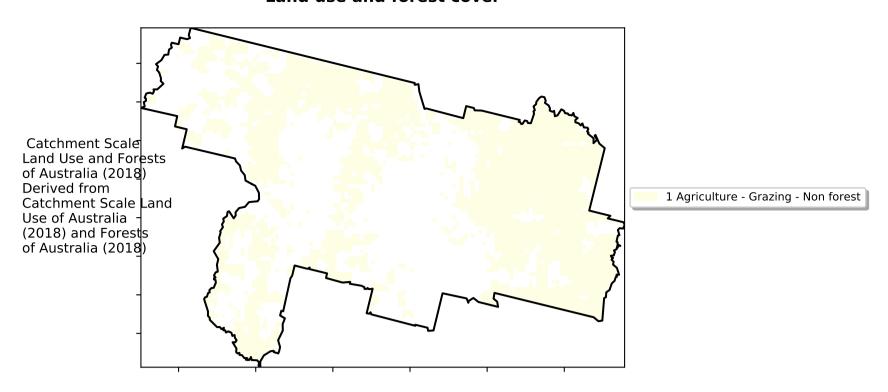


Water erosion historical monthly area protected (Total Veg Cov>70%)

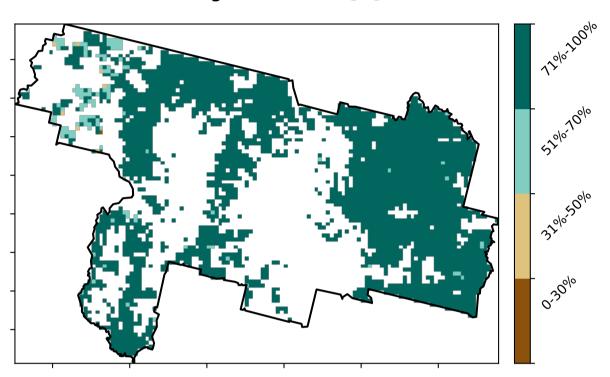


Grazing non forest

Land use and forest cover



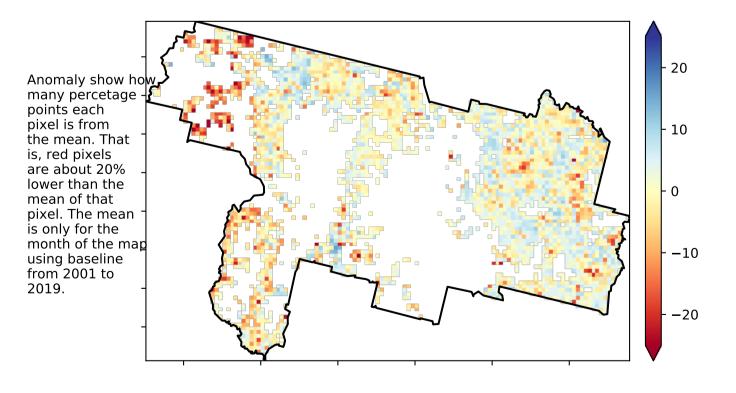
Total Vegetation Cover [%]



% Area protected from water erosion (>70%)

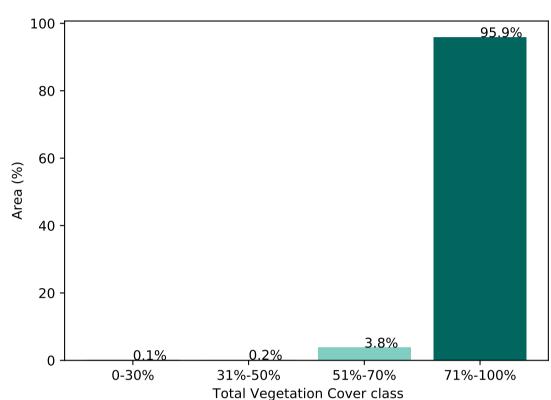


Total Vegetation Cover Anomaly [%]

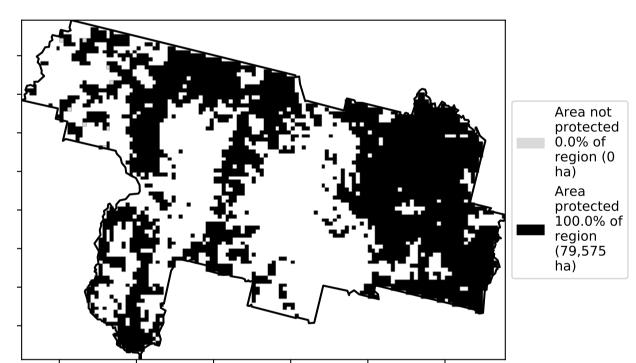


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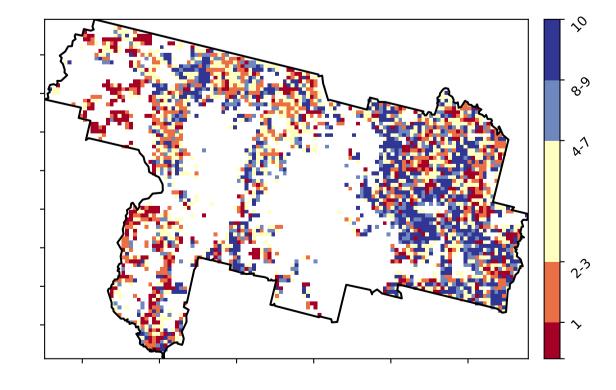
Proportion of vegetation cover class in area



% Area protected from wind erosion (>50%)



Total Vegetation Cover Decile [%]



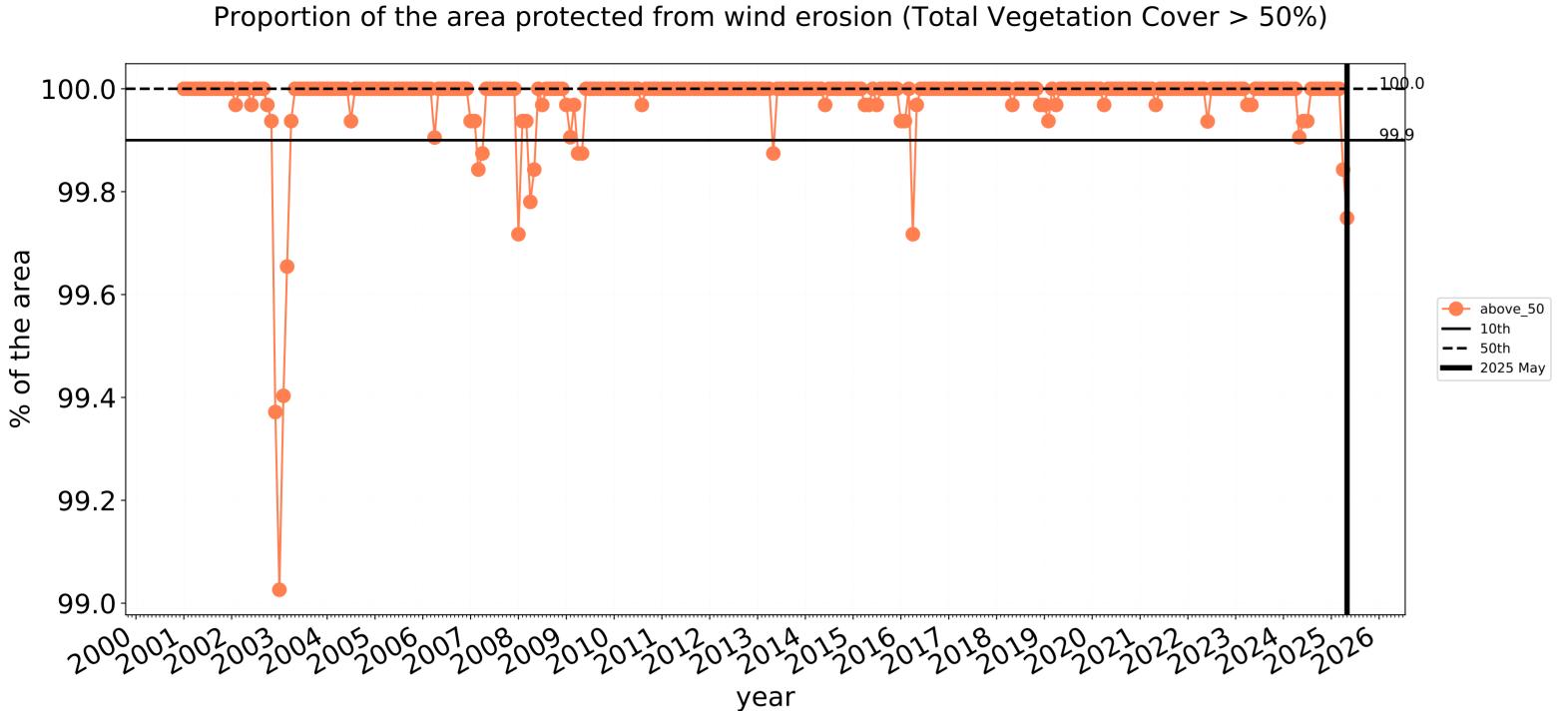


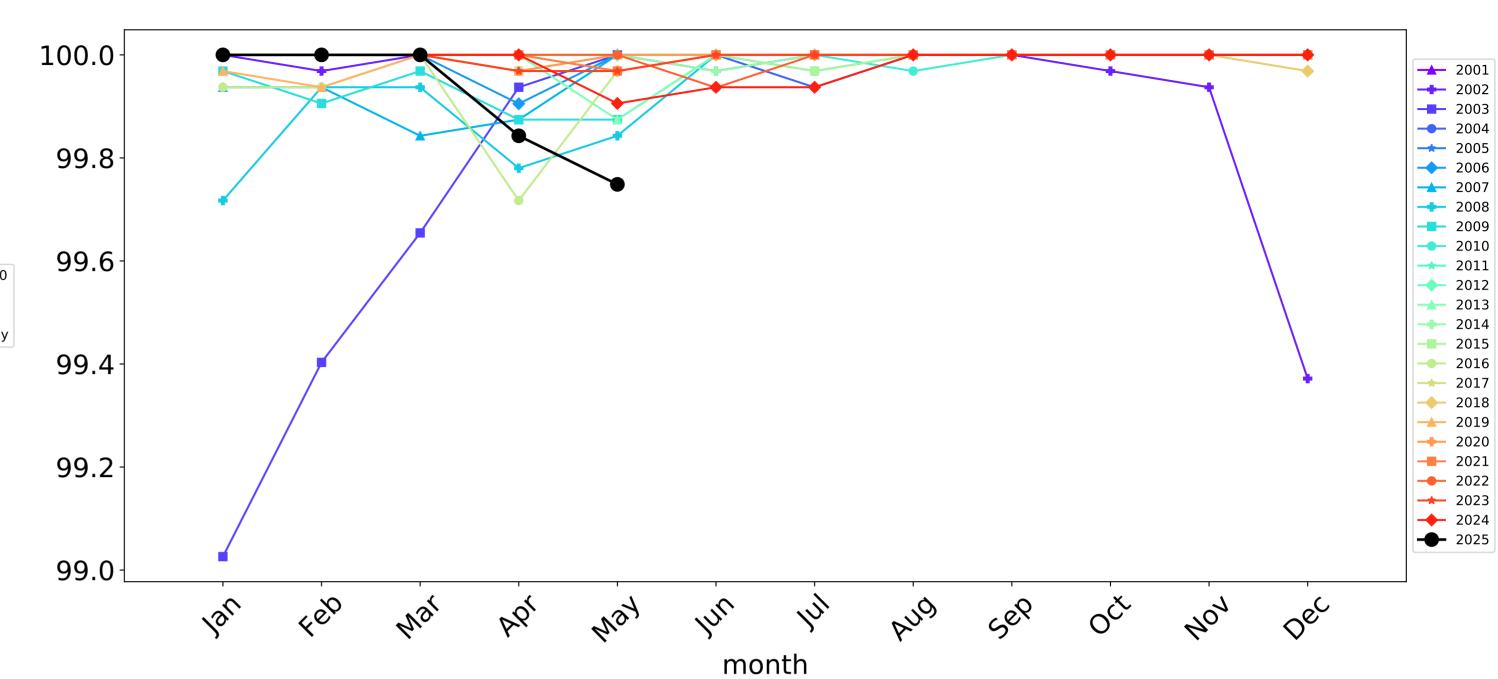




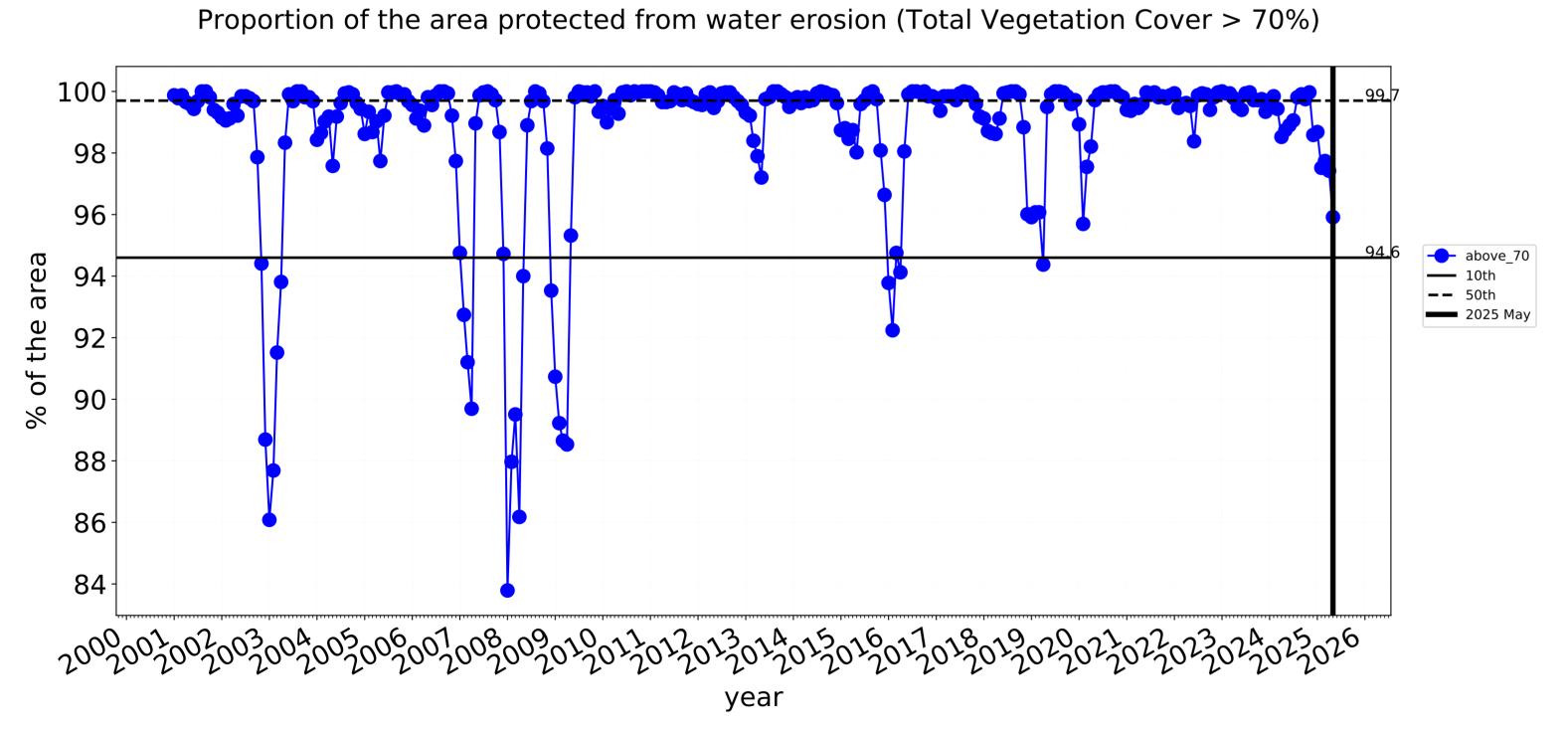


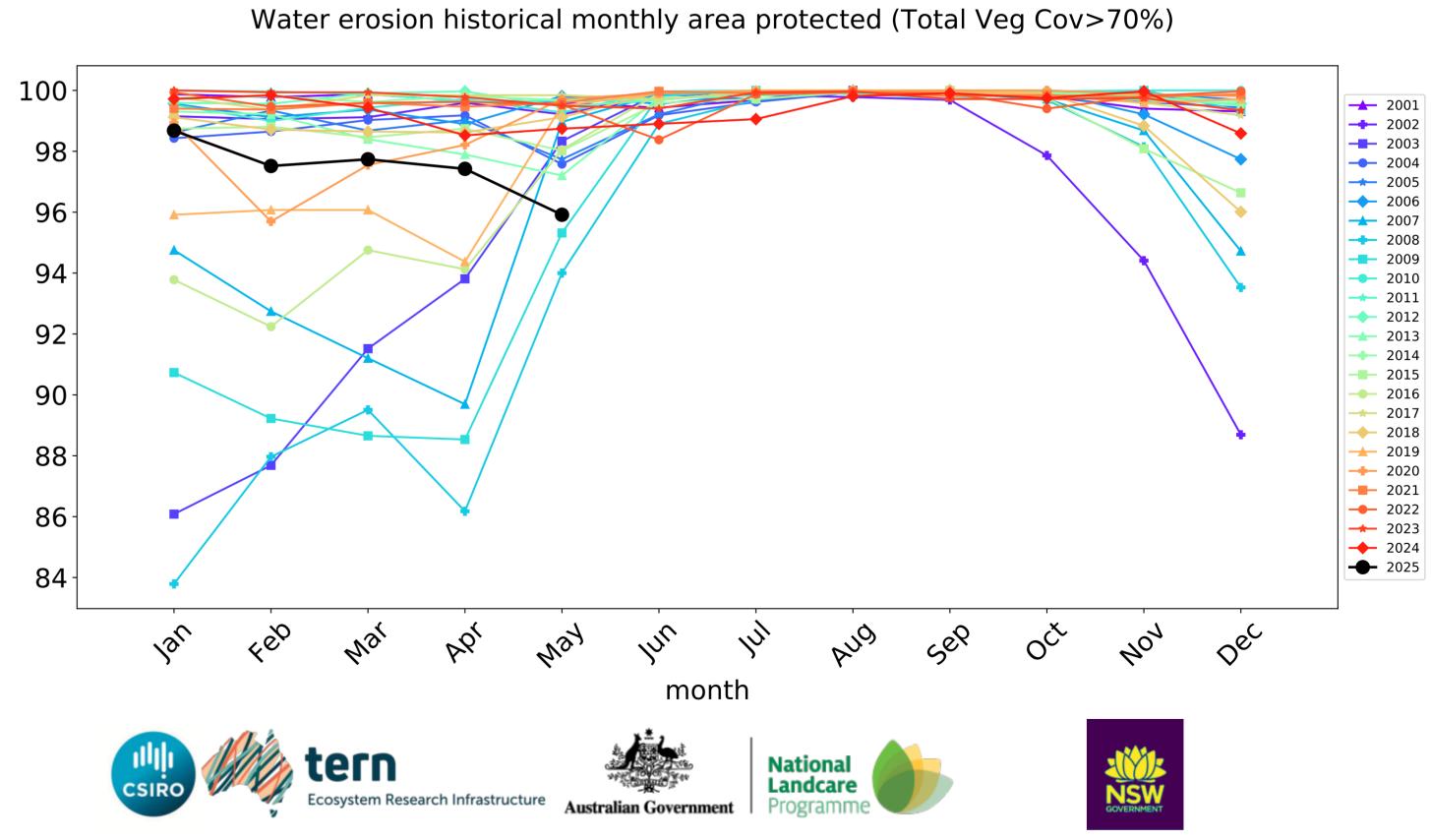
Grazing non forest timeseries

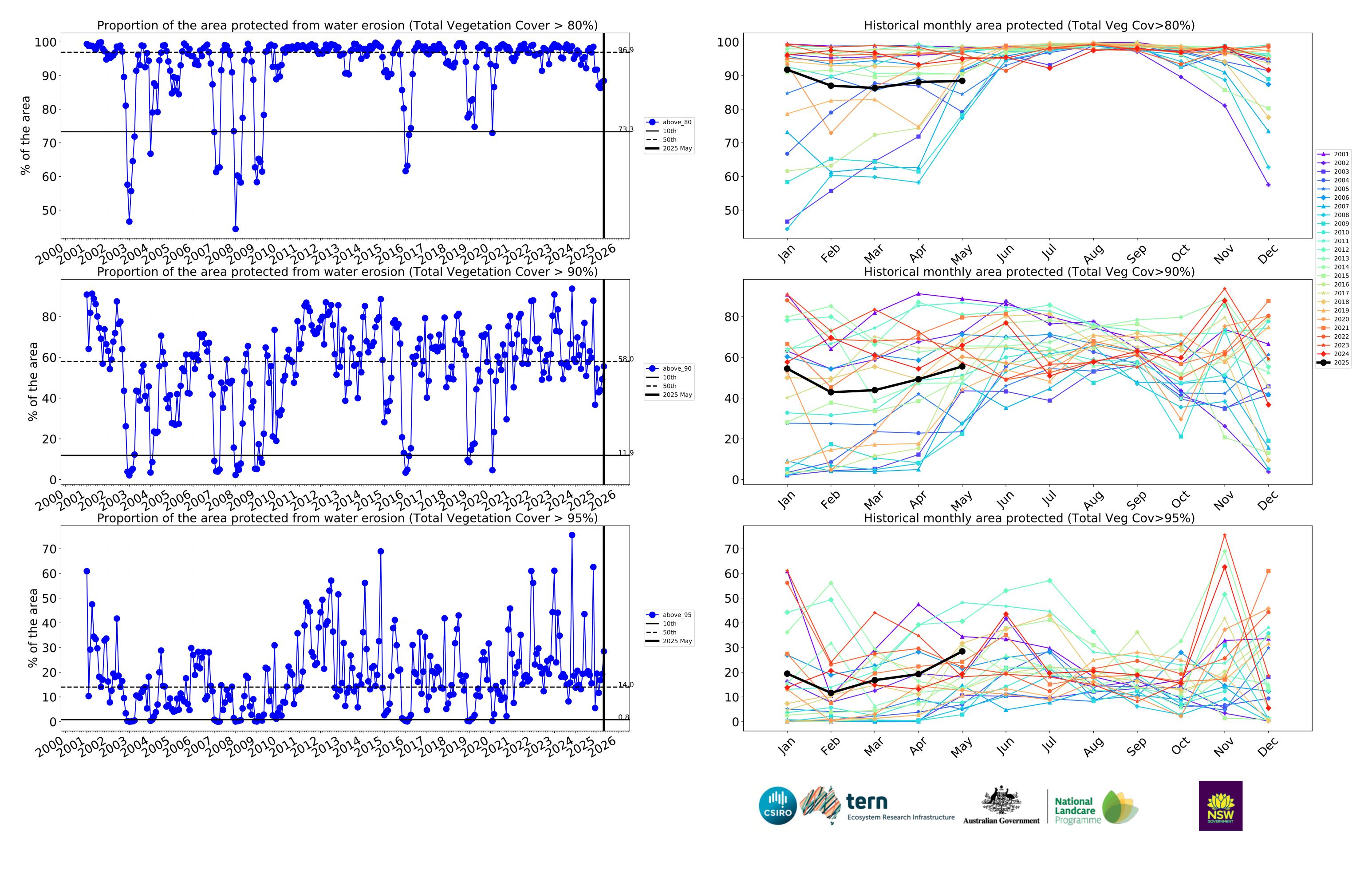




Wind erosion historical monthly area protected (Total Veg Cov >50%)



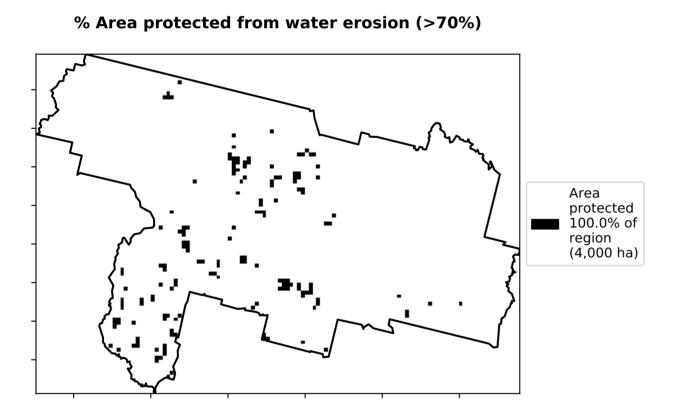


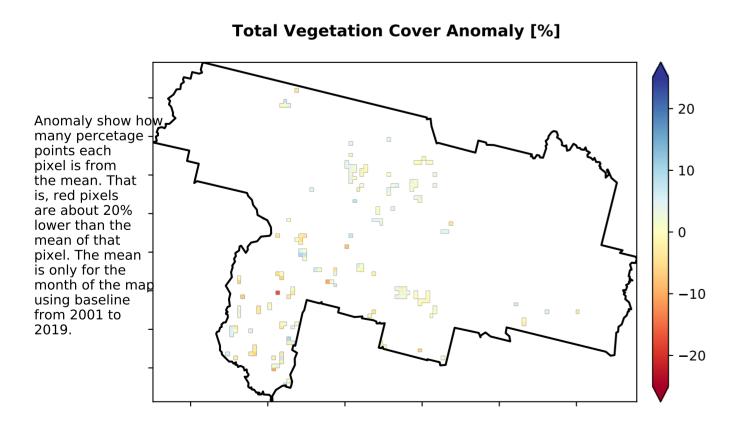


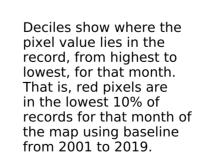
Grazing - Forest (non woodland)

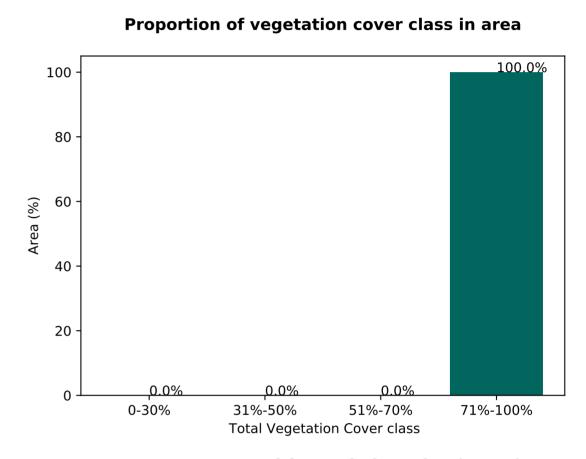
Catchment Scale Land Use and Forests of Australia (2018) Derived from Catchment Scale Use of Australia (2018) 1 Agriculture - Grazing - Non-woodland forest Of Australia (2018)

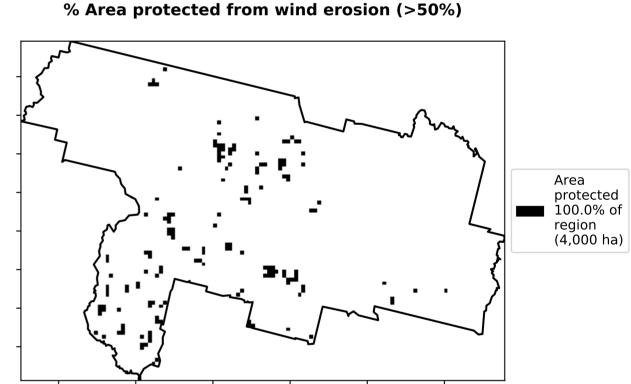
Total Vegetation Cover [%]

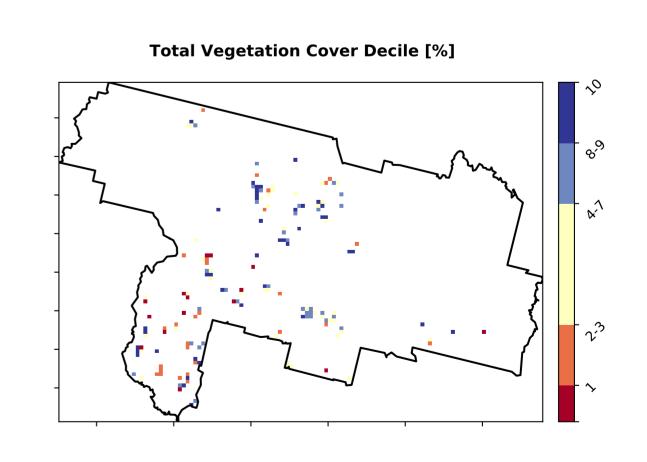










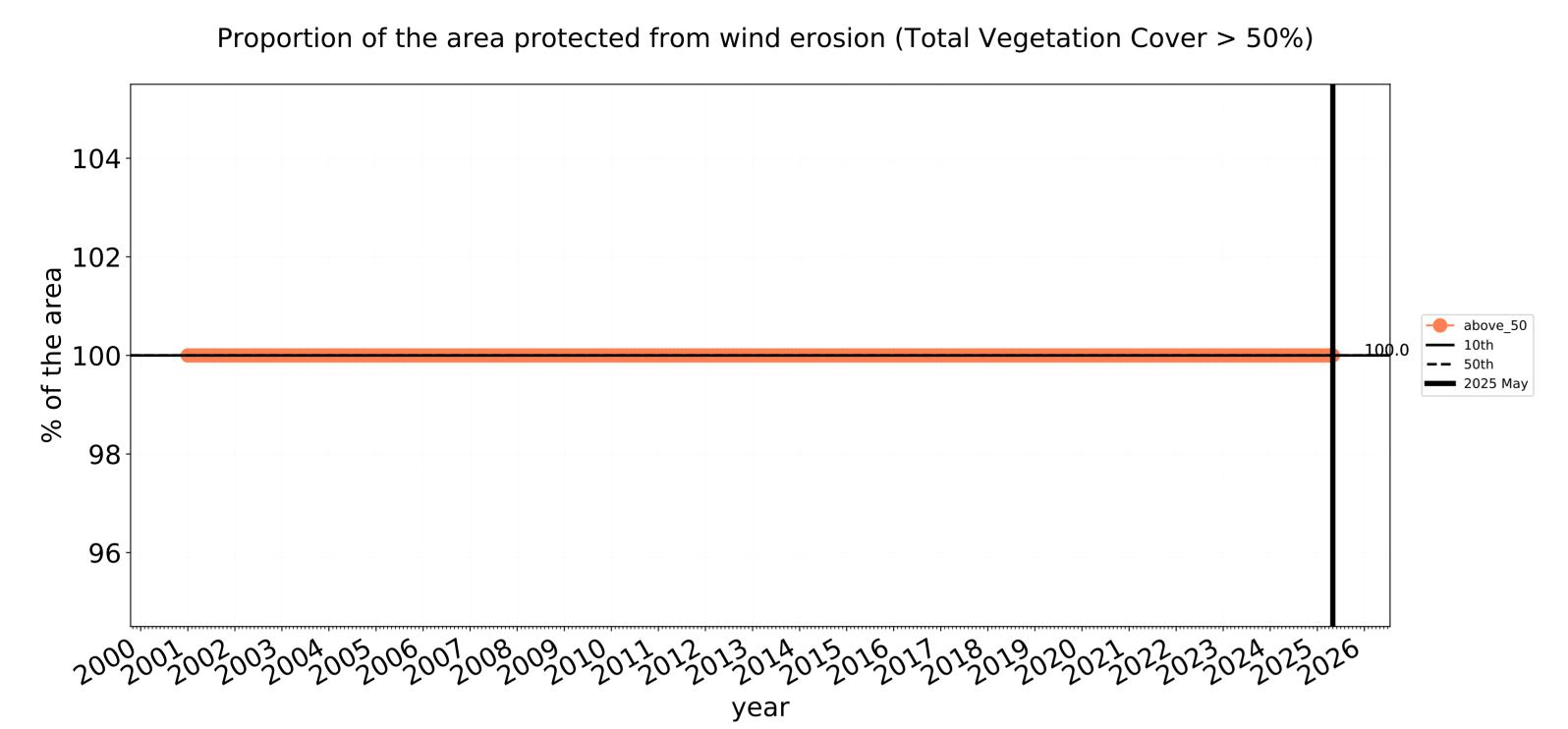


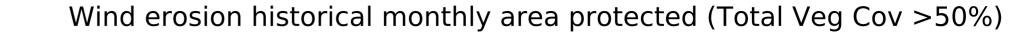


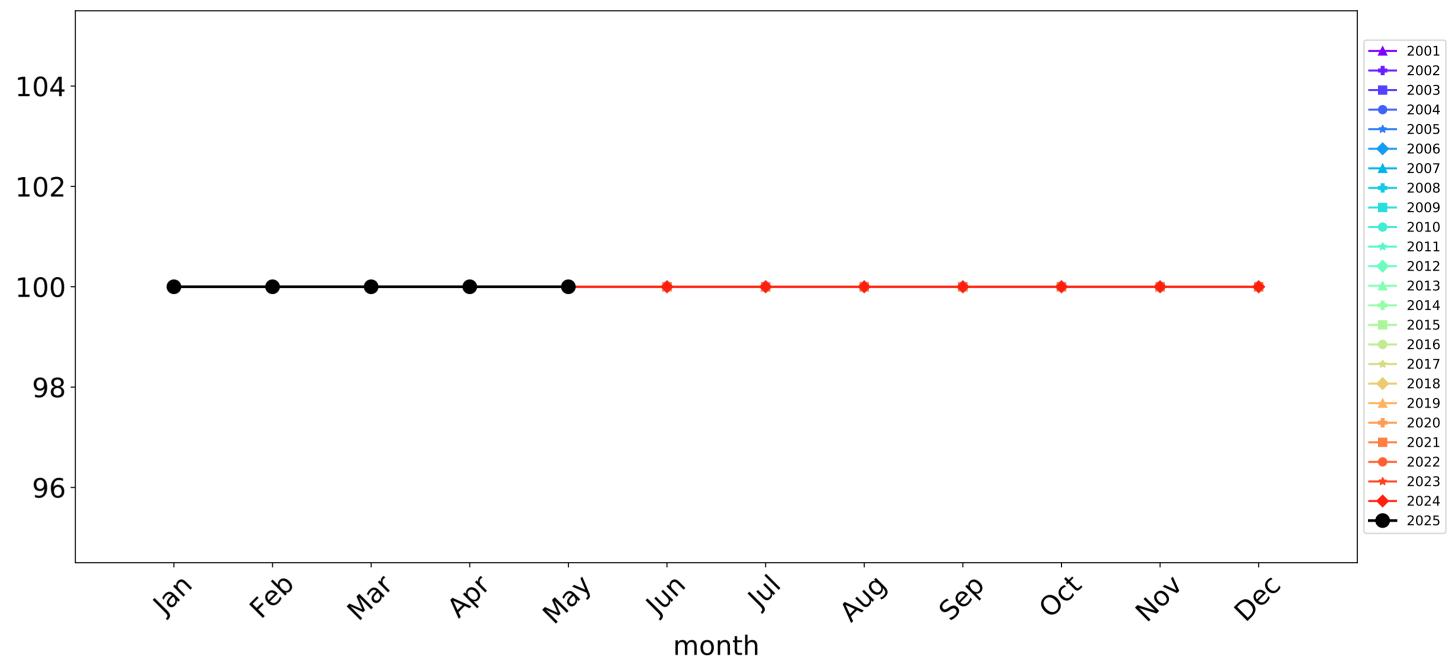


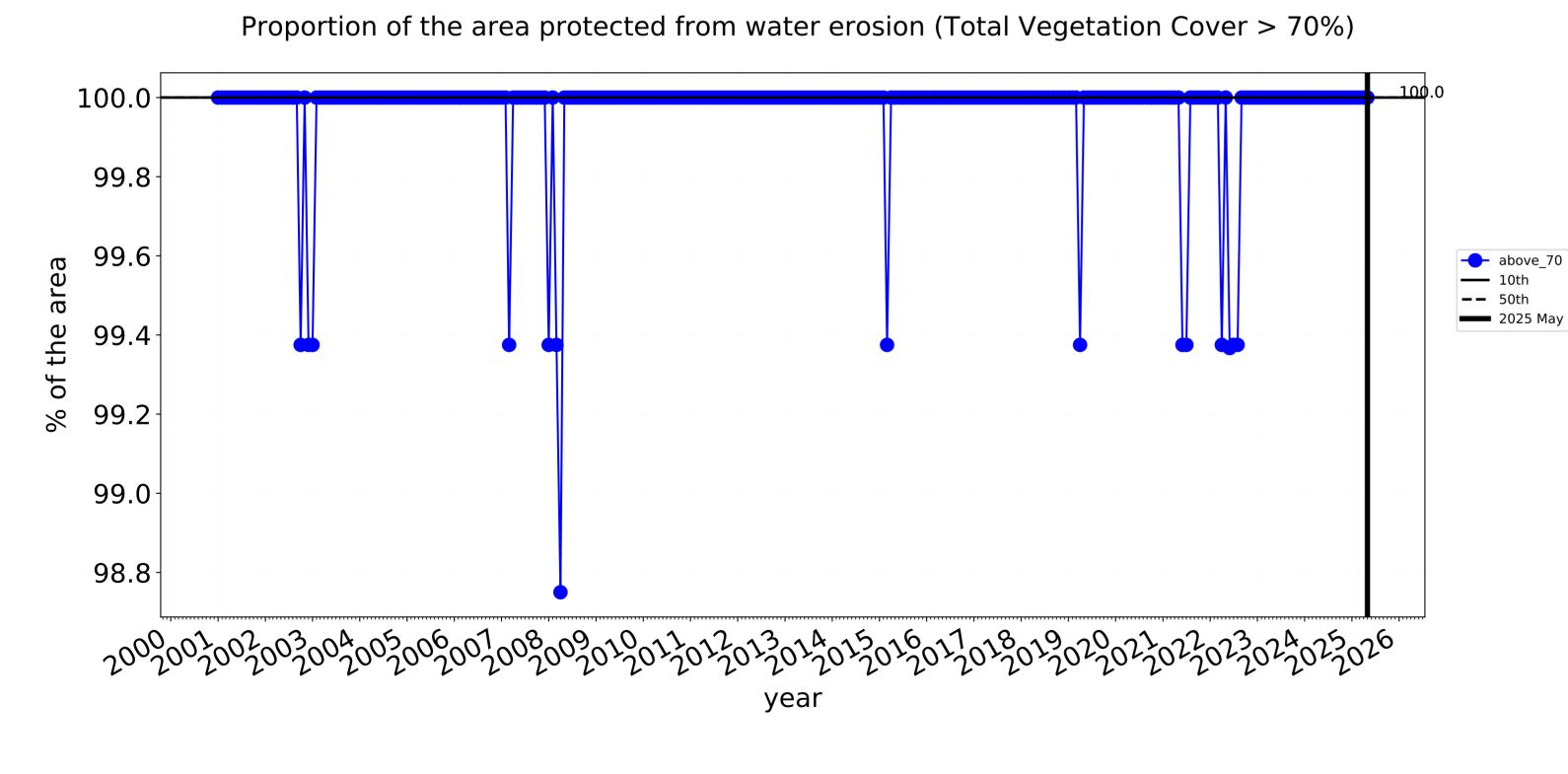


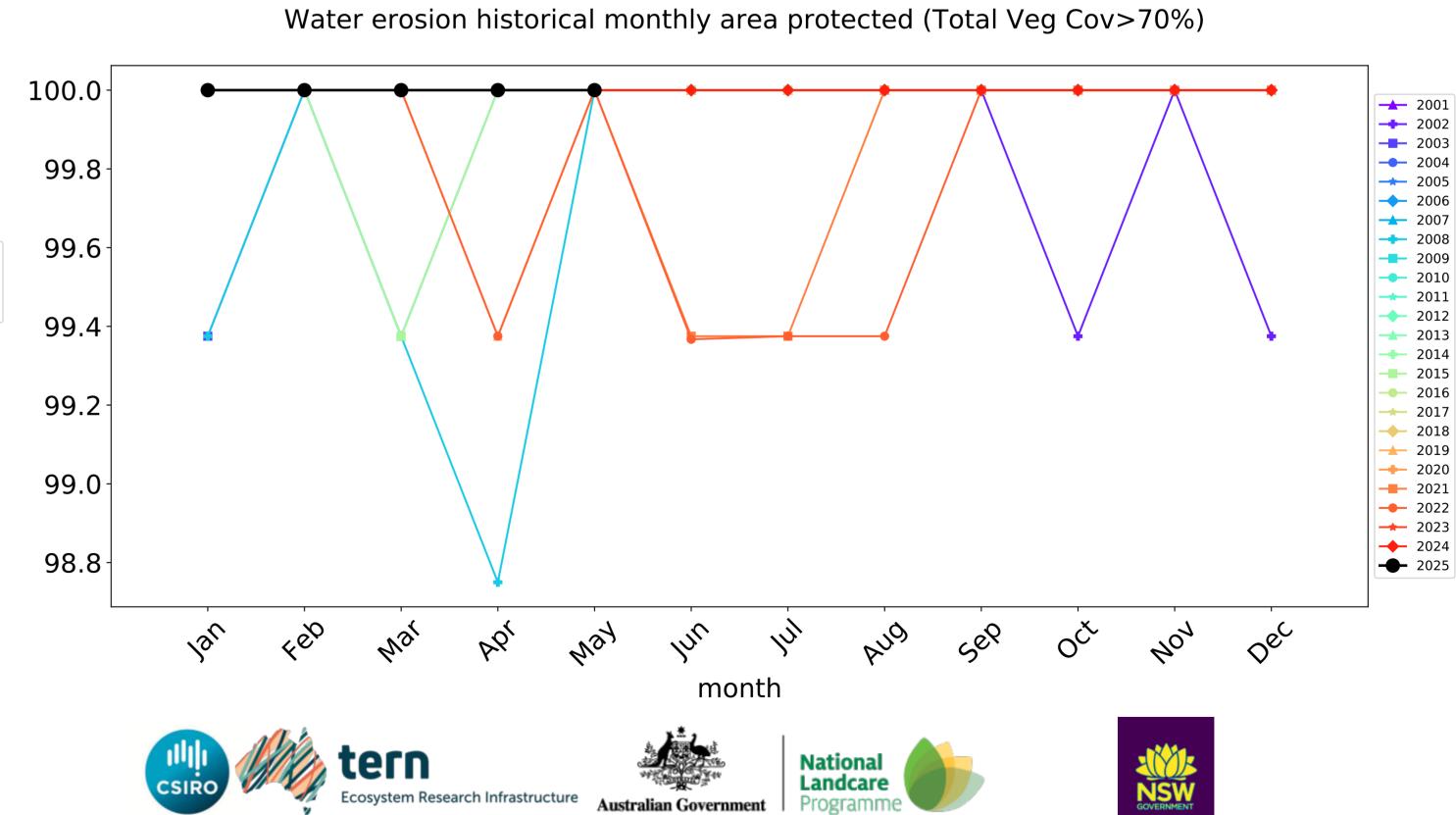


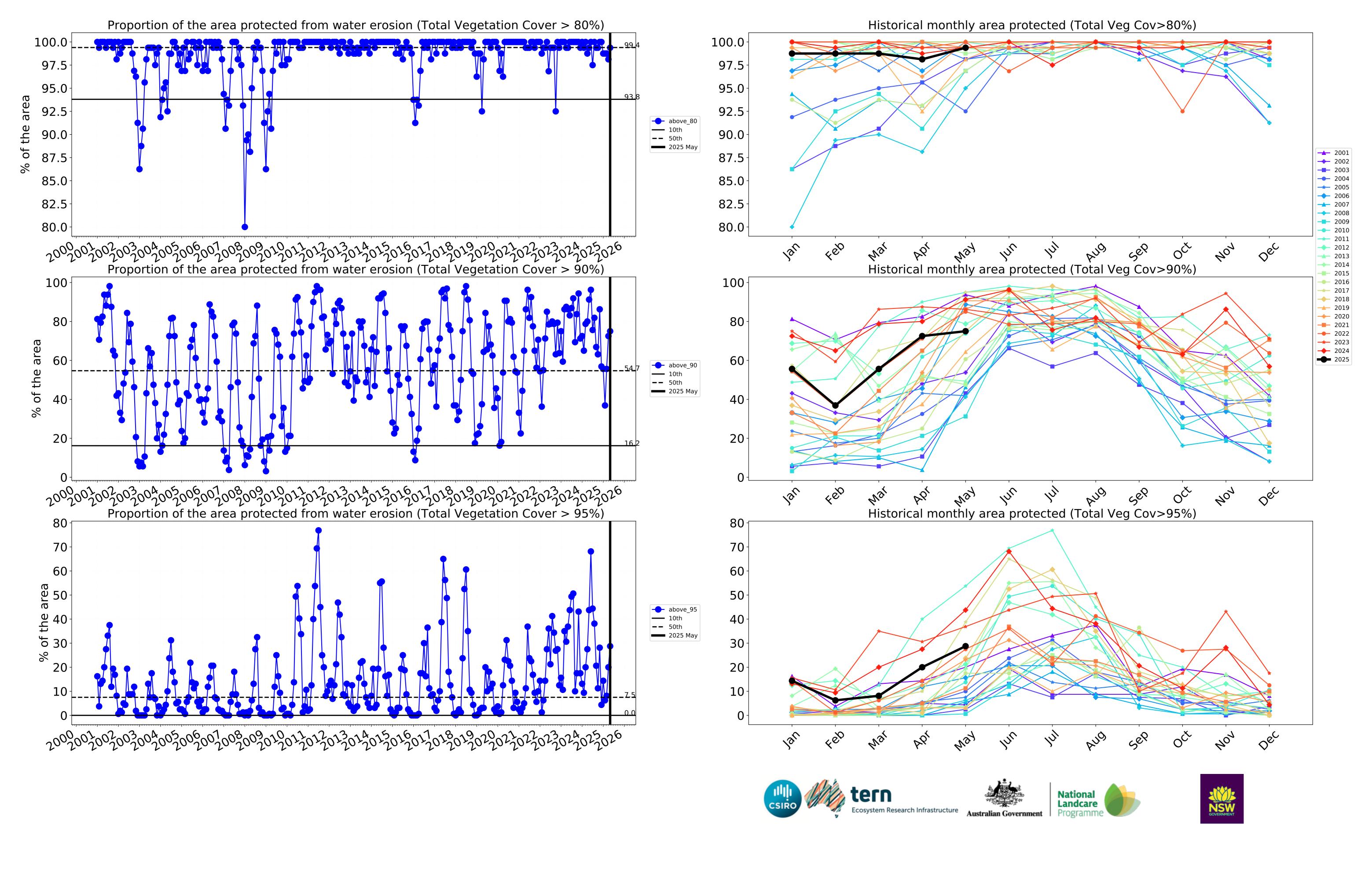






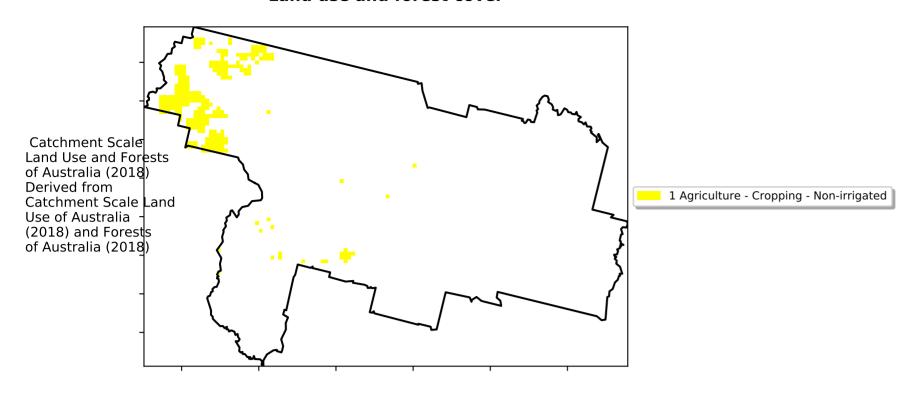




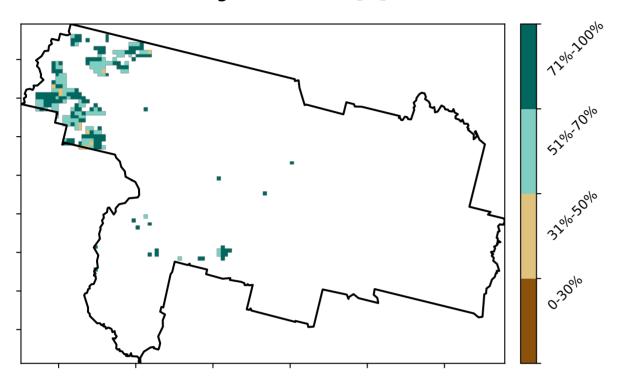


Cropping

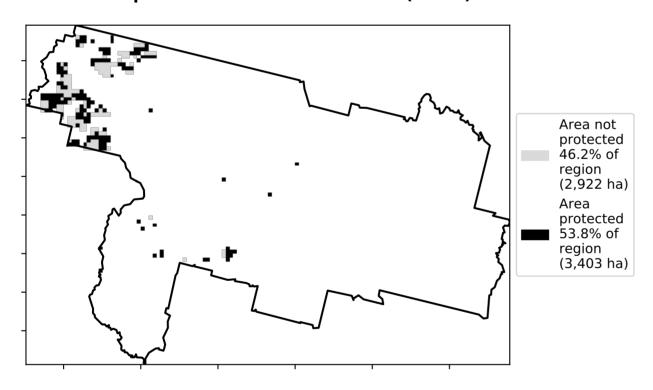
Land use and forest cover



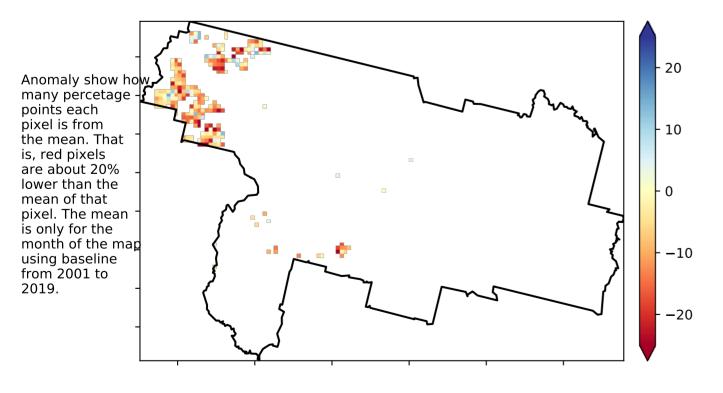
Total Vegetation Cover [%]



% Area protected from water erosion (>70%)

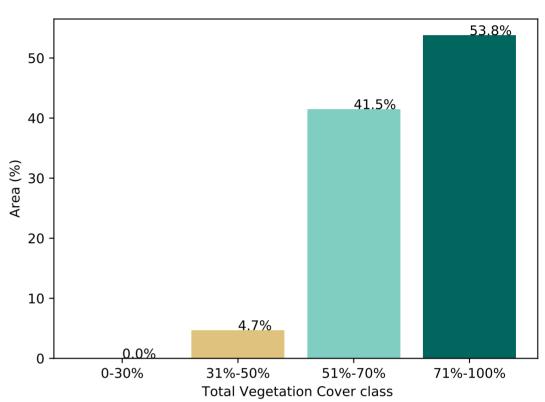


Total Vegetation Cover Anomaly [%]

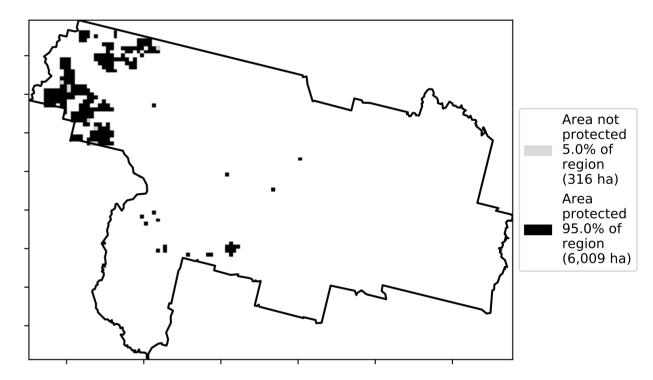


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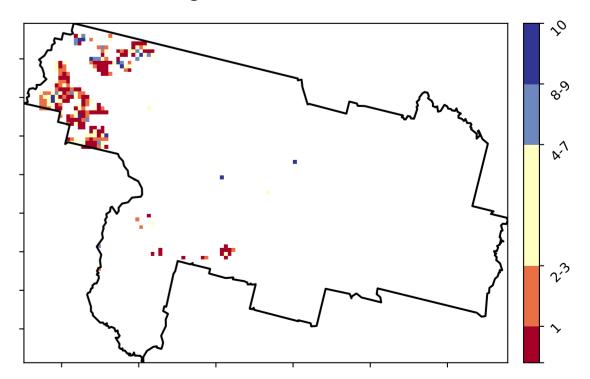
Proportion of vegetation cover class in area



% Area protected from wind erosion (>50%)



Total Vegetation Cover Decile [%]



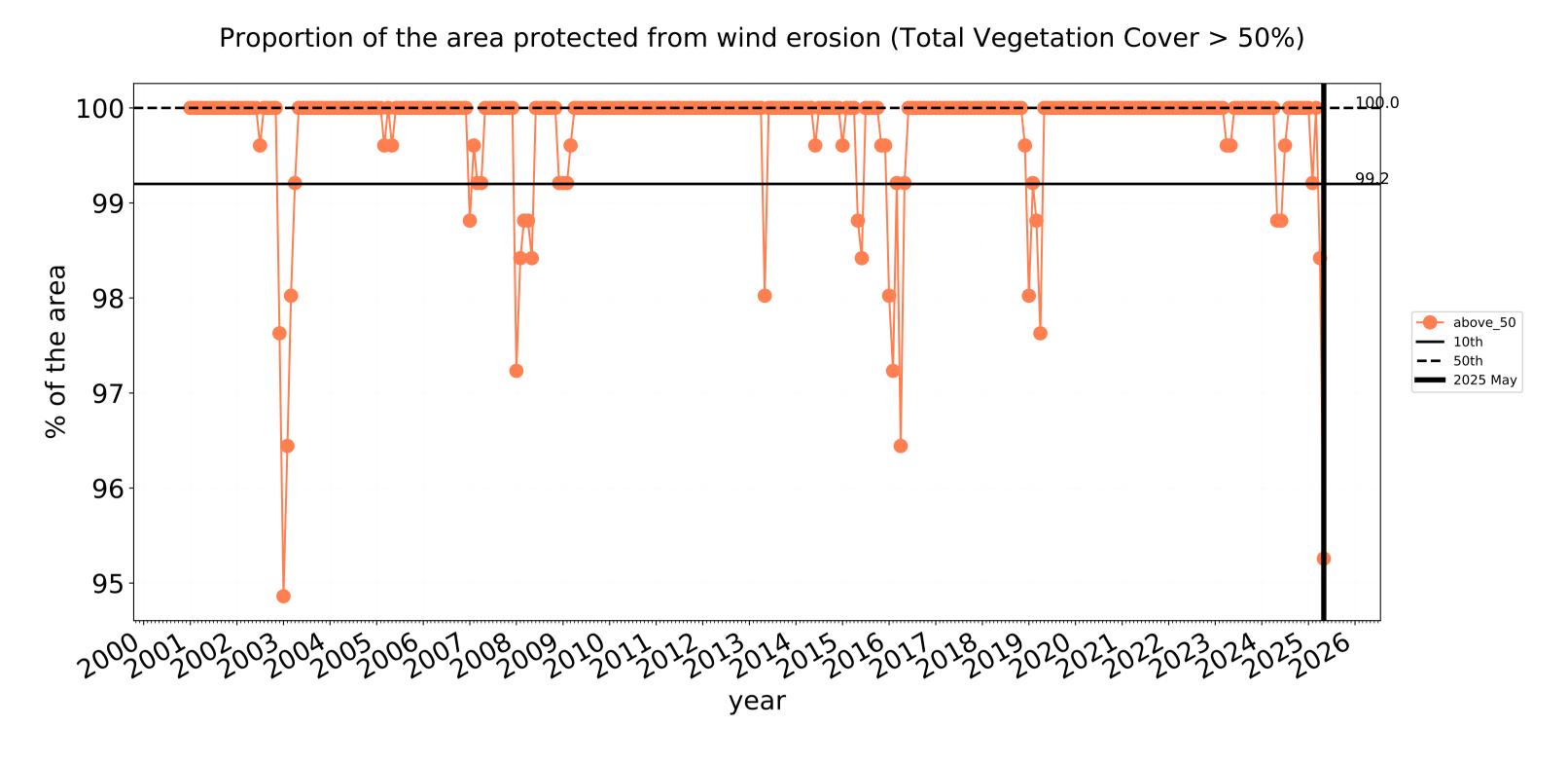


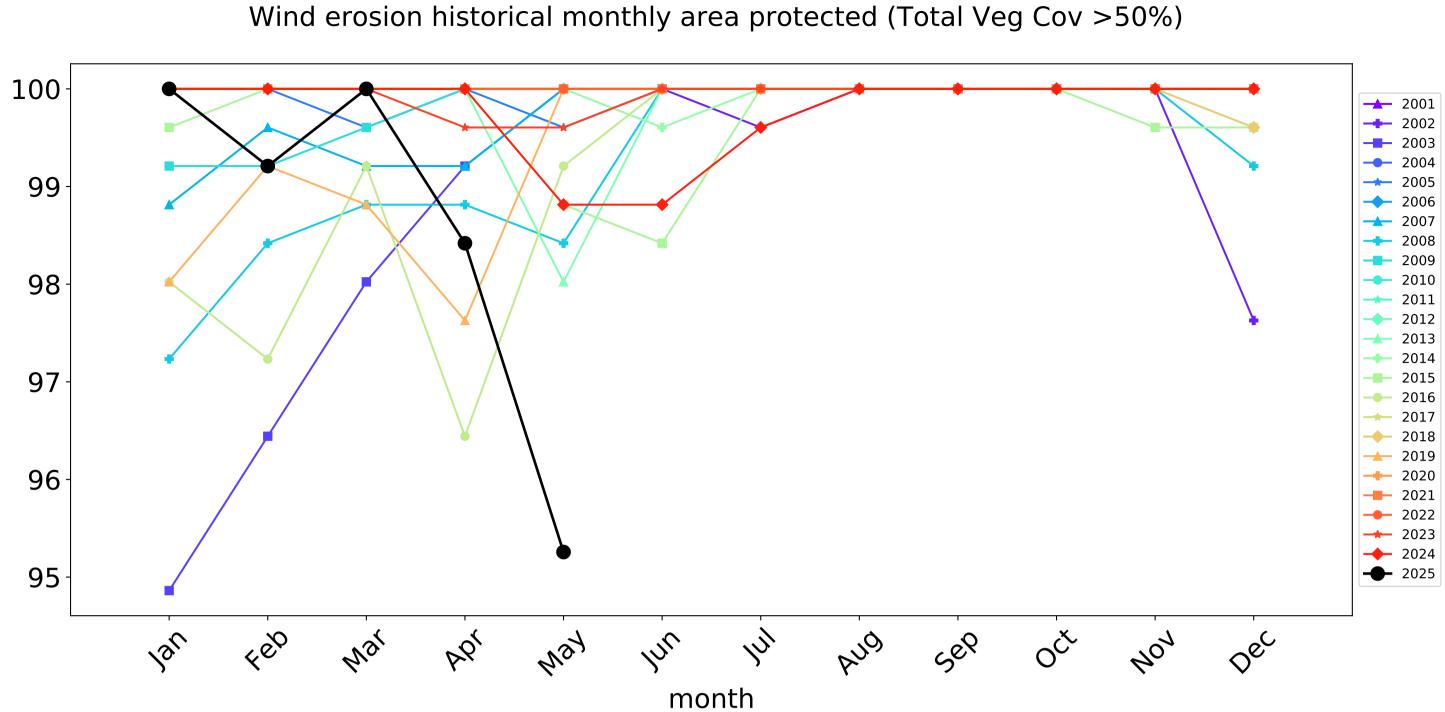


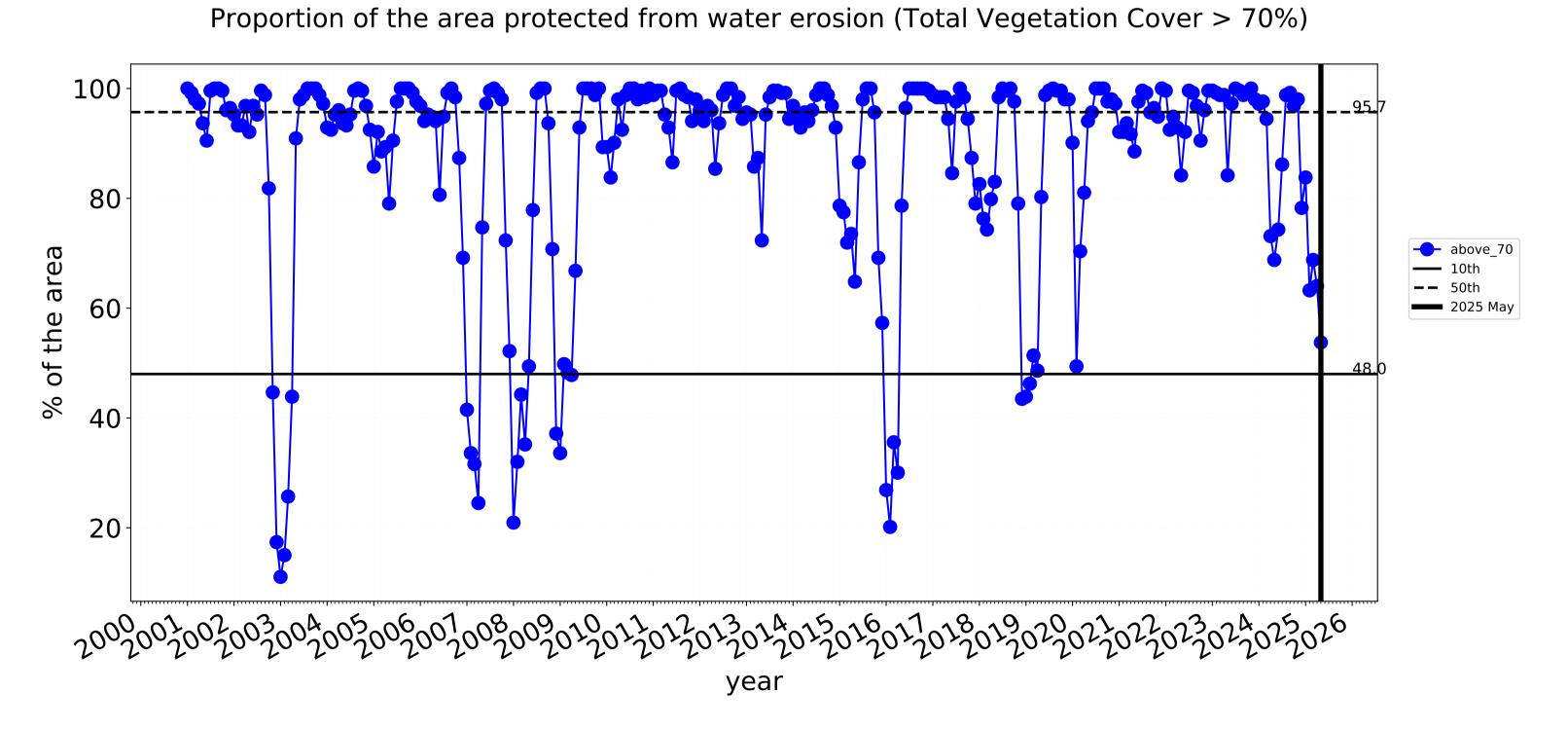


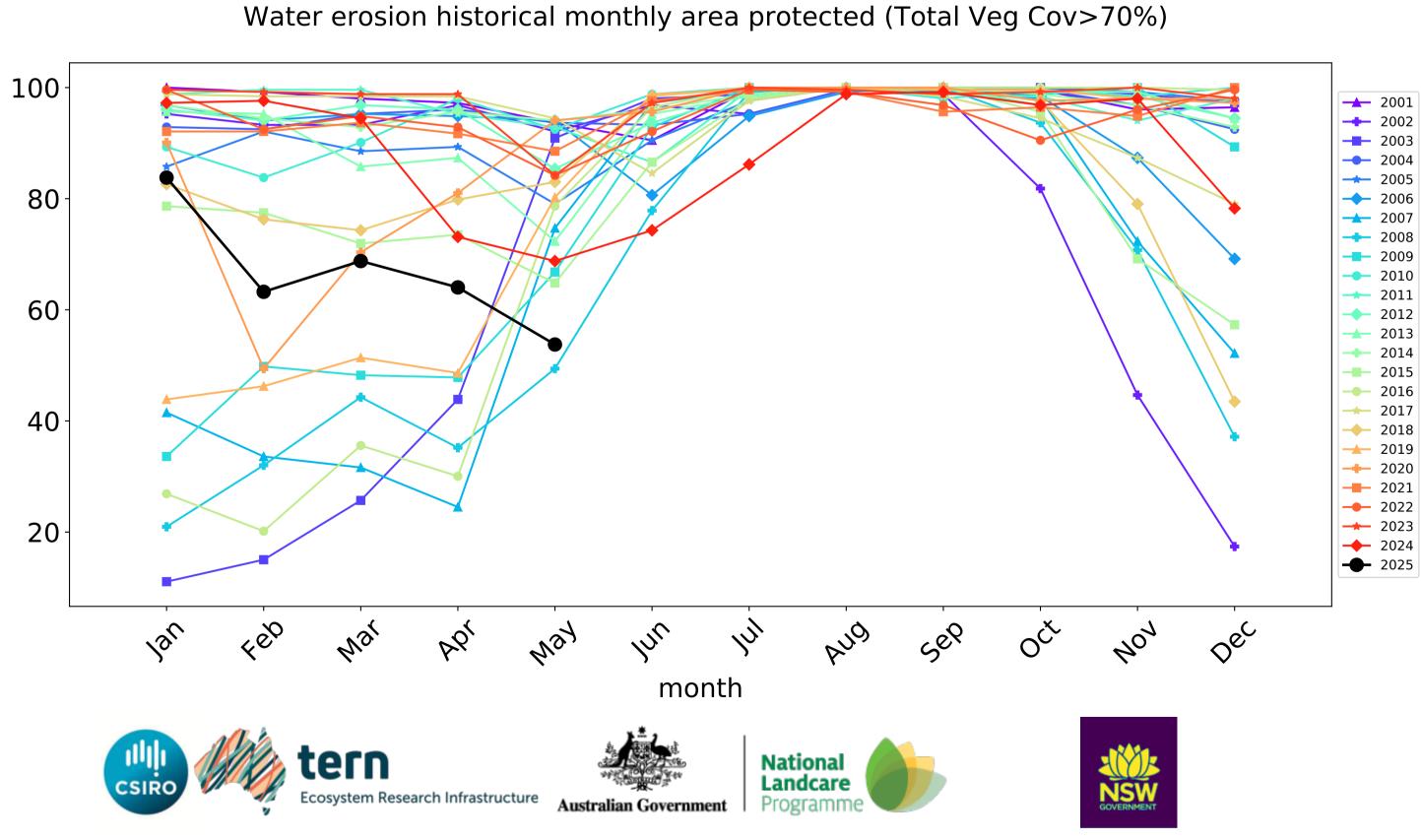


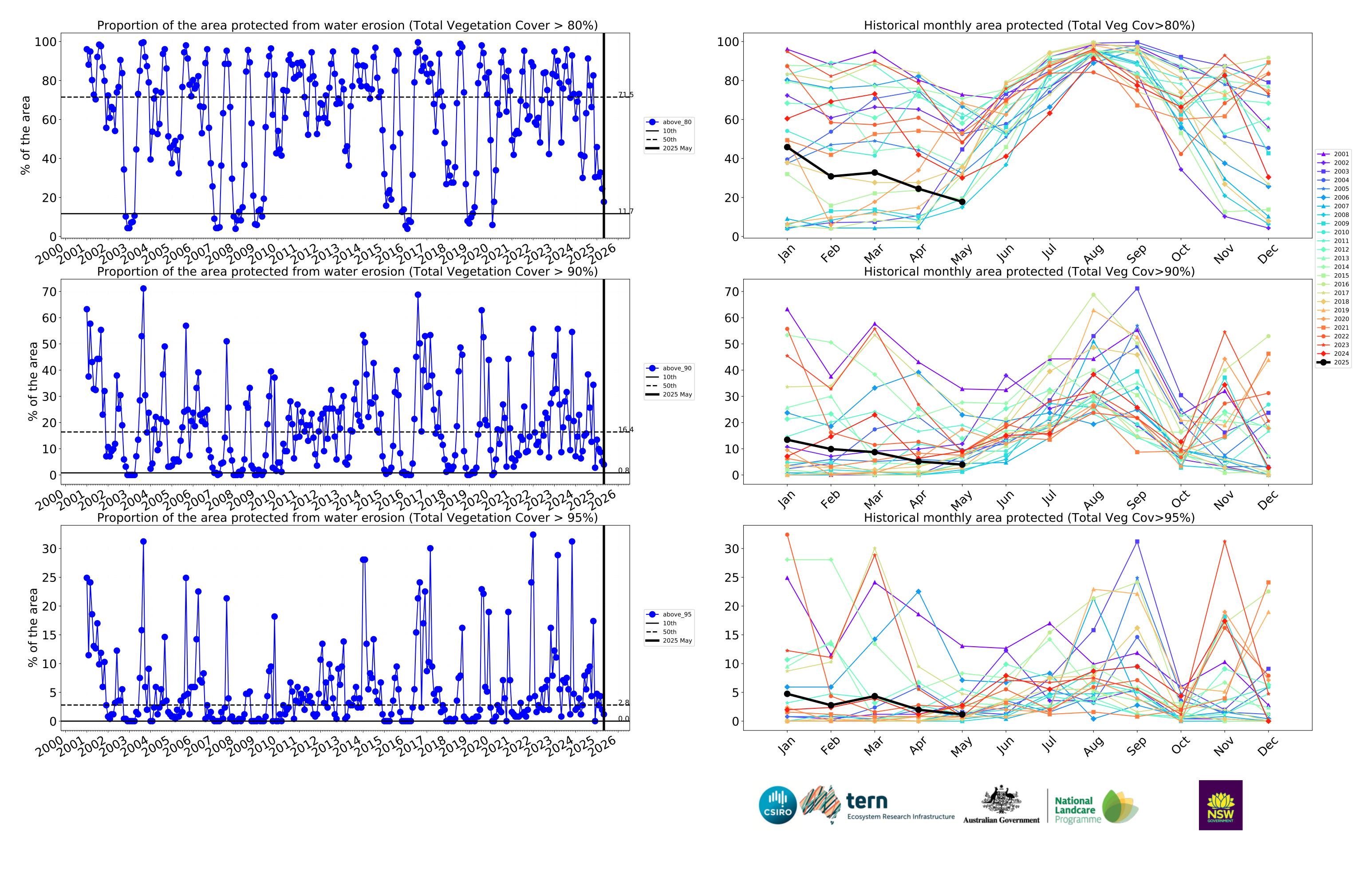
Cropping timeseries





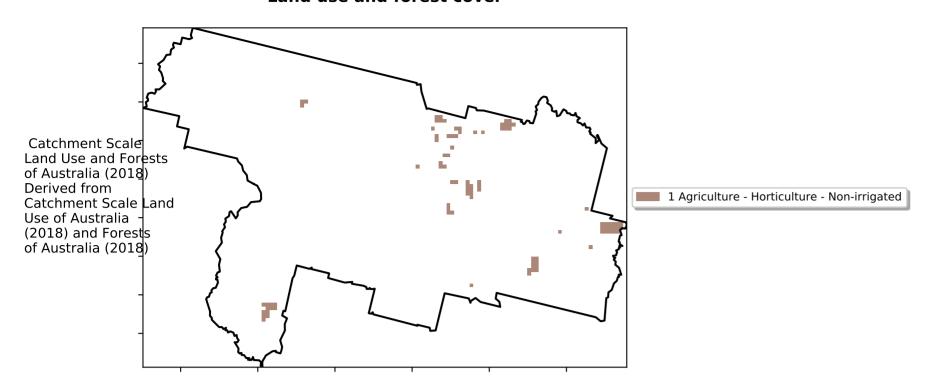




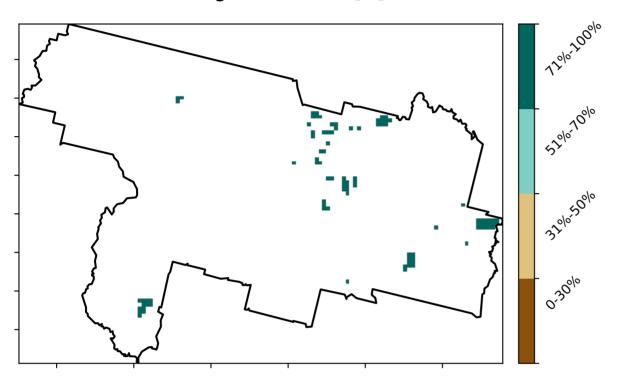


Horticulture

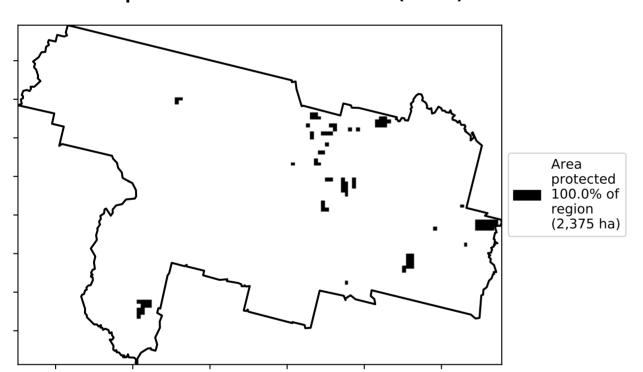
Land use and forest cover



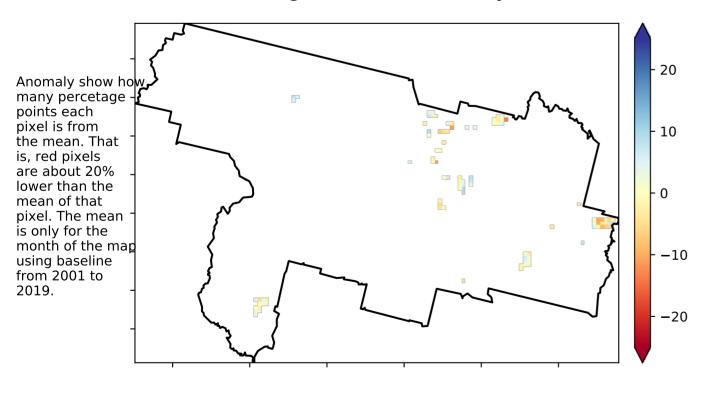
Total Vegetation Cover [%]



% Area protected from water erosion (>70%)

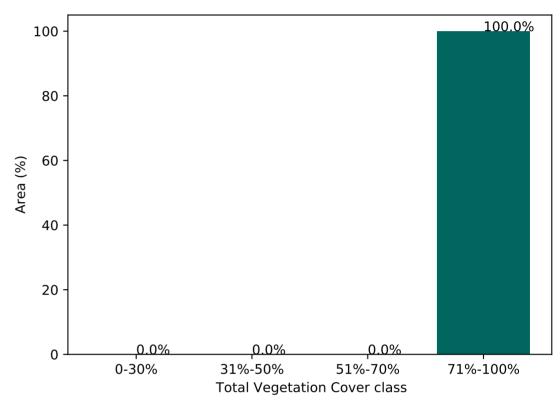


Total Vegetation Cover Anomaly [%]

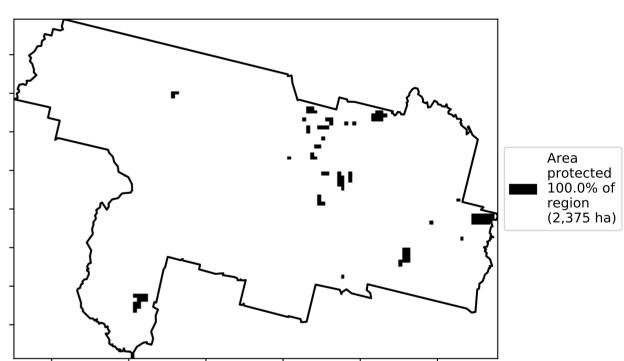


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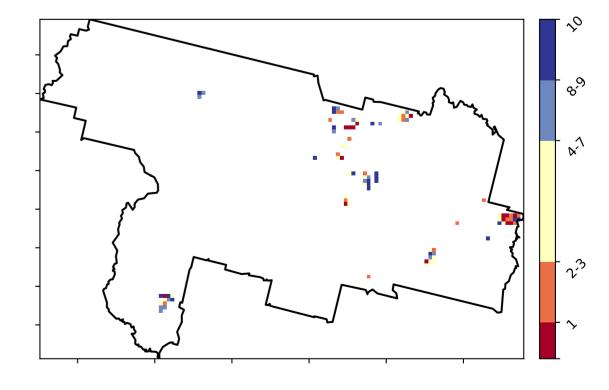
Proportion of vegetation cover class in area



% Area protected from wind erosion (>50%)



Total Vegetation Cover Decile [%]





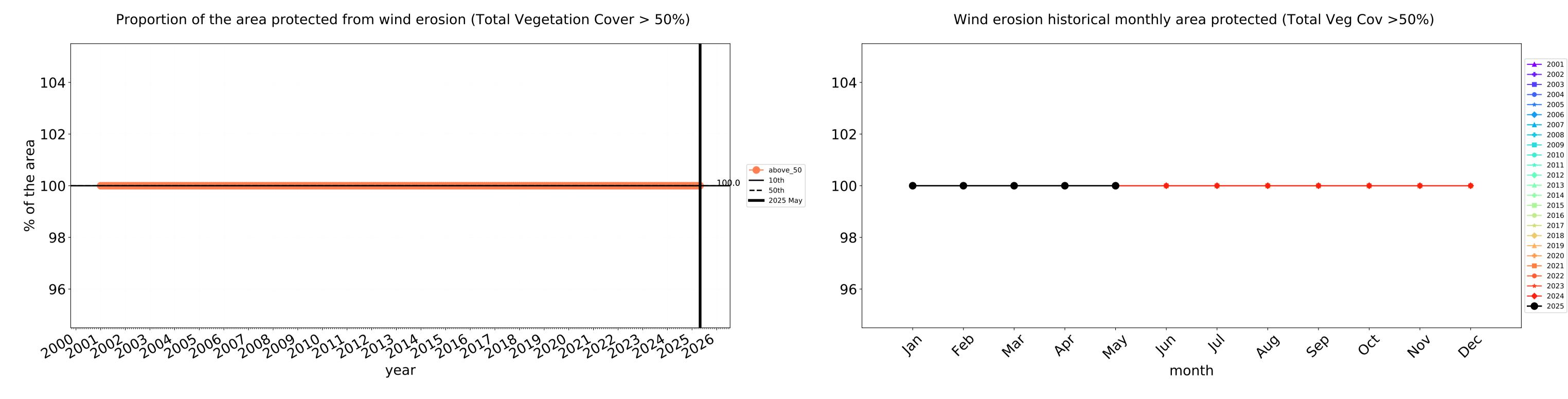


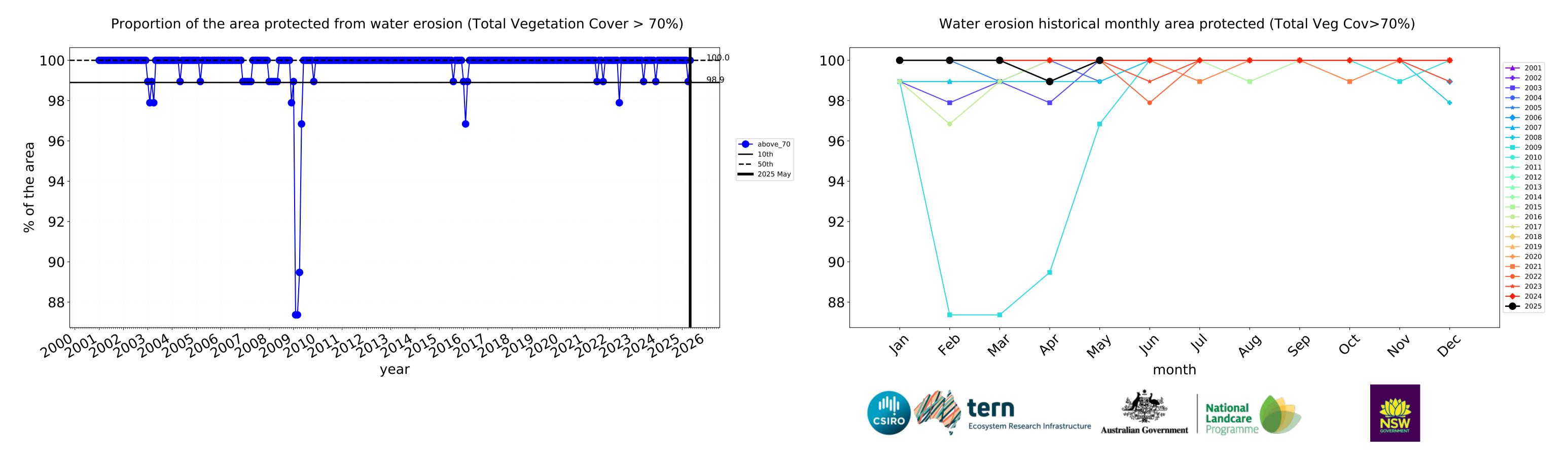


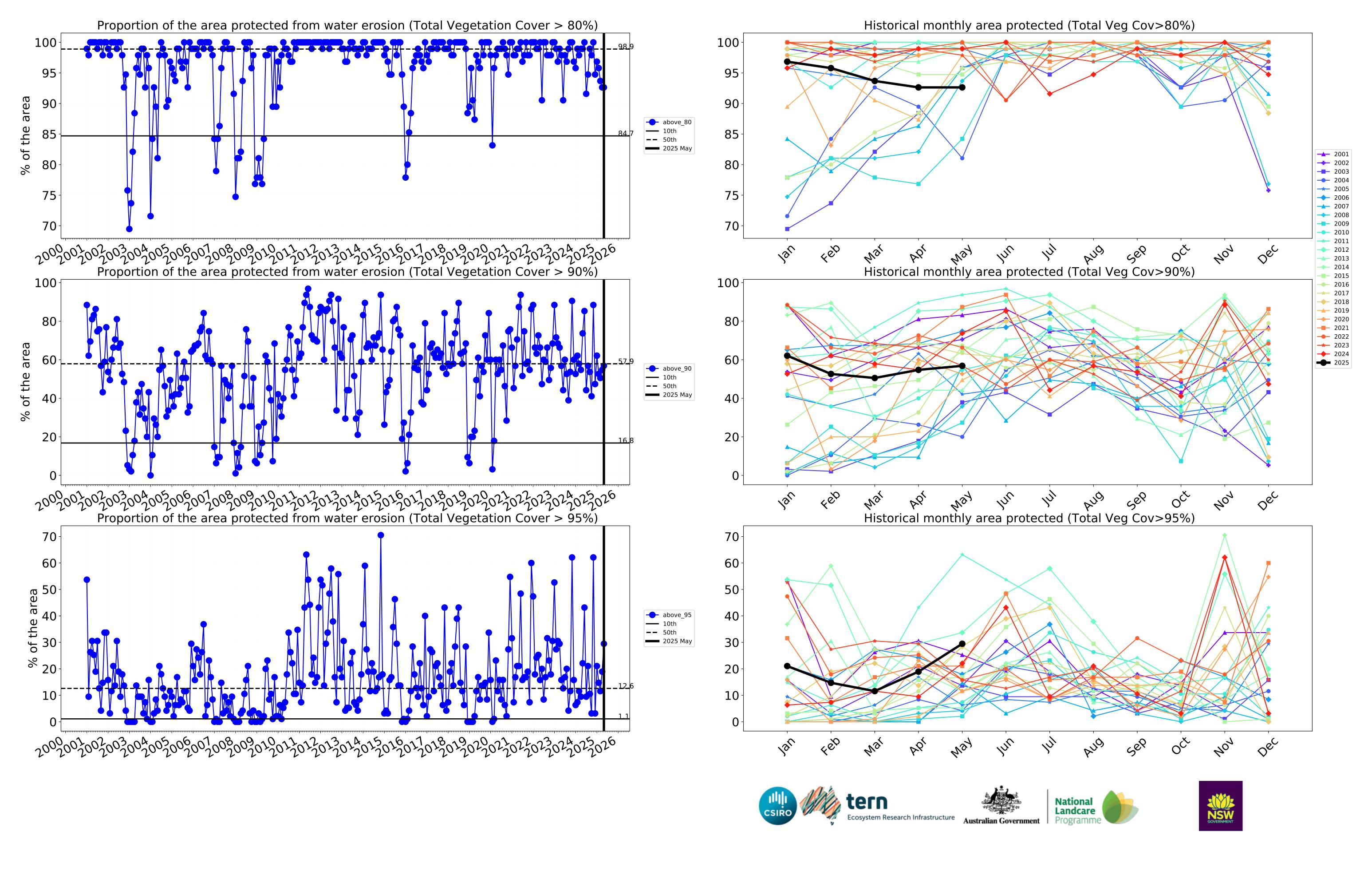




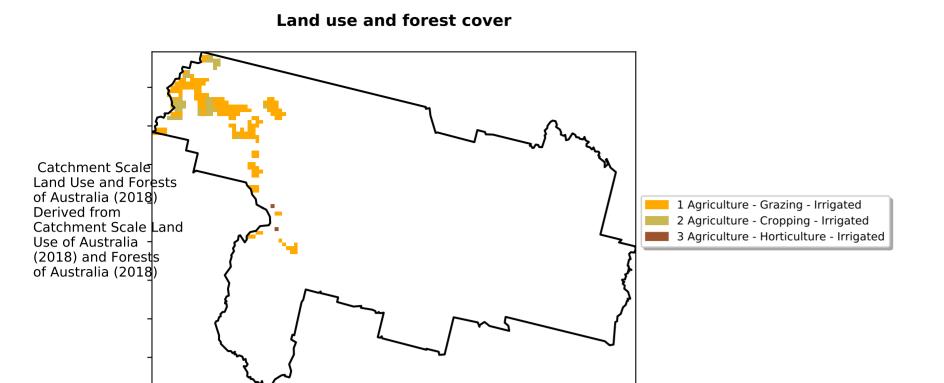
Horticulture timeseries



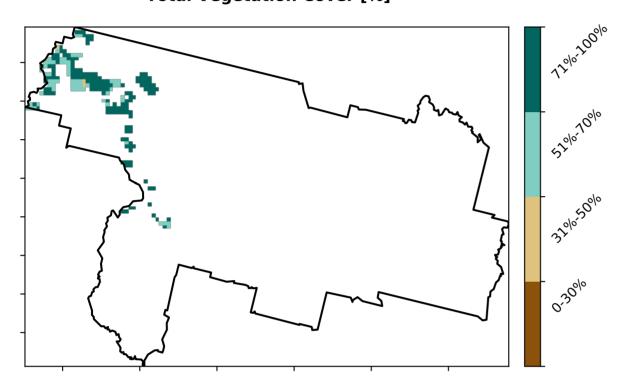




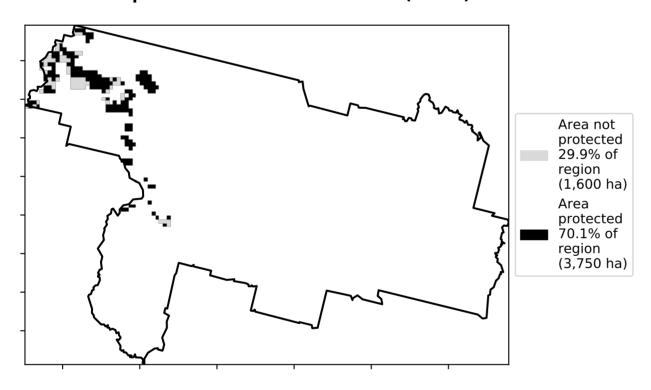
Irrigation



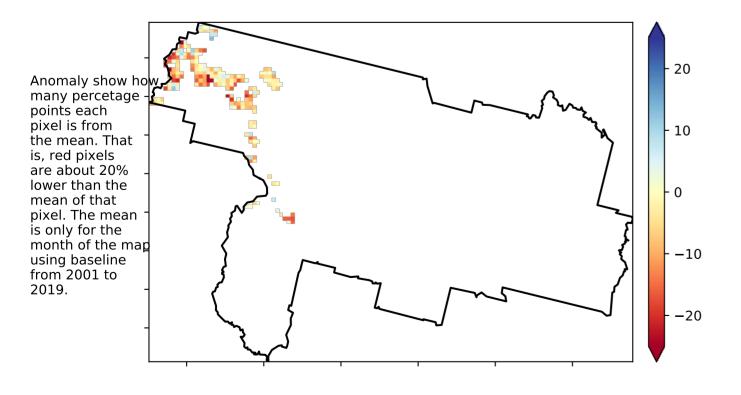
Total Vegetation Cover [%]



% Area protected from water erosion (>70%)

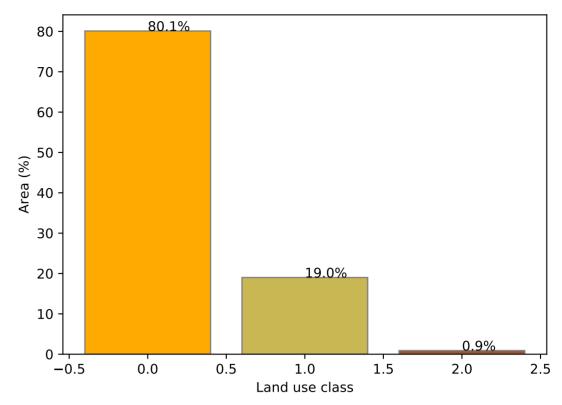


Total Vegetation Cover Anomaly [%]

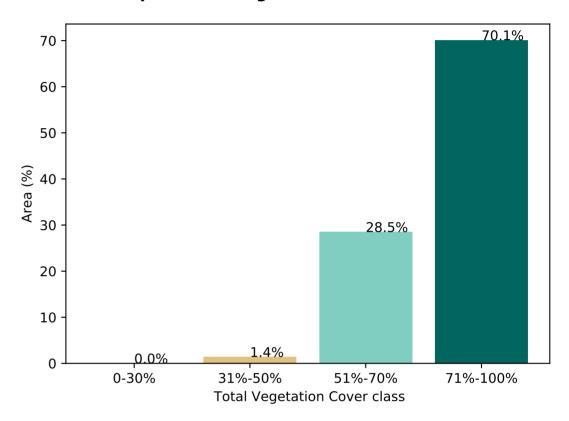


Deciles show where the pixel value lies in the record, from highest to lowest, for that month. That is, red pixels are in the lowest 10% of records for that month of the map using baseline from 2001 to 2019.

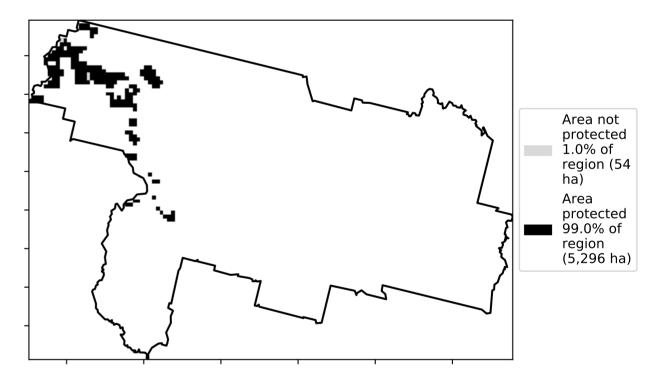
Proportion of each land class in area



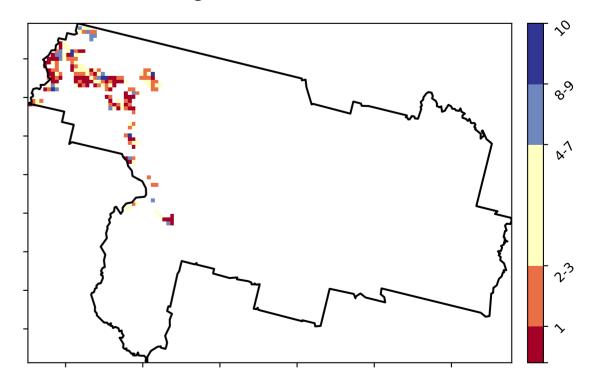
Proportion of vegetation cover class in area



% Area protected from wind erosion (>50%)



Total Vegetation Cover Decile [%]



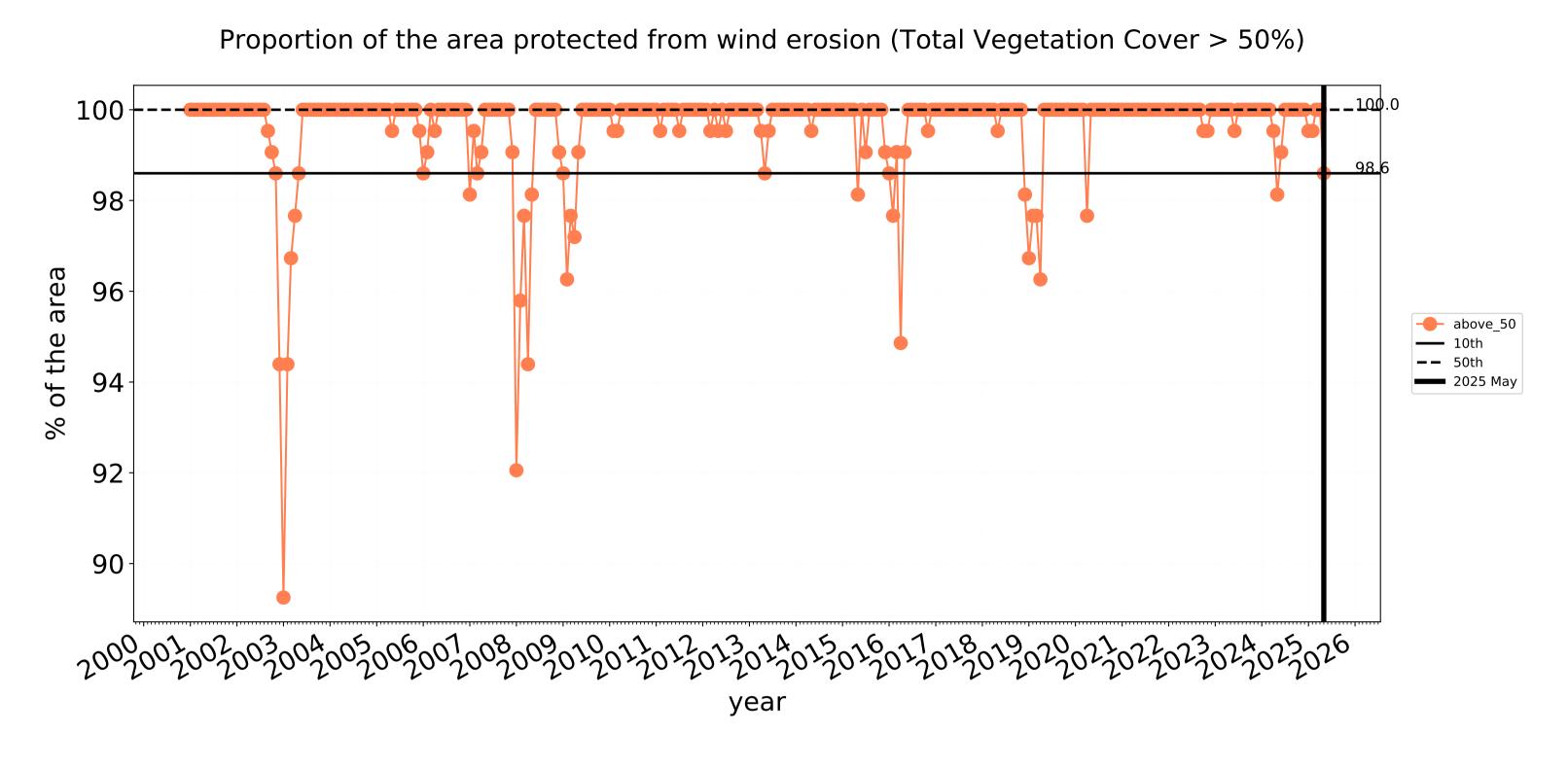


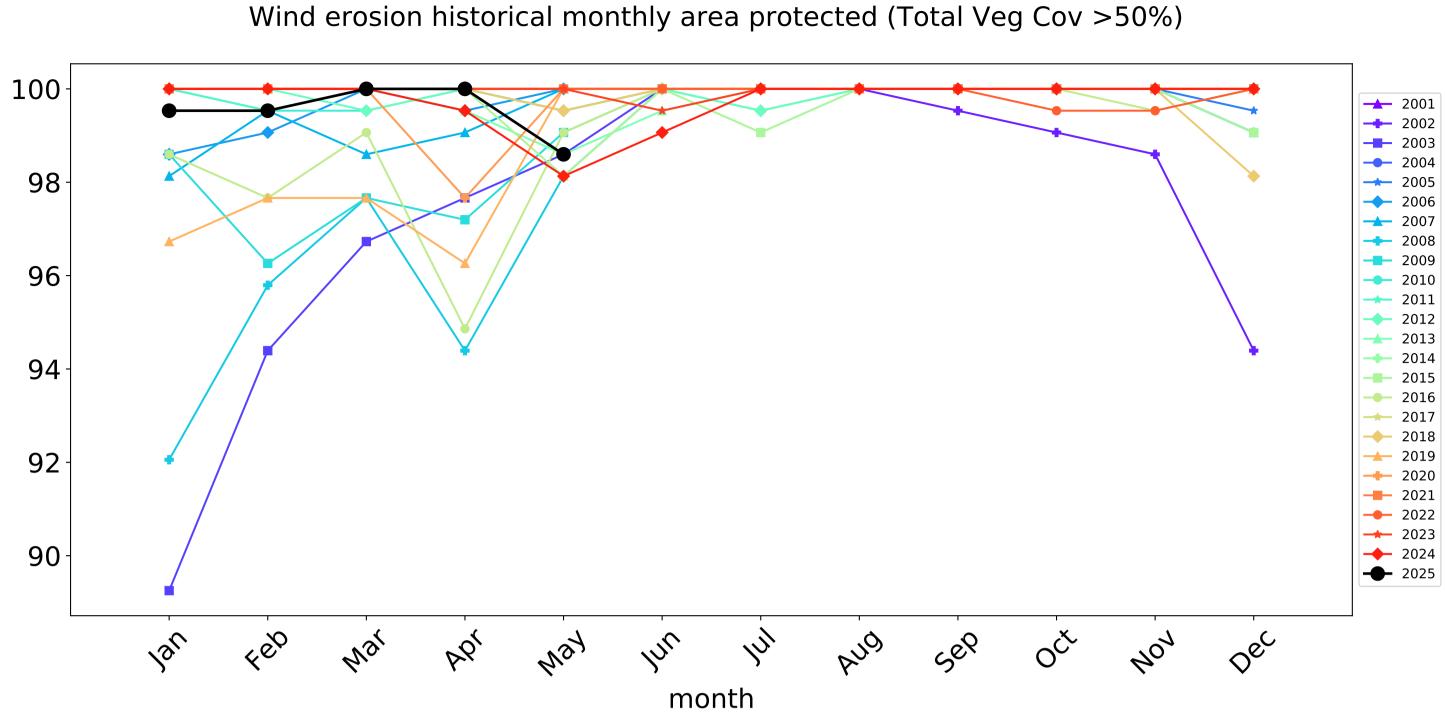


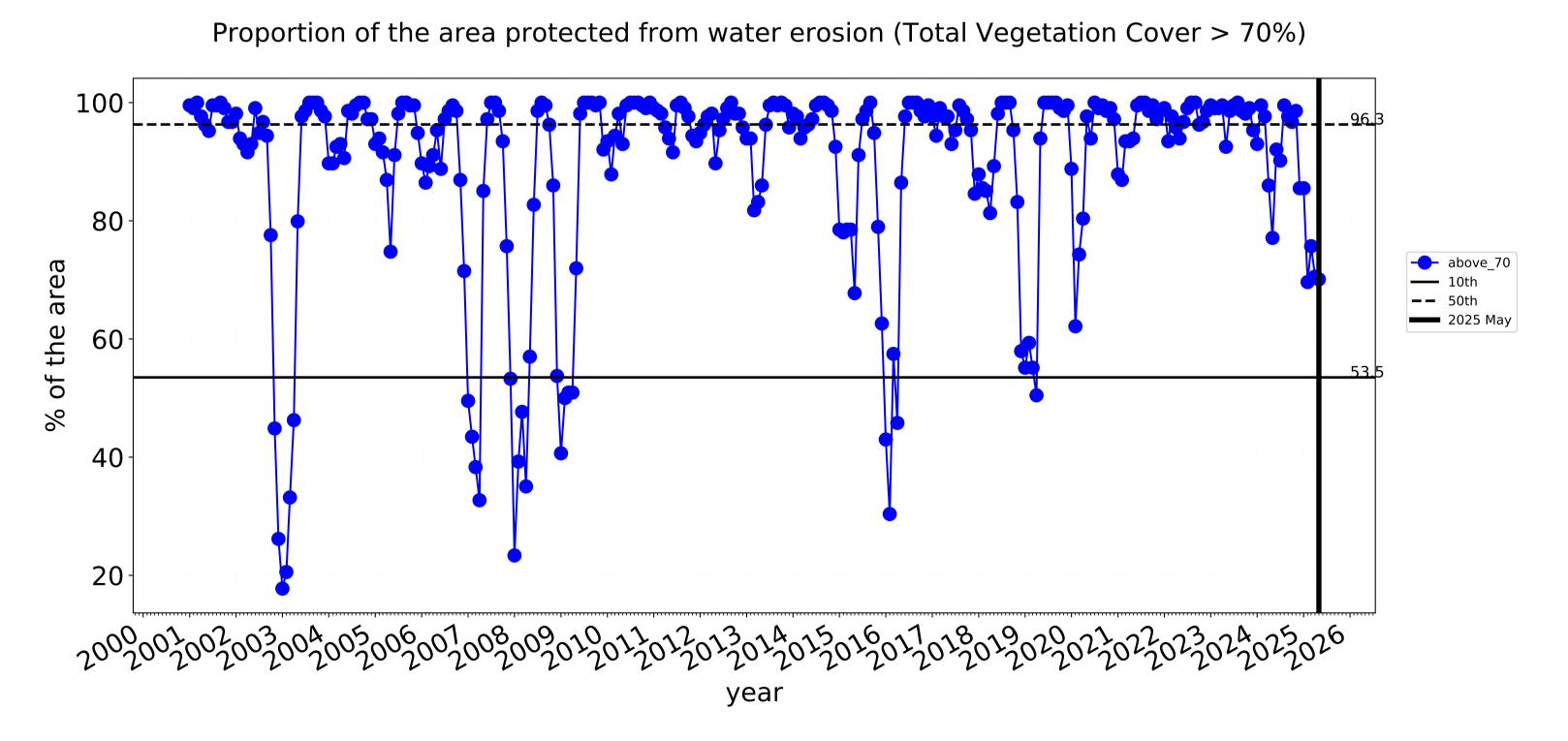


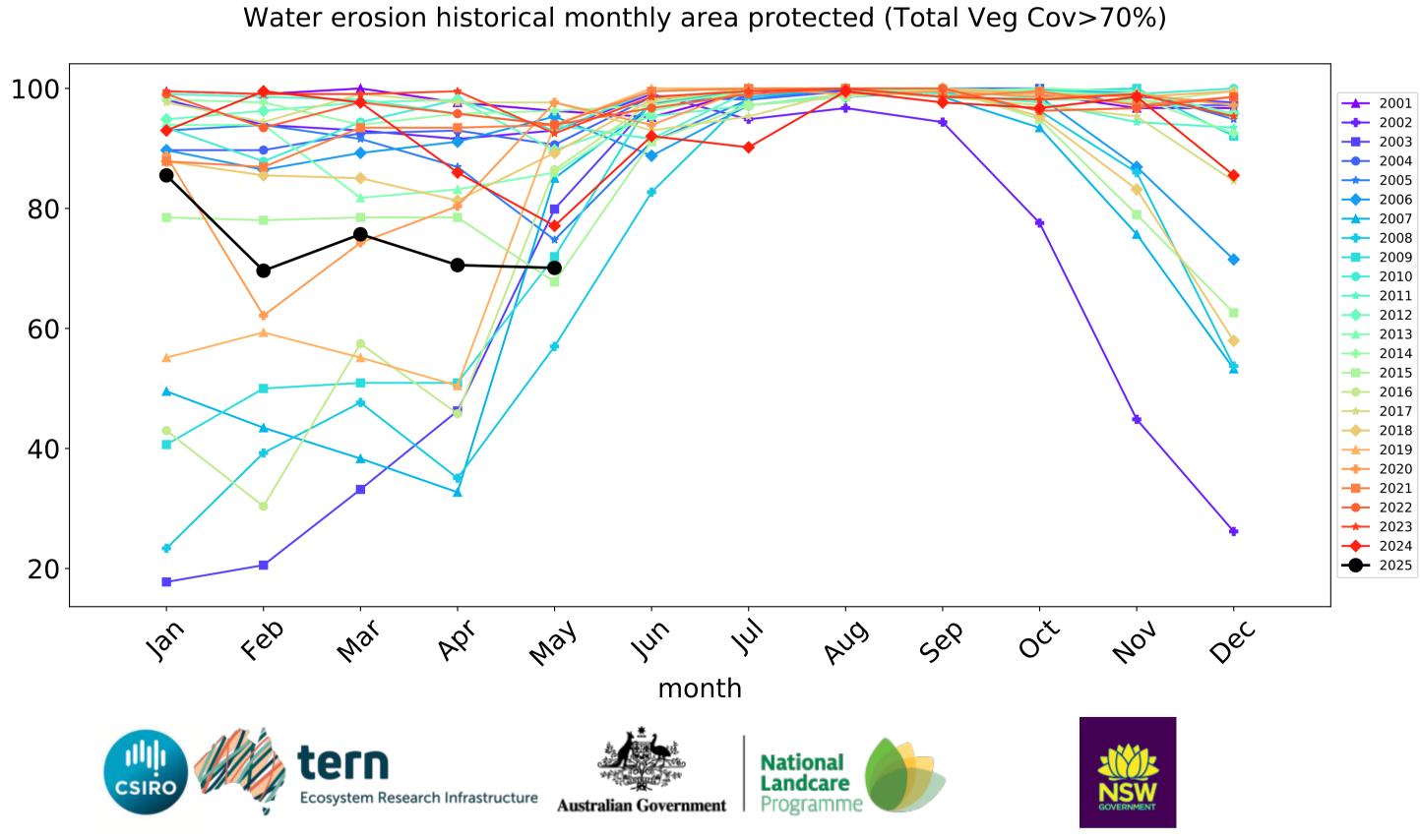


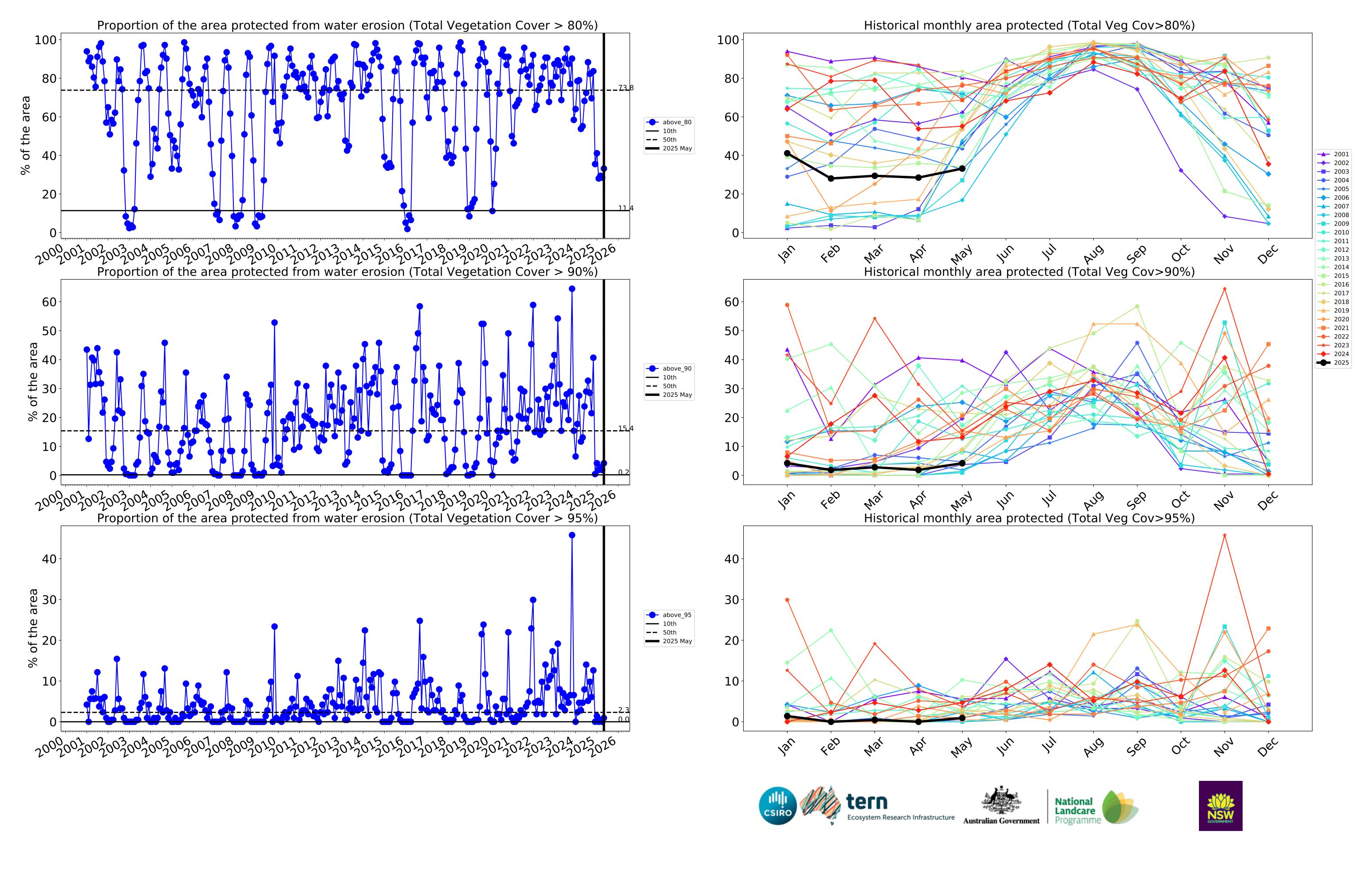








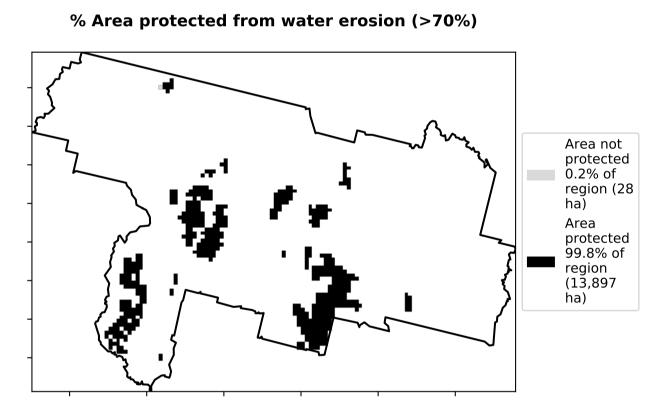


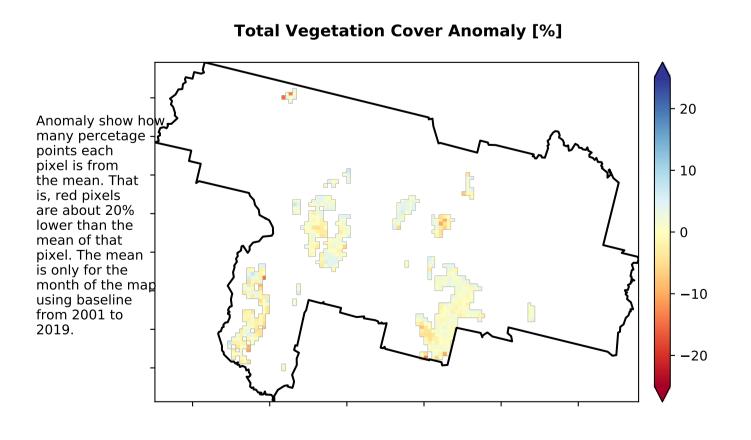


Production native forests and plantation forests

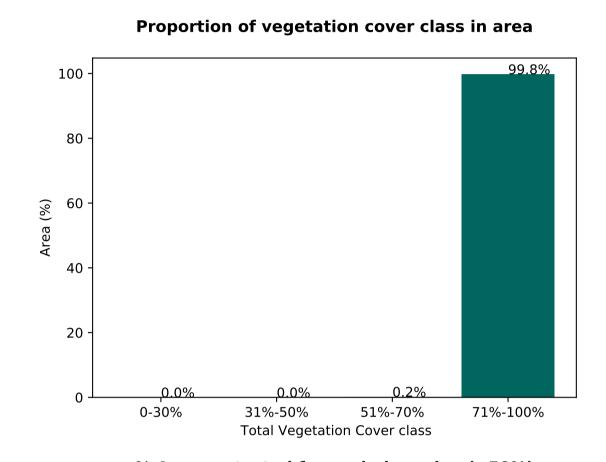
Catchment Scale Land Use and Forests of Australia (2018) Derived from Catchment Scale Land Use of Australia - (2018) and Forests of Australia (2018)

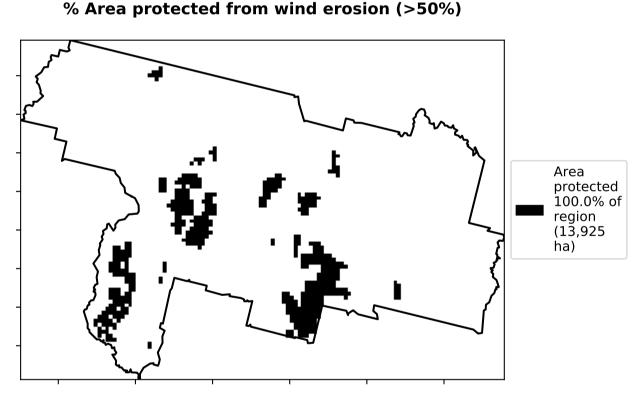
Total Vegetation Cover [%]

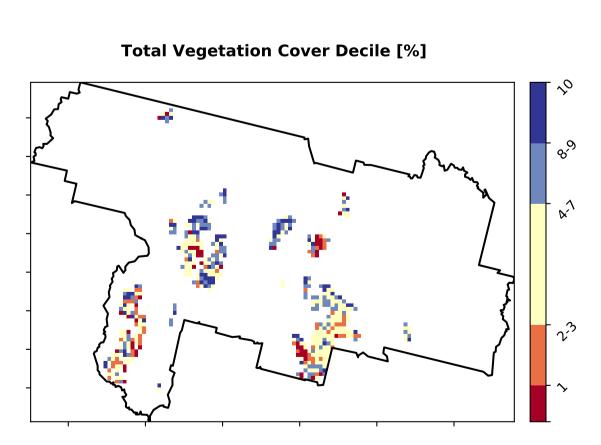




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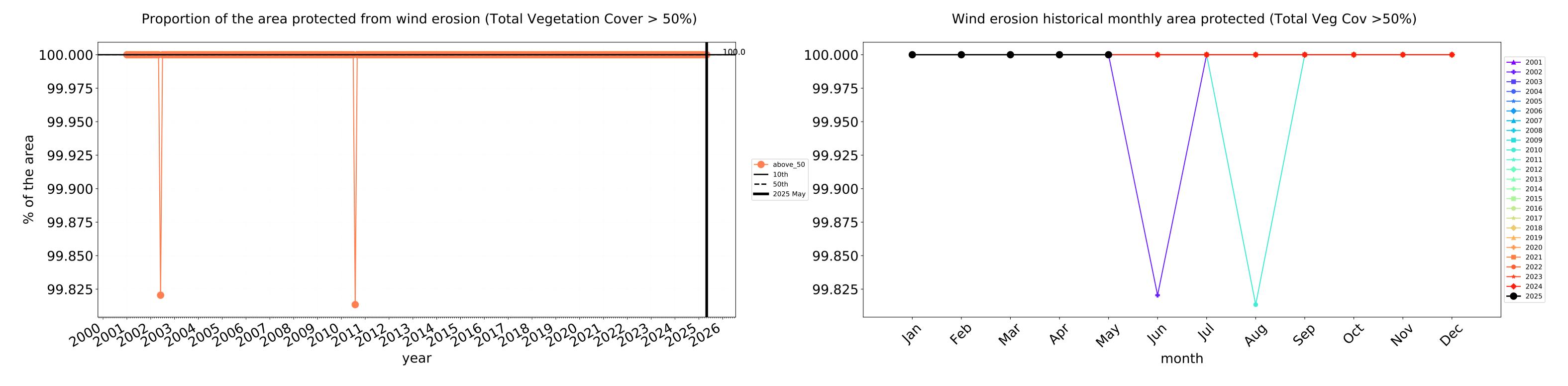


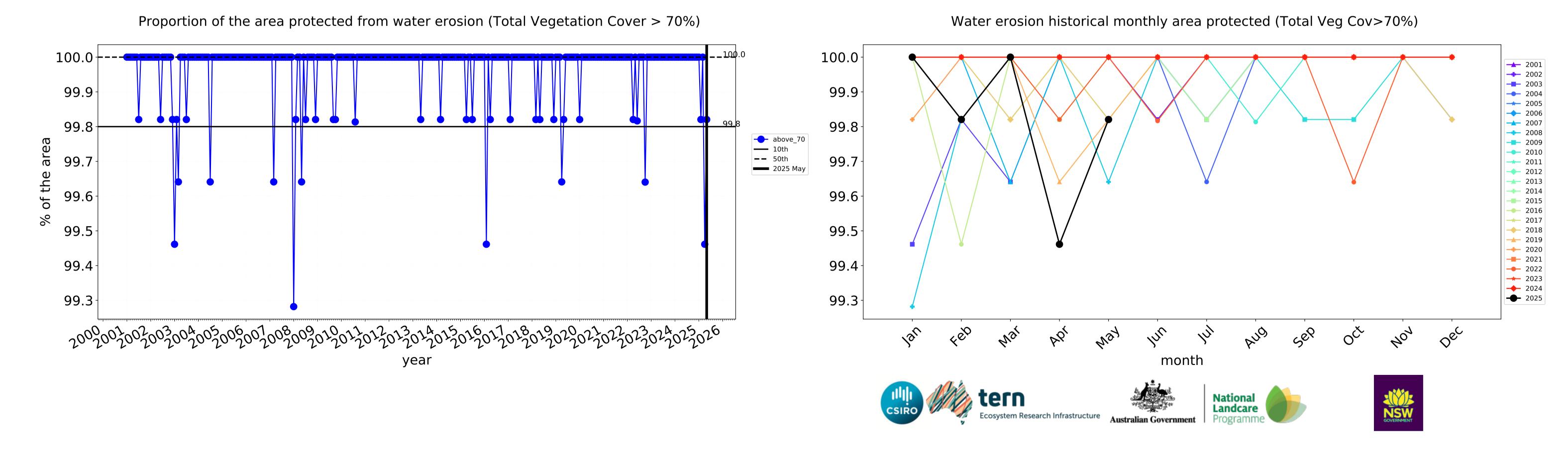


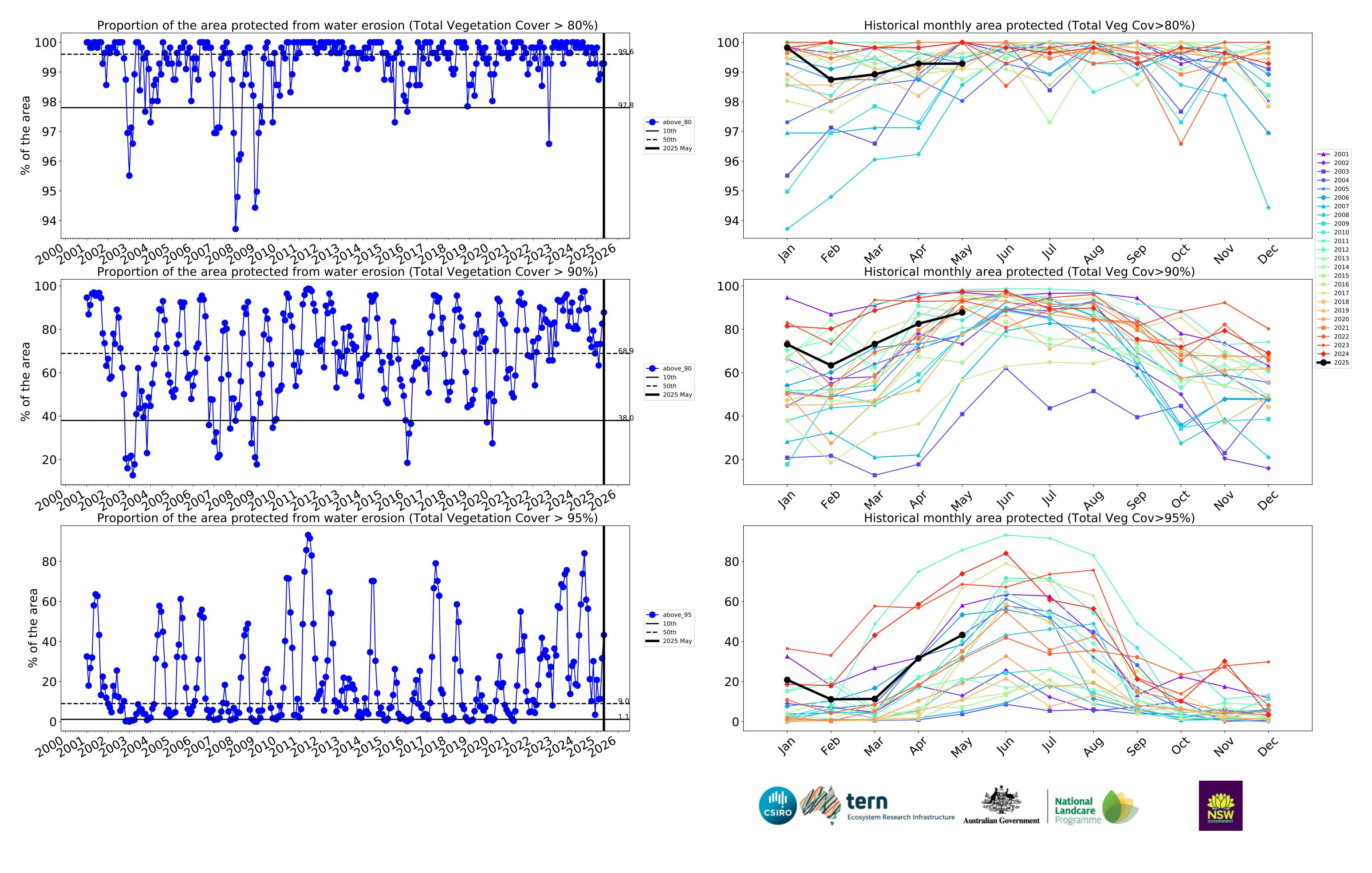




Production native forests and plantation forests timeseries







Mount_Alexander_(S) (152,850 ha and no data 225 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	152,850	100.0% 152,775	99.6% 152,200	94.3% 144,150	86.2% 131,800	57.8% 88,400	27.4% 41,875
Conservation and natural environments	11,850	100.0% 11,850	100.0% 11,850	99.2% 11,750	98.5% 11,675	82.9% 9,825	44.7% 5,300
Conservation and natural environments Woodland forest	2,175	100.0% 2,175	100.0% 2,175	100.0% 2,175	100.0% 2,175	81.6% 1,775	32.2% 700
Conservation and natural environments Forest (non woodland)	8,425	100.0% 8,425	100.0% 8,425	100.0% 8,425	99.7% 8,400	88.4% 7,450	50.7% 4,275
Agriculture	98,625	100.0% 98,600	99.4% 98,050	92.1% 90,850	81.5% 80,425	50.4% 49,675	25.3% 24,950
Grazing	84,575	100.0% 84,550	99.8% 84,375	96.2% 81,325	89.1% 75,325	56.6% 47,850	28.5% 24,125
Grazing non forest	79,575	100.0% 79,550	99.7% 79,375	95.9% 76,325	88.4% 70,375	55.5% 44,200	28.5% 22,650
Grazing - Forest (non woodland)	4,000	100.0% 4,000	100.0% 4,000	100.0% 4,000	99.4% 3,975	75.0% 3,000	28.8% 1,150
Cropping	6,325	100.0% 6,325	95.3% 6,025	53.8% 3,400	17.8% 1,125	4.0% 250	1.2% 75
Horticulture	2,375	100.0% 2,375	100.0% 2,375	100.0% 2,375	92.6% 2,200	56.8% 1,350	29.5% 700
Irrigation	5,350	100.0% 5,350	98.6% 5,275	70.1% 3,750	33.2% 1,775	4.2% 225	0.9% 50
Production native forests and plantation forests	13,925	100.0% 13,925	100.0% 13,925	99.8% 13,900	99.3% 13,825	87.8% 12,225	43.3% 6,025







