Total vegetation cover soil protection Region:LGA Logan_(C) QLD

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:

Date: August 2025

Results can be shown for the whole region (polygon), and separated by land use and forest cover classes which are likely to show different cover patterns and targets. Land use is divided into four broad classes: Conservation and natural environments, Agriculture, production native forests and plantation forests (no report), and other (no report). Agriculture is divided into grazing, crops and horticulture which are sub-divided into non-irrigated and irrigated. If forest is present land use is further divided into: non-forest, woodland forest and non-woodland forest. The area of each land use and forest class are shown as a map and chart. The report content is repeated for each land use and forest cover class that covers at least 1% of the area of the chosen region. Total vegetation Cover:

The total vegetation cover indicates where soil is likely to be protected from wind and or water hillslope erosion. Total vegetation cover for this month is shown on a map and chart classified into 4 classes.

- 71-100% High cover protected from wind and usually water erosion (high rainfall, steep slopes, and erodible soils may need greater than 80, 90, 95 and up to 100% cover)
 - 51-70% Moderate cover protected from wind erosion
 - 31-50% Low cover not protected
 - 0-30% Very Low cover not protected

Erosion protection: Wind erosion 50% total vegetation cover

The vegetation cover threshold required to prevent soil erosion is usually 50% to reduce wind erosion, 70% or 80% to reduce water (hillslope) erosion depending on the steepness and rainfall. Areas protected from erosion for the month:

- Map: water erosion protection (>70% cover) percentage area and hectares.
- Map: wind erosion protection (>50% cover) percentage area and hectares.

Comparison with previous years:

- Map: anomaly comparing this month to the average cover from the same month in previous years.
- Map: deciles rank of month against the same month in previous years.

Anomalies and deciles until September 2019 are calculated comparing to the same months 2001 to 2019. Extra monthly data will be used to calculate anomalies and deciles post September 2019 as they become available. Time series monthly from January 2001 to current:

Erosion protection

- Wind erosion protection time series: percentage of the area of the region with greater than 50% cover for each month (orange lines). Horizontal lines are 10th (cover target) and 50th percentiles.
- Water erosion protection time series: percentage of the area of the region with greater than 70% cover for each month (blue line). Horizontal lines are 10th (cover target) and 50th percentiles.

Rainfall

• Millimetres rainfall each month (black line).

Each time series is also stacked by year. The black line shows the current year of data.

Water erosion protection for higher rainfall and steeper slopes:

Water erosion protection on higher slopes. As slope increases, more cover is required to control water erosion. The thresholds reported are:

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

Acknowledgment of data:

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

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



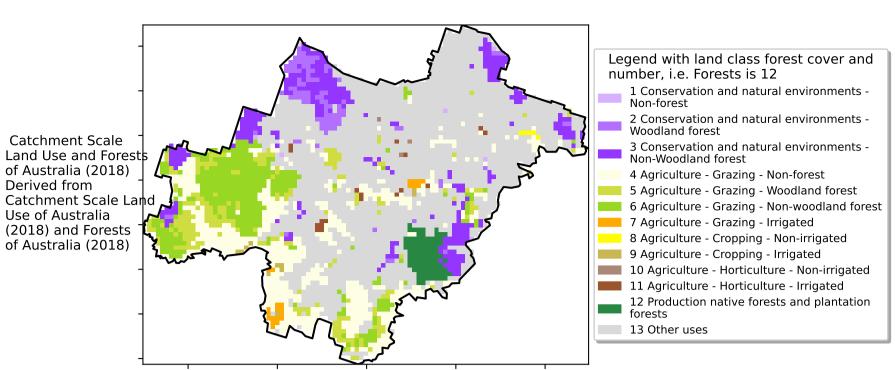


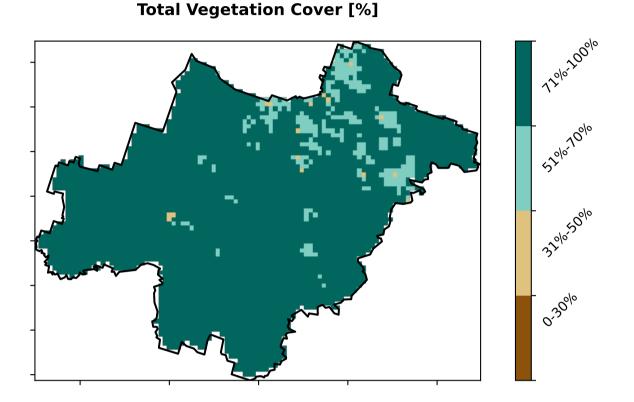




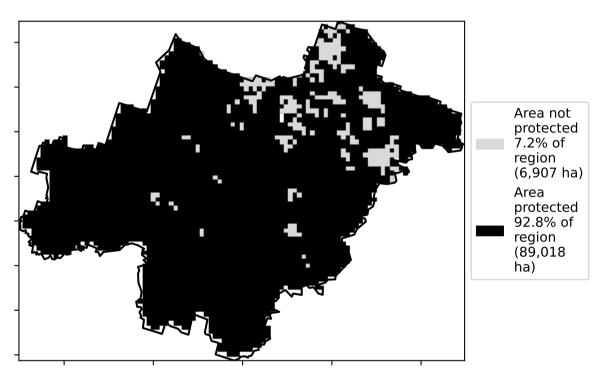
Vegetation Cover Aug 2025

Land use and forest cover

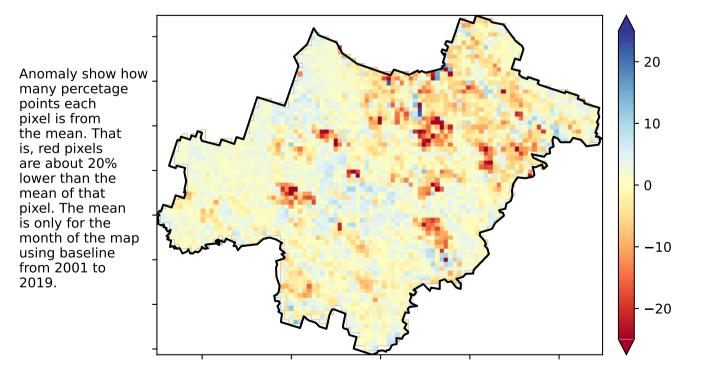




% Area protected from water erosion (>70%)

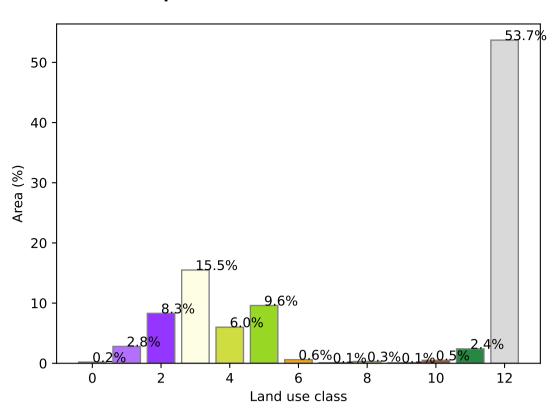


Total Vegetation Cover Anomaly [%]

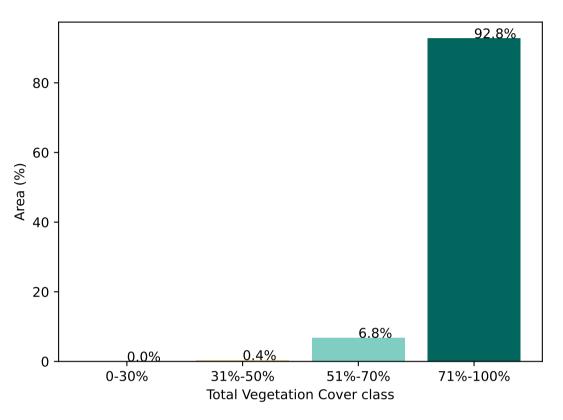


Deciles show where the pixel value lies in the record, from highest to lowest, for that month. That is, red pixels are in the lowest 10% of records for that month of the map using baseline from 2001 to 2019.

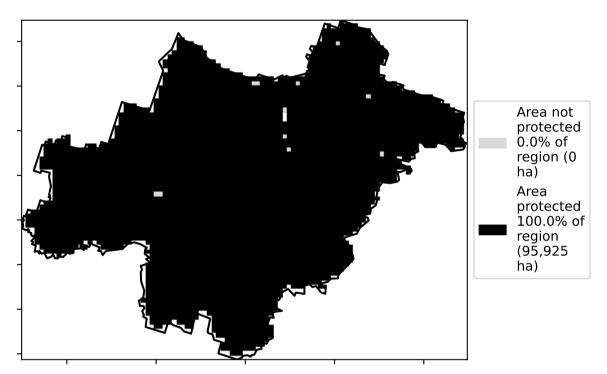
Proportion of each land class in area



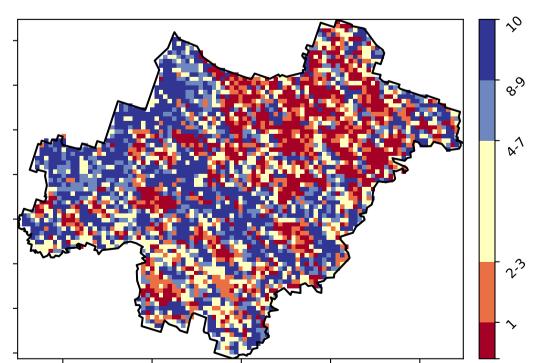
Proportion of vegetation cover class in area



% Area protected from wind erosion (>50%)



Total Vegetation Cover Decile [%]

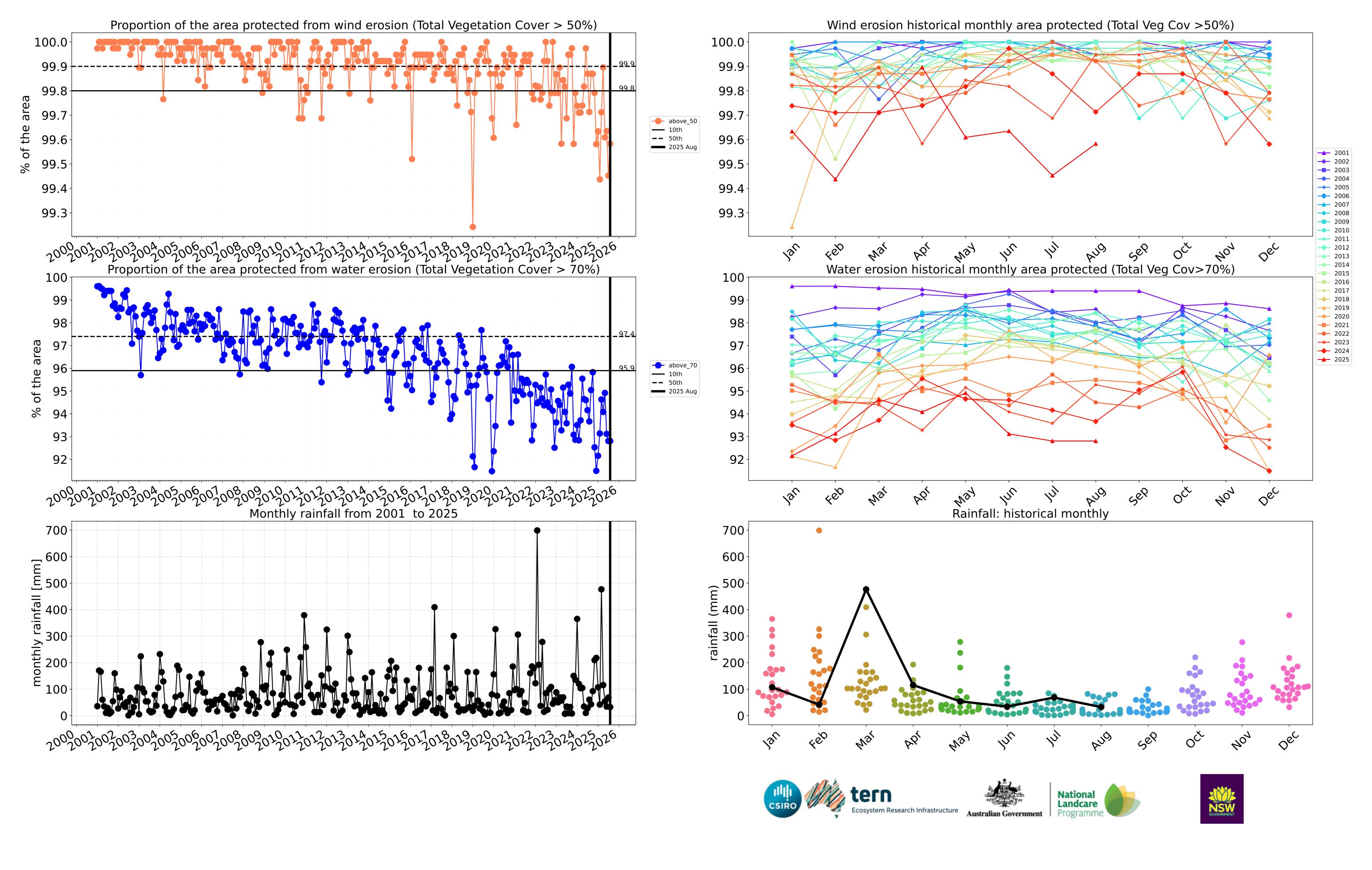


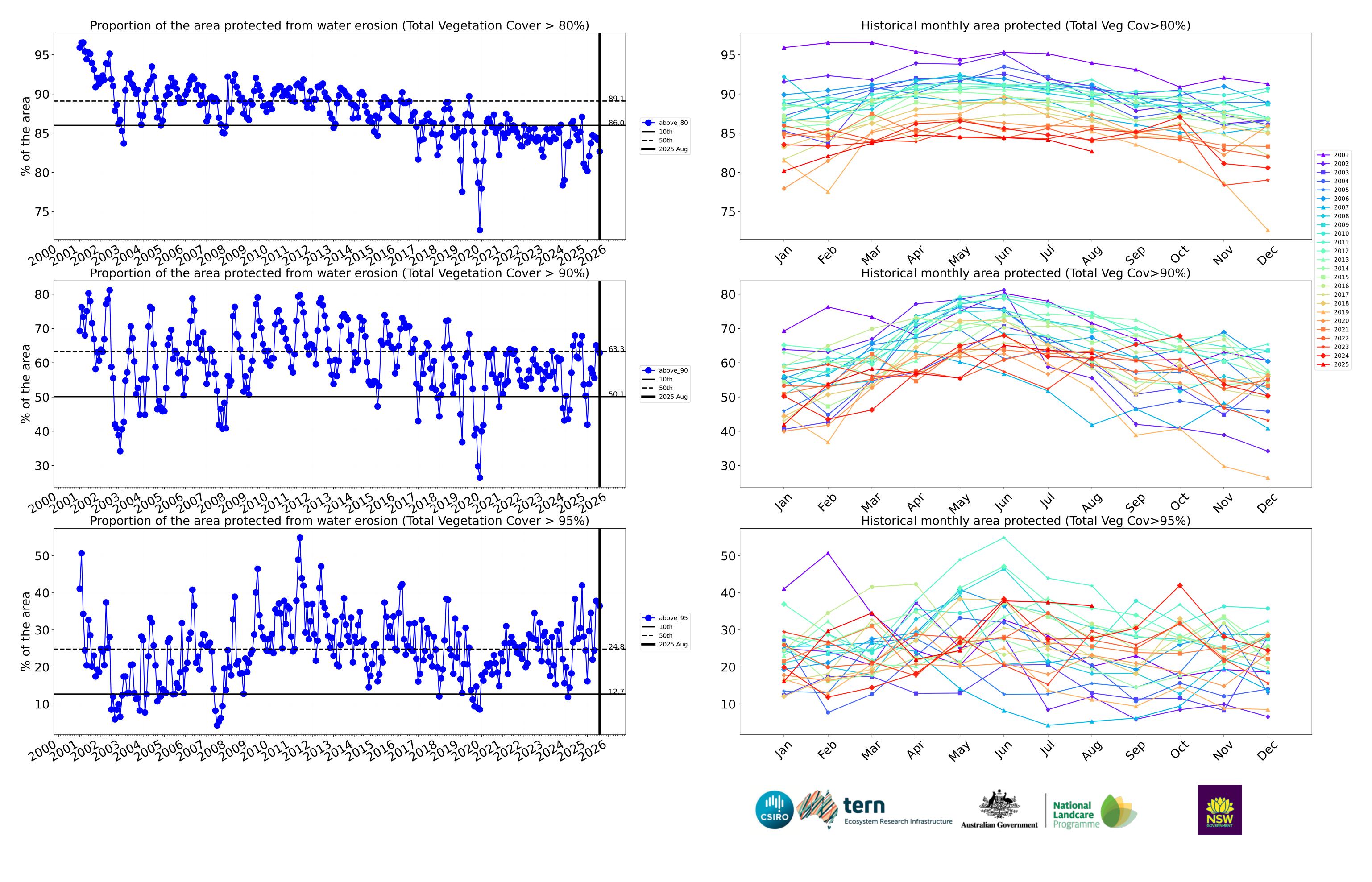




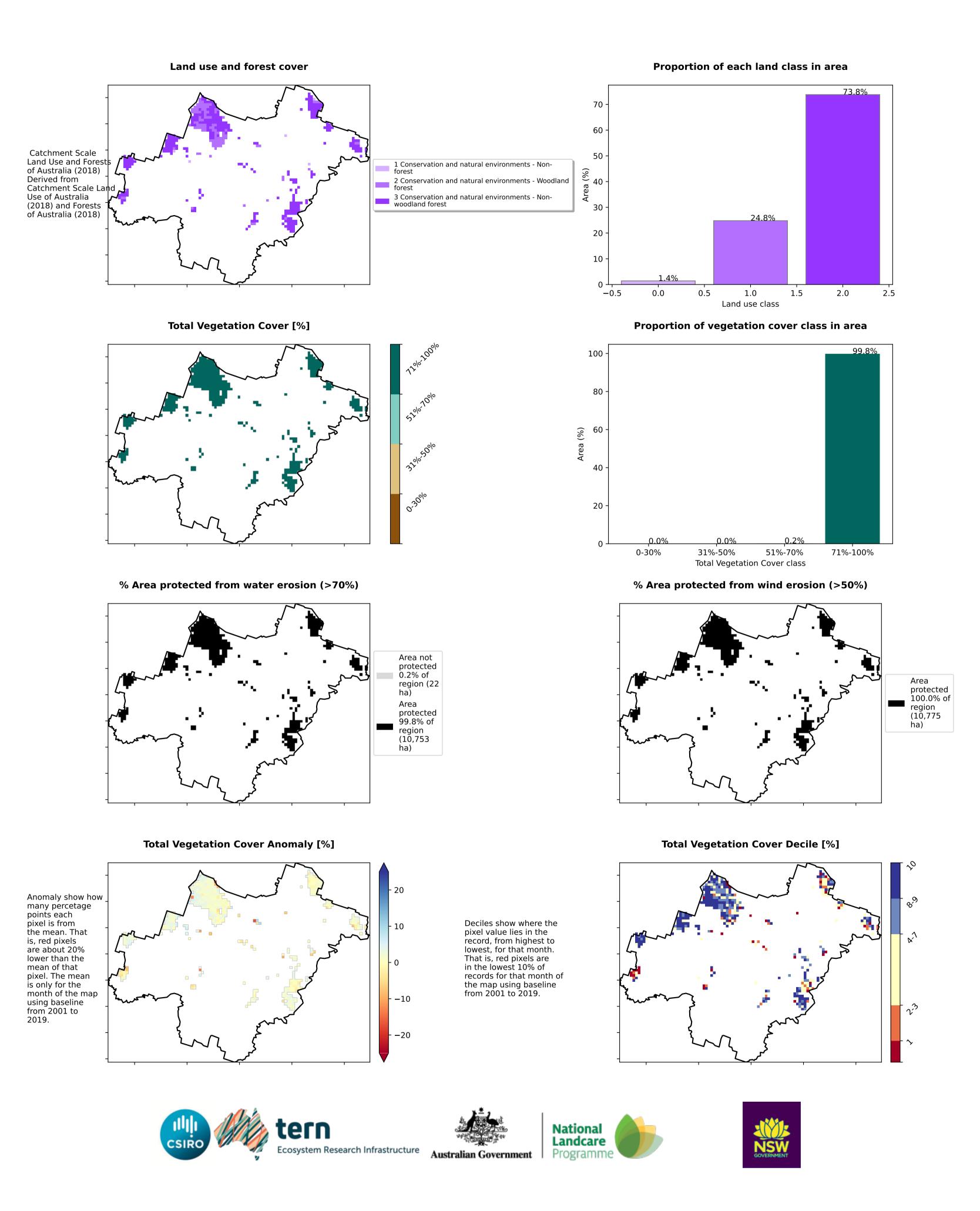




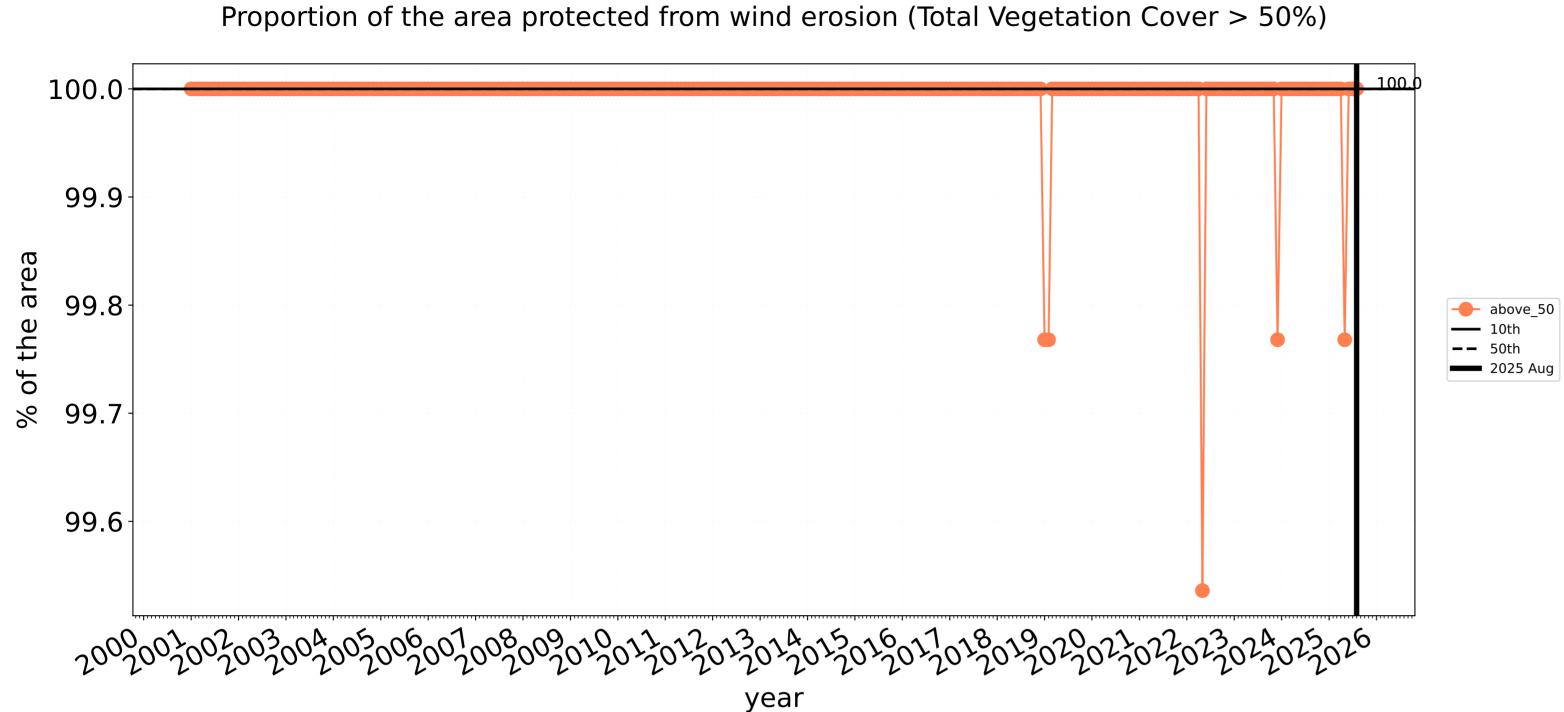


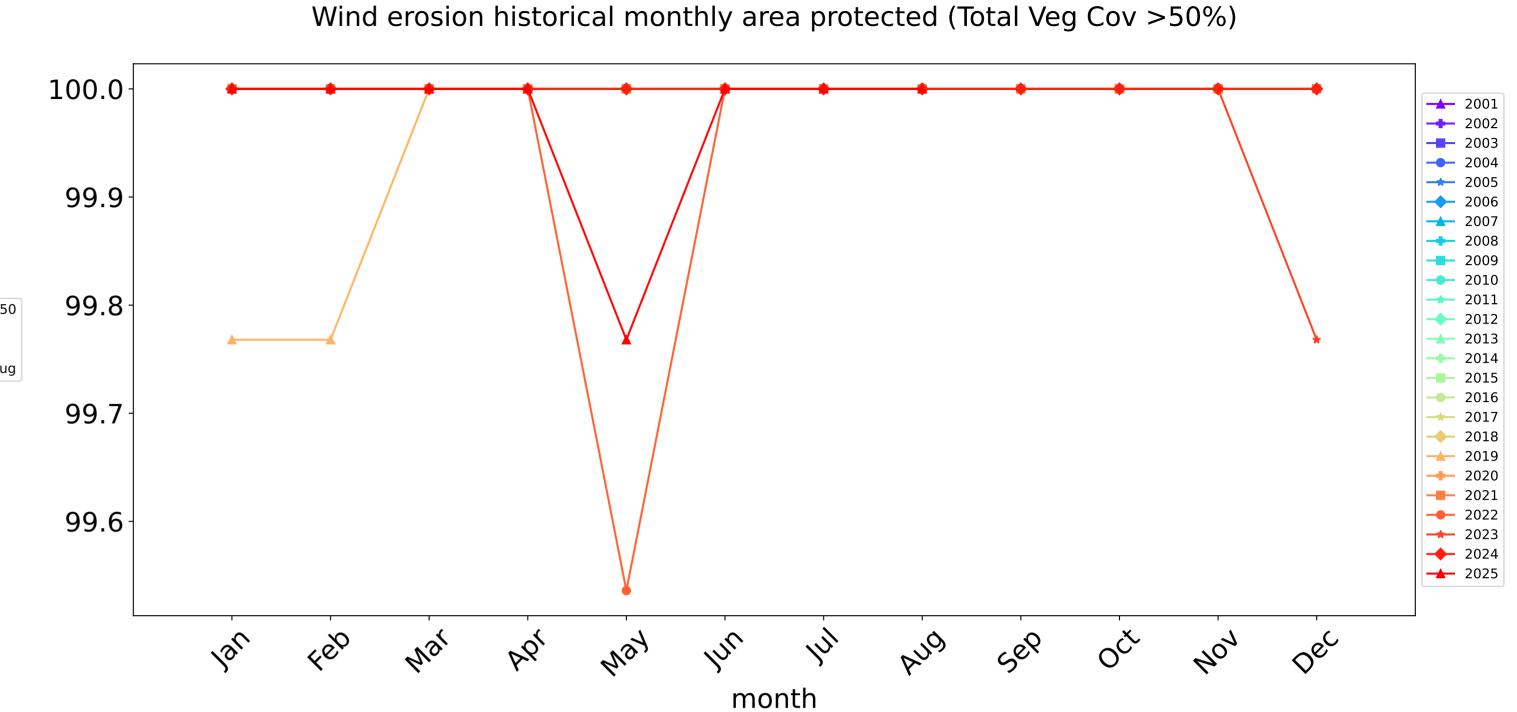


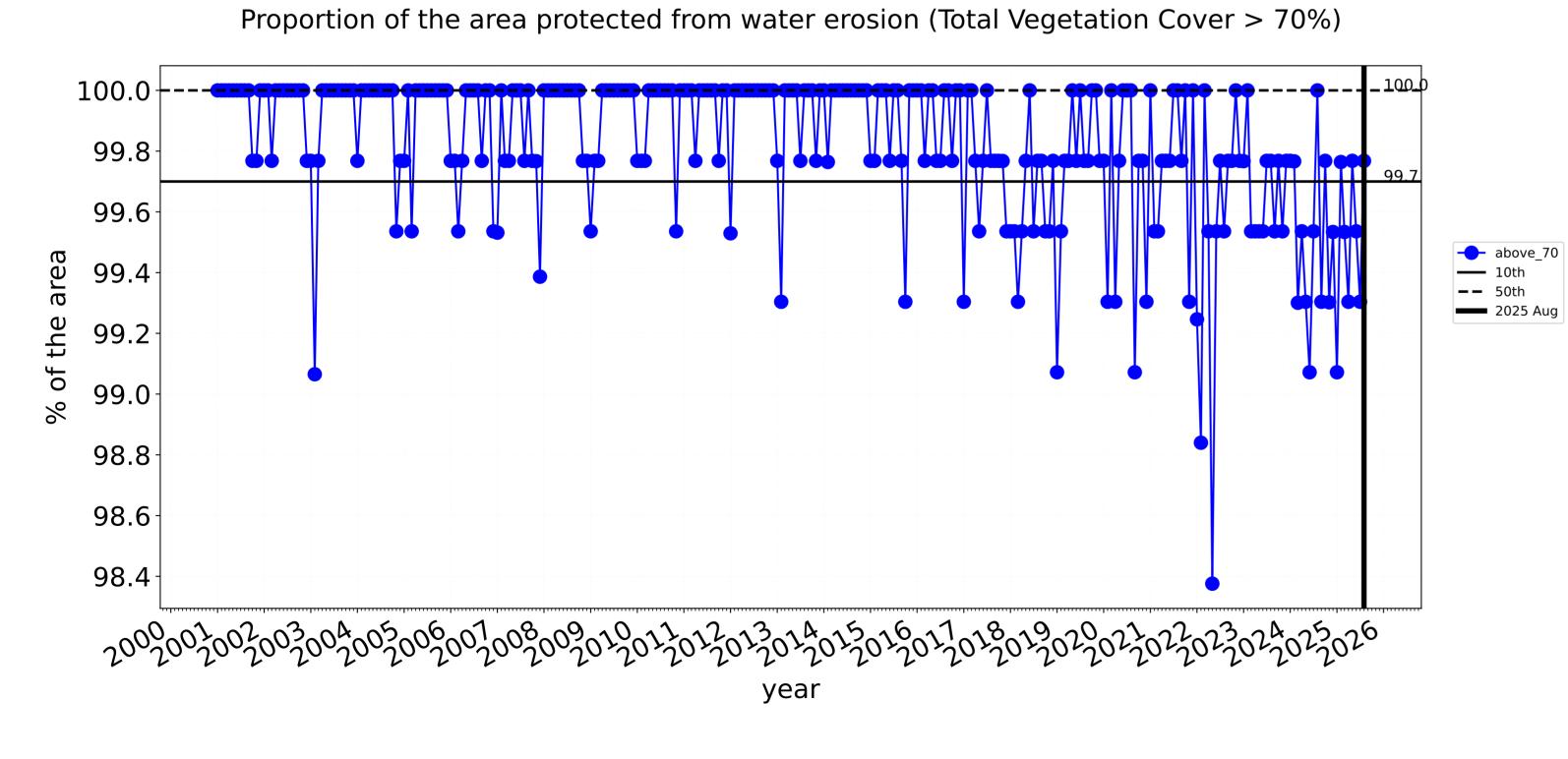
Conservation and natural environments

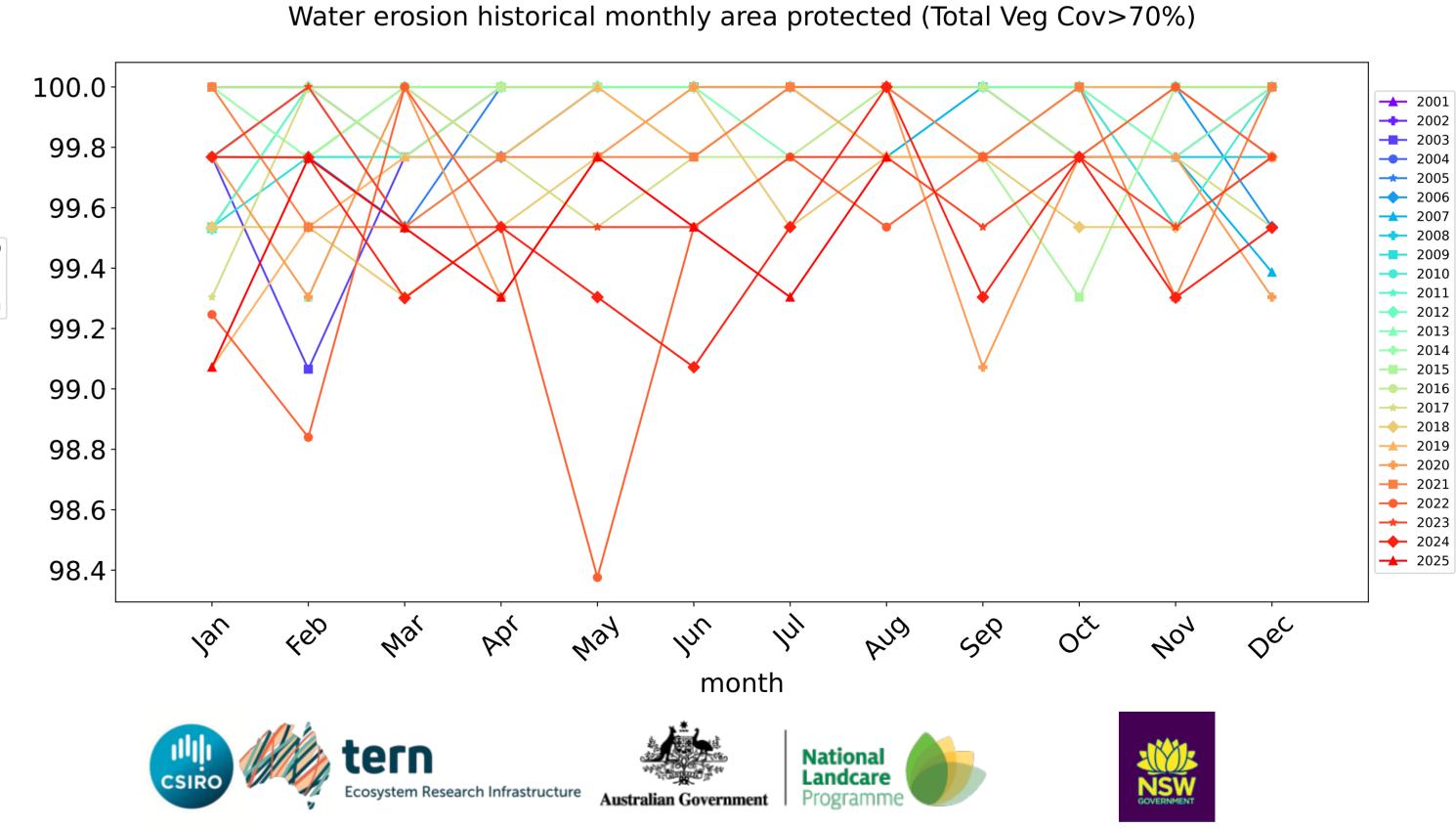


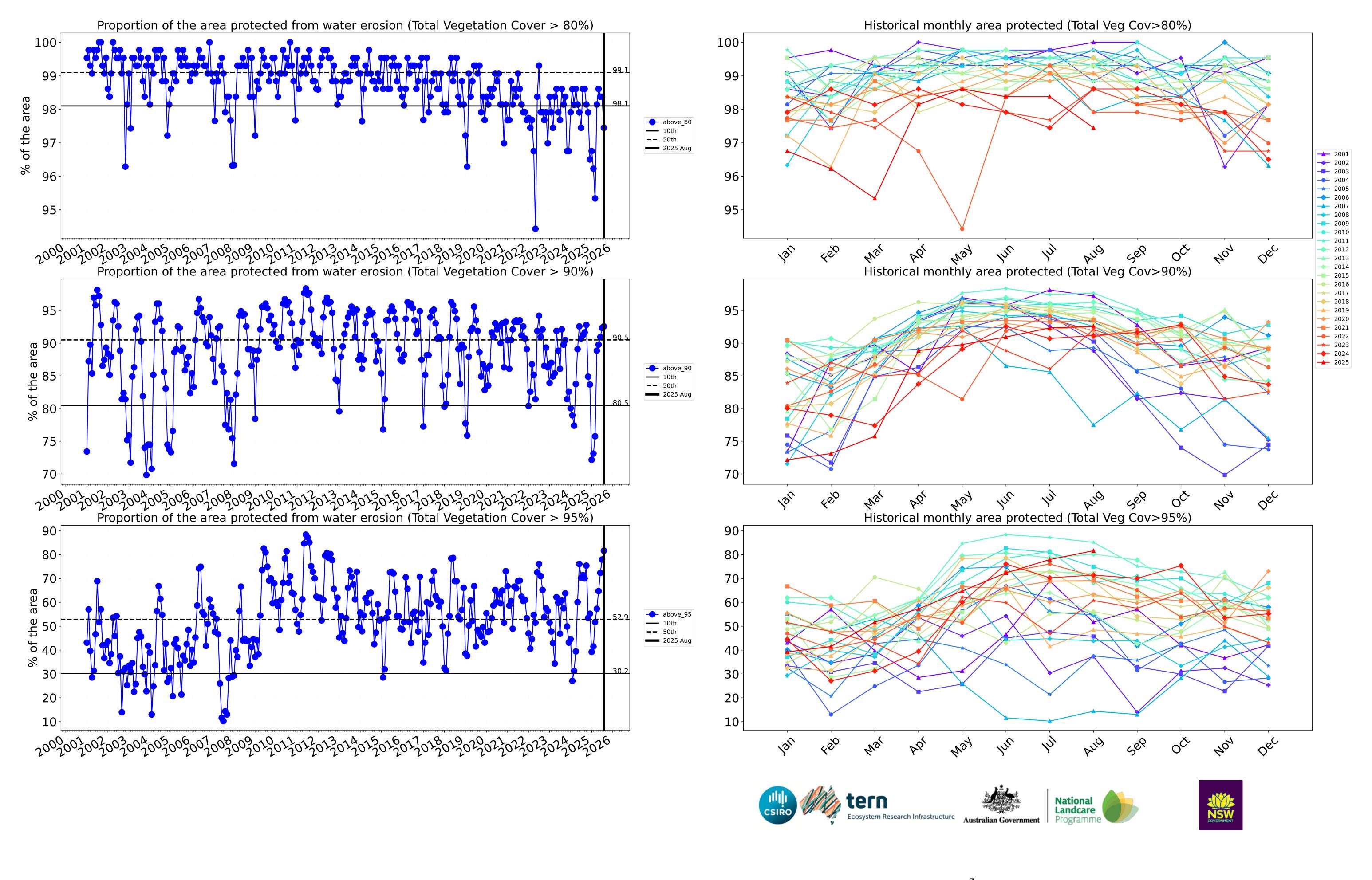
Conservation and natural environments timeseries









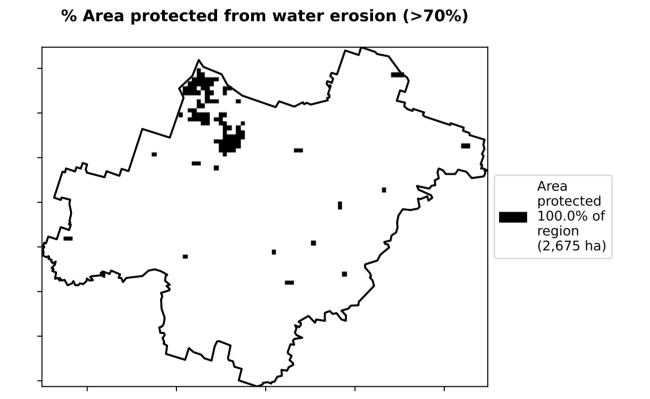


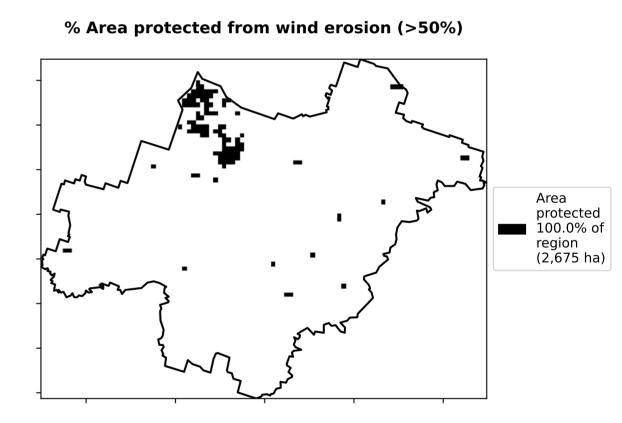
Conservation and natural environments Woodland forest

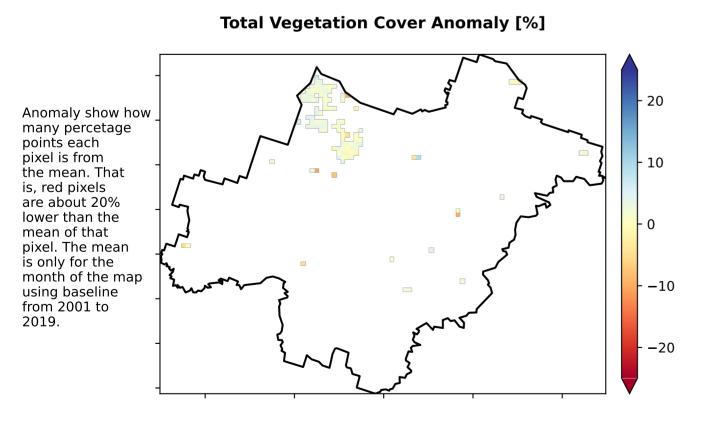
Land use and forest cover Catchment Scale Land Use and Forests of Australia (2018) Derived from 1 Conservation and natural environments - Woodland forest Catchment Scale Land Use of Australia (2018) and Forests of Australia (2018)

Total Vegetation Cover [%]

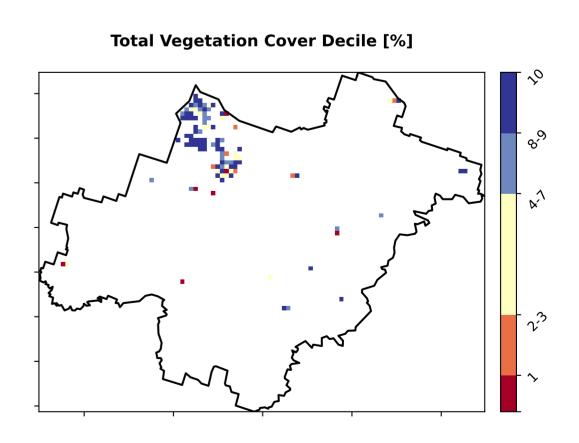
Proportion of vegetation cover class in area 100.0% 100 80 Area (%) 60 40 20 0.0% 0.0% 0.0% 0-30% 31%-50% 51%-70% 71%-100% Total Vegetation Cover class







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 man using baseling. the map using baseline from 2001 to 2019.



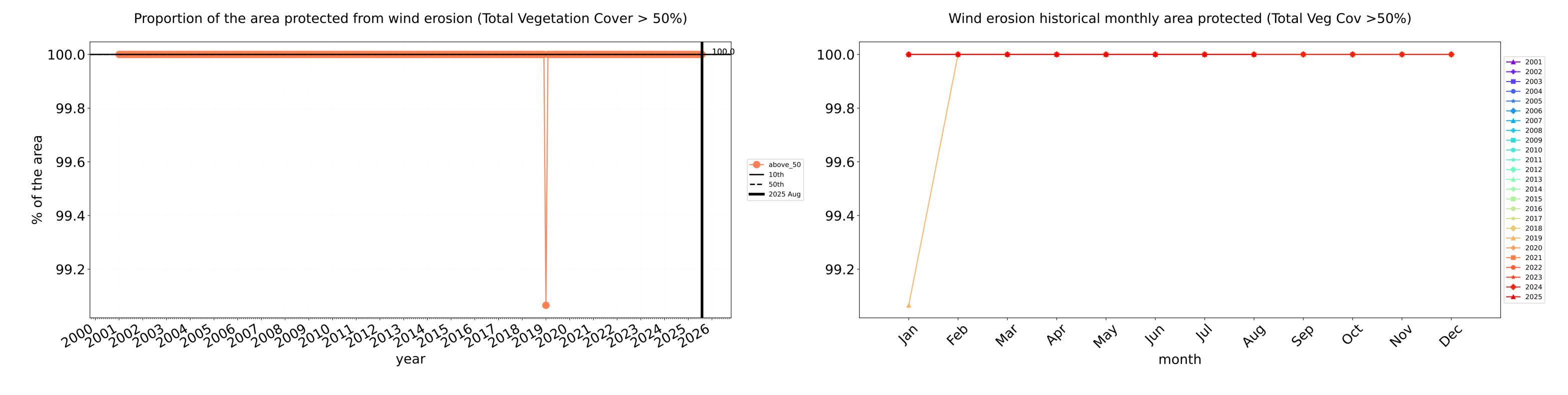


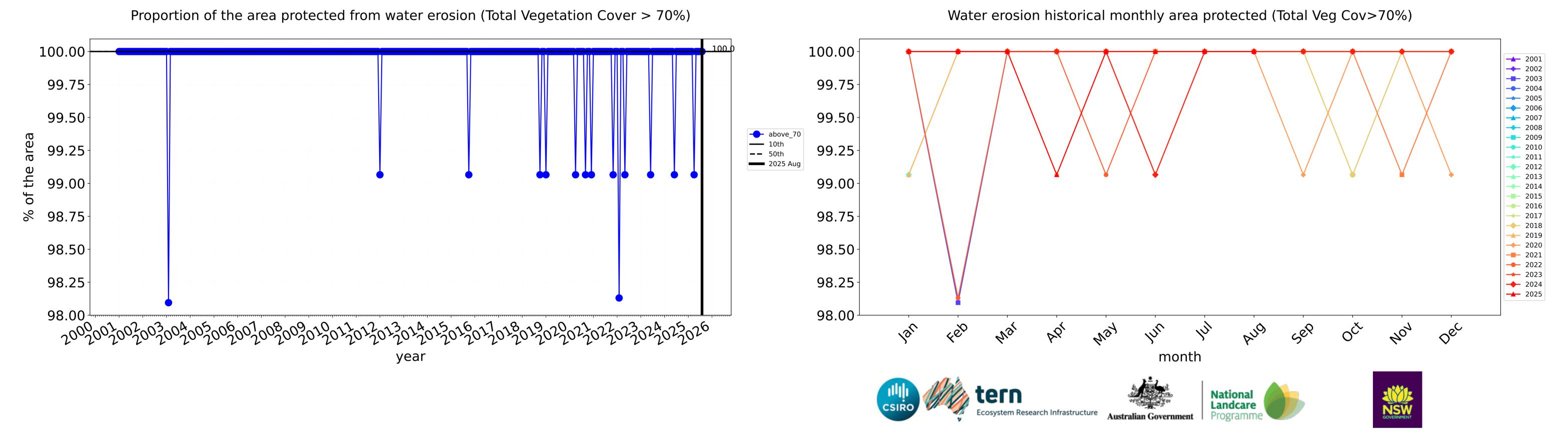


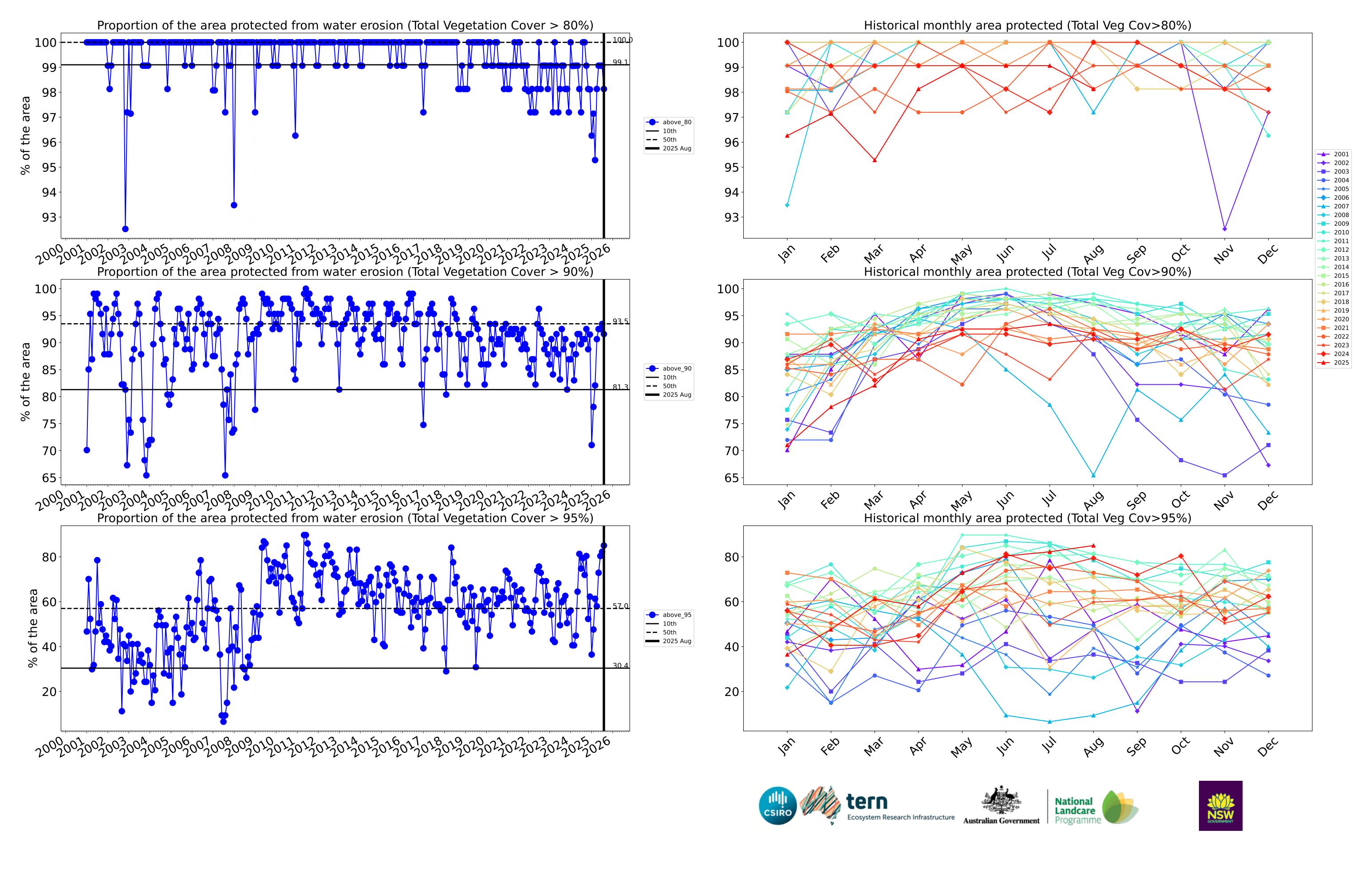


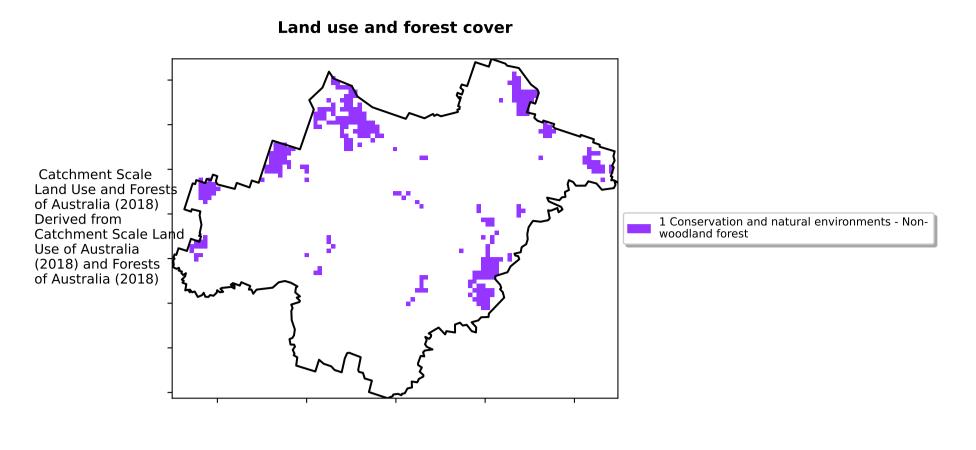


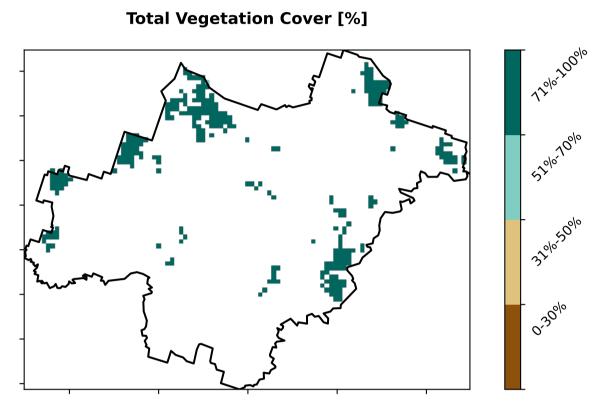
Conservation and natural environments Woodland forest timeseries

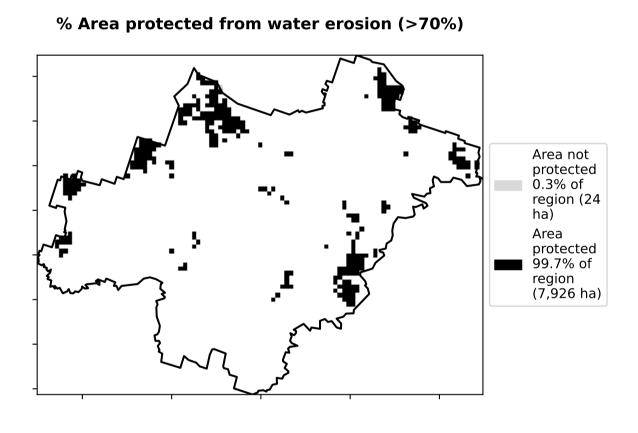


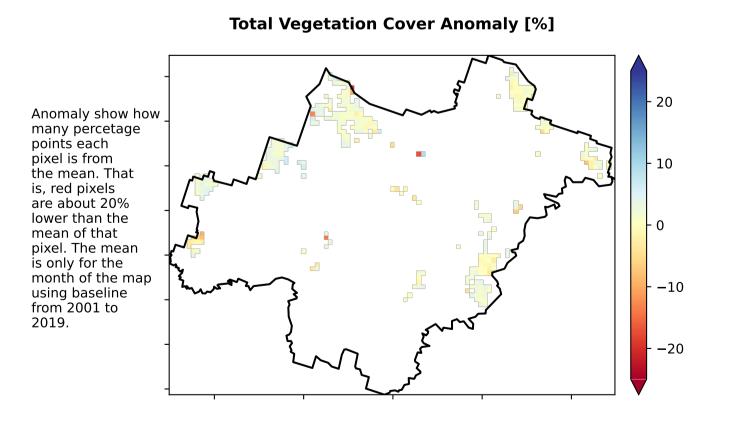


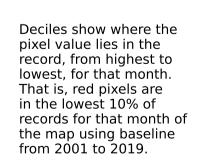


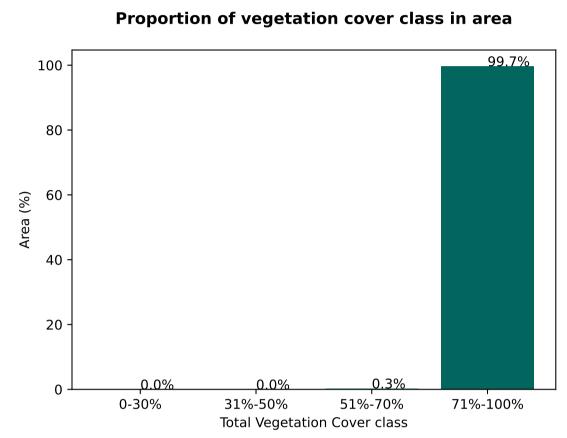


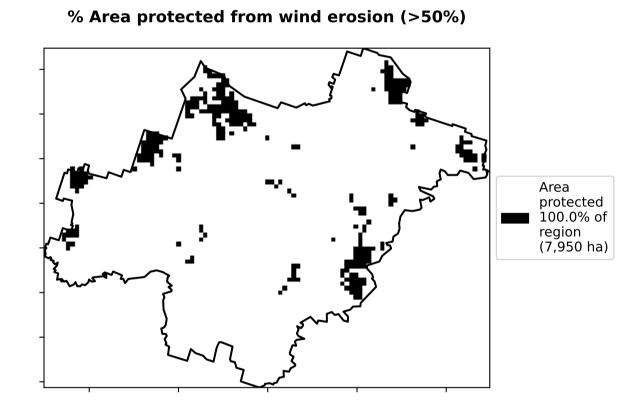


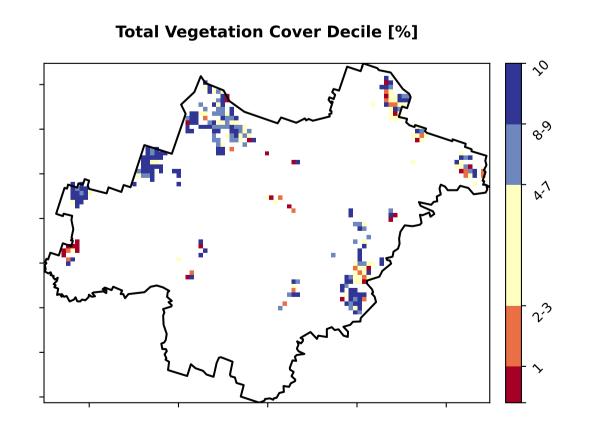












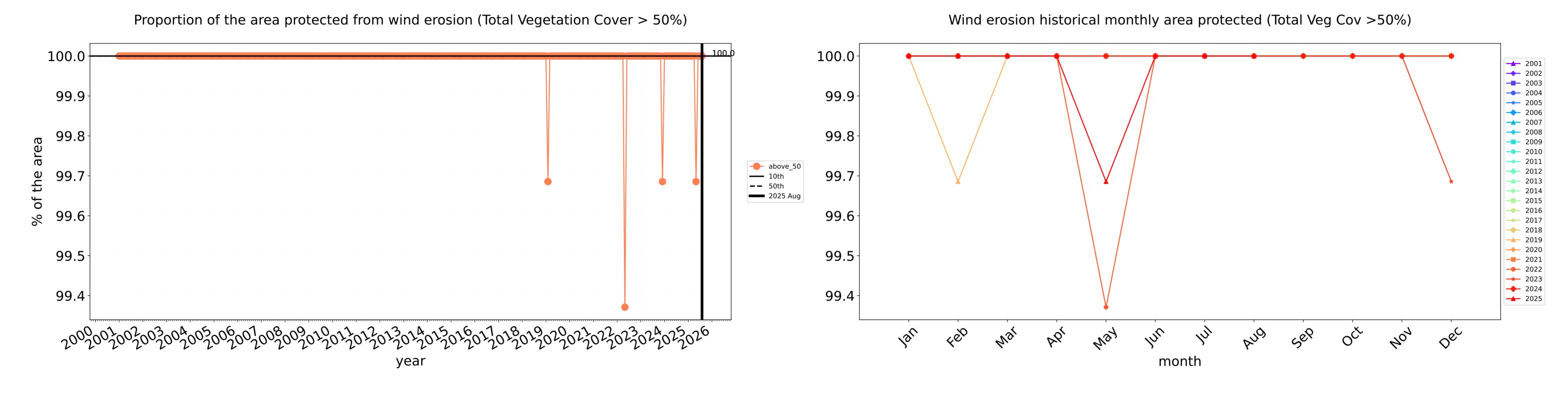


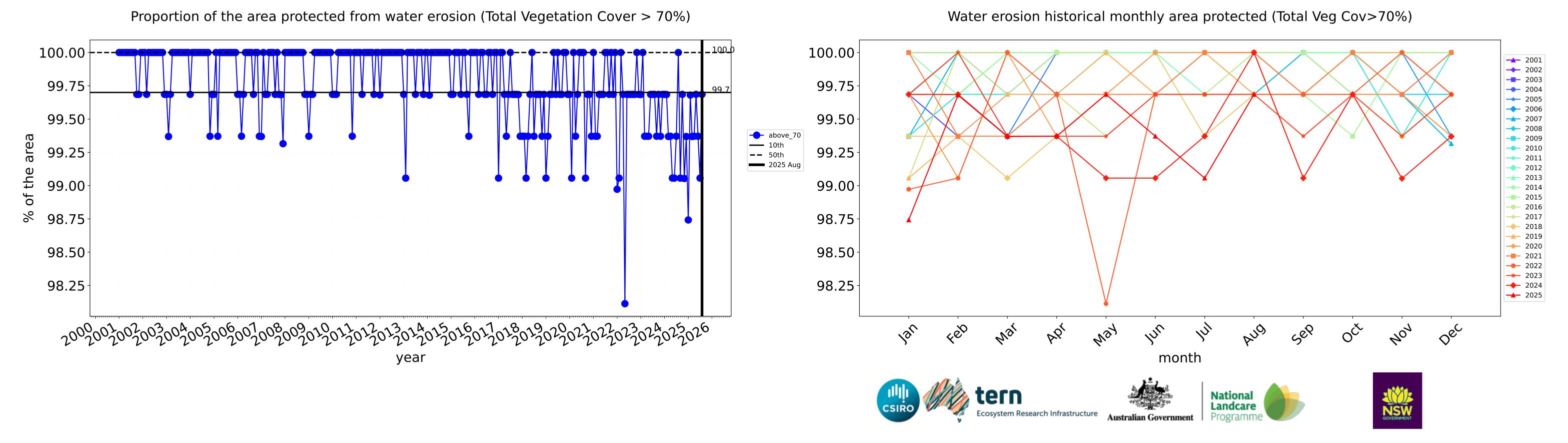


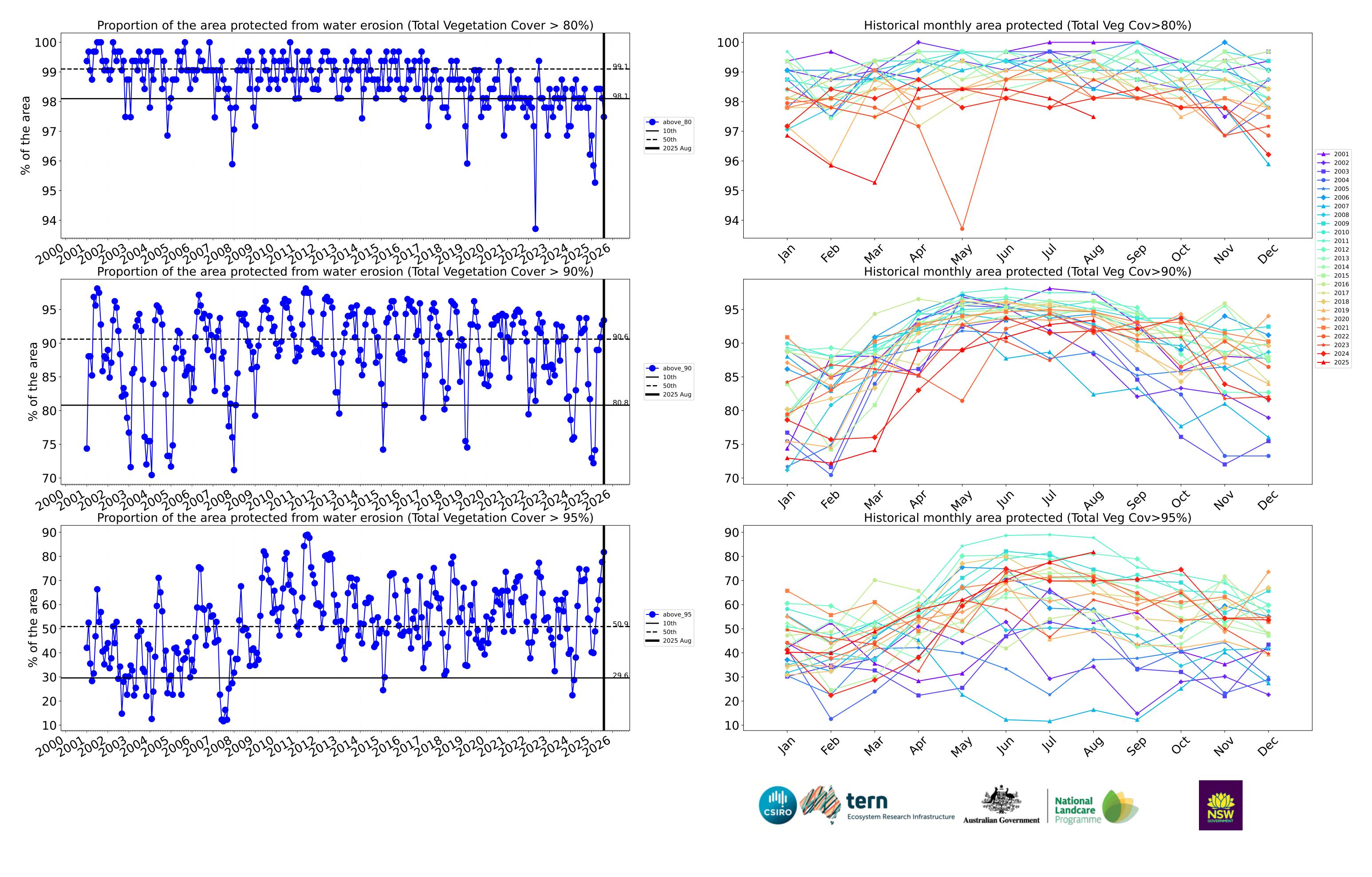




Conservation and natural environments Forest (non woodland) timeseries



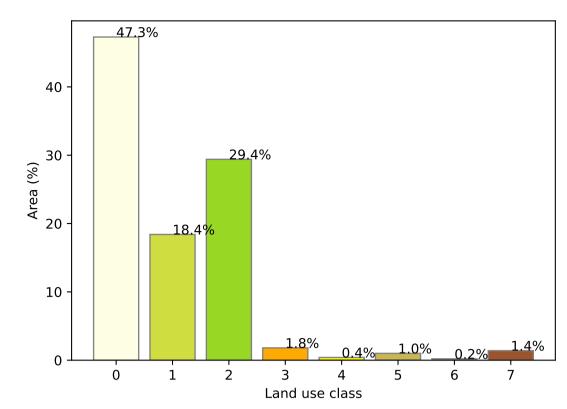




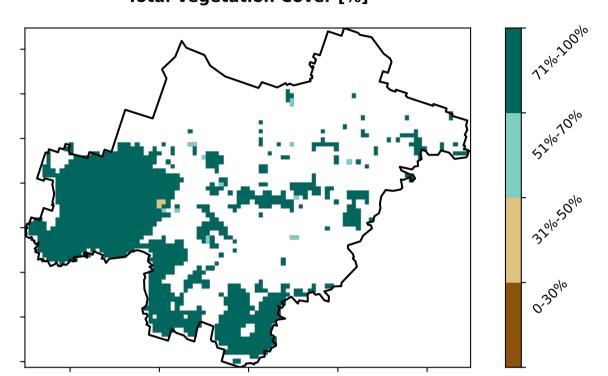
Agriculture

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

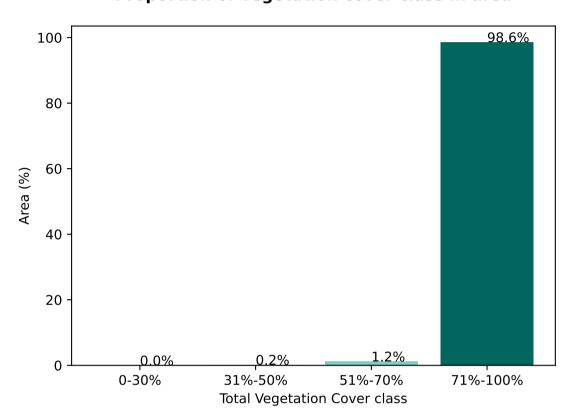
Proportion of each land class in area



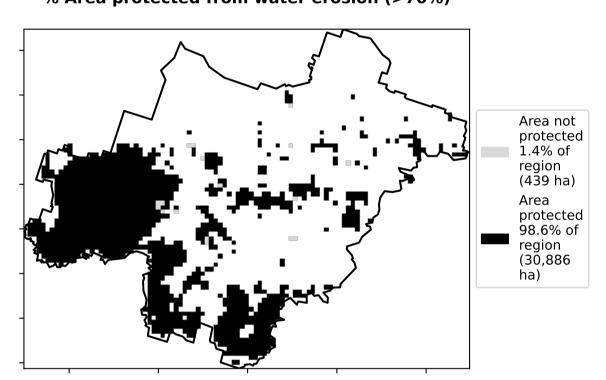
Total Vegetation Cover [%]



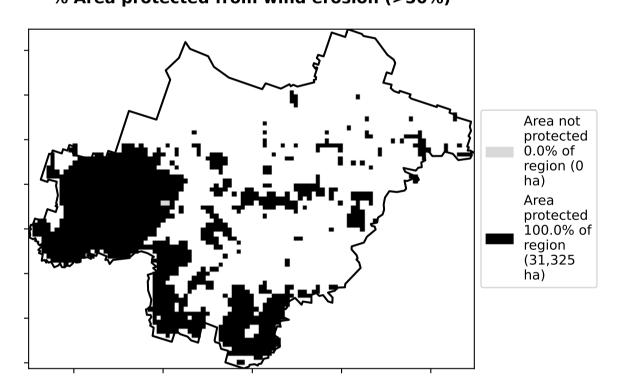
Proportion of vegetation cover class in area



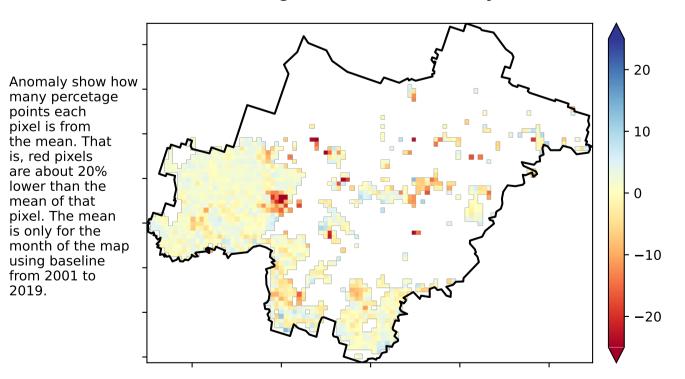
% Area protected from water erosion (>70%)



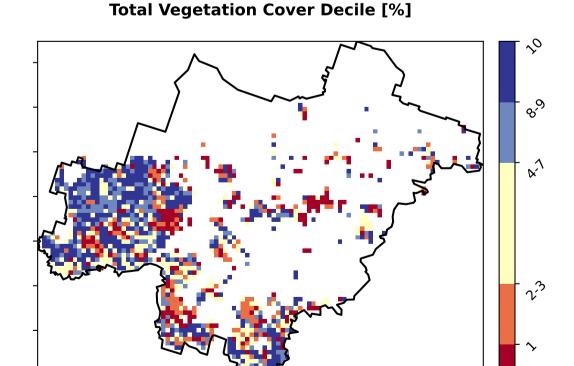
% Area protected from wind erosion (>50%)



Total Vegetation Cover Anomaly [%]



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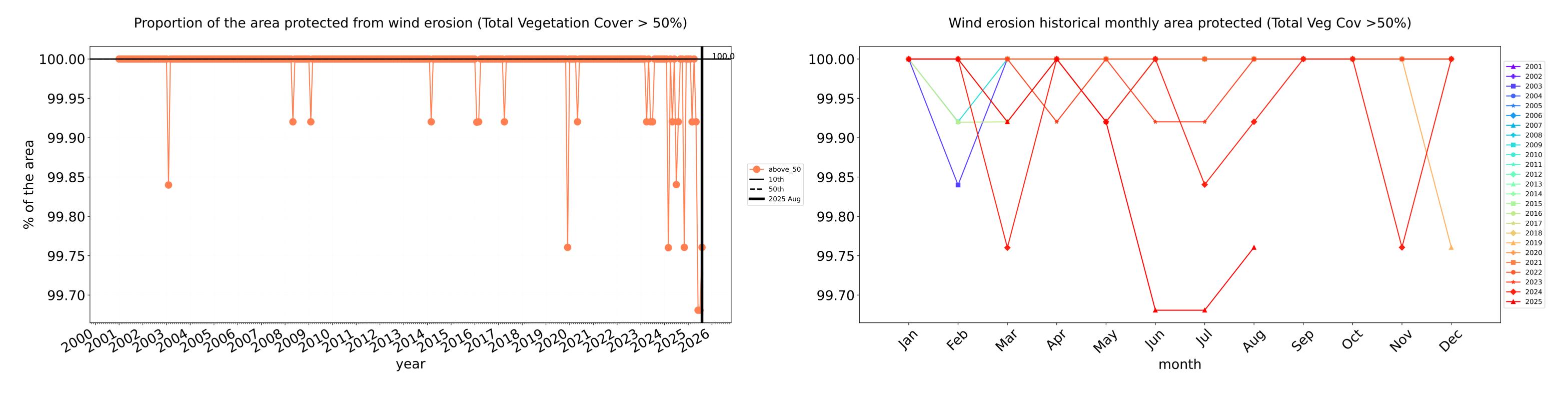


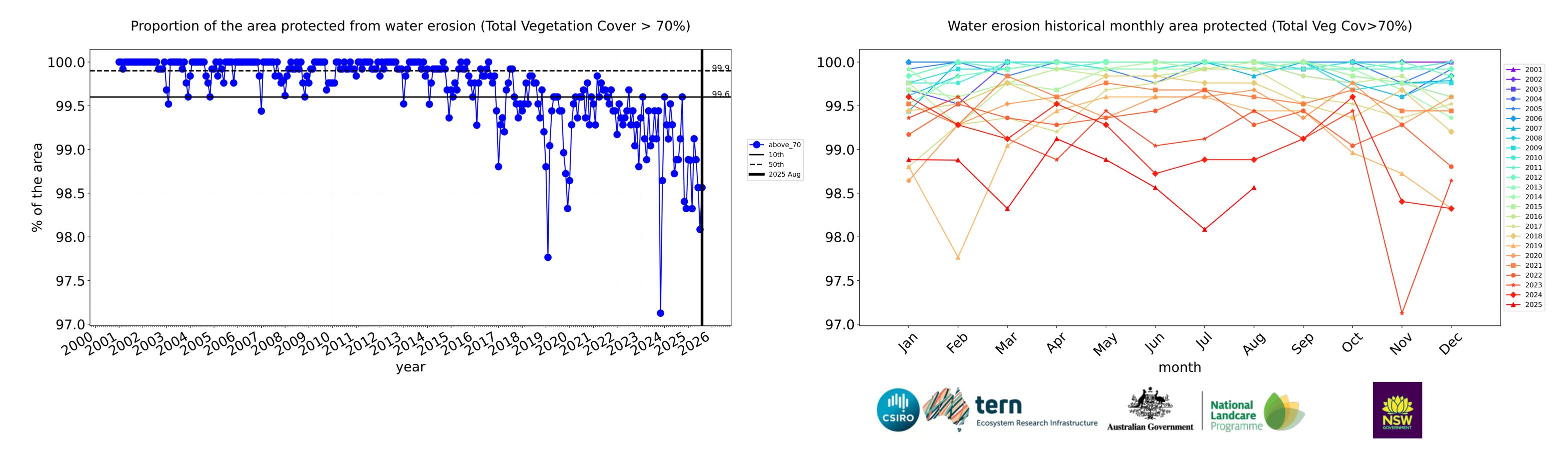


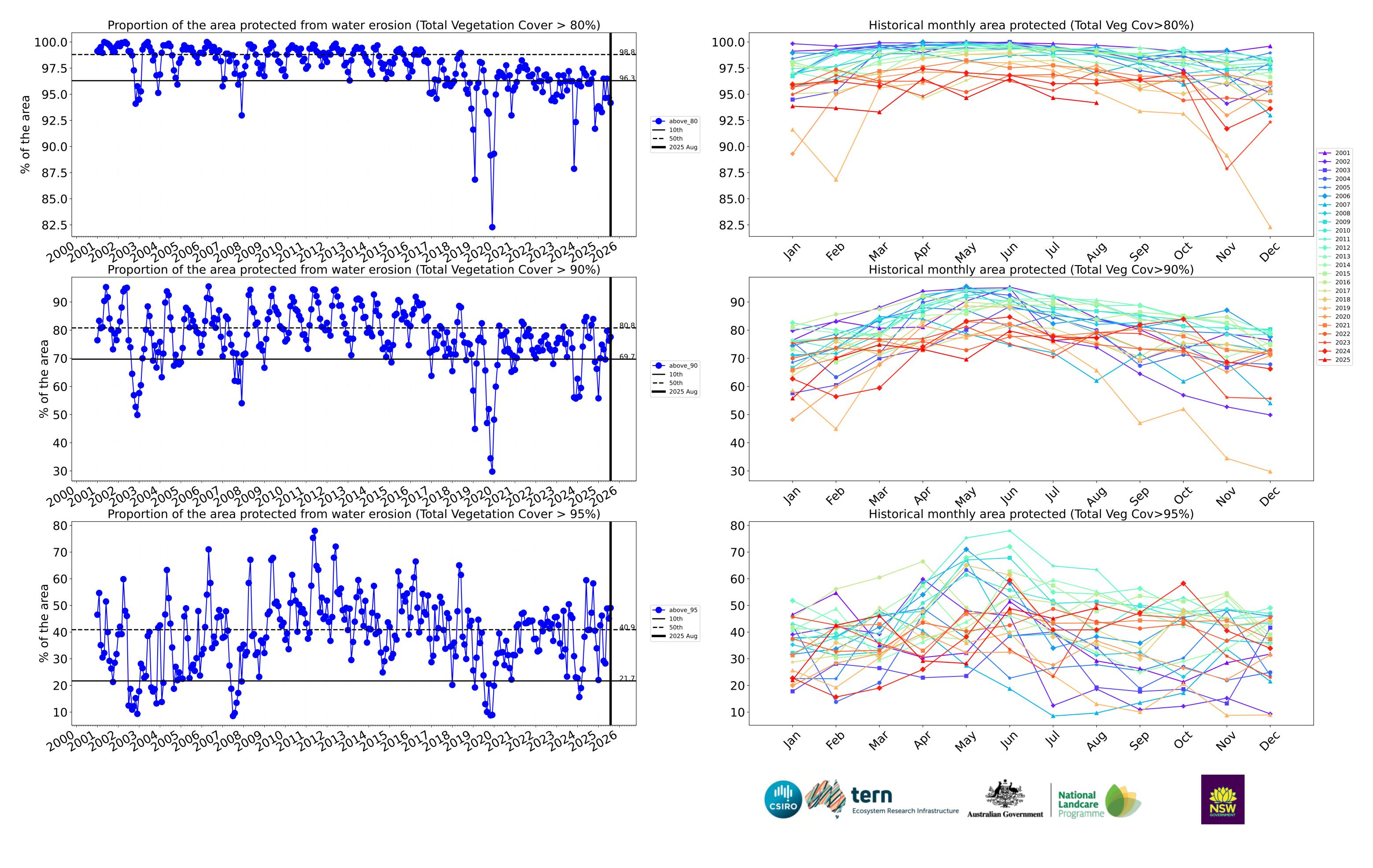




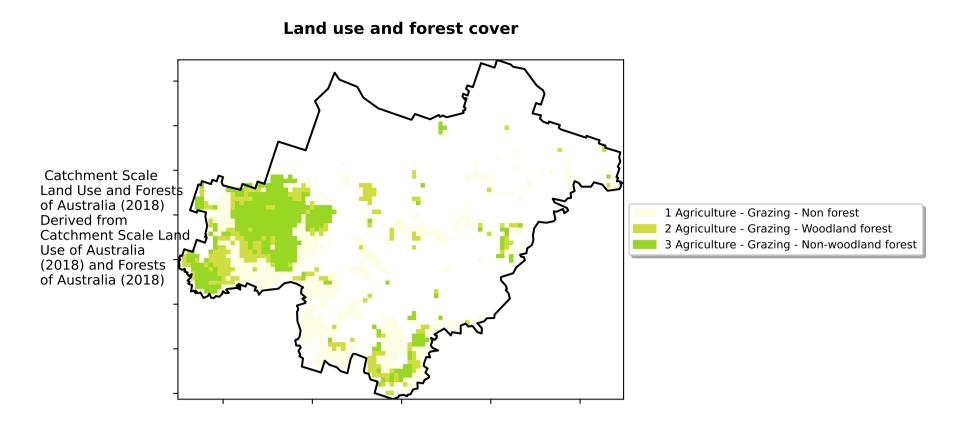
Agriculture timeseries







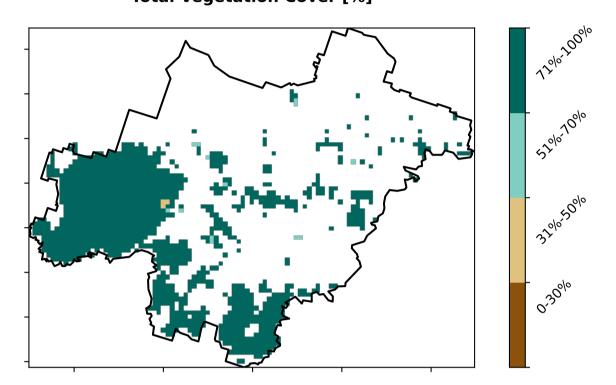
Grazing



50 - 49.7% 40 - (%) 30 - 19.4% 10 - 10 - 19.4%

Proportion of each land class in area

Total Vegetation Cover [%]



Proportion of vegetation cover class in area

1.0

Land use class

1.5

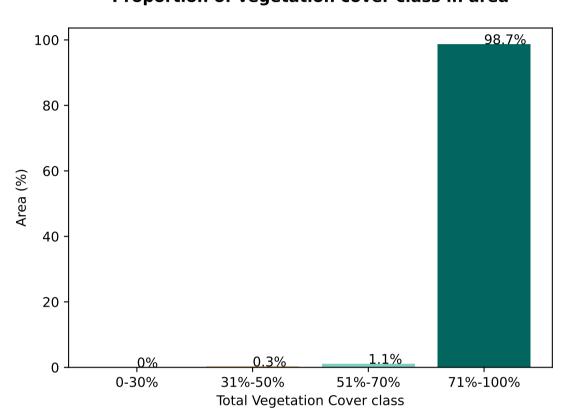
0.5

-0.5

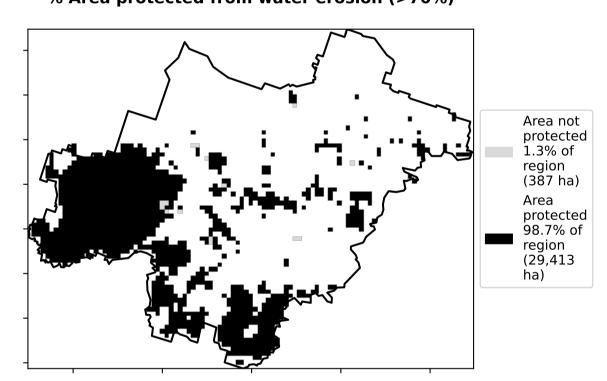
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2.0

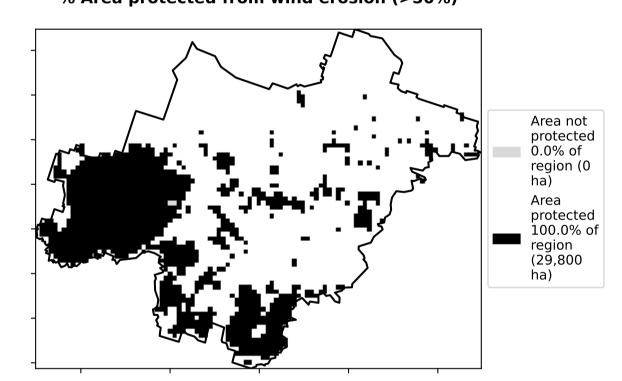
2.5



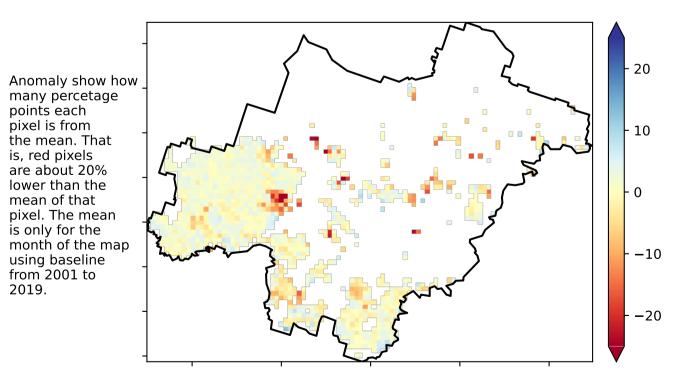
% Area protected from water erosion (>70%)



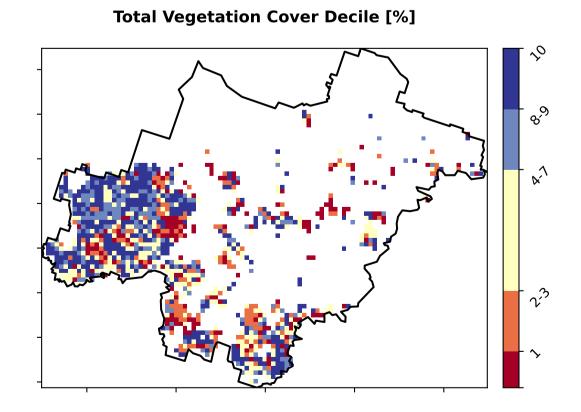
% Area protected from wind erosion (>50%)



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.



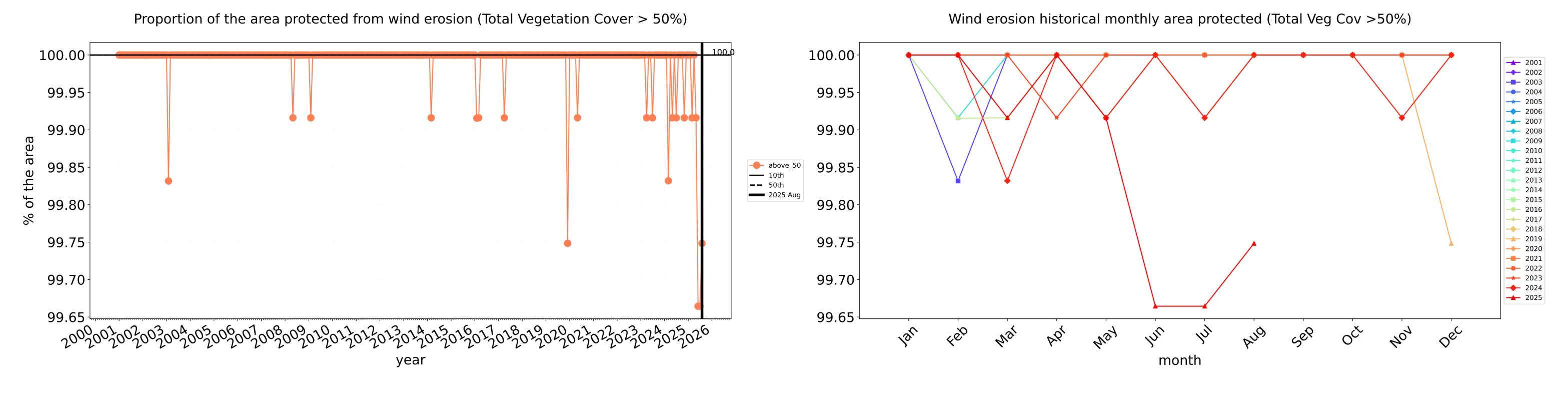
tern Ecosystem Research Infrastructure

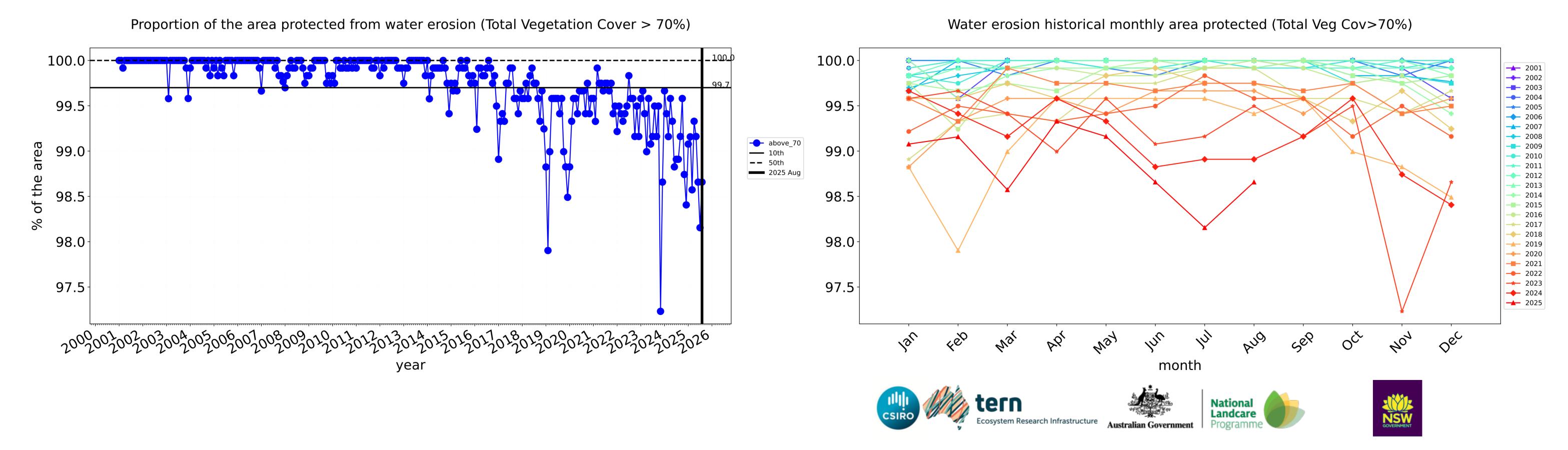


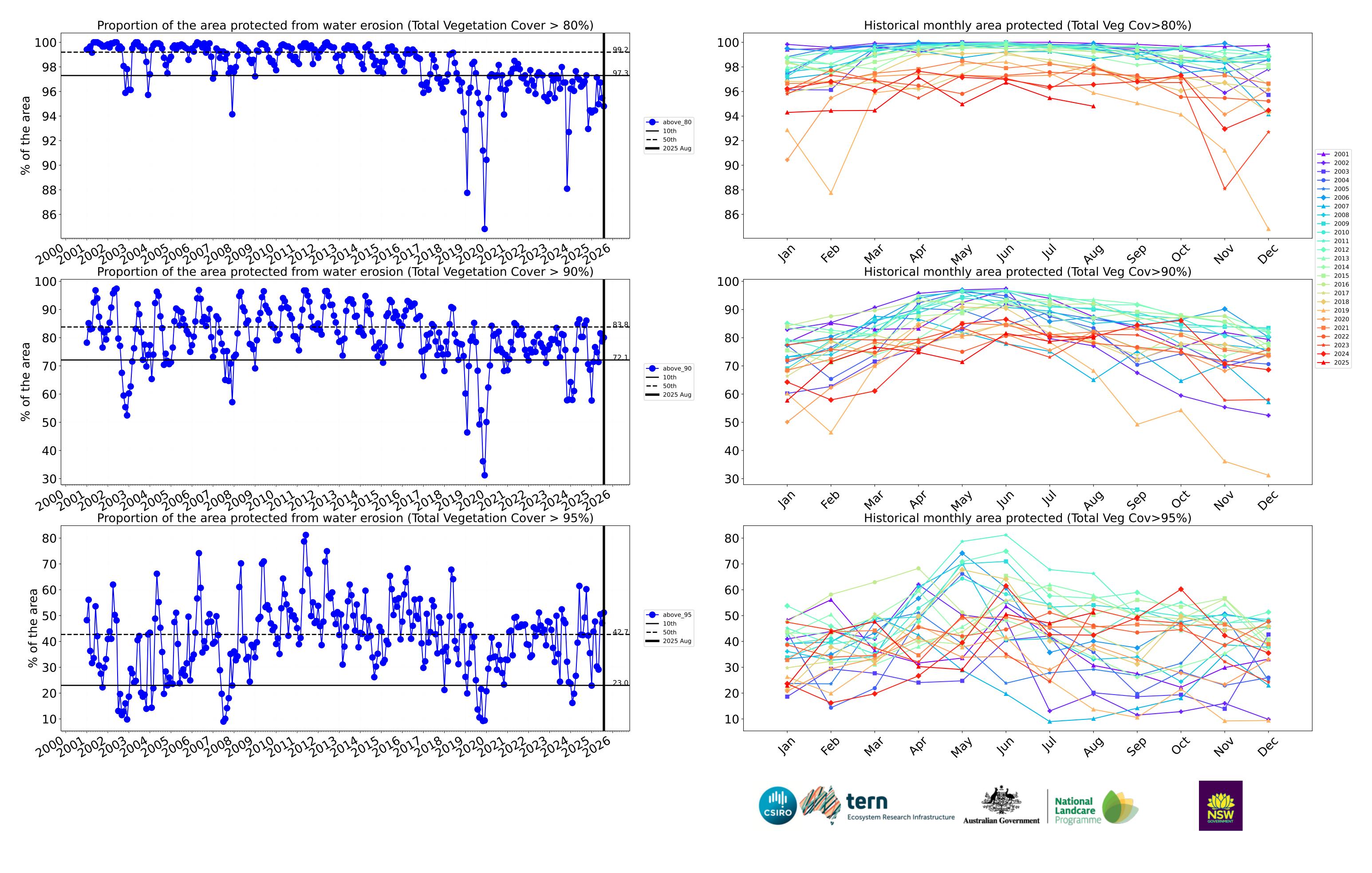




Grazing timeseries





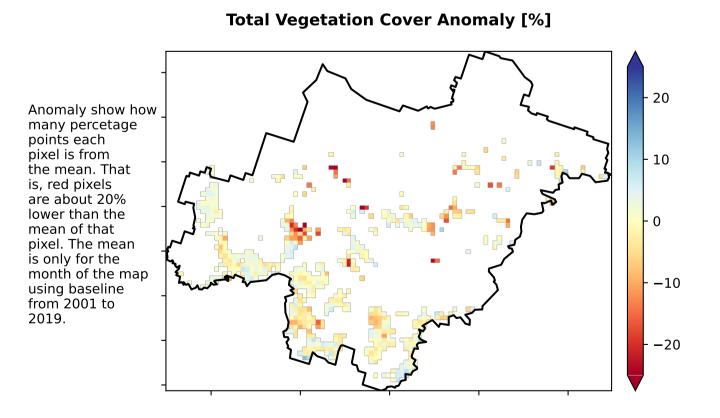


Grazing non forest

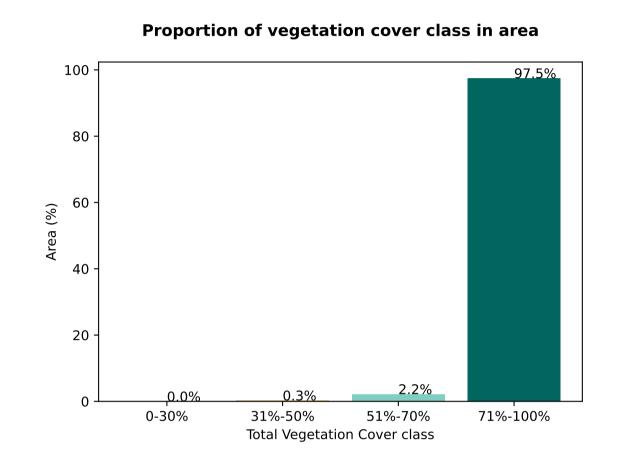
Catchment Scale Land Use and Forests of Australia (2018) Derived from Catchment Scale Land Use of Australia (2018) and Forests of Australia (2018) and Forests of Australia (2018)

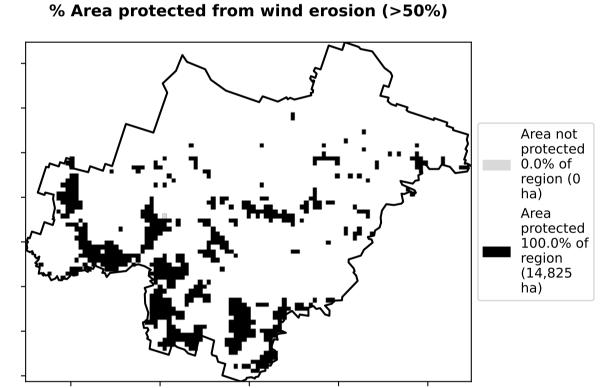
Total Vegetation Cover [%]

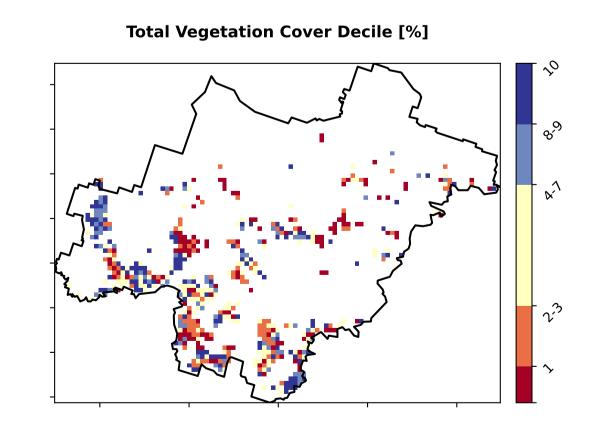
Area not protected 2.5% of region (371 ha) Area protected 97.5% of region (14,454 ha)



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







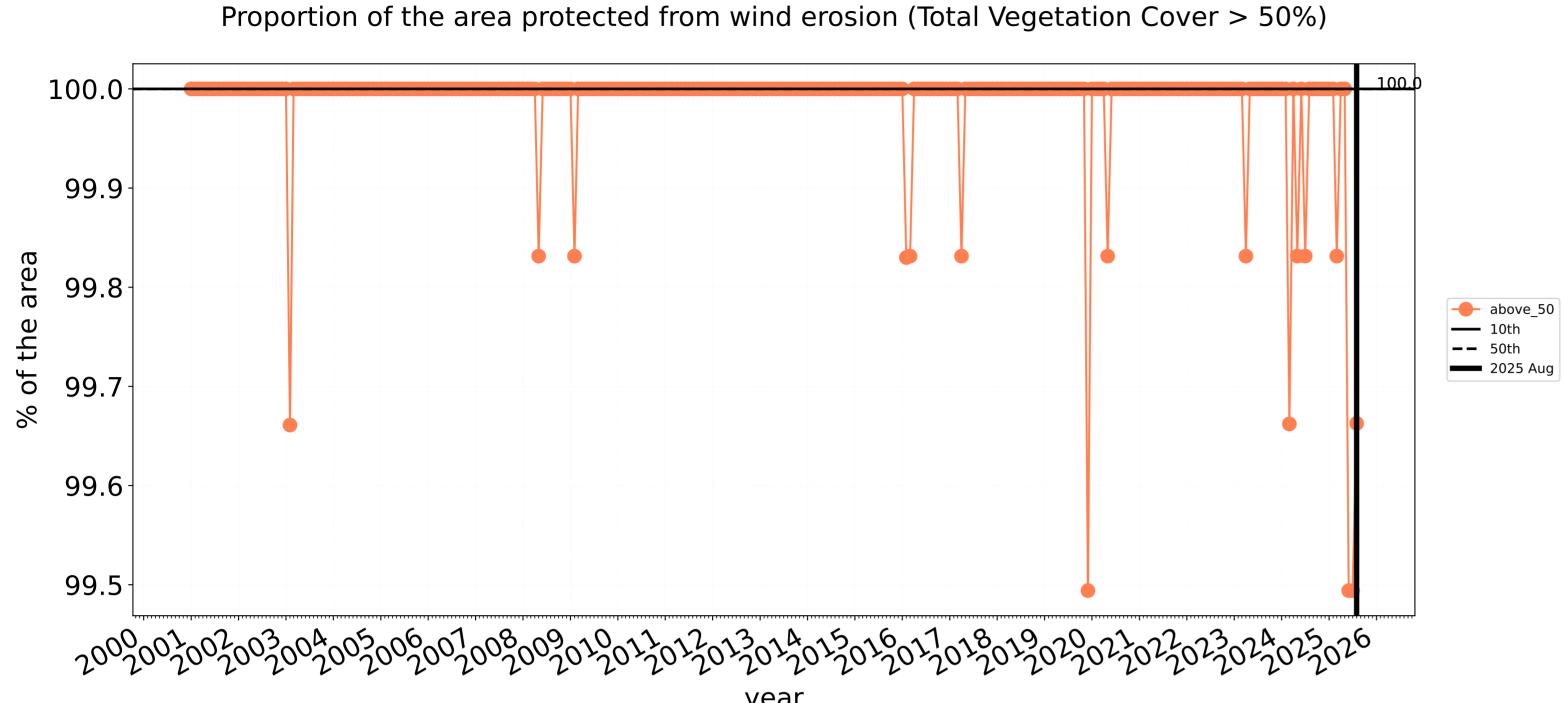


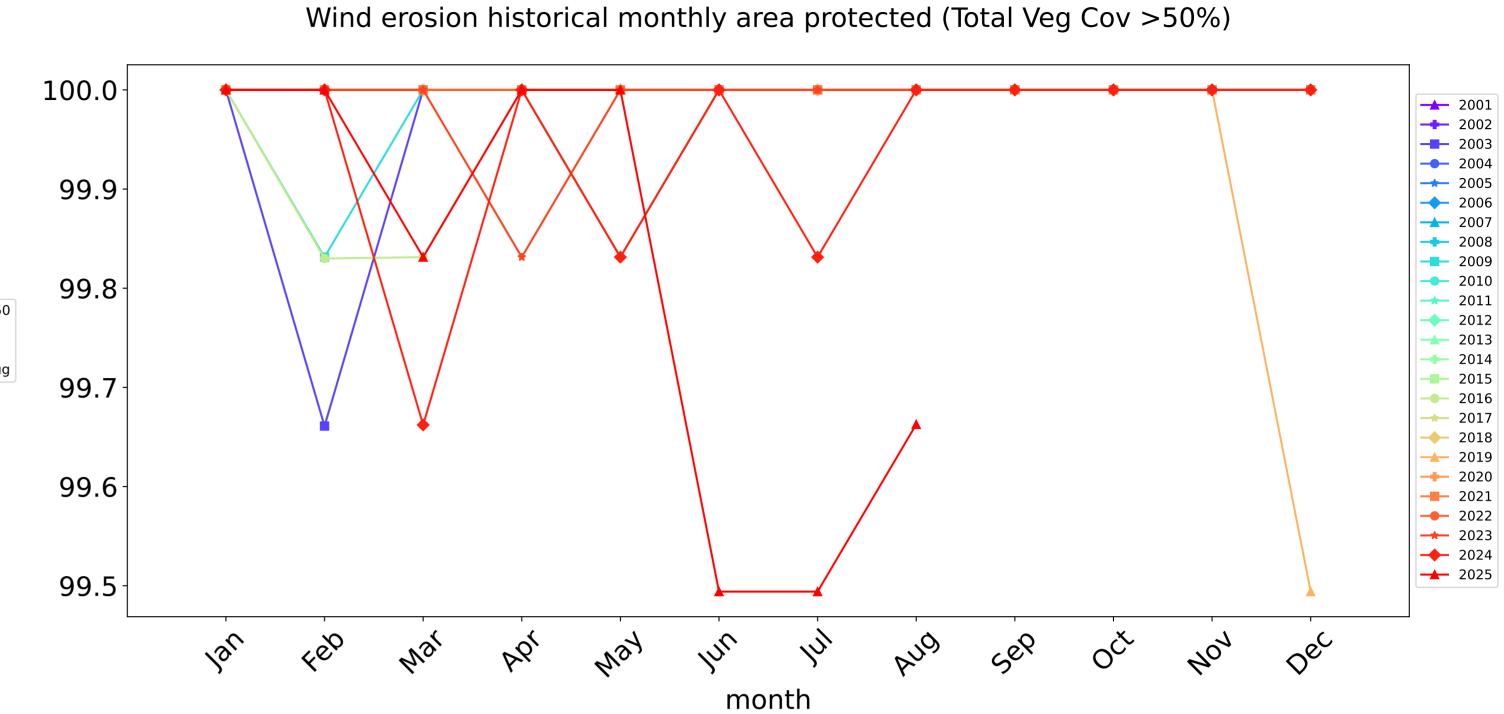


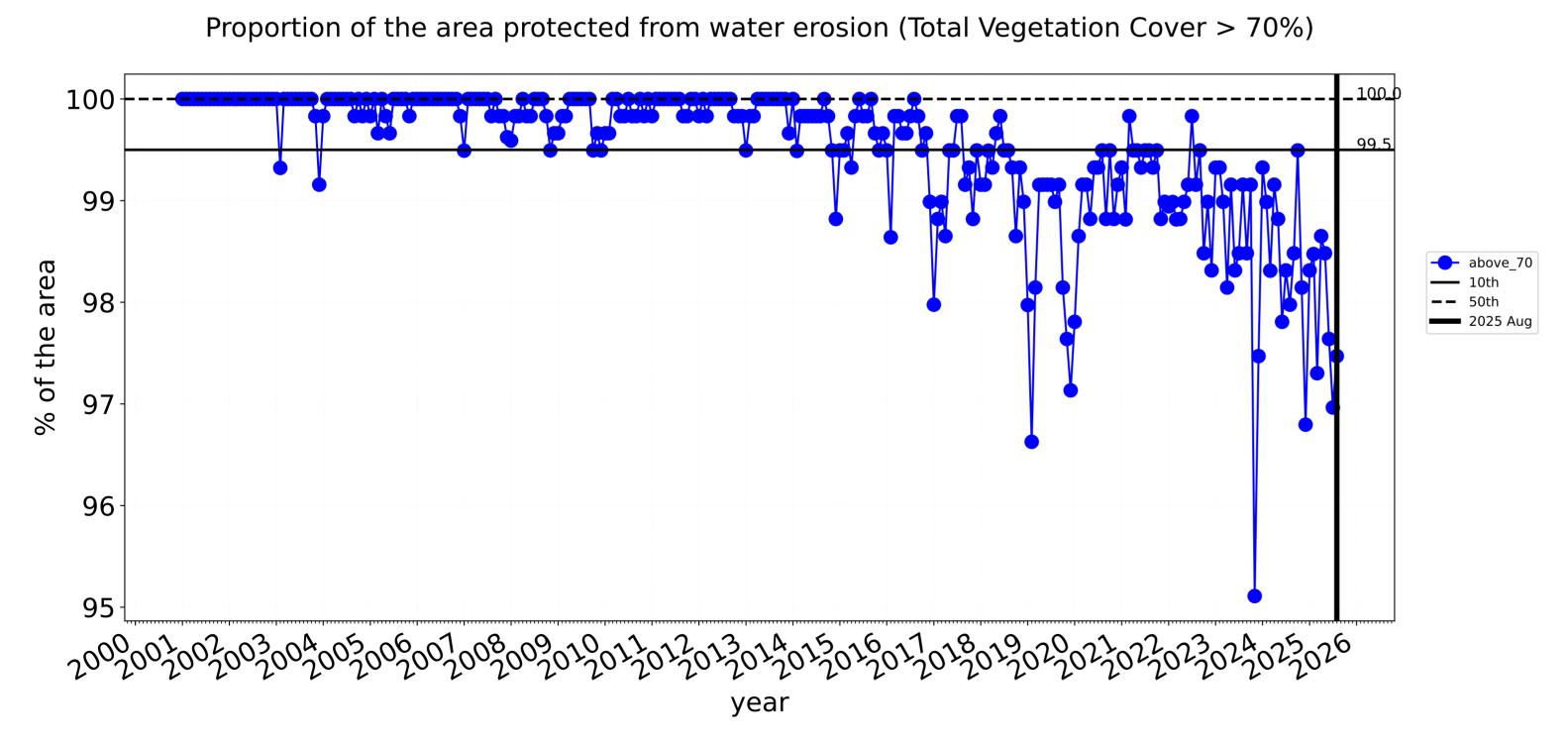


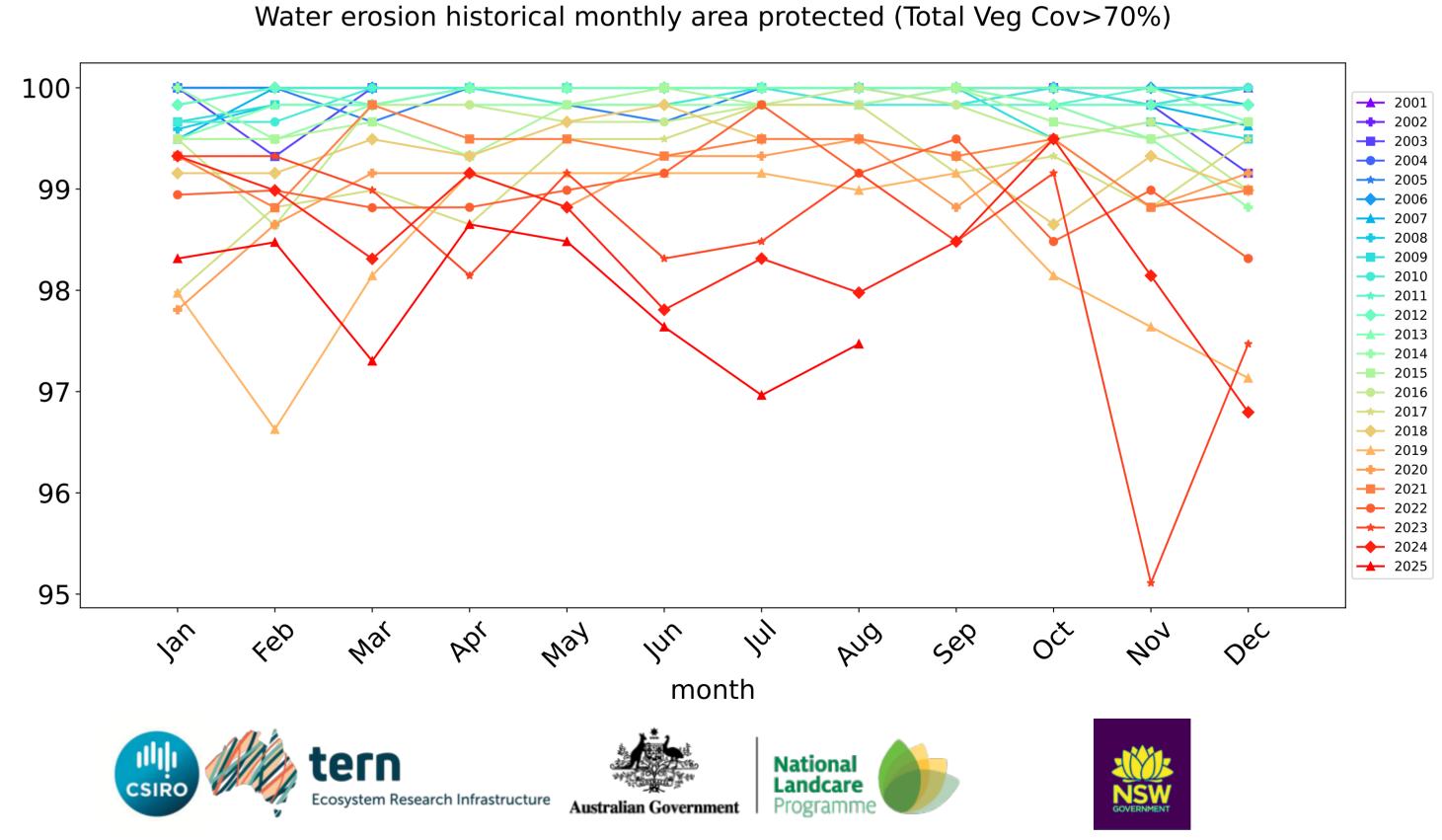


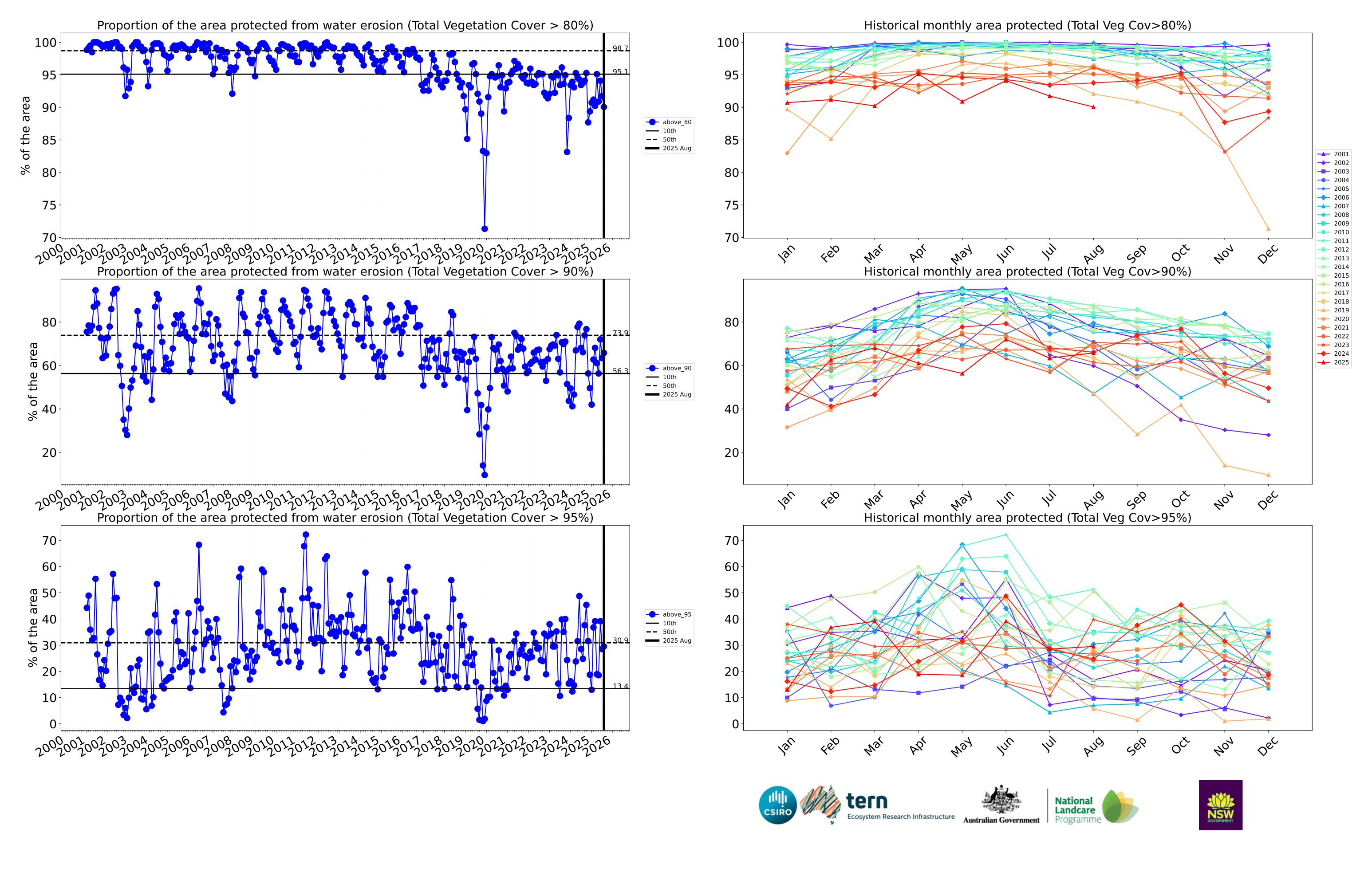
Grazing non forest timeseries









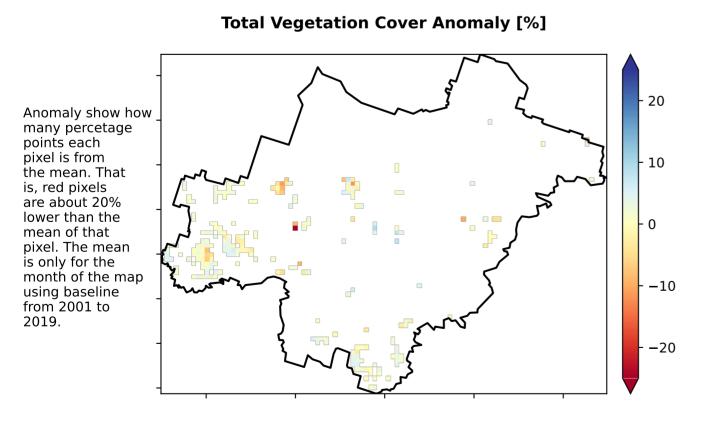


Grazing Woodland forest

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

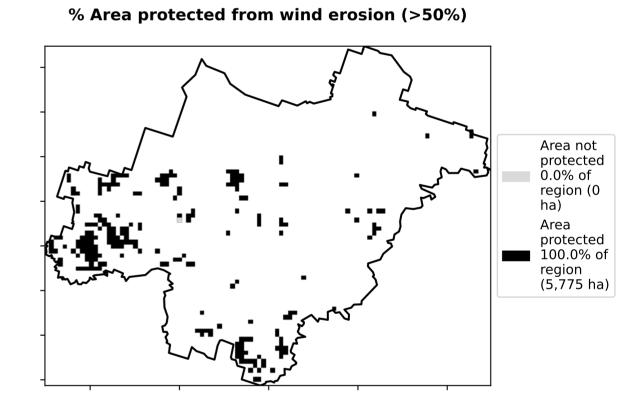
Total Vegetation Cover [%]

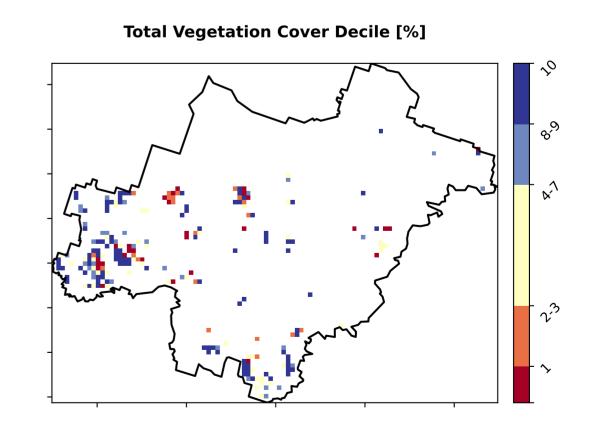
Area not protected 0.4% of region (23 ha) Area protected 99.6% of region (5,752 ha)



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 vegetation cover class in area 100 - 99.6% 80 - 99.6% 40 - 20 - 0.0% 0-30% 31%-50% 51%-70% Total Vegetation Cover class





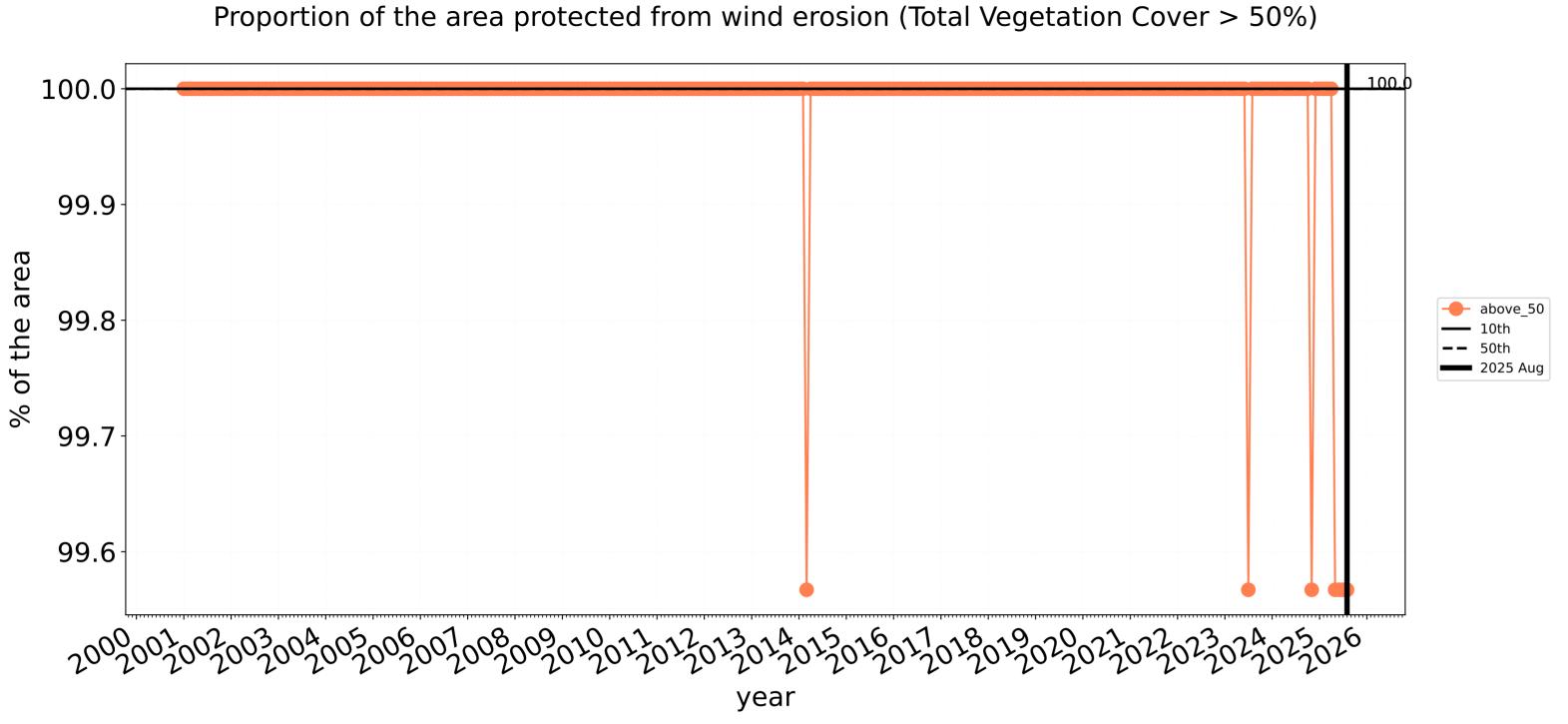


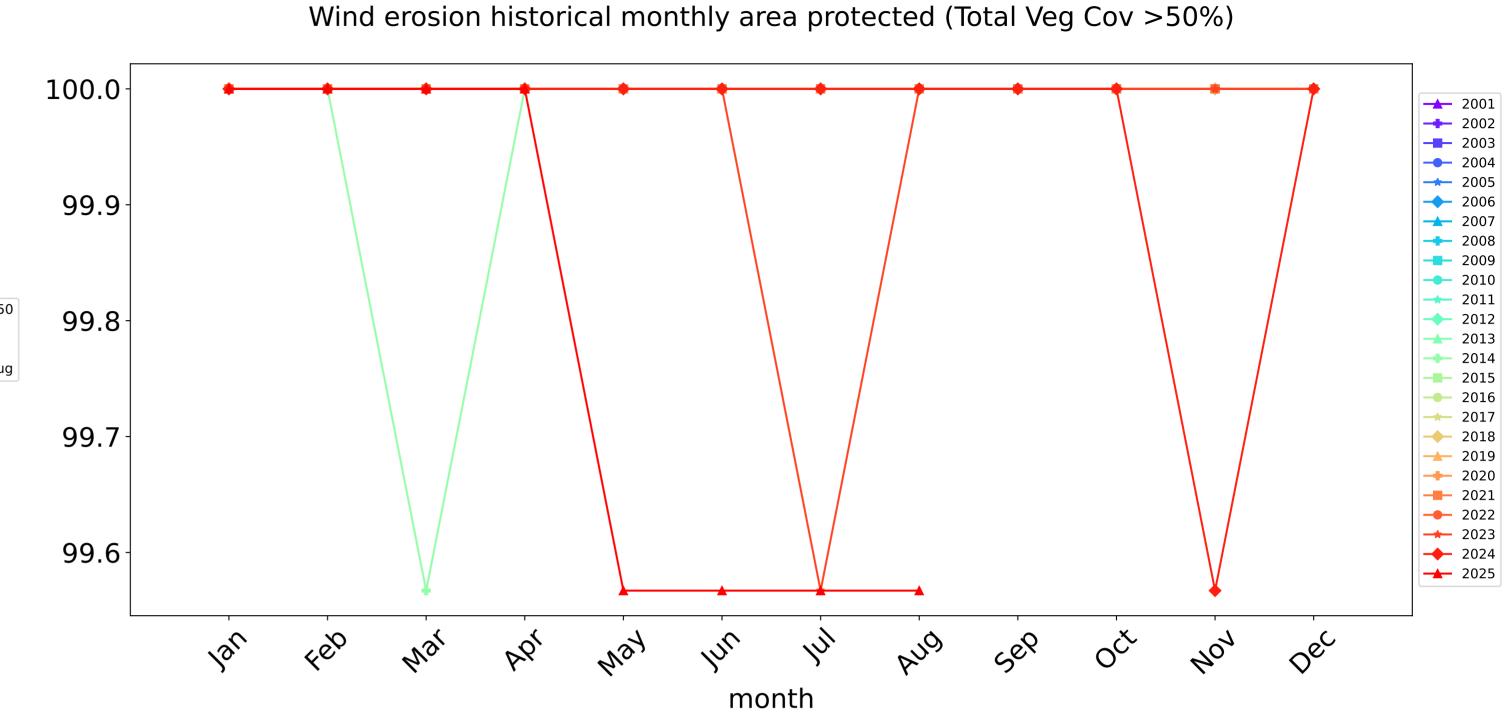


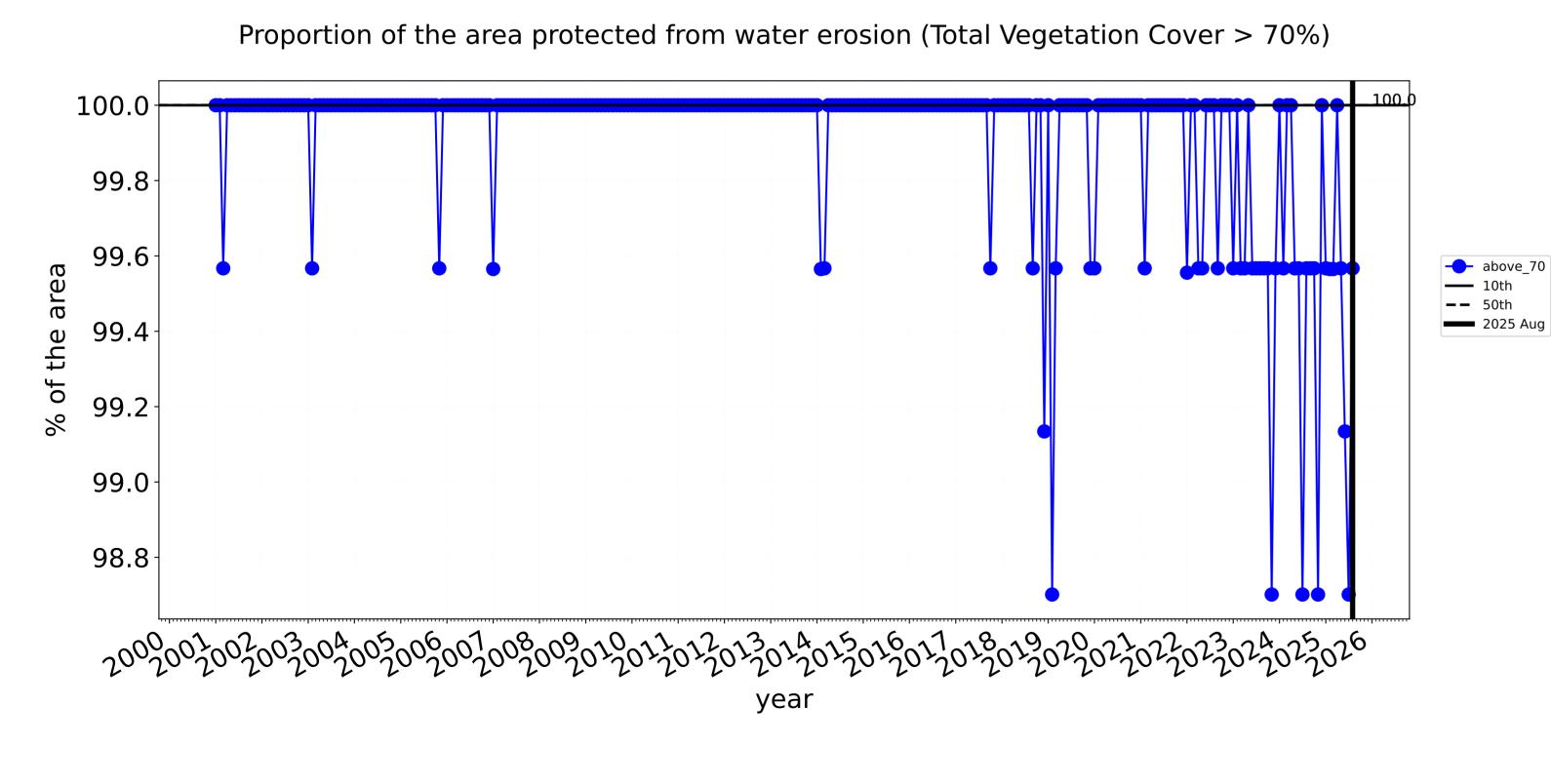


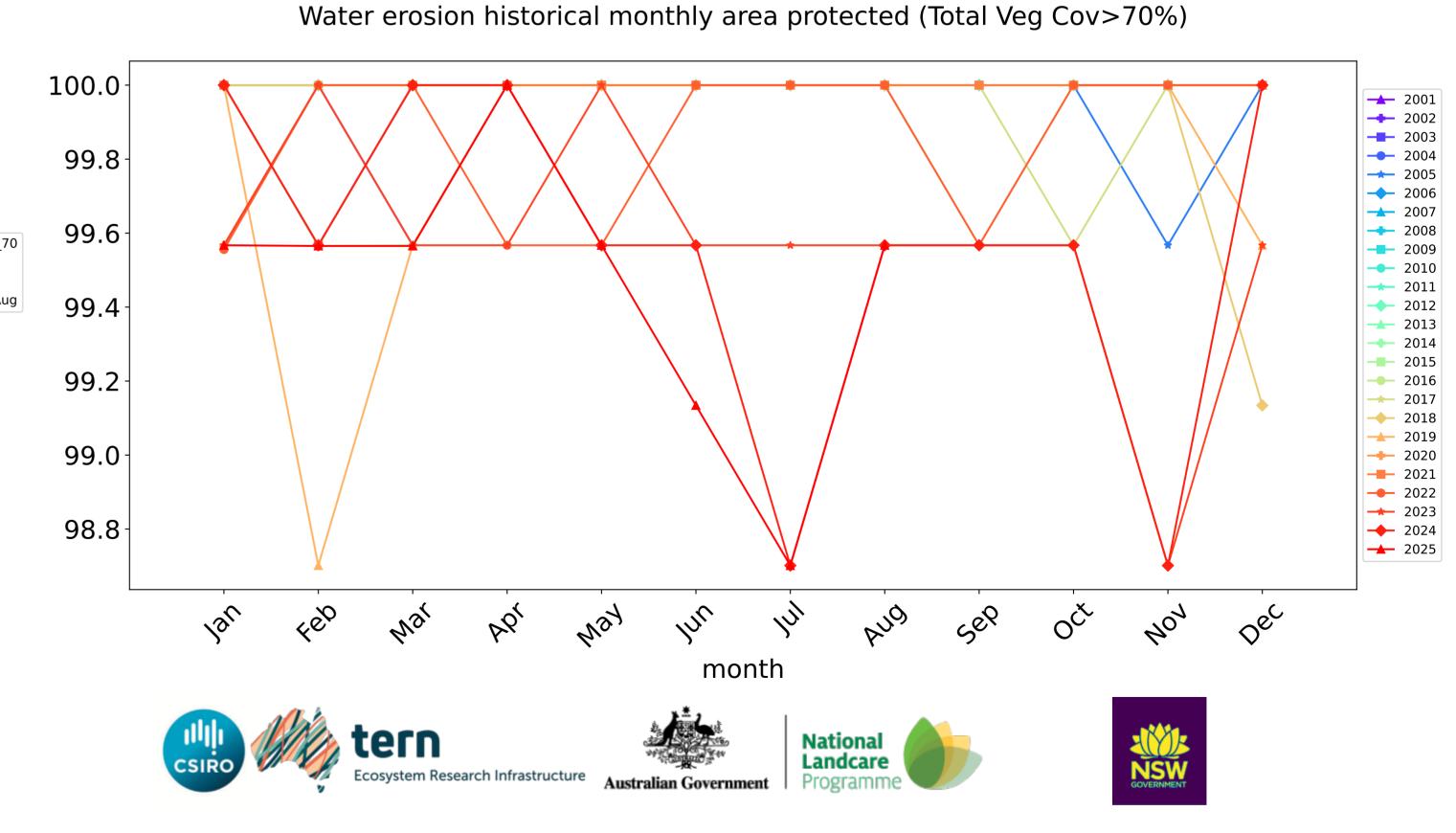


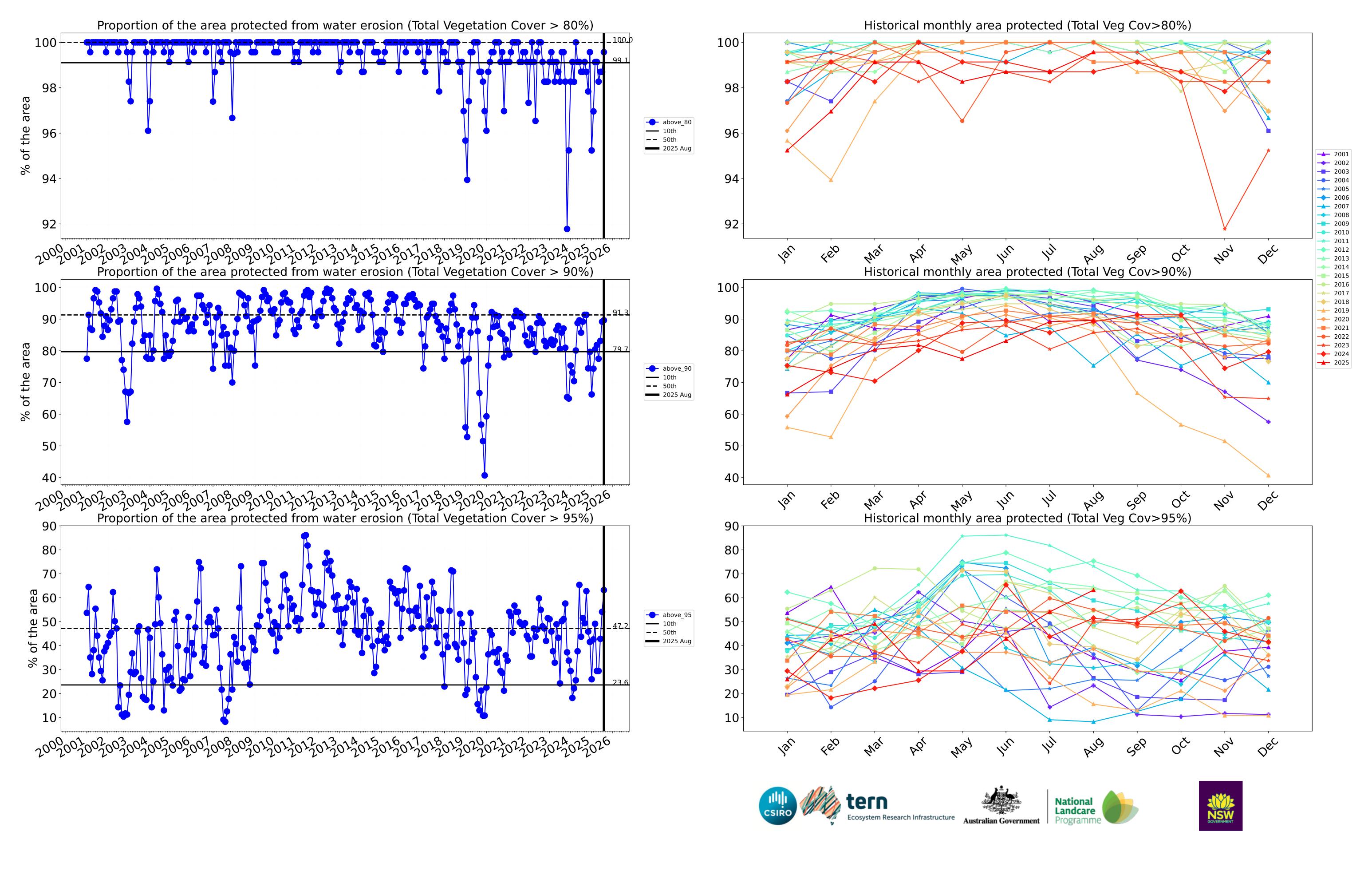
Grazing Woodland forest timeseries







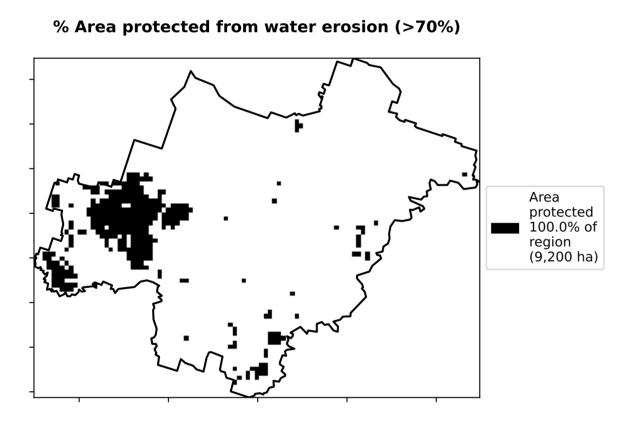


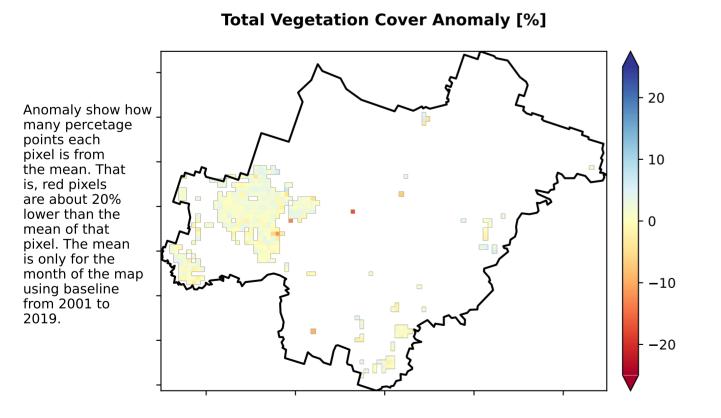


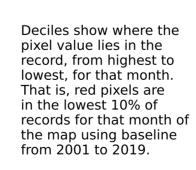
Grazing - Forest (non woodland)

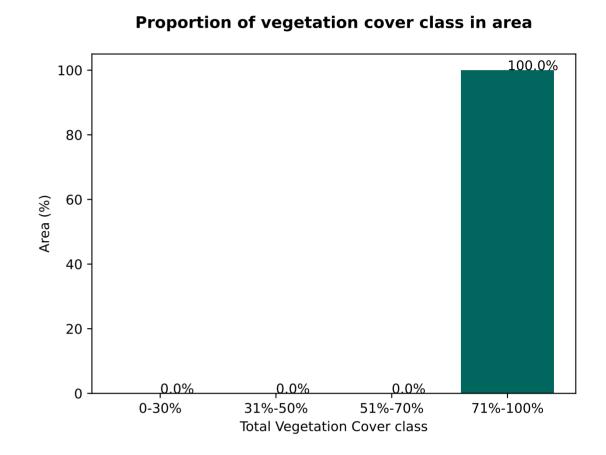
Catchment Scale Land Use and Forests of Australia (2018) Derived from Catchment Scale Land Use of Australia (2018) Australia (2018) and Forests of Australia (2018)

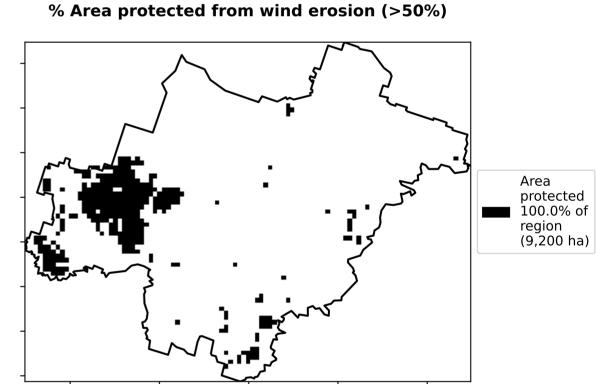
Total Vegetation Cover [%]

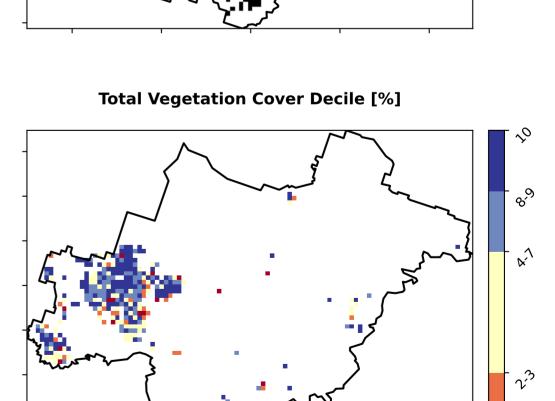










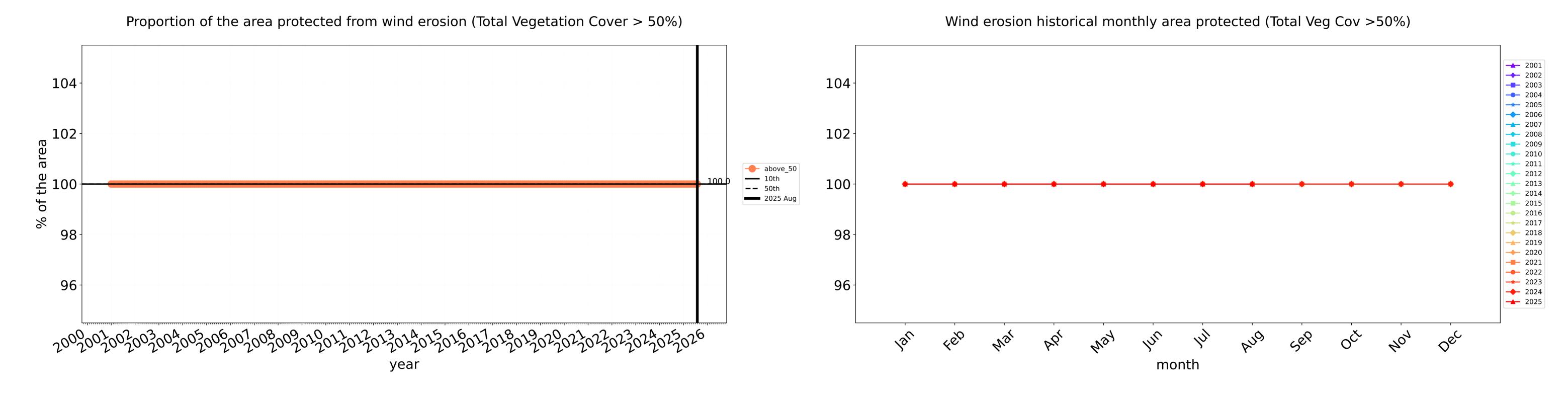


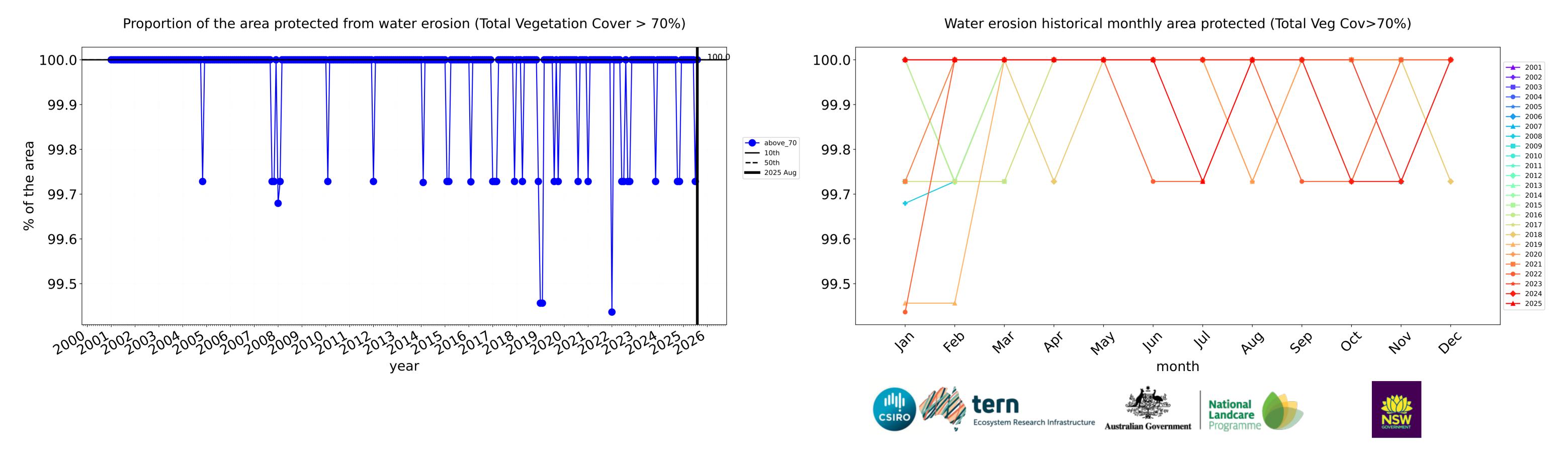


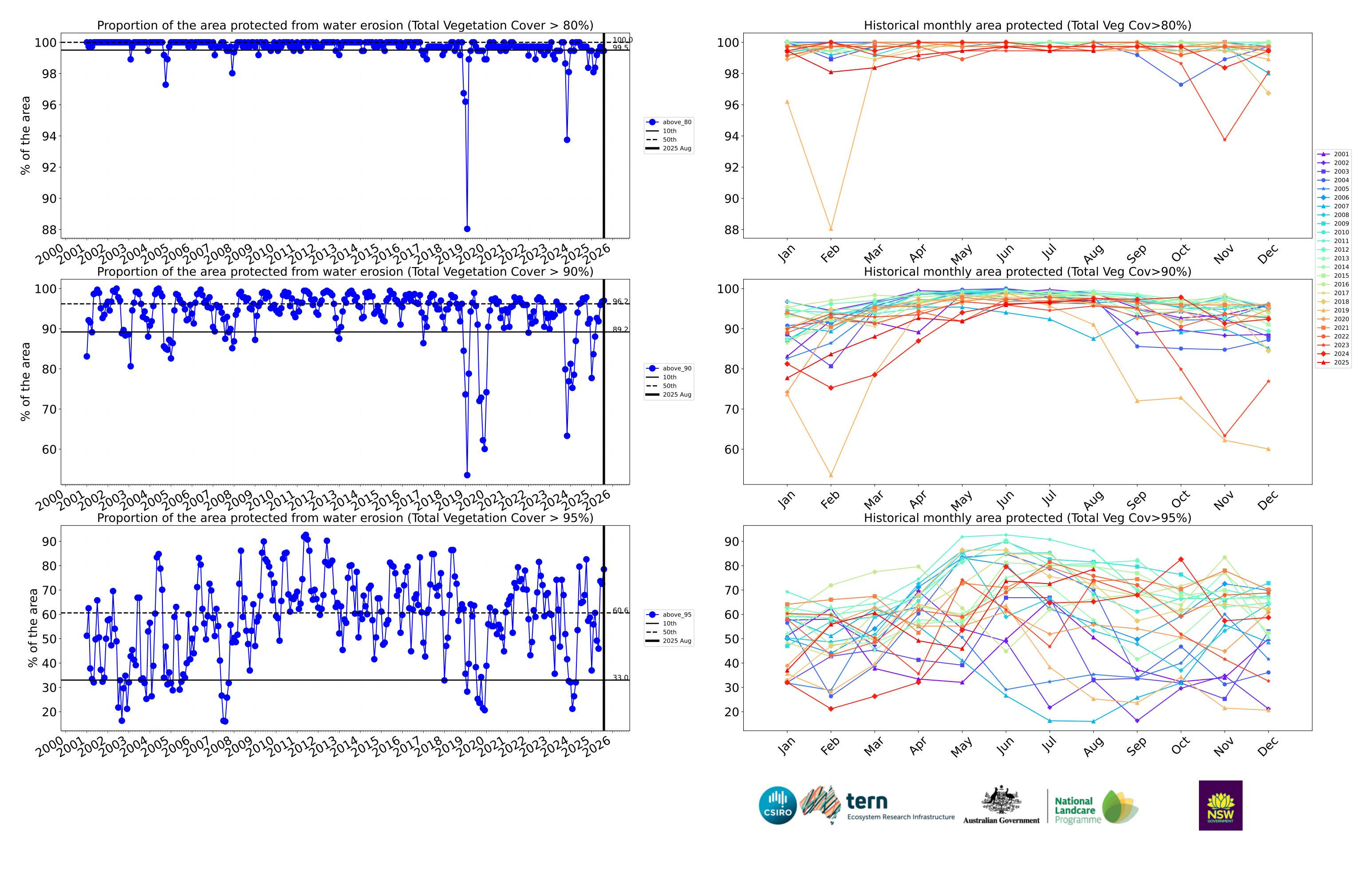




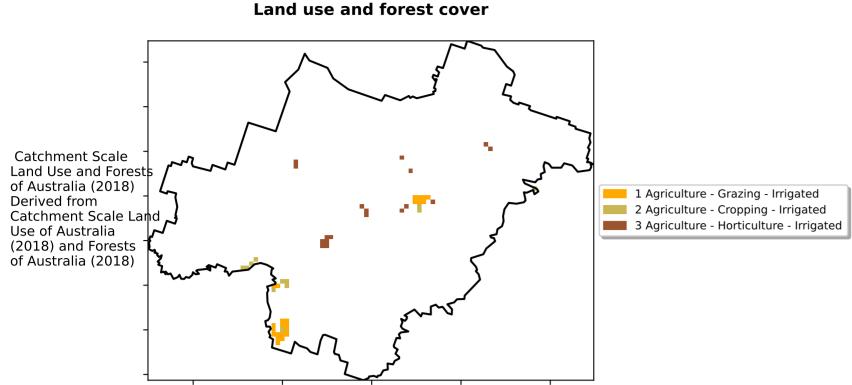








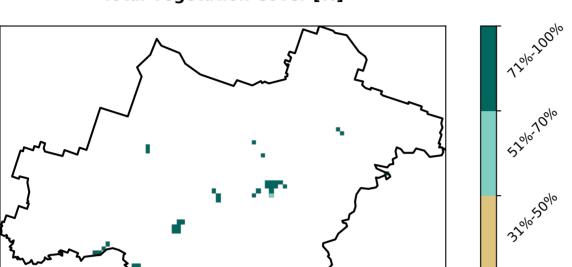
Irrigation

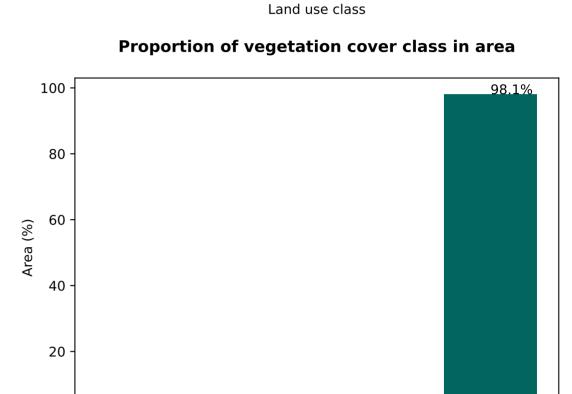


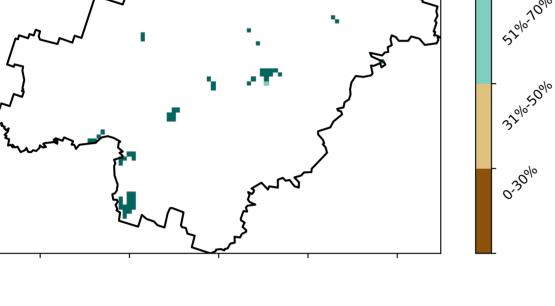
Total Vegetation Cover [%]

43.4% 40 34.0% 30 -Area (%) 22.6% 10 -0.5 0.5 1.0 1.5 0.0 2.0 2.5

Proportion of each land class in area







% Area protected from wind erosion (>50%)

Total Vegetation Cover class

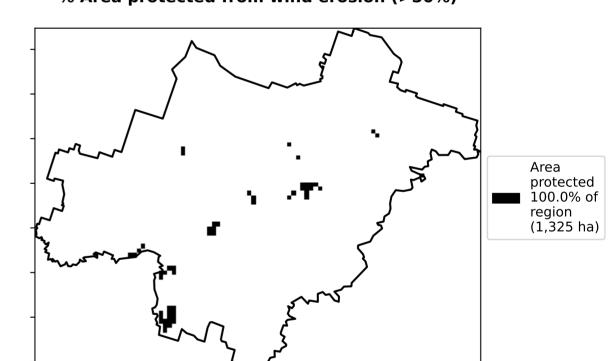
0.0%

31%-50%

0.0%

0-30%

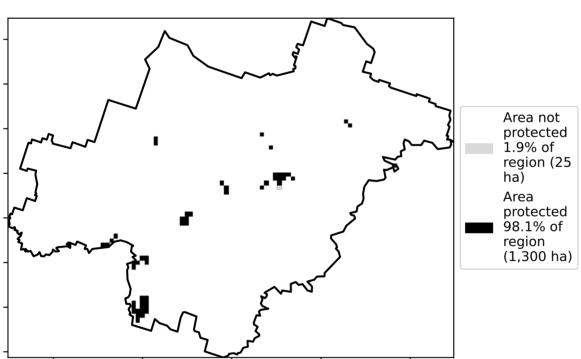




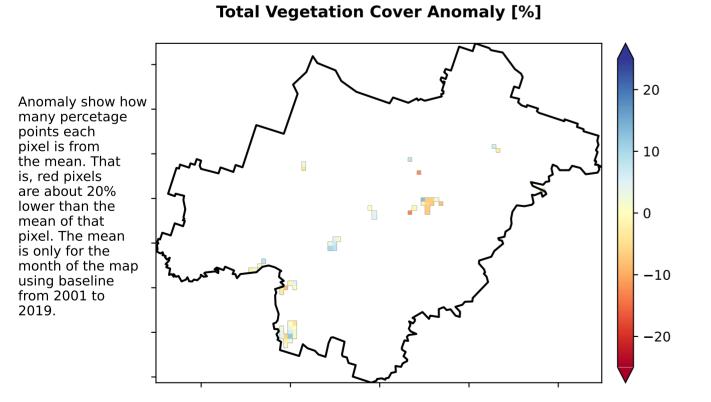
1.9%

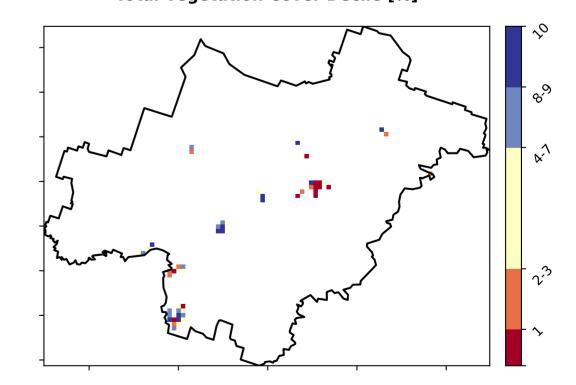
71%-100%

51%-70%









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 man using baseling. the map using baseline from 2001 to 2019.

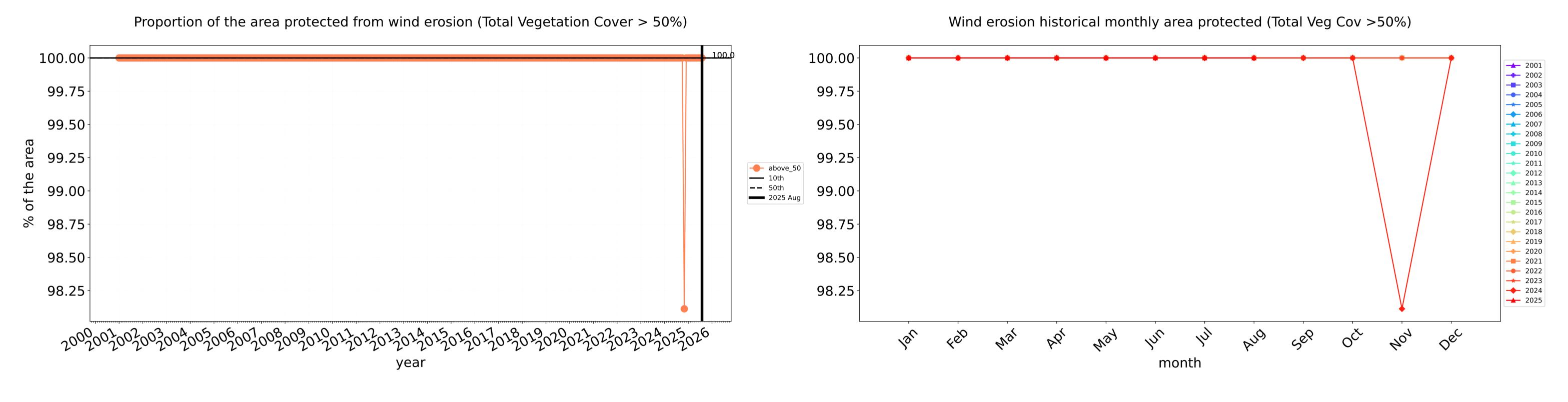


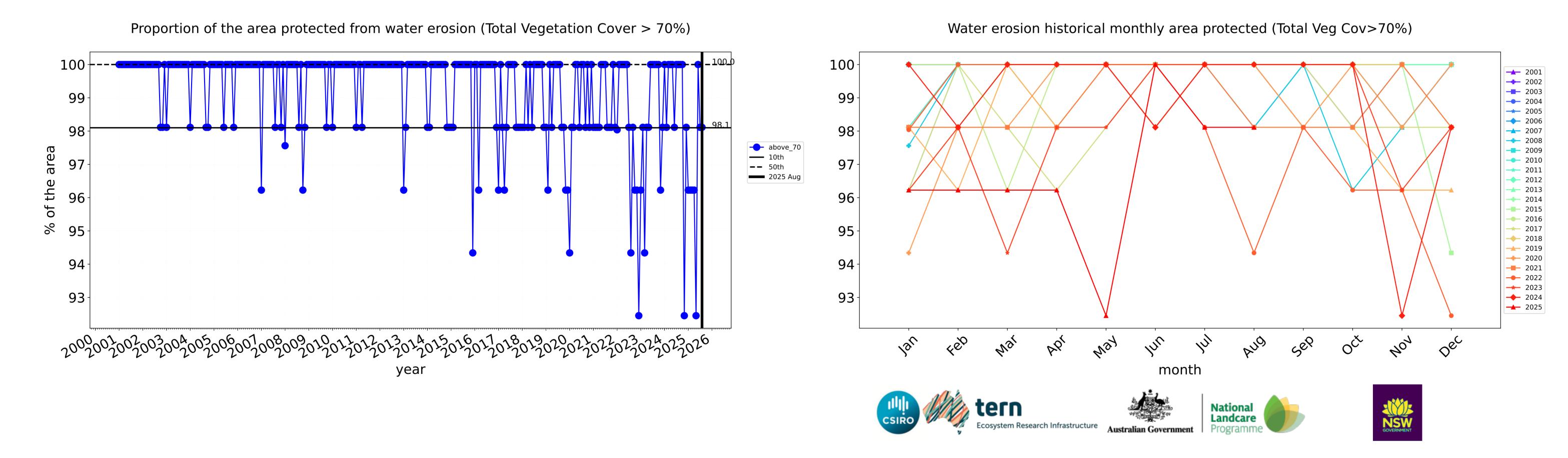


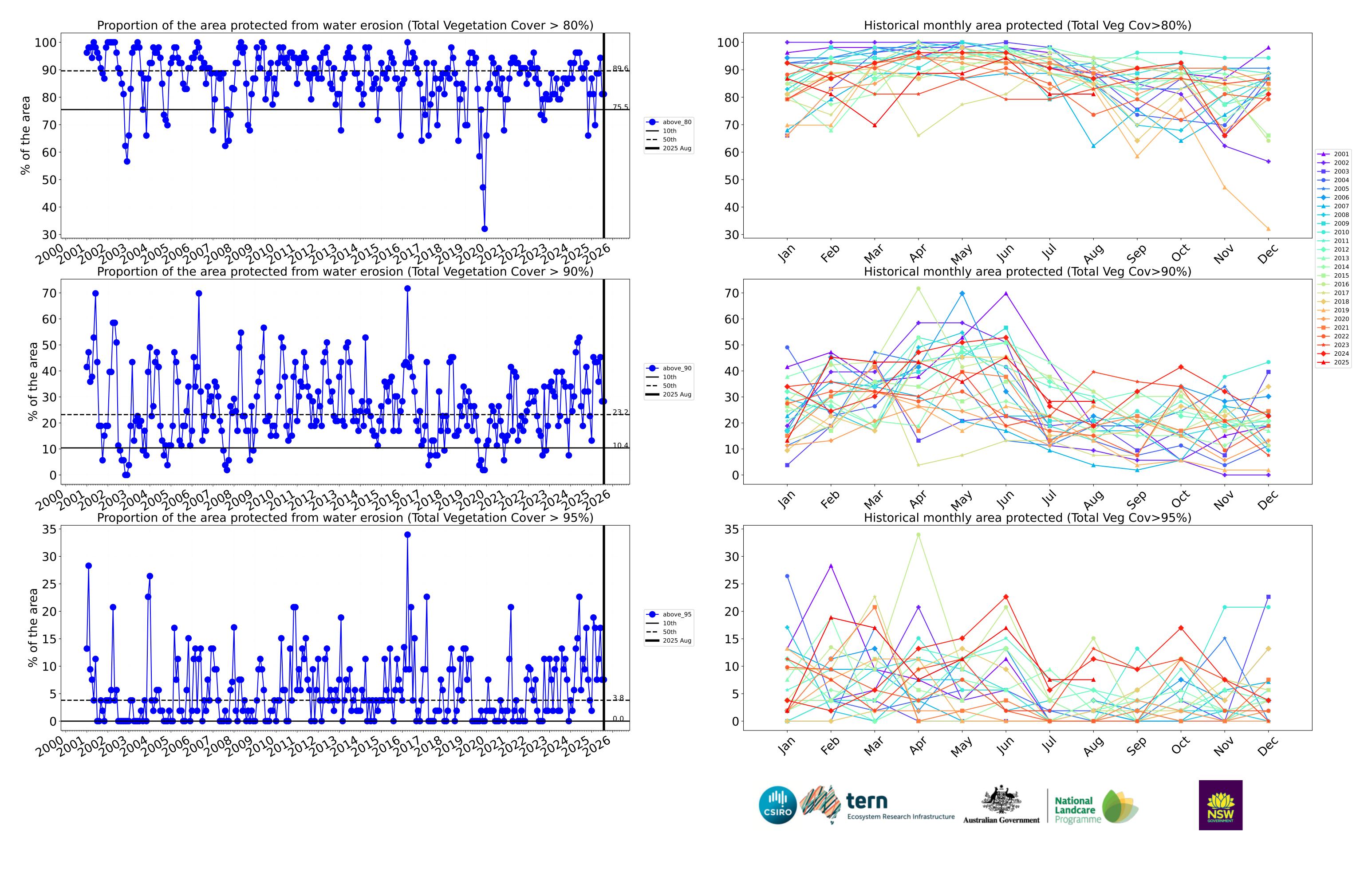




Irrigation timeseries





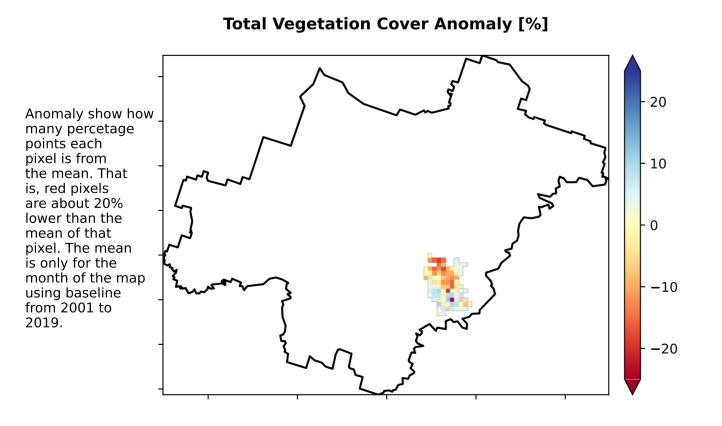


Production native forests and plantation forests

Land use and forest cover Catchment Scale Land Use and Forests of Australia (2018) Derived from 1 Production native forests and plantation forests Catchment Scale Land Use of Australia (2018) and Forests of Australia (2018)

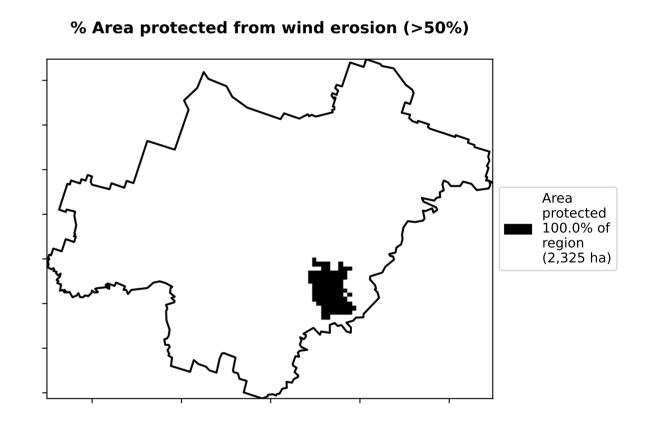
Total Vegetation Cover [%]

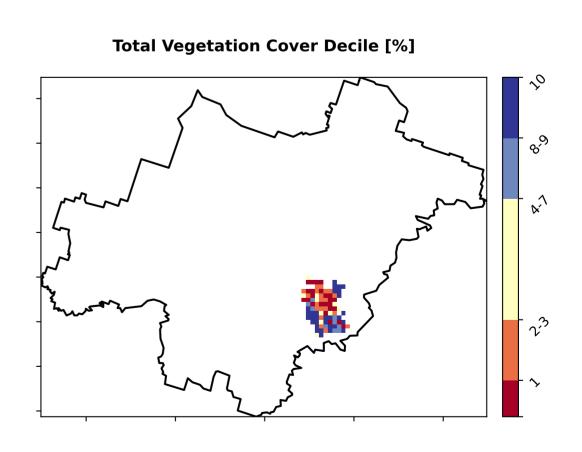
% Area protected from water erosion (>70%) Area not protected 8.6% of region (200 ha) Area protected 91.4% of region (2,125 ha)



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 man using baseling. the map using baseline from 2001 to 2019.

Proportion of vegetation cover class in area 91.4% 80 60 Area (%) 20 8.6% 0.0% 0.0% 0-30% 31%-50% 51%-70% 71%-100% Total Vegetation Cover class





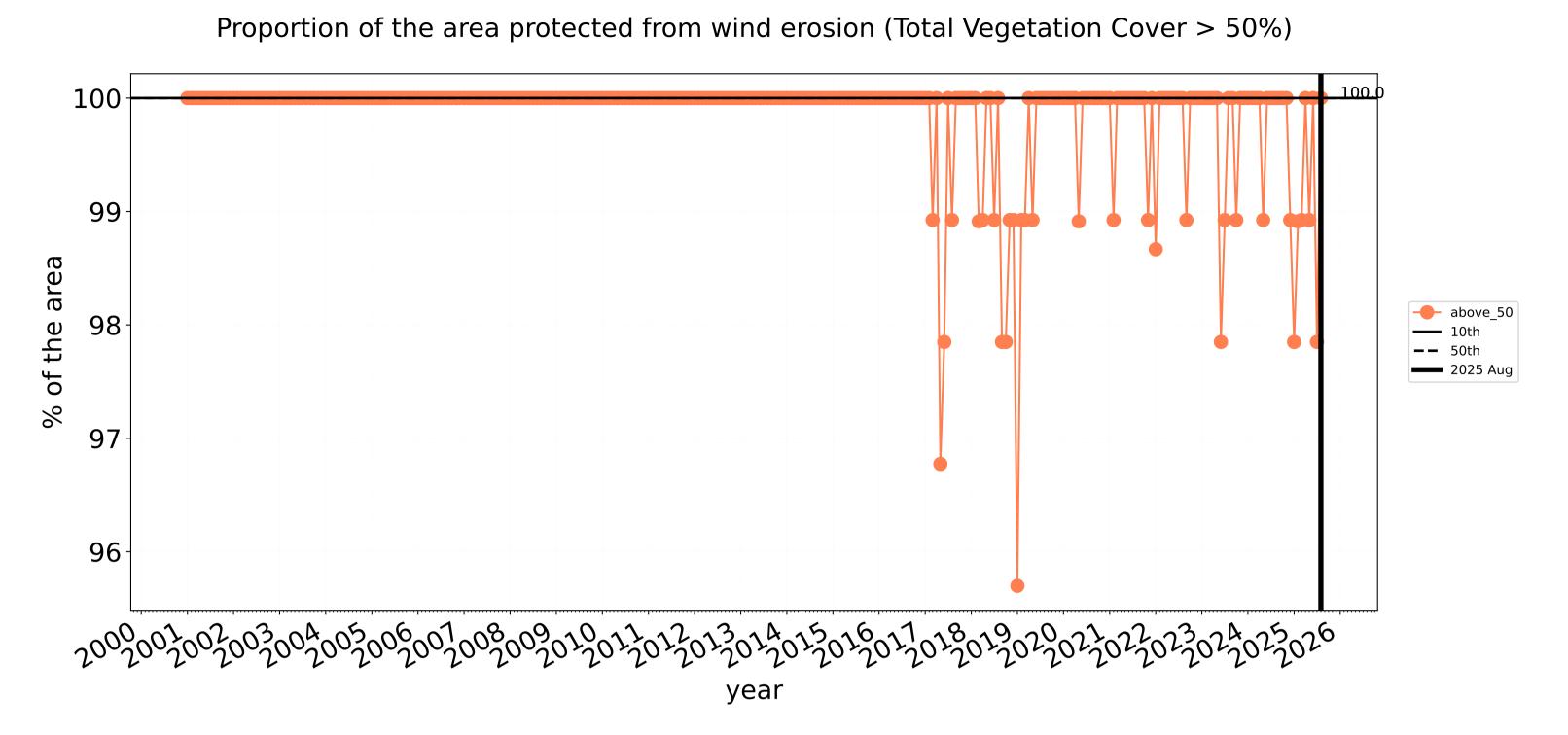


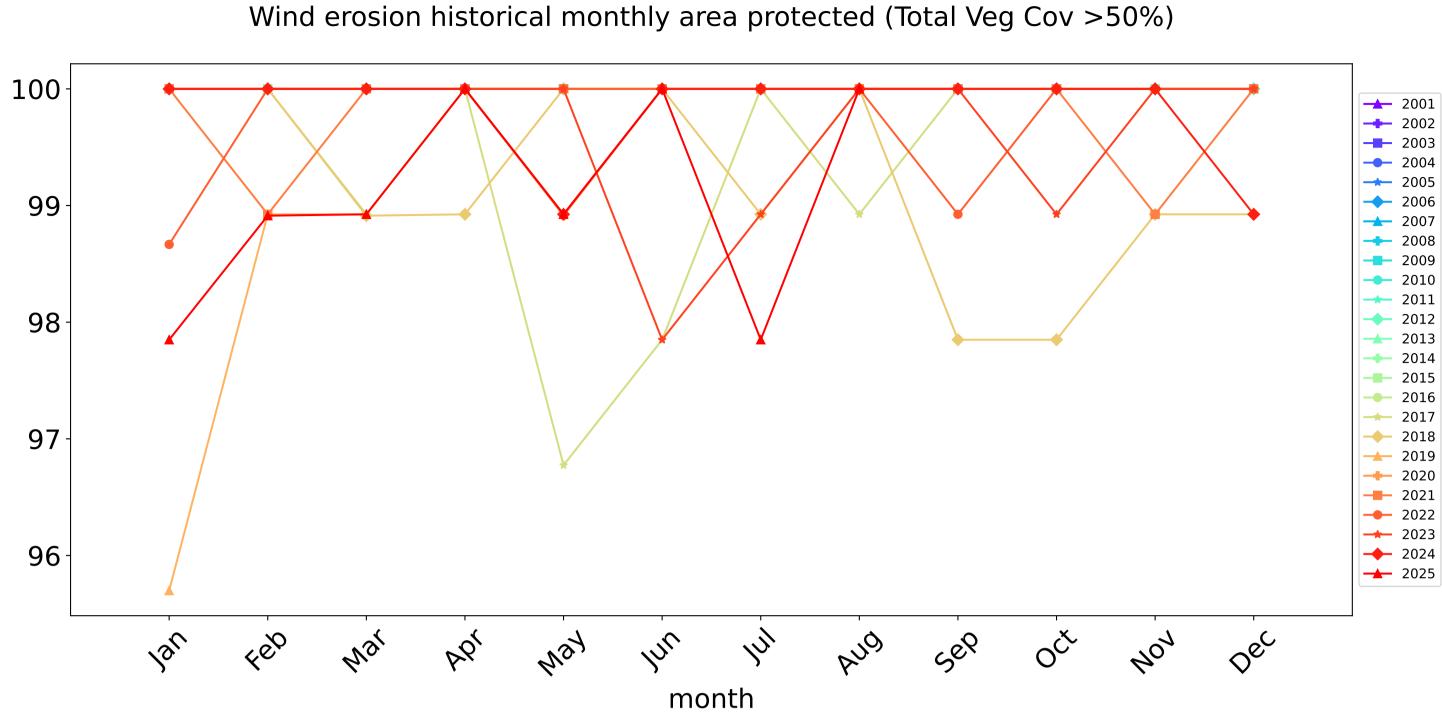


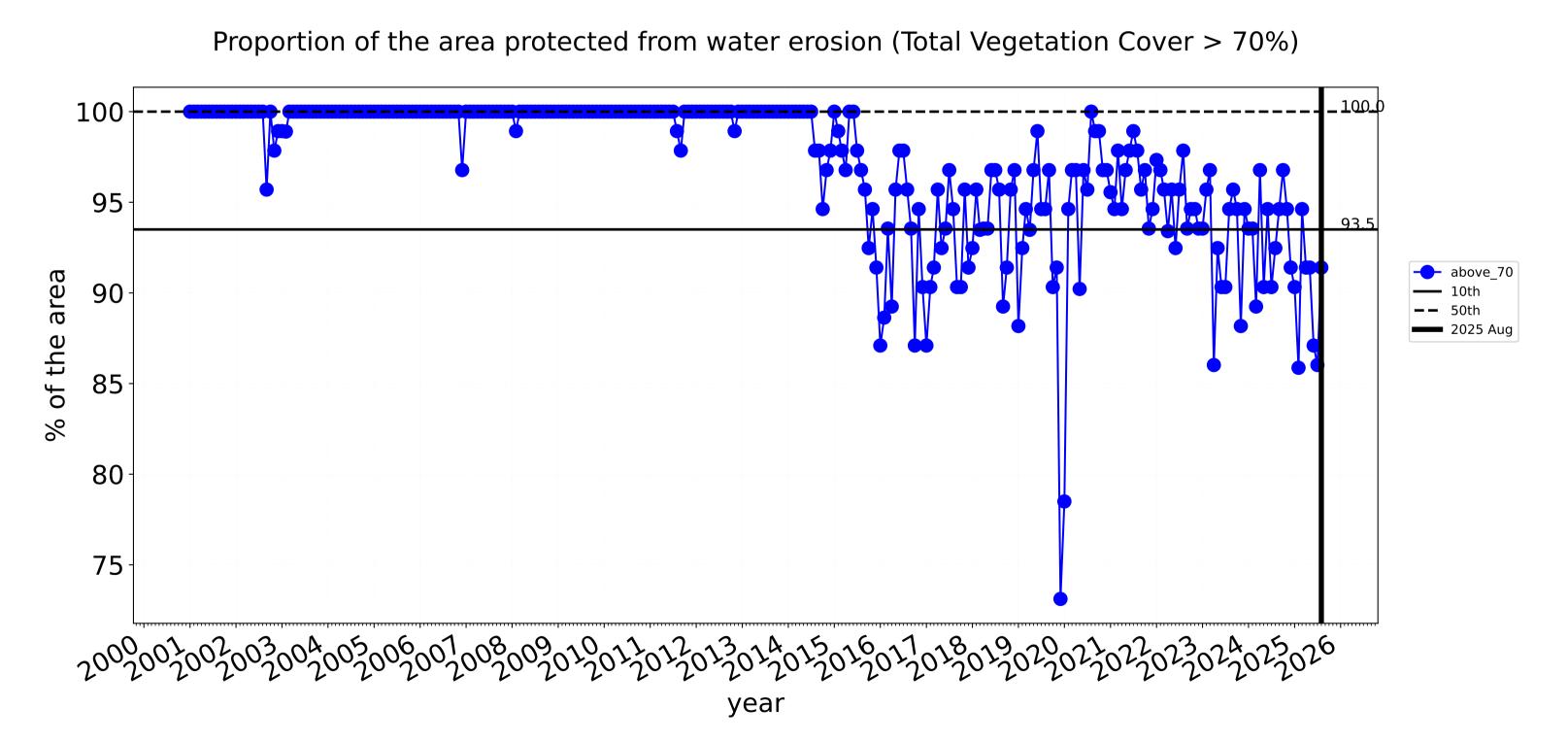


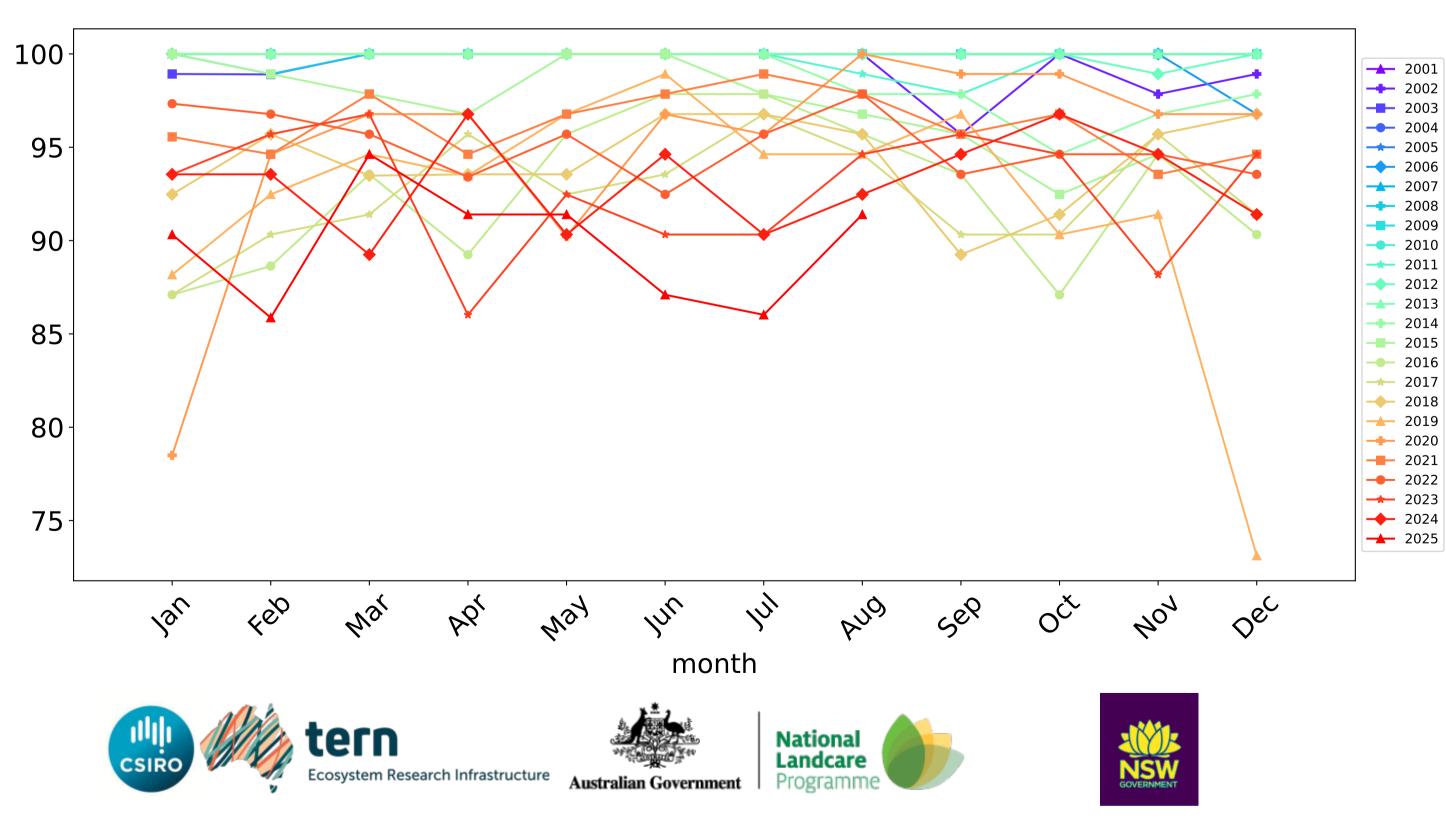


Production native forests and plantation forests timeseries

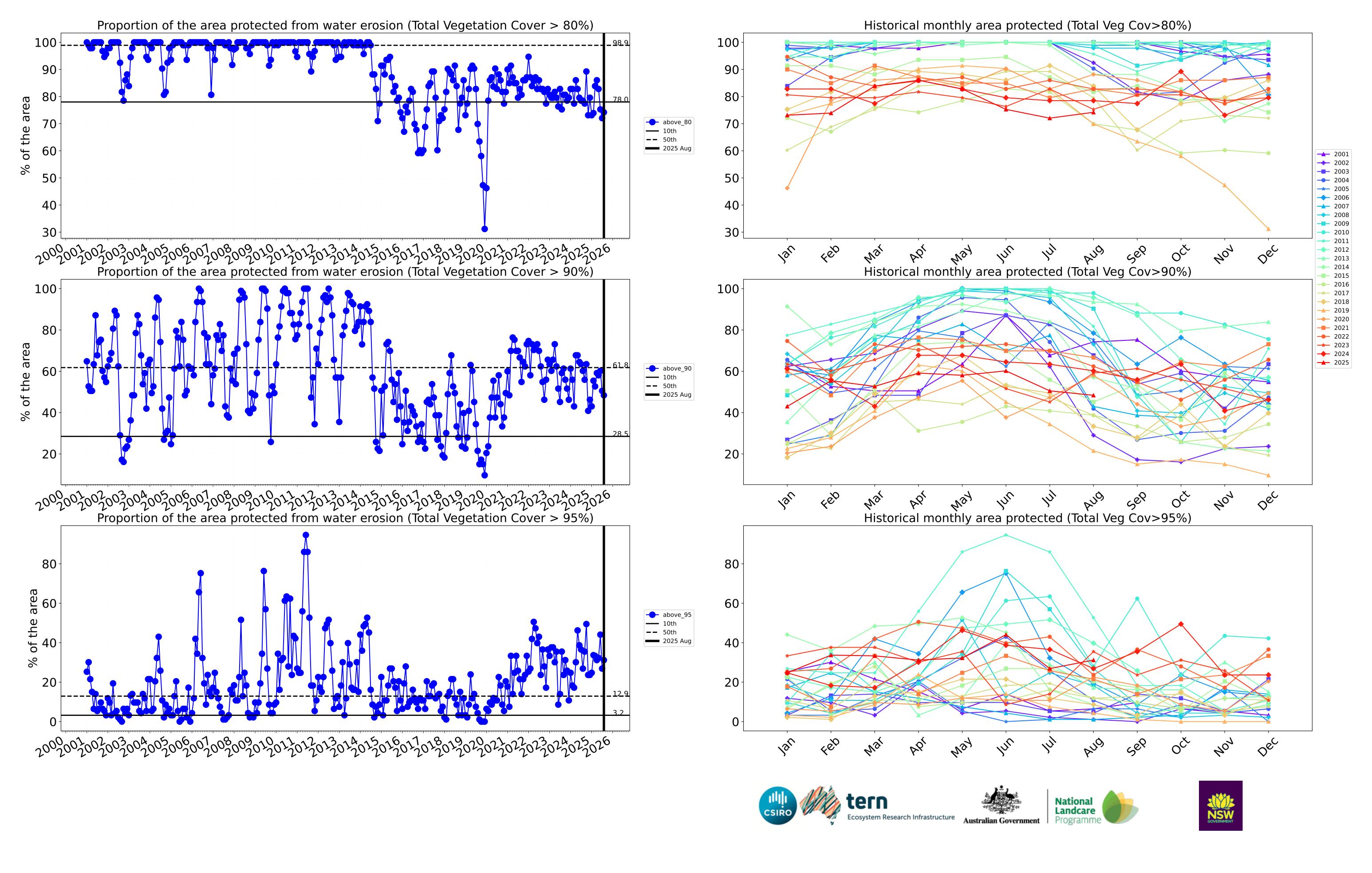








Water erosion historical monthly area protected (Total Veg Cov>70%)



Logan_(C) (total 95,925 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	95,925	100.0% 95,925	99.6% 95,525	92.8% 89,025	82.7% 79,300	62.9% 60,325	36.5% 35,025
Conservation and natural environments	10,775	100.0% 10,775	100.0% 10,775	99.8% 10,750	97.4% 10,500	92.6% 9,975	81.7% 8,800
Conservation and natural environments Woodland forest	2,675	100.0% 2,675	100.0% 2,675	100.0% 2,675	98.1% 2,625	91.6% 2,450	85.0% 2,275
Conservation and natural environments Forest (non woodland)	7,950	100.0% 7,950	100.0% 7,950	99.7% 7,925	97.5% 7,750	93.4% 7,425	81.8% 6,500
Agriculture	31,325	100.0% 31,325	99.8% 31,250	98.6% 30,875	94.2% 29,500	77.6% 24,300	49.1% 15,375
Grazing	29,800	100.0% 29,800	99.7% 29,725	98.7% 29,400	94.8% 28,250	80.0% 23,850	51.2% 15,250
Grazing non forest	14,825	100.0% 14,825	99.7% 14,775	97.5% 14,450	90.1% 13,350	65.8% 9,750	29.5% 4,375
Grazing Woodland forest	5,775	100.0% 5,775	99.6% 5,750	99.6% 5,750	99.6% 5,750	89.6% 5,175	63.2% 3,650
Grazing - Forest (non woodland)	9,200	100.0% 9,200	100.0% 9,200	100.0% 9,200	99.5% 9,150	97.0% 8,925	78.5% 7,225
Irrigation	1,325	100.0% 1,325	100.0% 1,325	98.1% 1,300	81.1% 1,075	28.3% 375	7.5% 100
Production native forests and plantation forests	2,325	100.0% 2,325	100.0% 2,325	91.4% 2,125	74.2% 1,725	48.4% 1,125	31.2% 725







