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

Date: November 2024

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 covers at least 1% of the area of the chosen region. Total vegetation Cover:

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

• 71-100% High cover - protected from wind and usually water erosion (high rainfall, steep slopes, and erodible soils may need greater than 80, 90, 95 and up to 100% cover)

- 51-70% Moderate cover protected from wind erosion
- 31-50% Low cover not protected
- 0-30% Very Low cover not protected

Erosion protection: Wind erosion 50% total vegetation cover

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

- Map: water erosion protection (>70% cover) percentage area and hectares.
- Map: wind erosion protection (>50% cover) percentage area and hectares. Comparison with previous years:
 - Map: anomaly comparing this month to the average cover from the same month in previous years.
 - Map: deciles rank of month against the same month in previous years.

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

Erosion protection

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

Rainfall

• Millimetres rainfall each month (black line).

Each time series is also stacked by year. The black line shows the current year of data. Water erosion protection for higher rainfall and steeper slopes:

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

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

Acknowledgment of data:

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

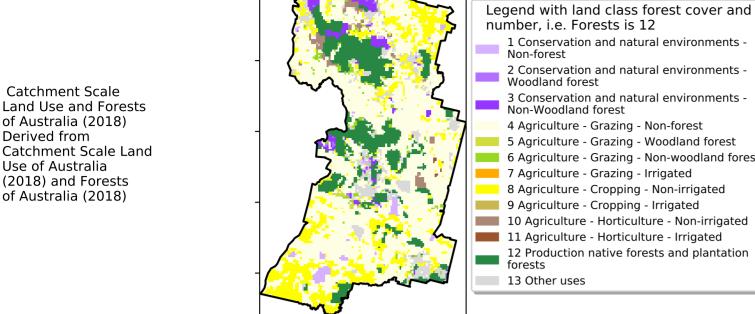
https://doi.org/10.4225/08/5848a3f19a7b3



Vegetation Cover Nov 2024

Land use and forest cover

Proportion of each land class in area



	Non-Woodland forest
	4 Agriculture - Grazing - Non-forest
	5 Agriculture - Grazing - Woodland forest
2 🖉 🐪 🚺	6 Agriculture - Grazing - Non-woodland forest
	7 Agriculture - Grazing - Irrigated
	8 Agriculture - Cropping - Non-irrigated
	9 Agriculture - Cropping - Irrigated
1	10 Agriculture - Horticulture - Non-irrigated
1 m h	11 Agriculture - Horticulture - Irrigated
1 - Carlor - 1	12 Production native forests and plantation
	forests
	13 Other uses

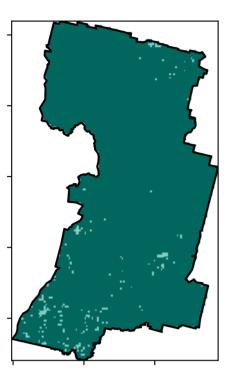
120/02/00/0

52°10'TO010

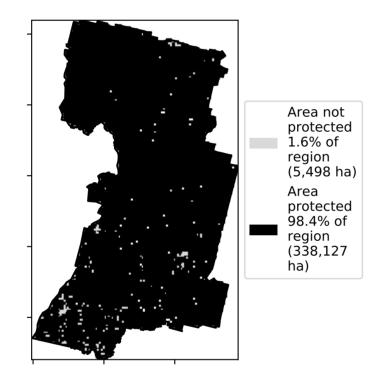
3201050010

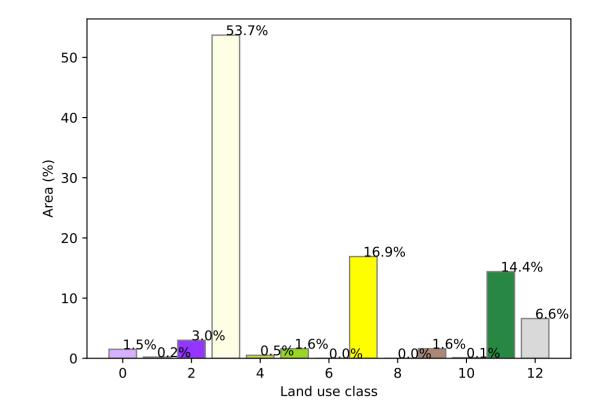
0.30%

Total Vegetation Cover [%]

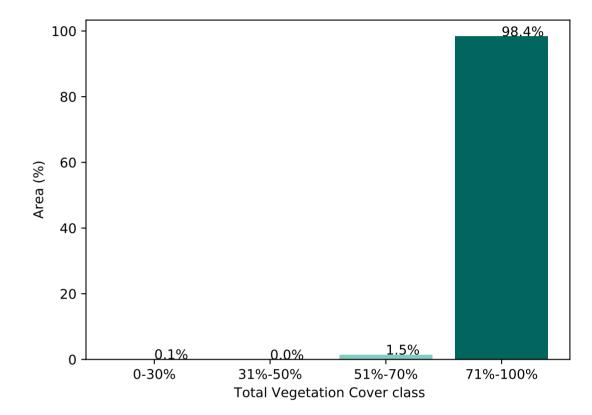




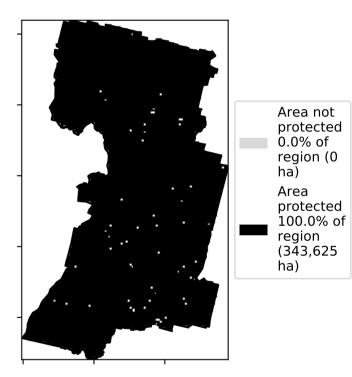




Proportion of vegetation cover class in area



% Area protected from wind erosion (>50%)



Total Vegetation Cover Anomaly [%]

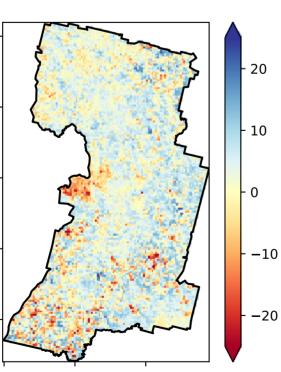
Anomaly show how many percetage points each pixel is from the mean. That is, red pixels are about 20% lower than the mean of that pixel. The mean is only for the month of the map using baseline from 2001 to 2019.

Catchment Scale

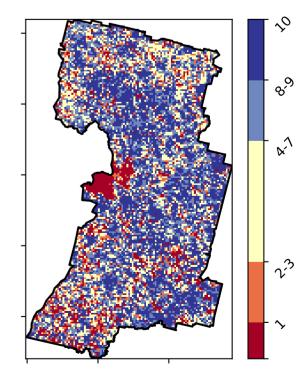
of Australia (2018)

Derived from

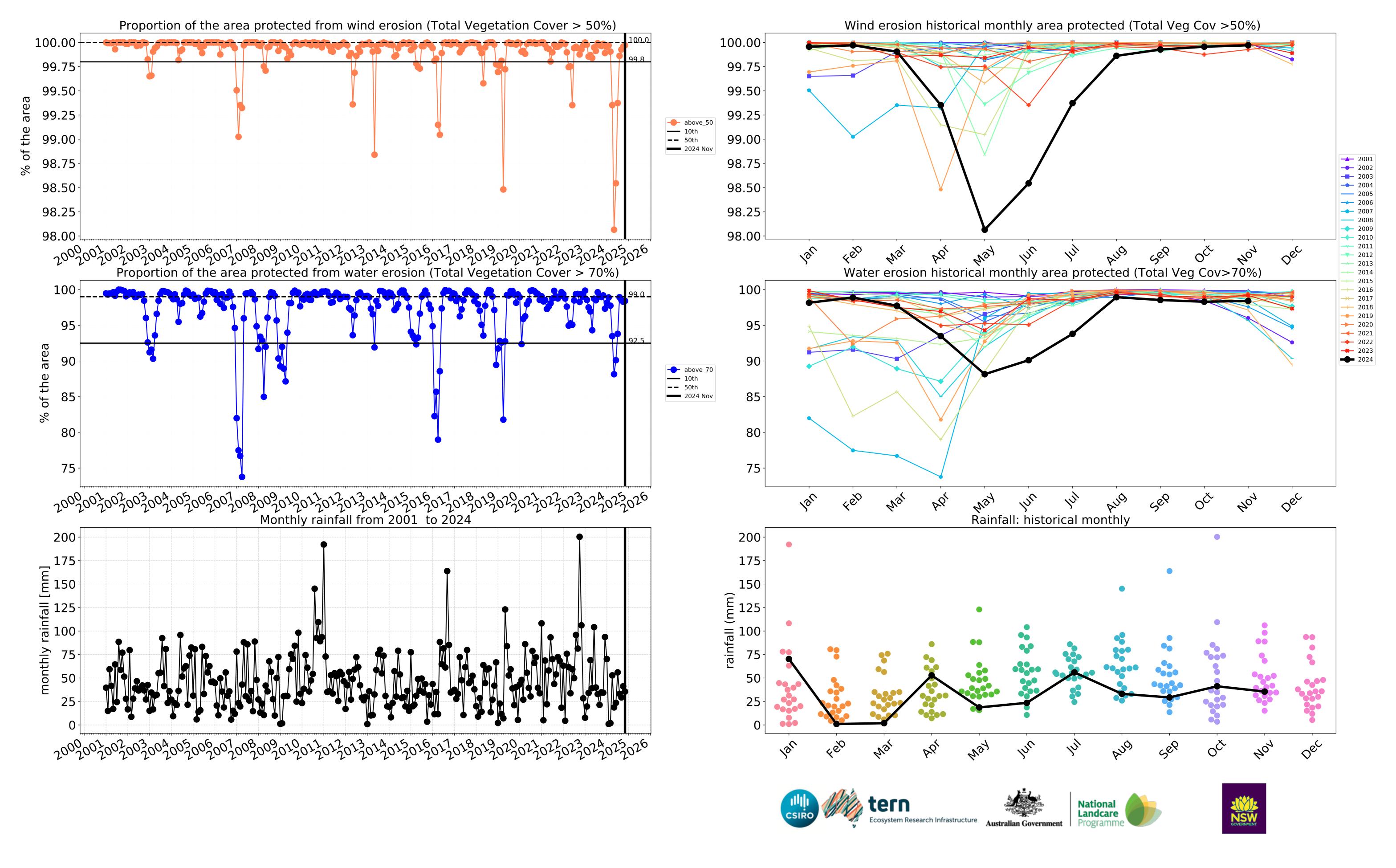
Use of Australia (2018) and Forests of Australia (2018)

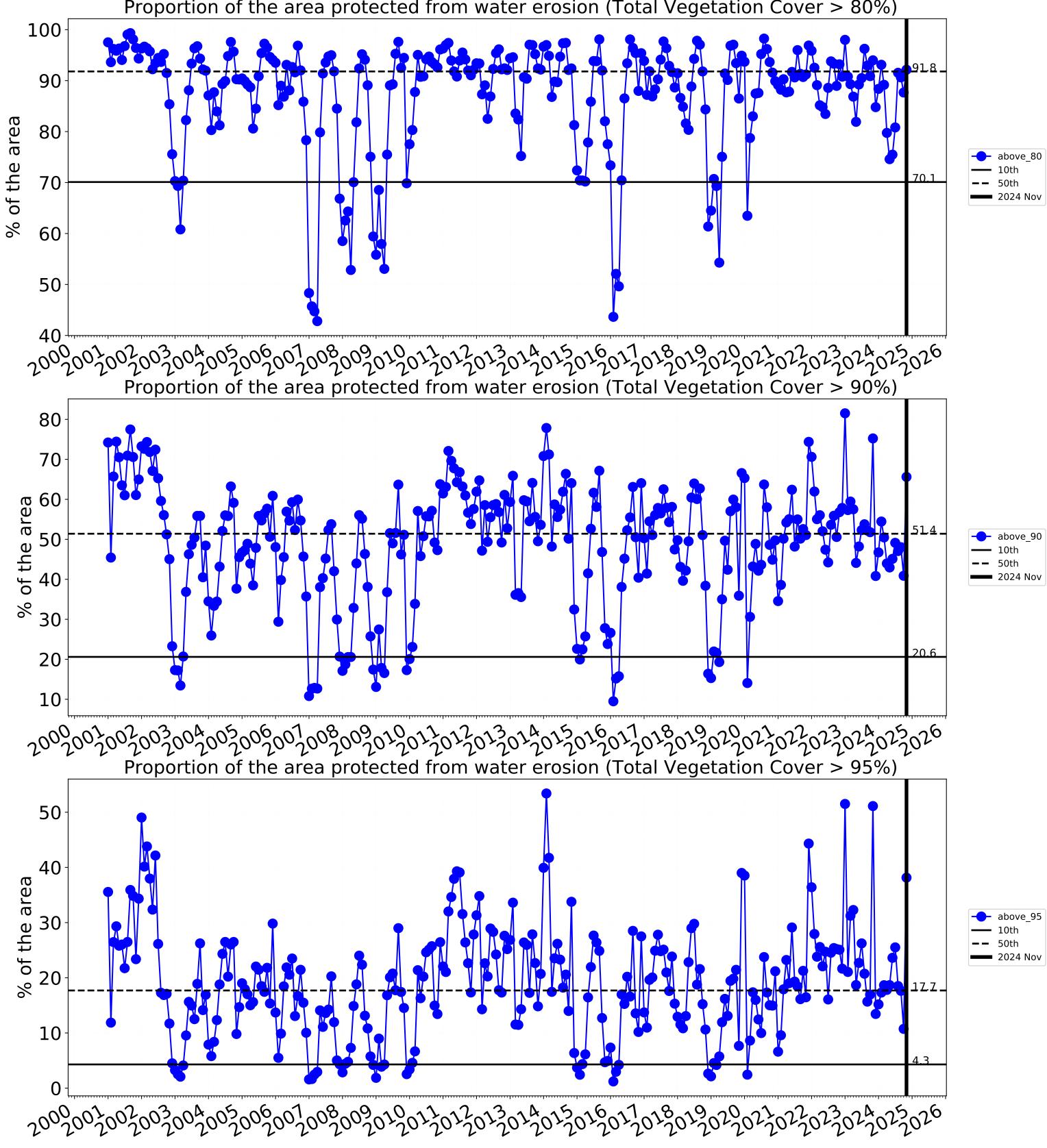


Deciles show where the pixel value lies in the record, from highest to lowest, for that month. That is, red pixels are in the lowest 10% of records for that month of the map using baseline from 2001 to 2019.

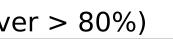


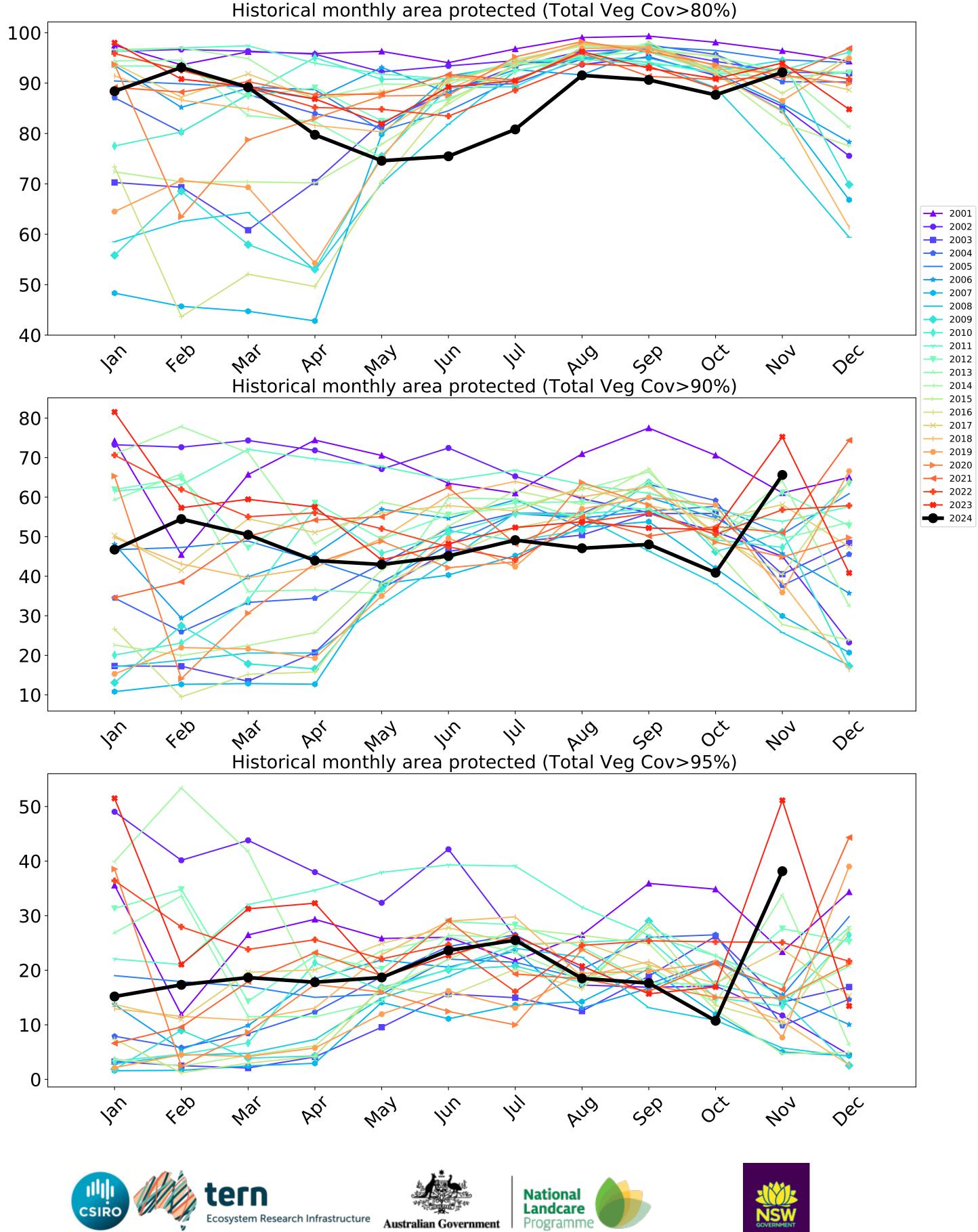






Proportion of the area protected from water erosion (Total Vegetation Cover > 80%)



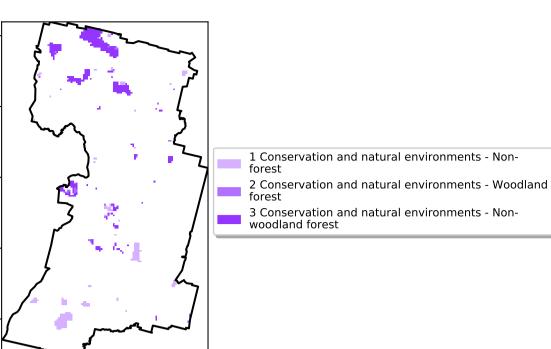




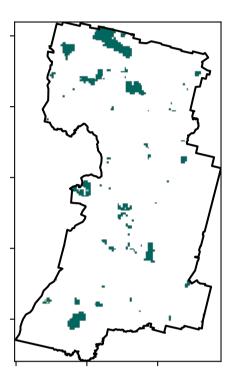
Conservation and natural environments

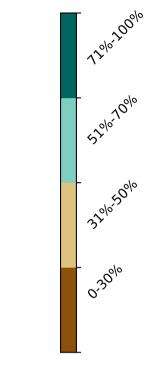
Land use and forest cover

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

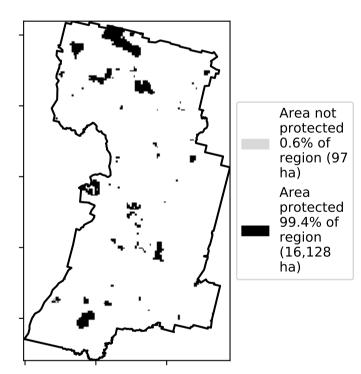


Total Vegetation Cover [%]

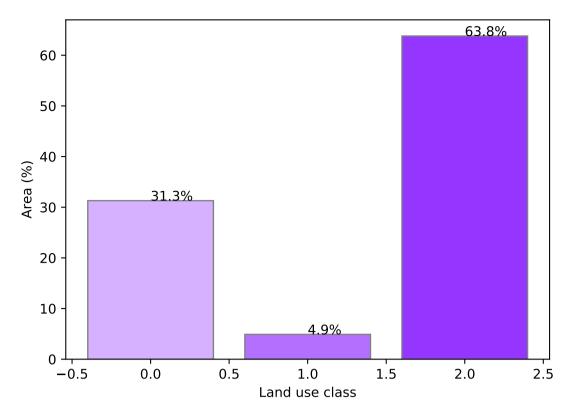




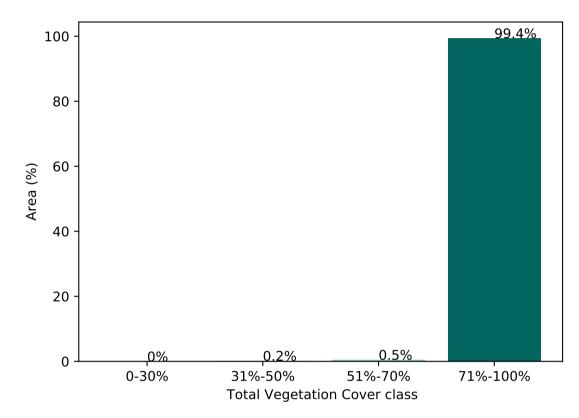
% Area protected from water erosion (>70%)



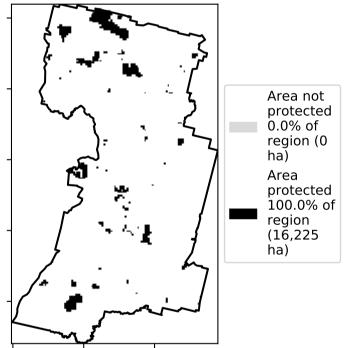
Proportion of each land class in area



Proportion of vegetation cover class in area



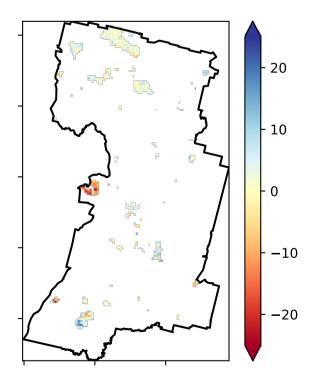
% Area protected from wind erosion (>50%)



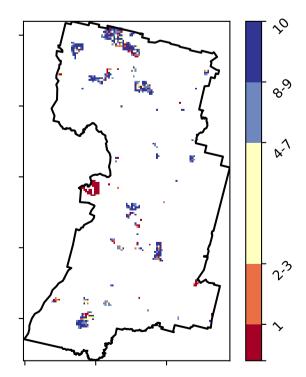


Total Vegetation Cover Anomaly [%]

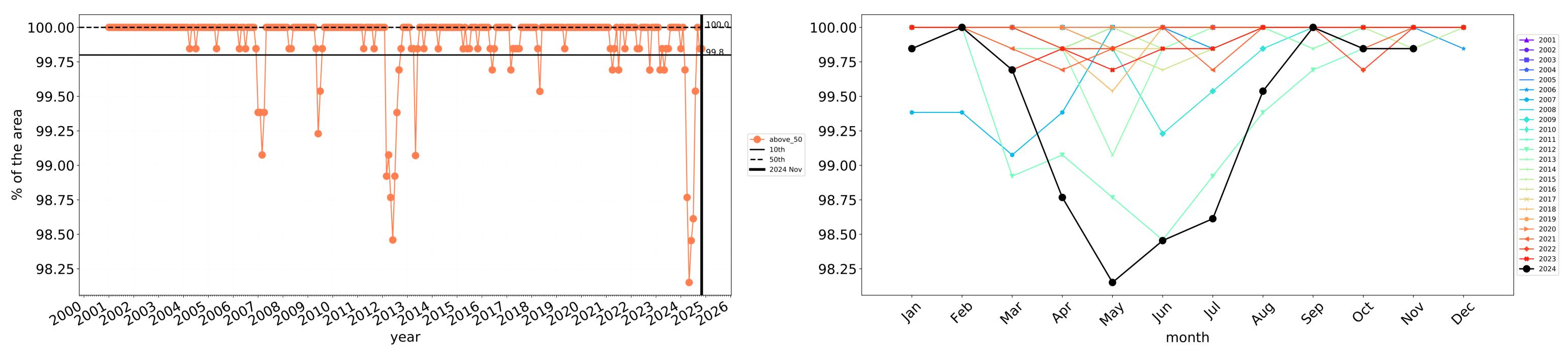
Anomaly show how many percetage points each pixel is from the mean. That is, red pixels are about 20% lower than the mean of that pixel. The mean is only for the month of the map using baseline from 2001 to 2019.



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.

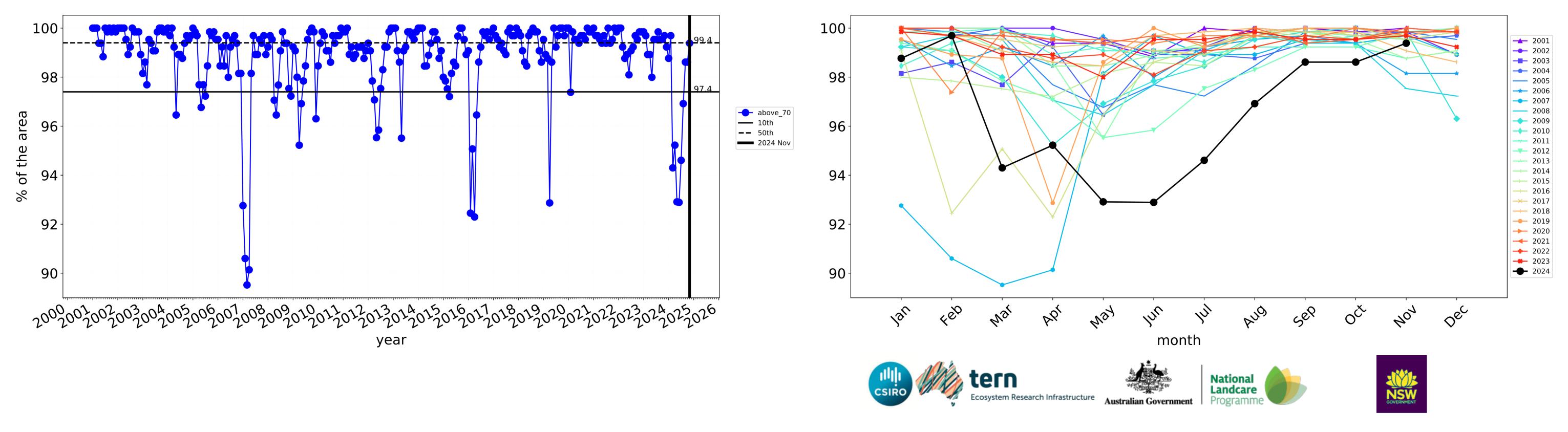


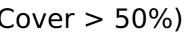




Proportion of the area protected from wind erosion (Total Vegetation Cover > 50%)

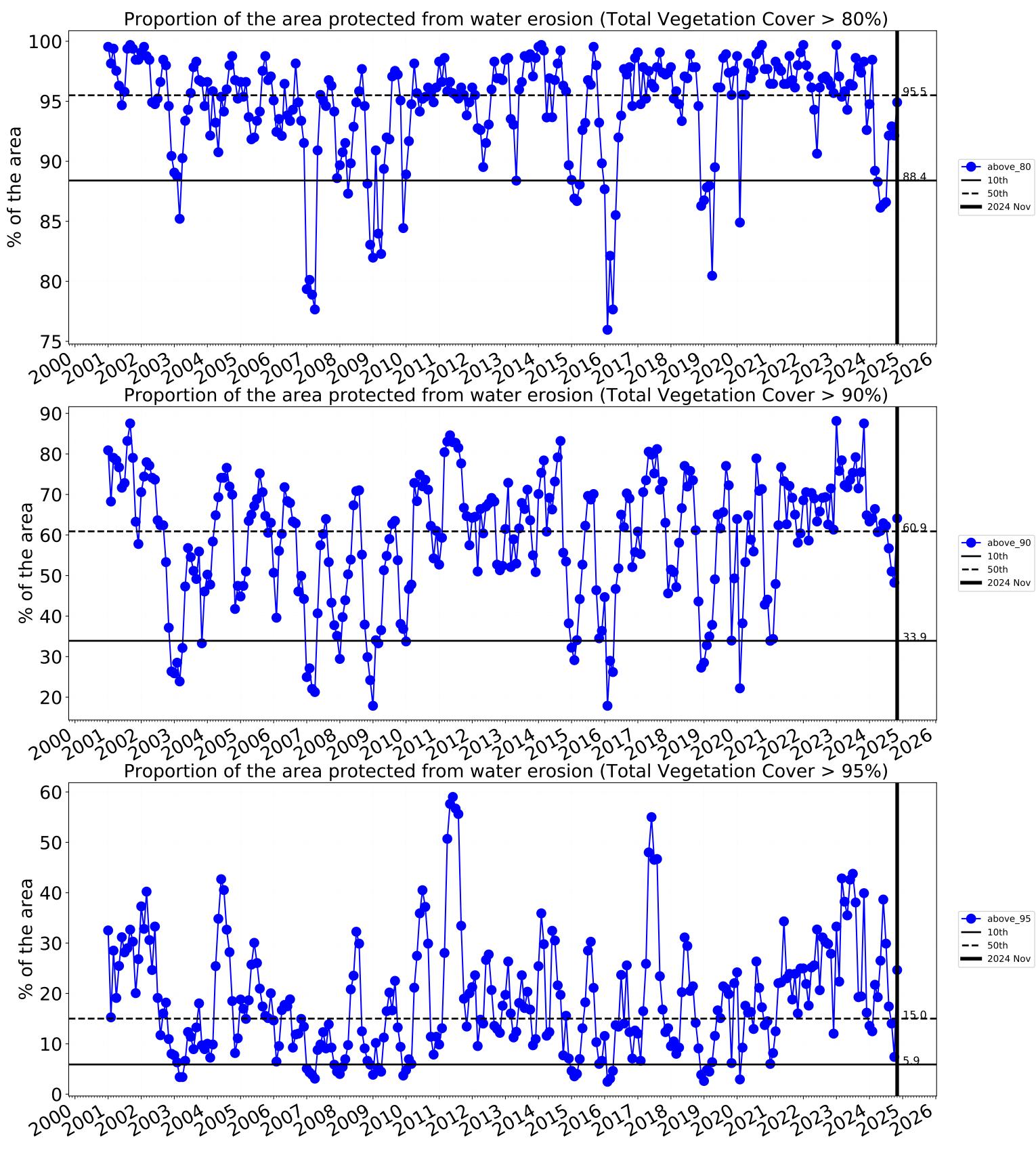
Proportion of the area protected from water erosion (Total Vegetation Cover > 70%)

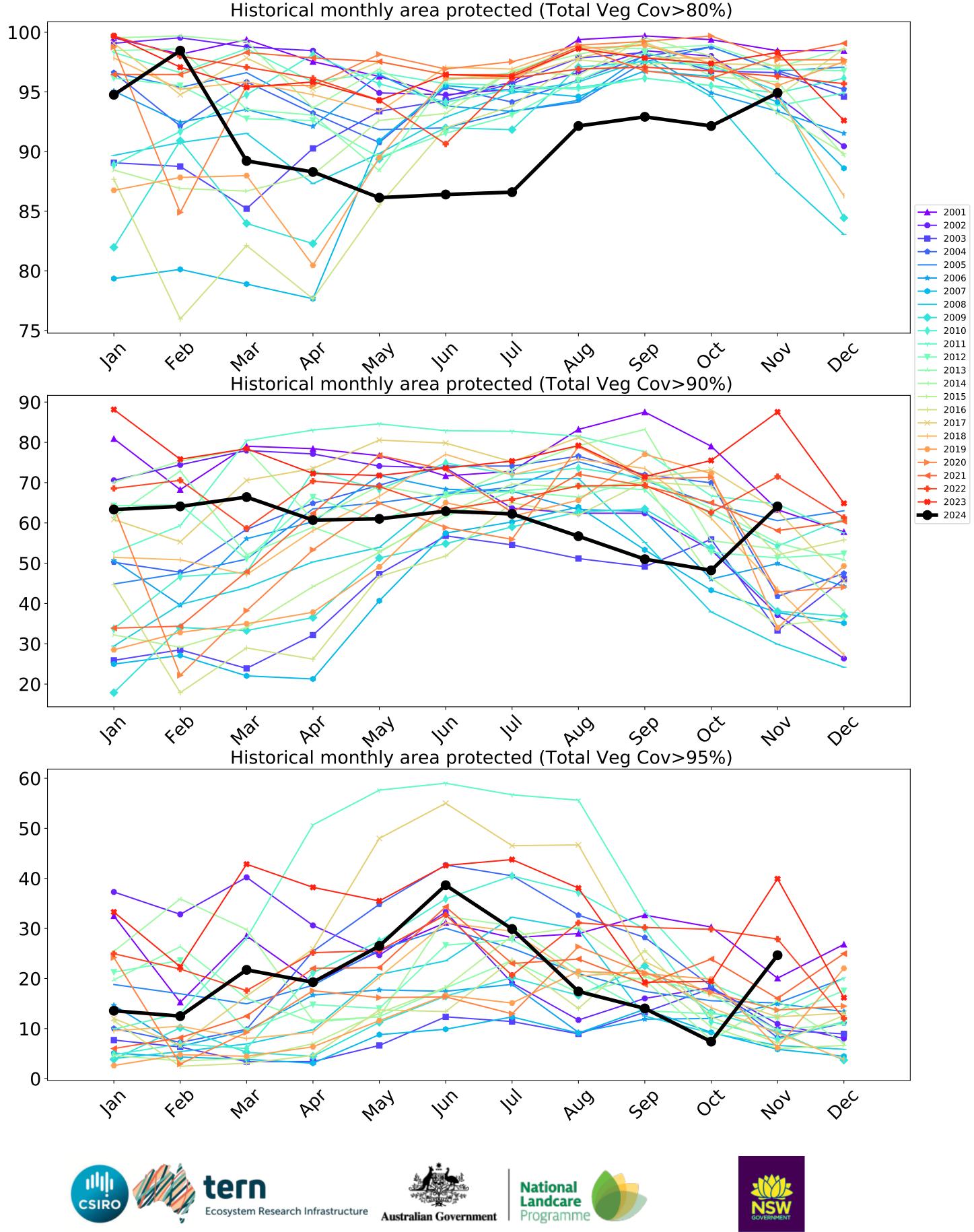




Wind erosion historical monthly area protected (Total Veg Cov >50%)

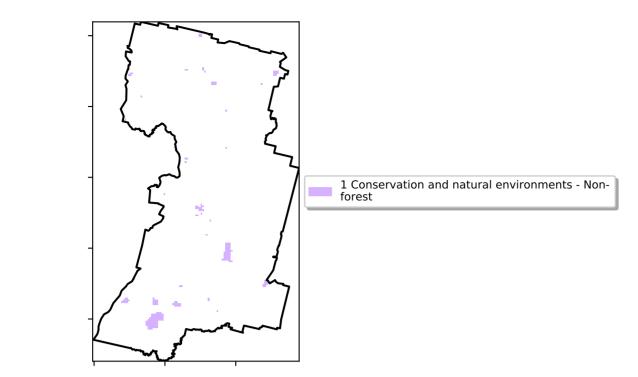
Water erosion historical monthly area protected (Total Veg Cov>70%)





Conservation and natural environments non forest

Land use and forest cover



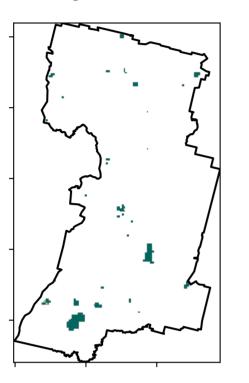
12%200%

1 52°10 70°10

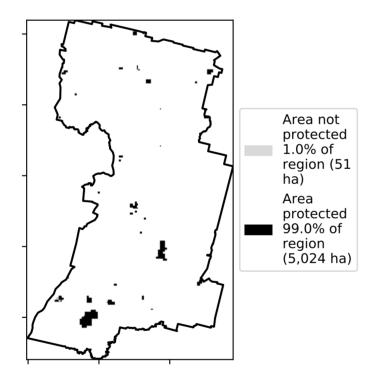
· 32°1050°10

0.30%

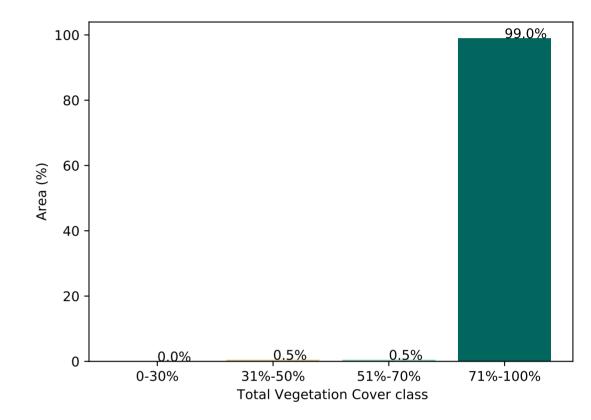
Total Vegetation Cover [%]



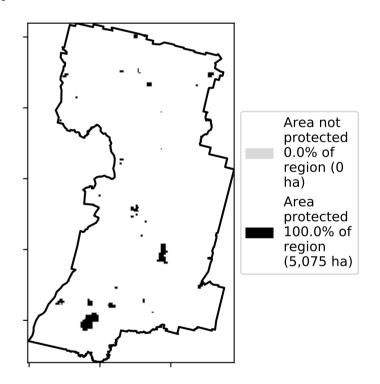








% Area protected from wind erosion (>50%)

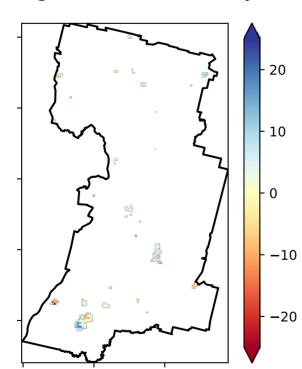


Total Vegetation Cover Anomaly [%]

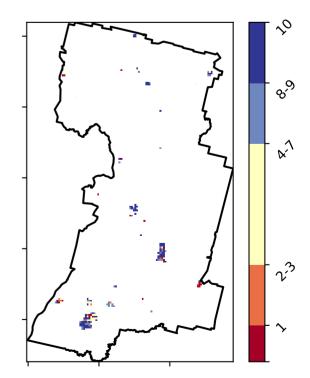
Anomaly show how many percetage points each pixel is from the mean. That is, red pixels are about 20% lower than the mean of that pixel. The mean is only for the month of the map using baseline from 2001 to 2019.

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

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



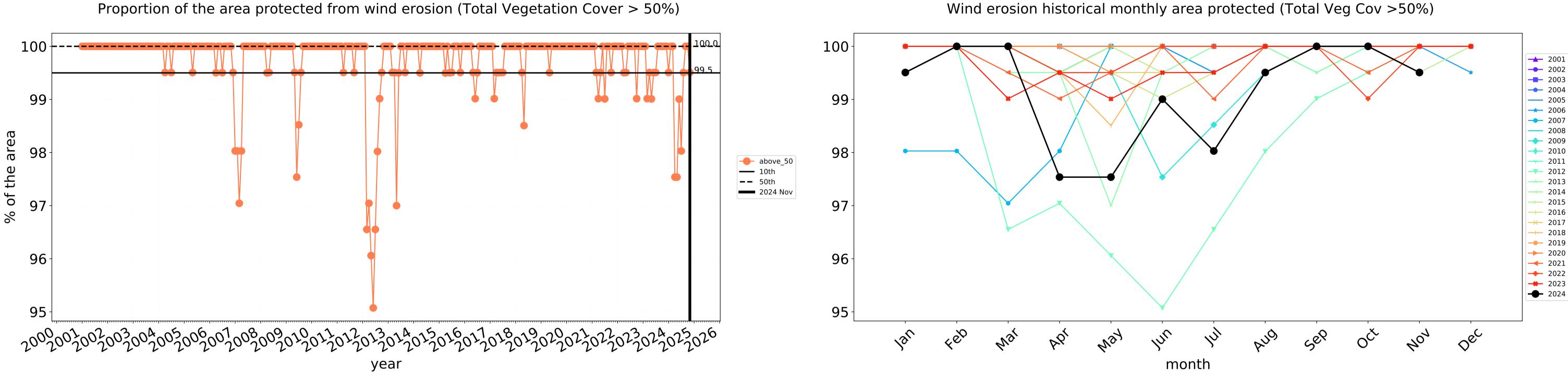
Deciles show where the pixel value lies in the record, from highest to lowest, for that month. That is, red pixels are in the lowest 10% of records for that month of the map using baseline from 2001 to 2019.



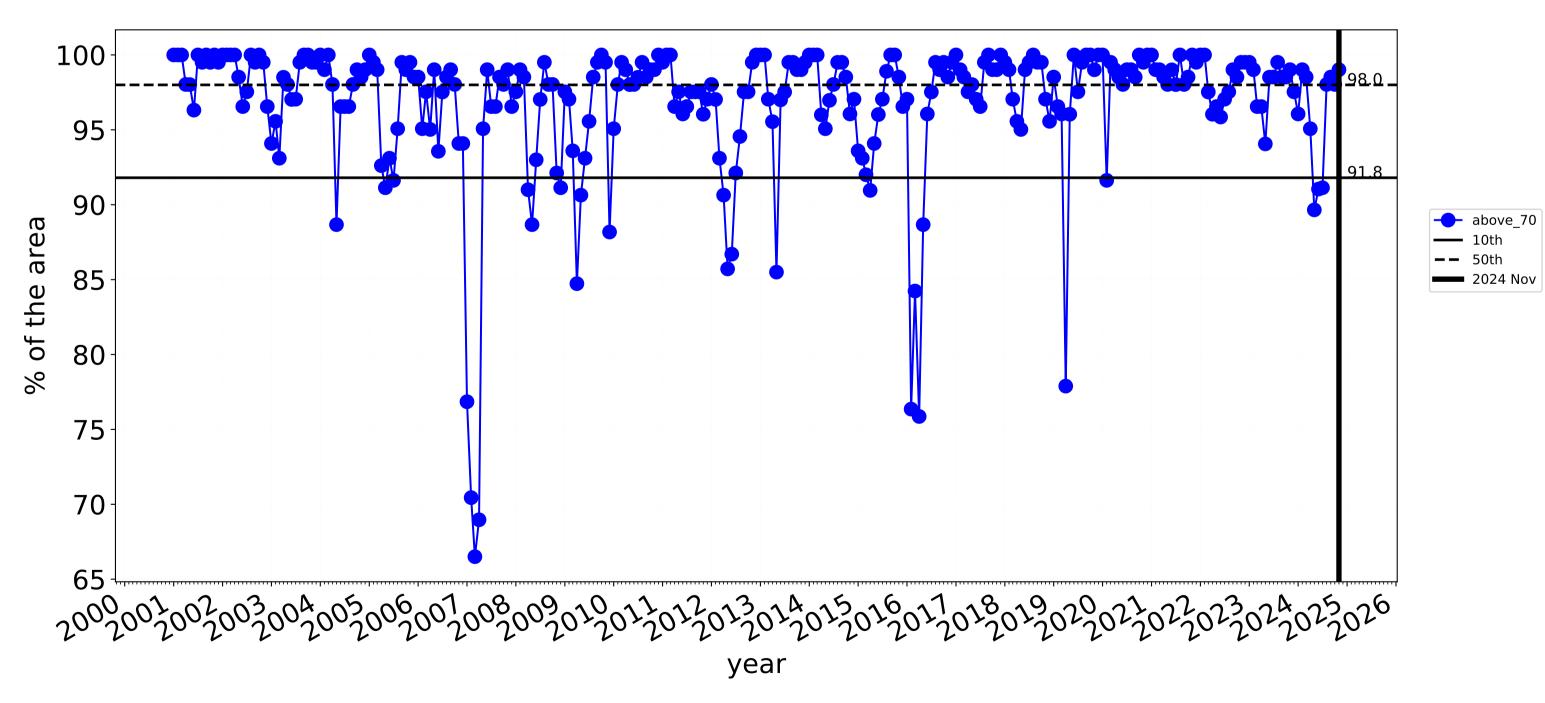




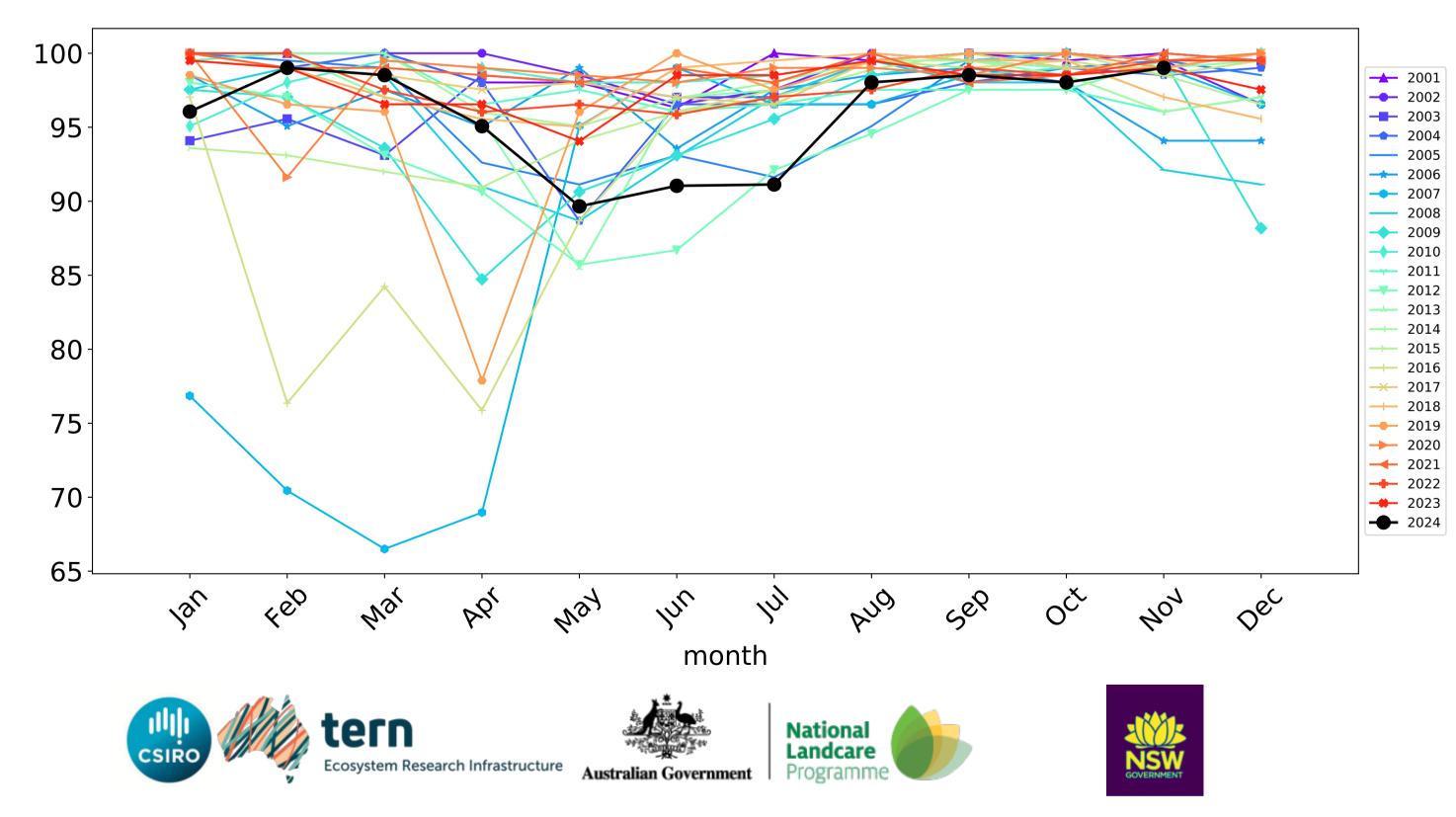
Conservation and natural environments non forest timeseries

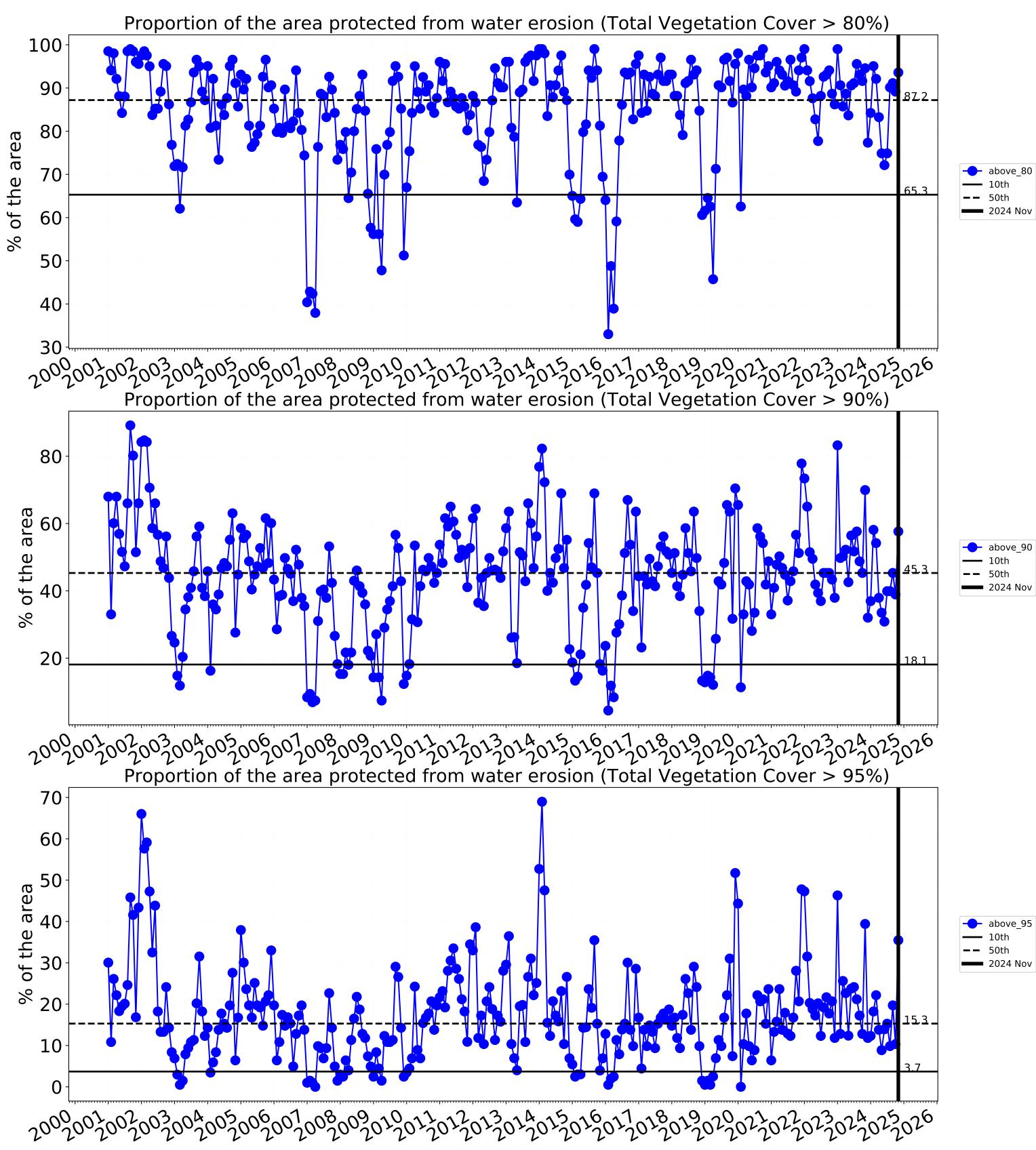


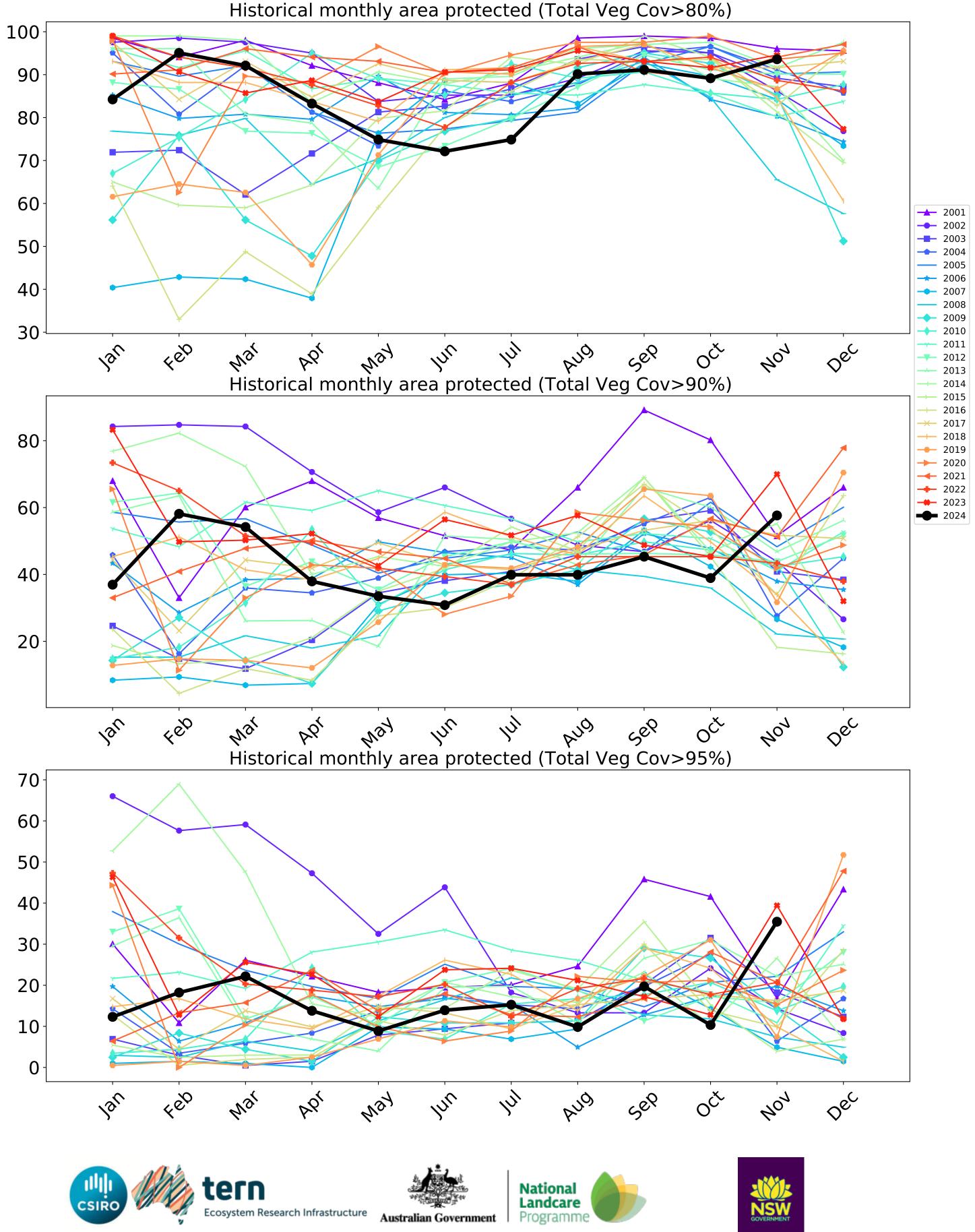
Proportion of the area protected from water erosion (Total Vegetation Cover > 70%)



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





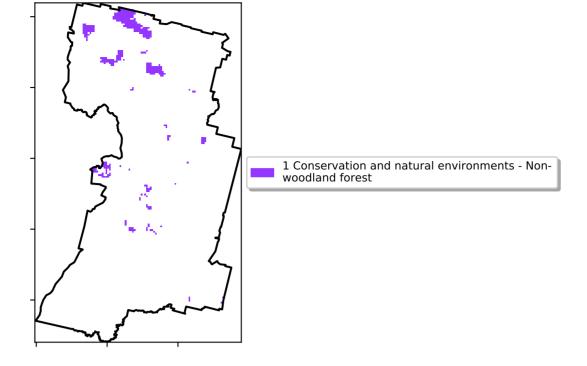




Conservation and natural environments Forest (non woodland)

Land use and forest cover

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



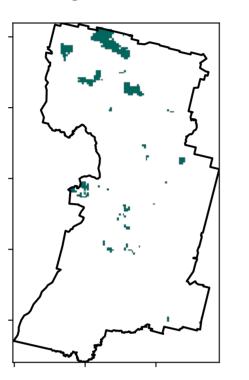
1 12º00 200%

52°1070010

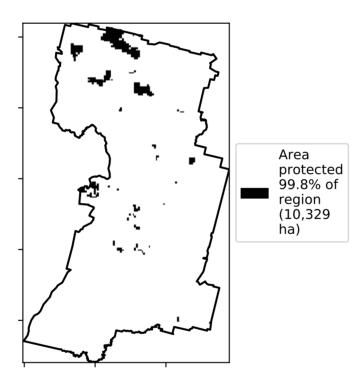
320050010

0.30%

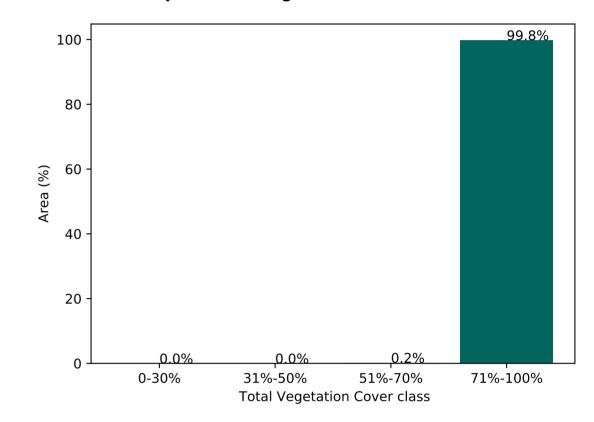
Total Vegetation Cover [%]



% Area protected from water erosion (>70%)



Proportion of vegetation cover class in area



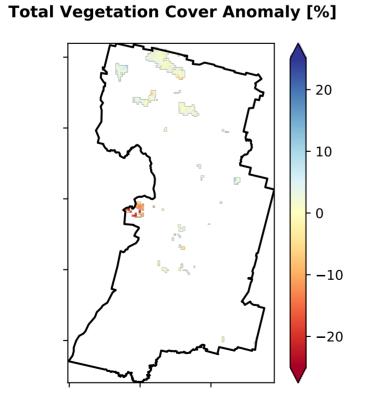
% Area protected from wind erosion (>50%)



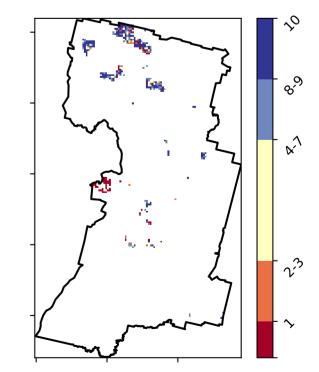
Area protected 100.0% of region (10,350 ha)

Total Vegetation Cover Decile [%]

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

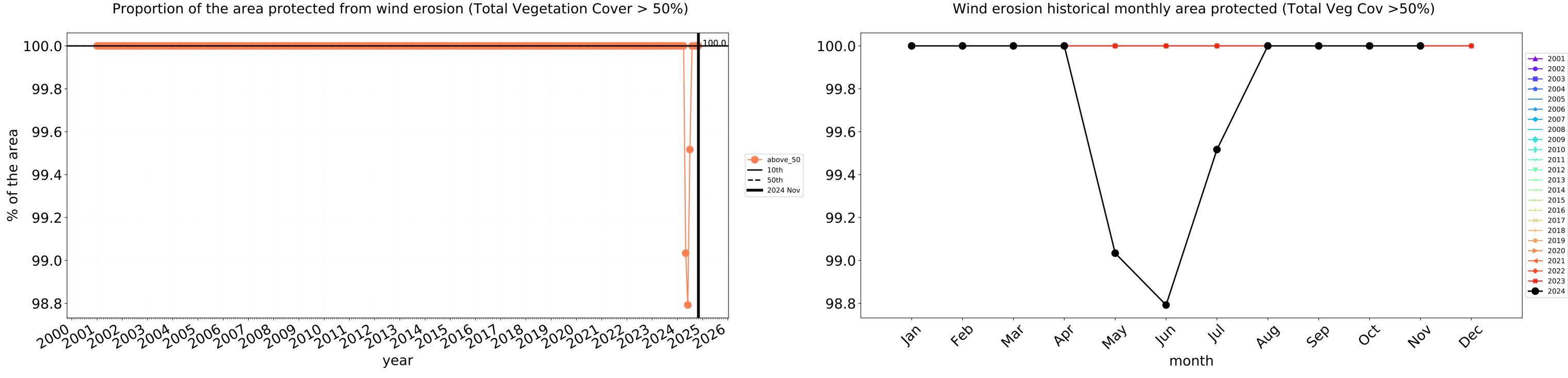


Deciles show where the pixel value lies in the record, from highest to lowest, for that month. That is, red pixels are in the lowest 10% of records for that month of the map using baseline from 2001 to 2019.

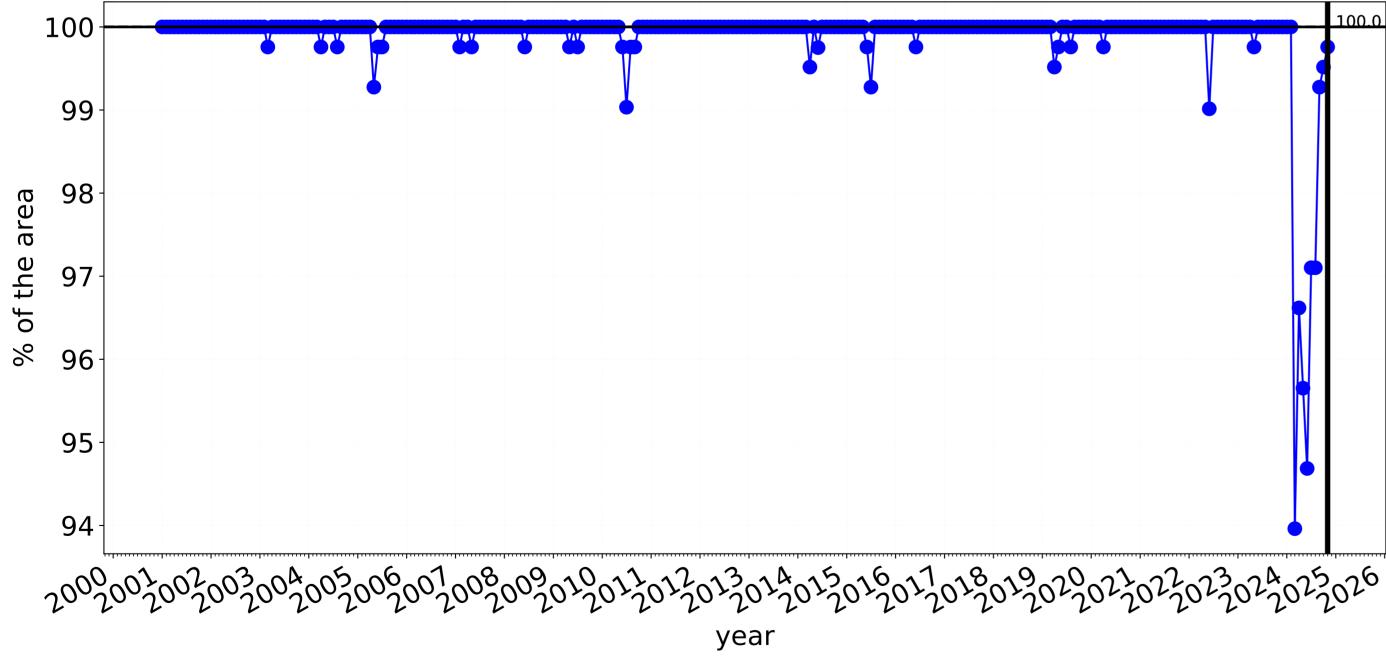




Conservation and natural environments Forest (non woodland) timeseries

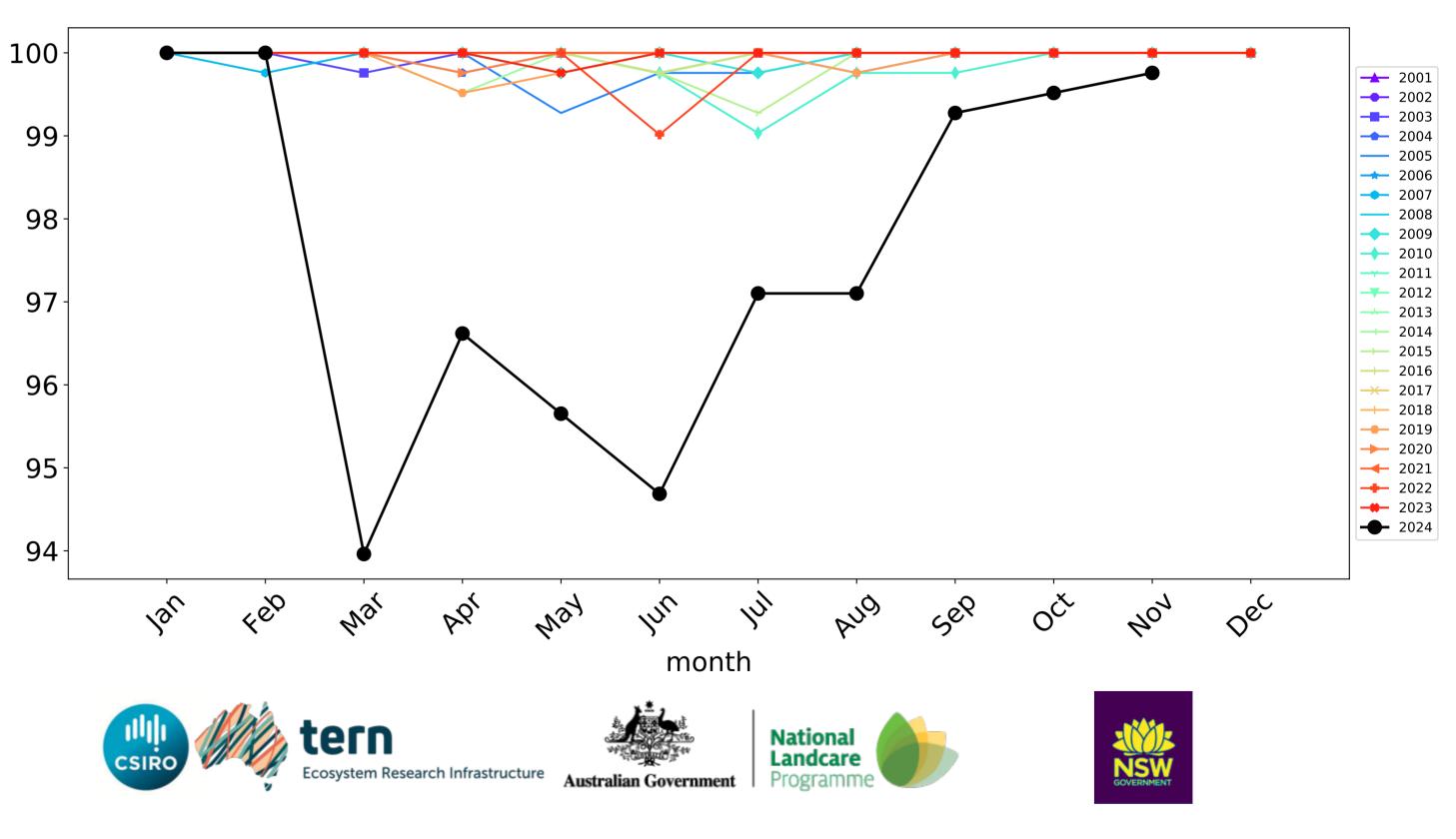


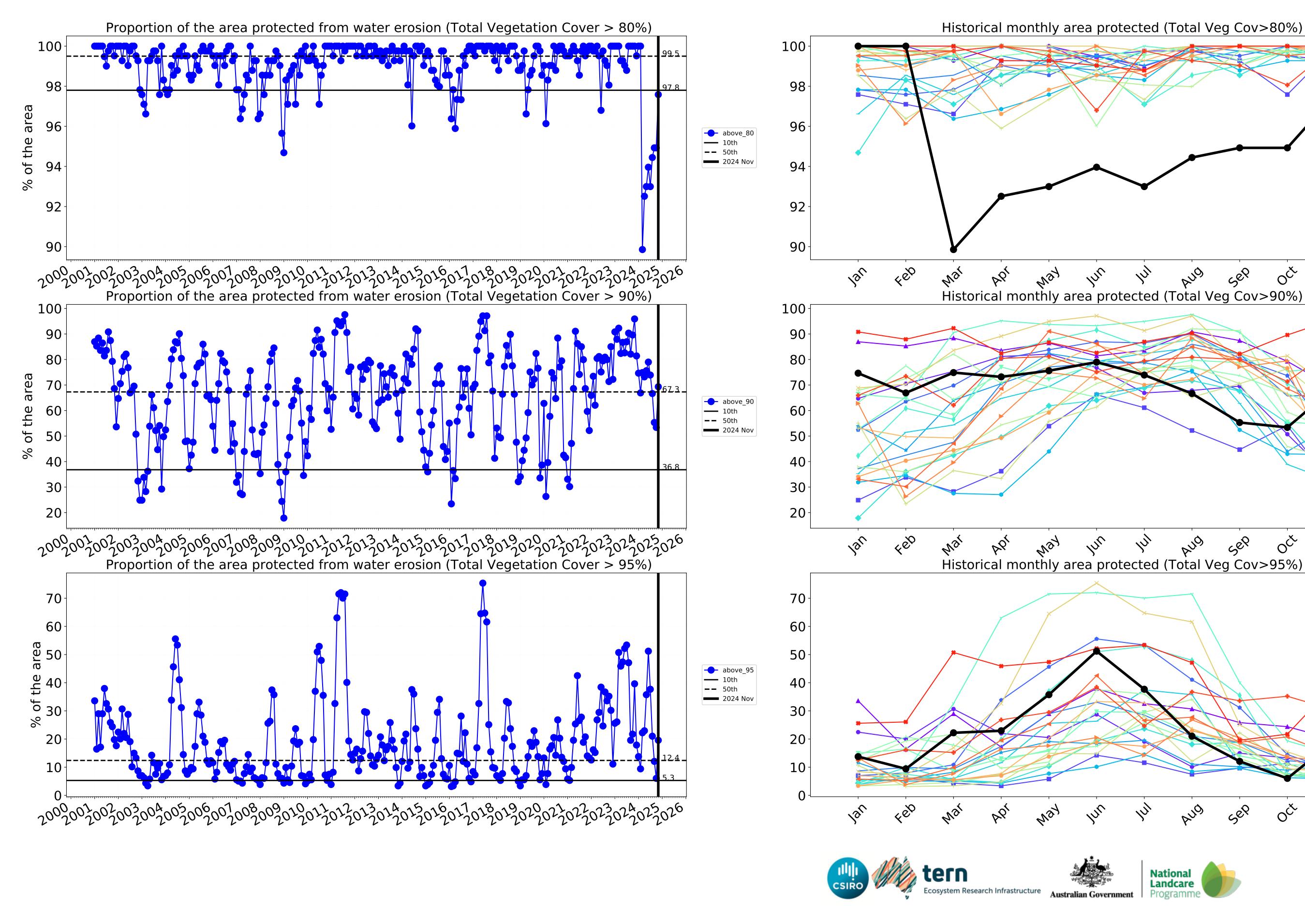
Proportion of the area protected from water erosion (Total Vegetation Cover > 70%)

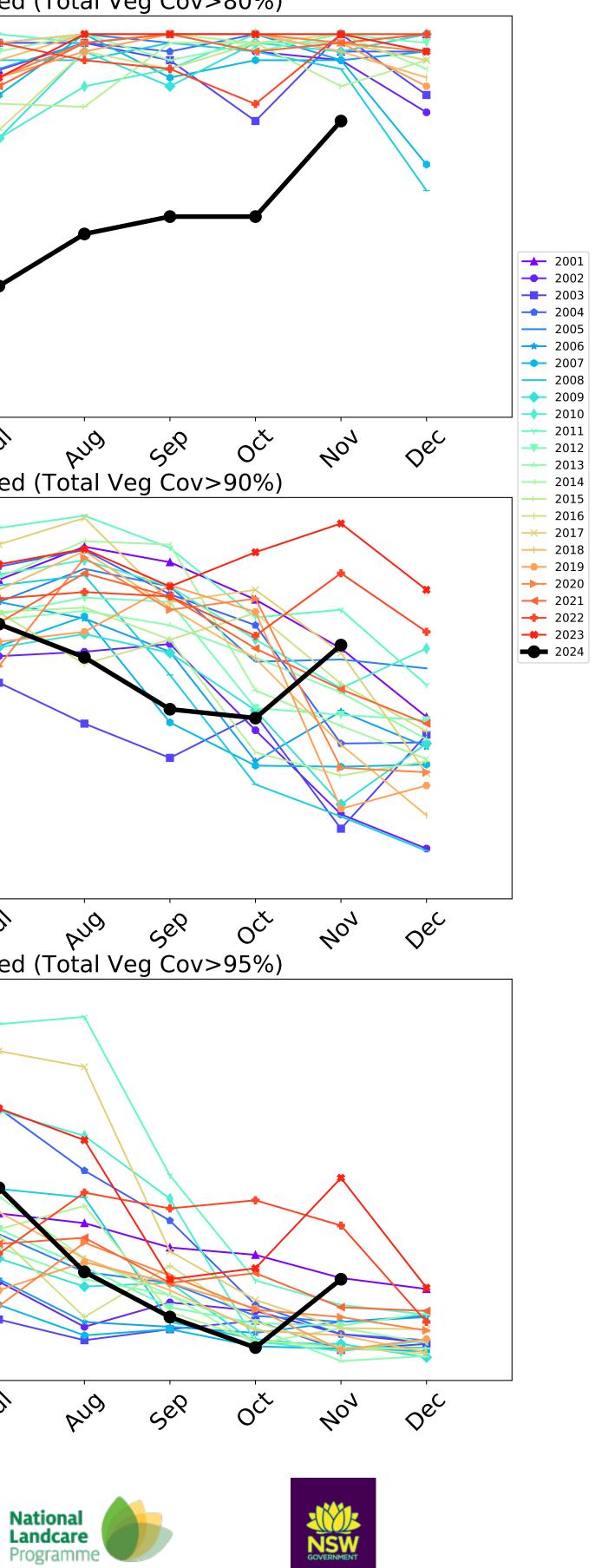


Water erosion historical monthly area protected (Total Veg Cov>70%)

00 0 --- above_70 **—** 10th **——** 50th 2024 Nov

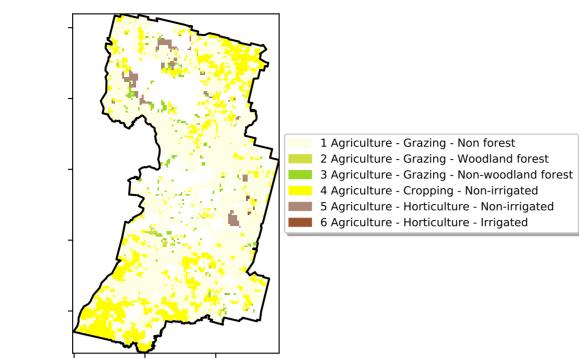




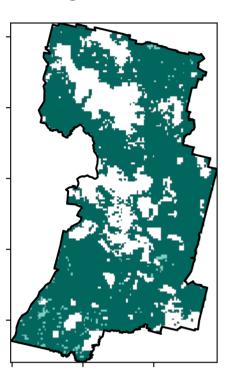


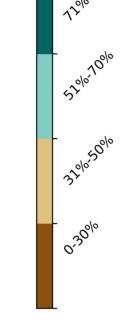
Agriculture

Land use and forest cover

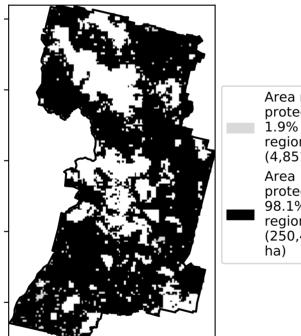


Total Vegetation Cover [%]



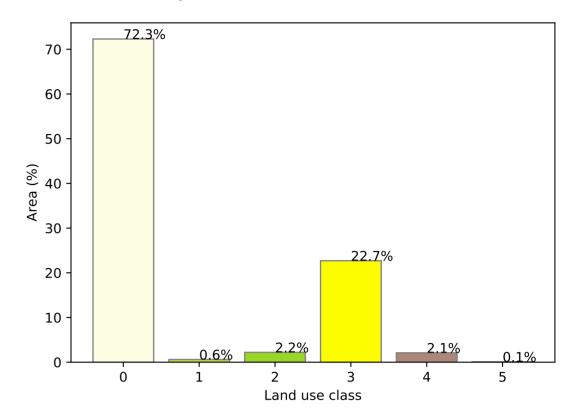


% Area protected from water erosion (>70%)

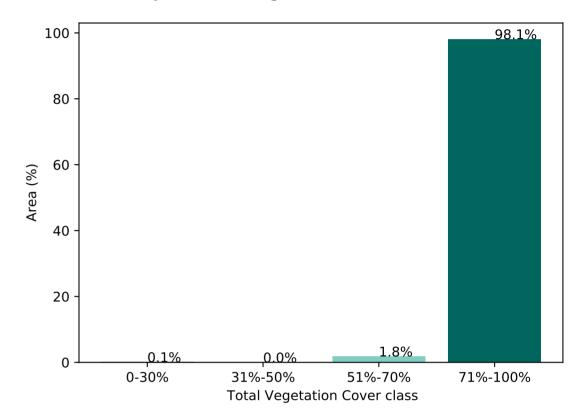


120/02/00/0

Proportion of each land class in area



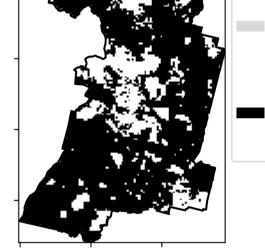
Proportion of vegetation cover class in area



% Area protected from wind erosion (>50%)



Area not protected 1.9% of region (4,851 ha) Area protected . 98.1% of region (250,474



Area not protected 0.0% of region (0 ha) Area protected . 100.0% of region (255,325 ha)

Total Vegetation Cover Anomaly [%]

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

Catchment Scale

Derived from

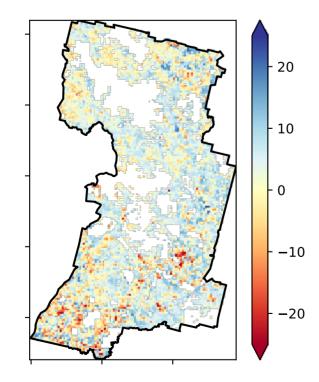
Use of Australia

(2018) and Forests

of Australia (2018)

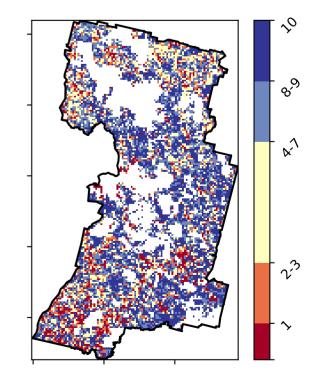
Land Use and Forests of Australia (2018)

Catchment Scale Land



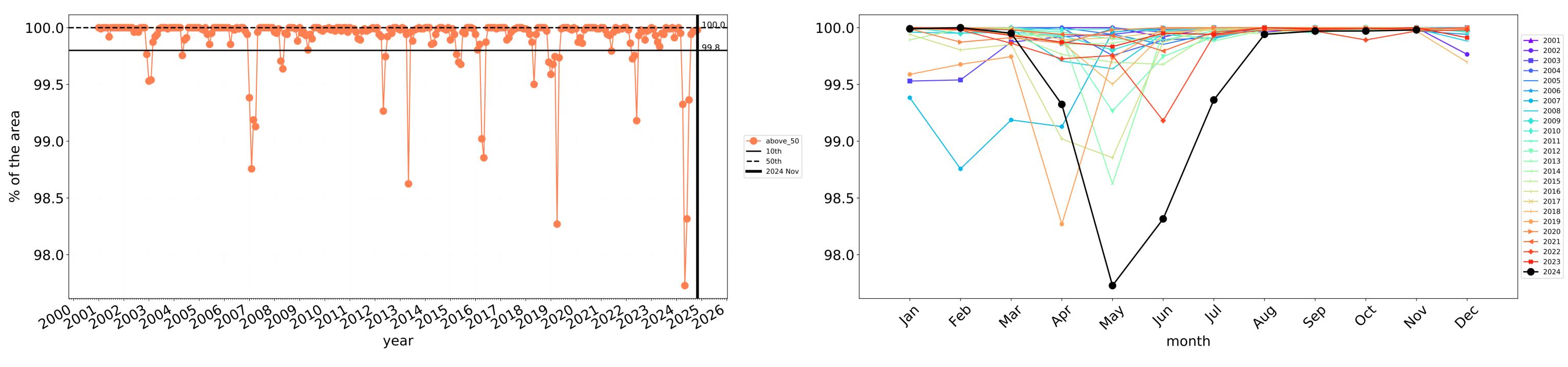
Deciles show where the pixel value lies in the record, from highest to lowest, for that month. That is, red pixels are in the lowest 10% of records for that month of the map using baseline from 2001 to 2019.





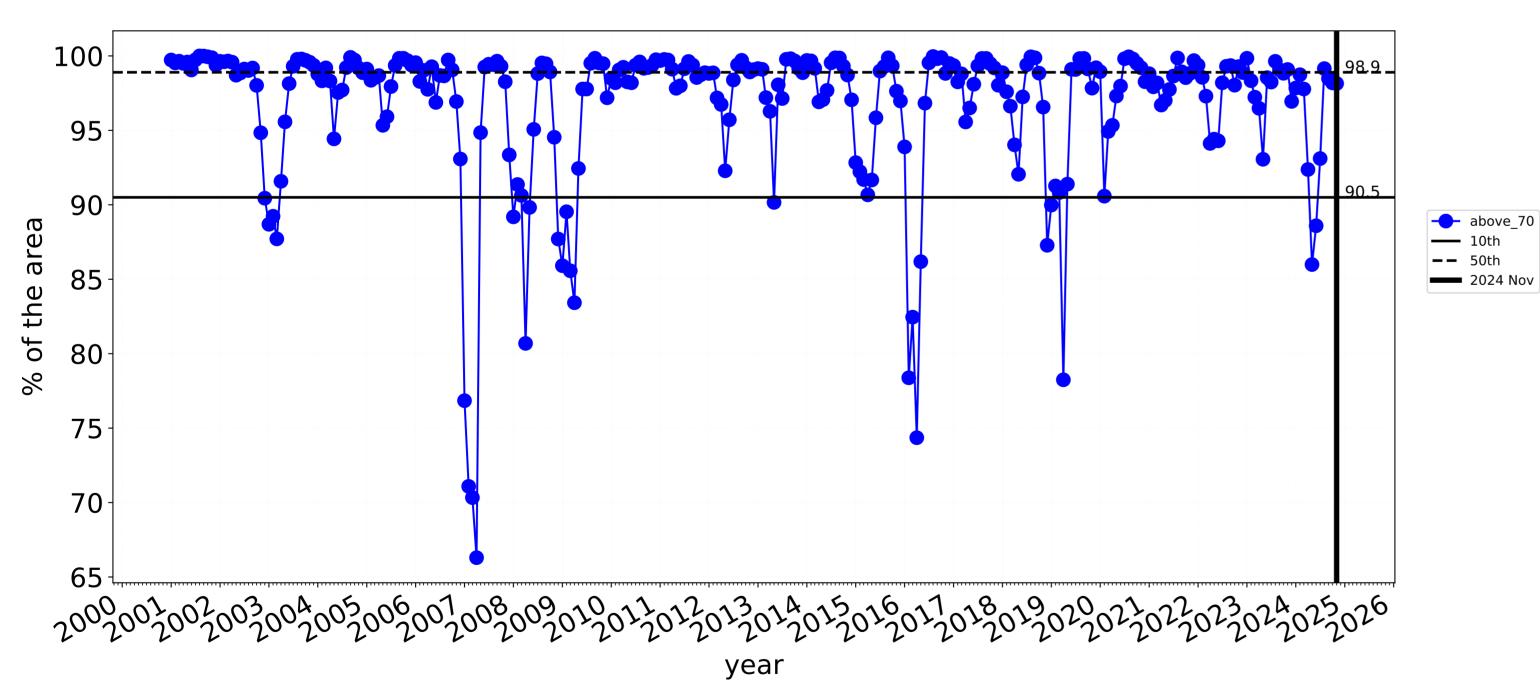


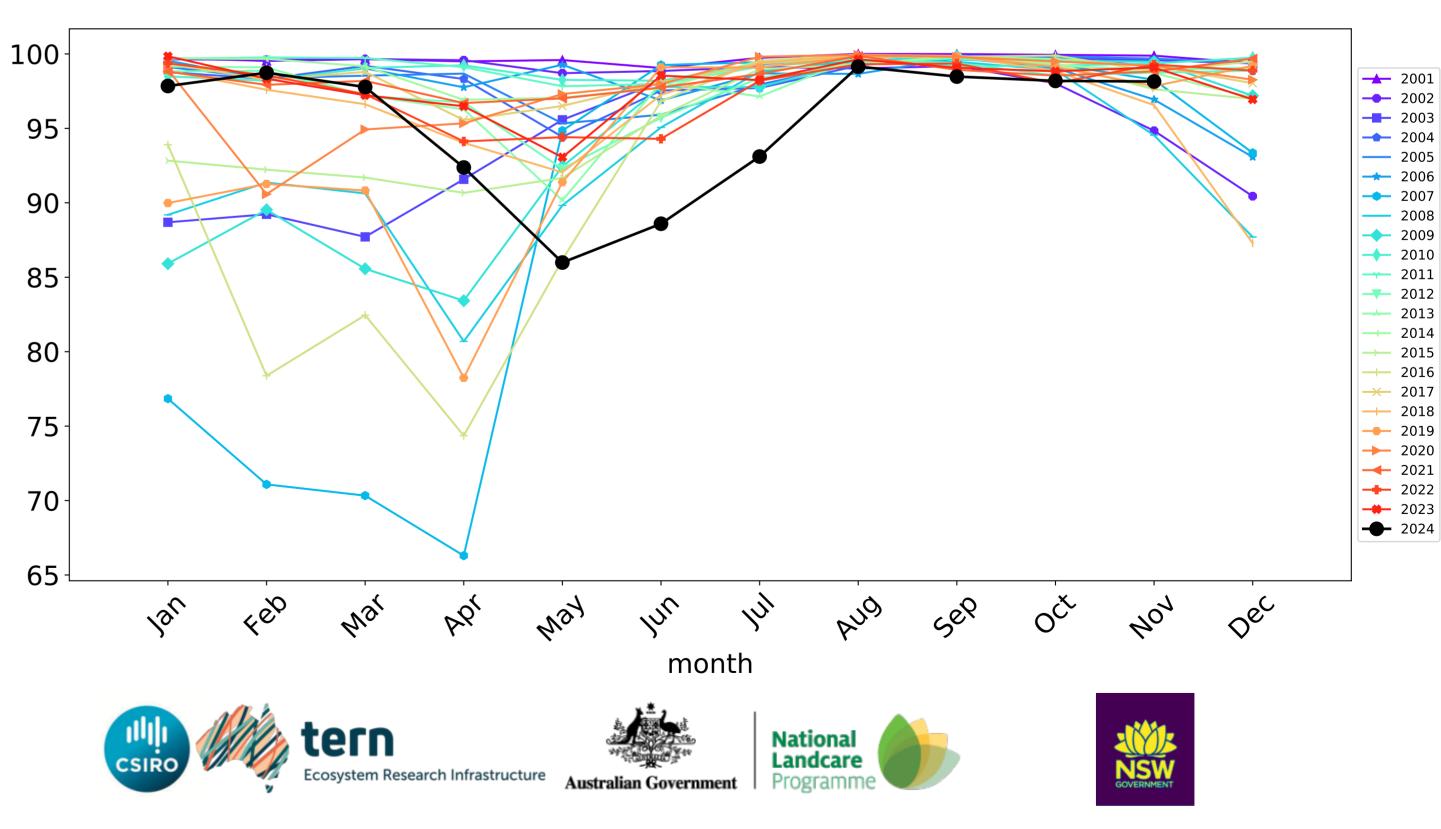




Proportion of the area protected from wind erosion (Total Vegetation Cover > 50%)

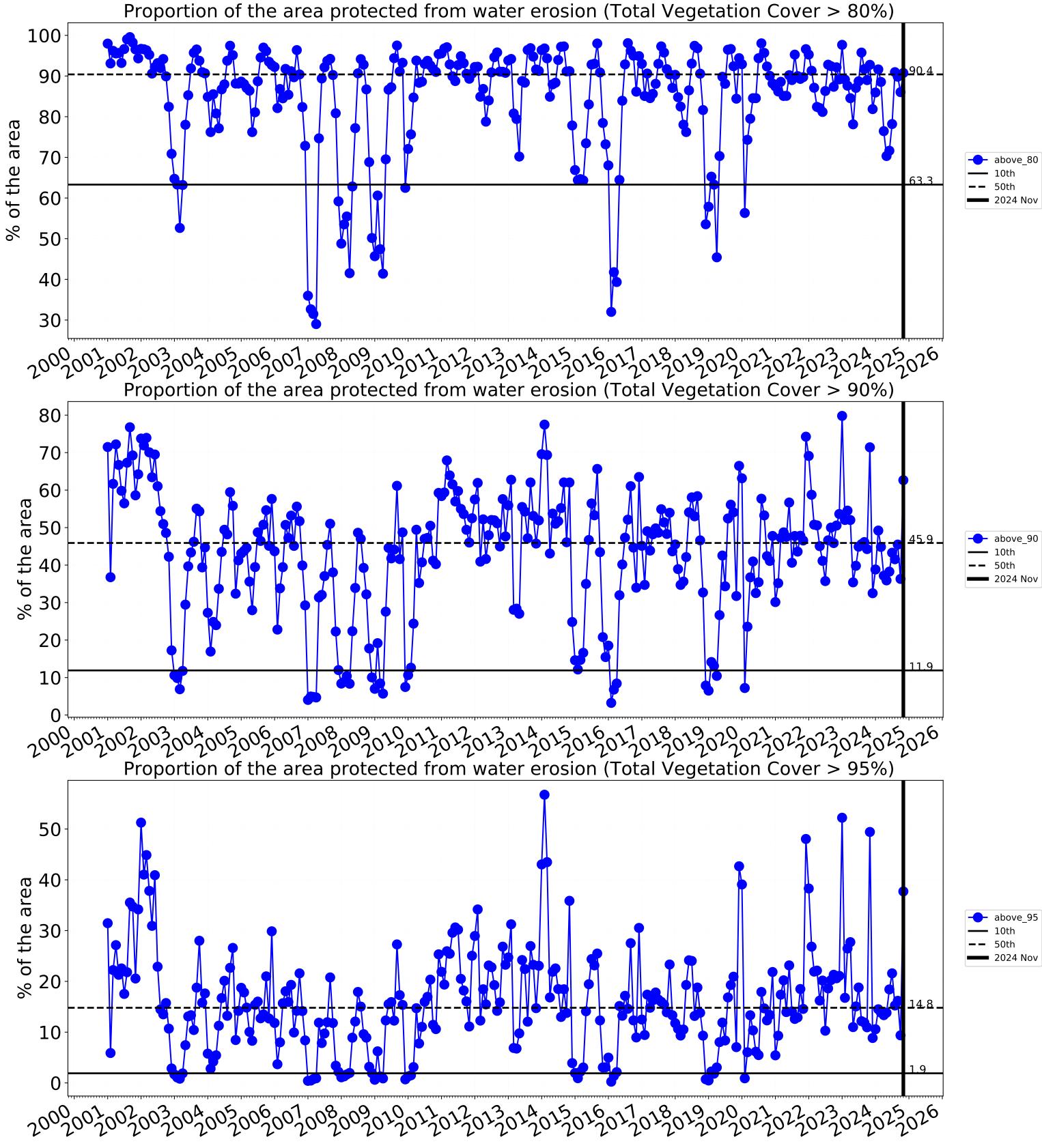
Proportion of the area protected from water erosion (Total Vegetation Cover > 70%)

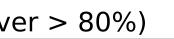


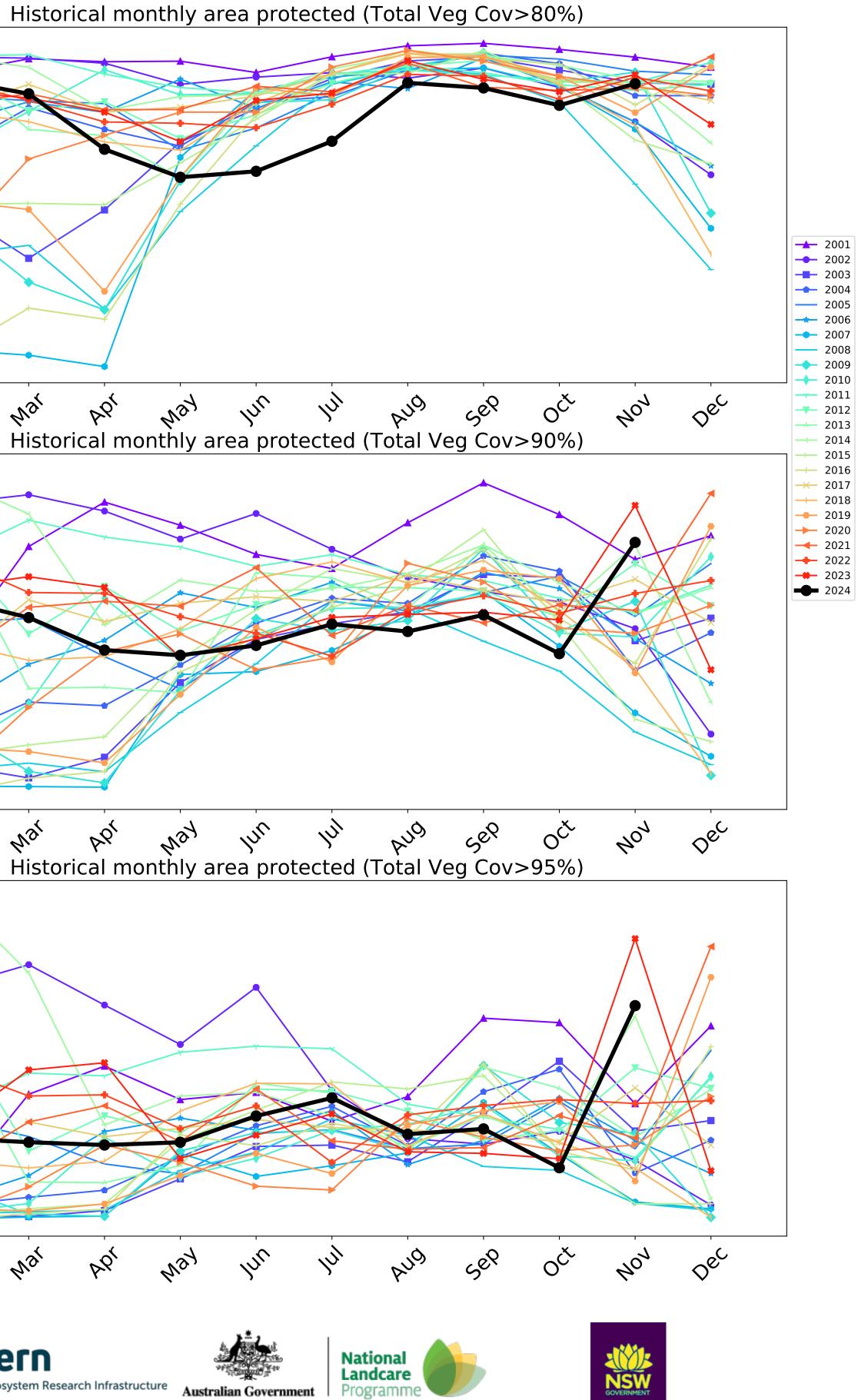


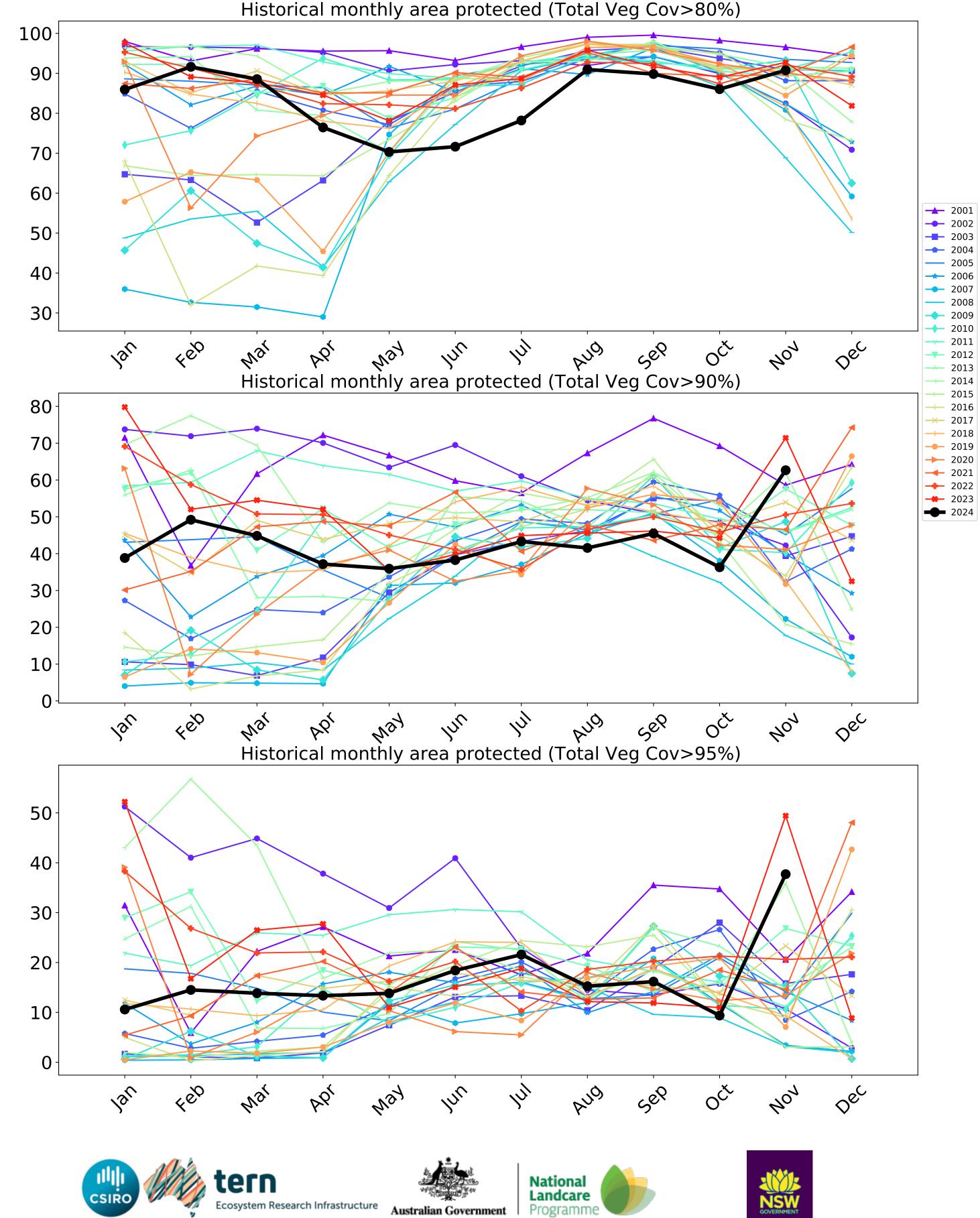
Wind erosion historical monthly area protected (Total Veg Cov >50%)

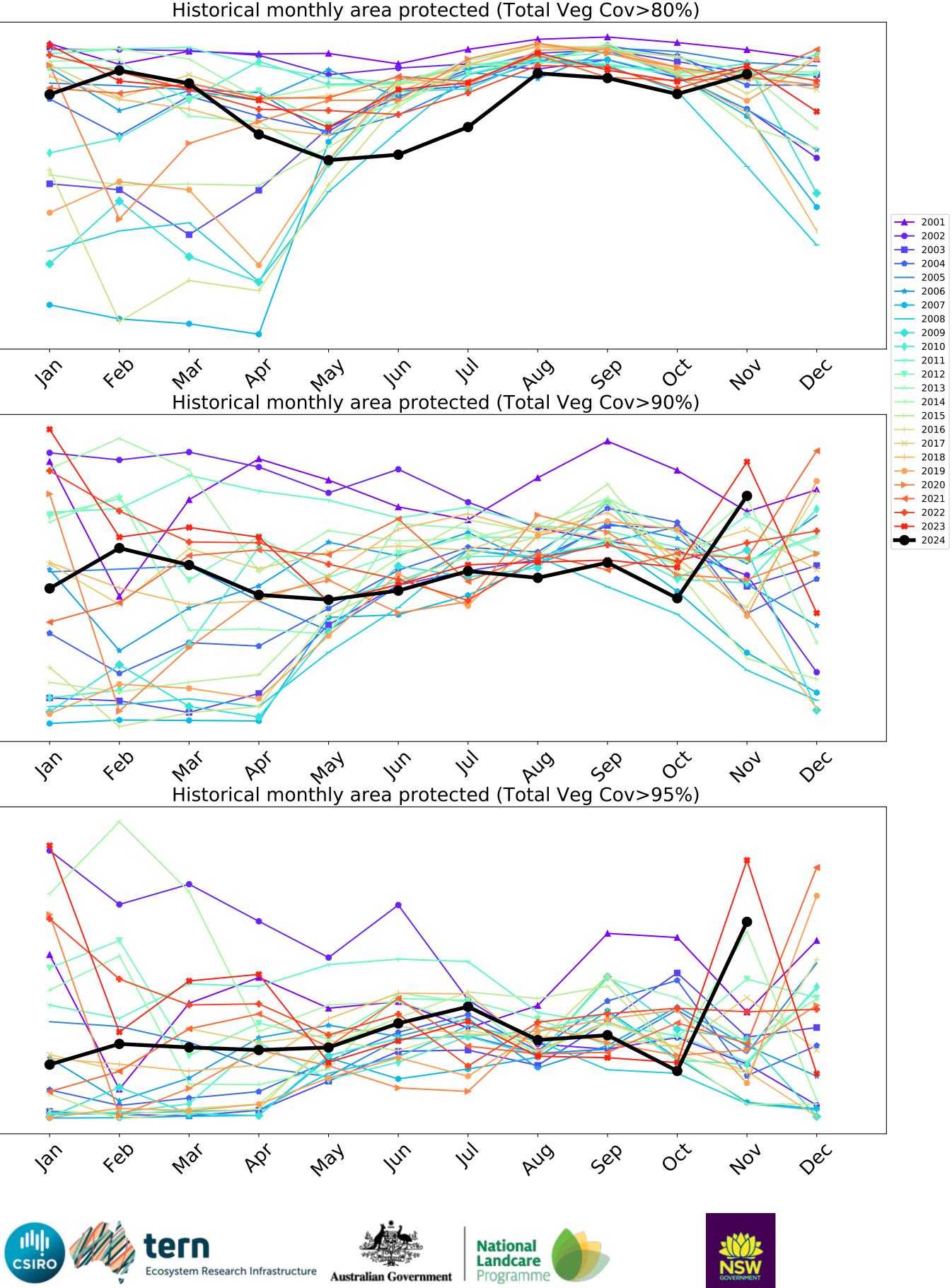
Water erosion historical monthly area protected (Total Veg Cov>70%)







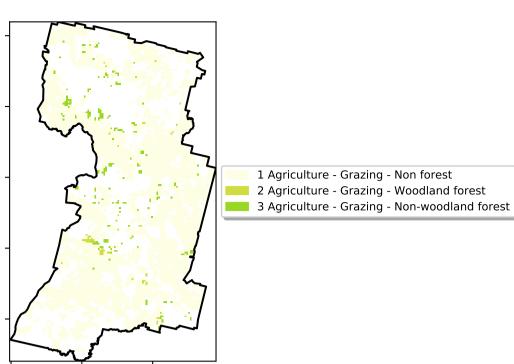




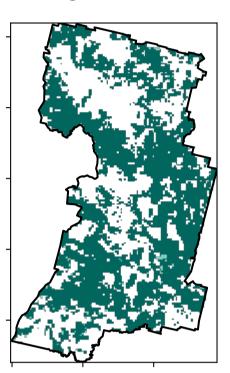
Grazing

Land use and forest cover

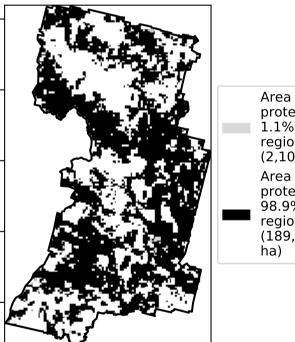
Catchment Scale Land Use and Forests of Australia (2018) Derived from Catchment Scale Land Use of Australia (2018) and Forests of Australia (2018)

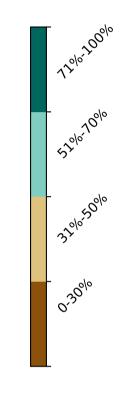


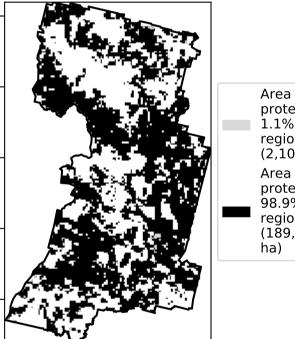
Total Vegetation Cover [%]



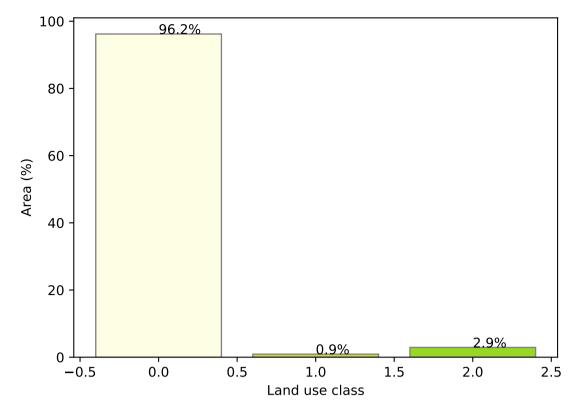




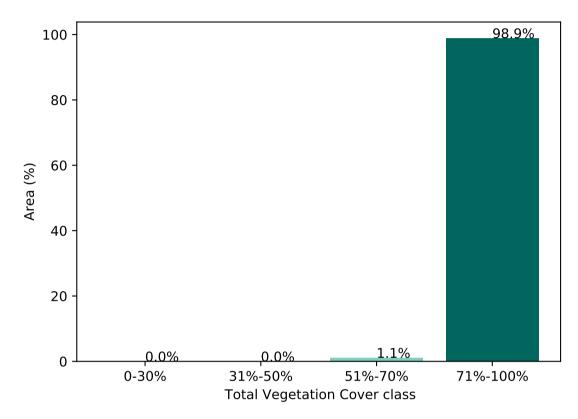








Proportion of vegetation cover class in area



% Area protected from wind erosion (>50%)

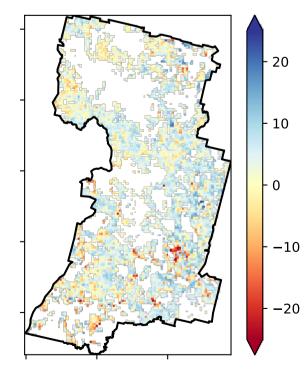


Area not protected 1.1% of region (2,109 ha) Area protected 98.9% of region (189,641

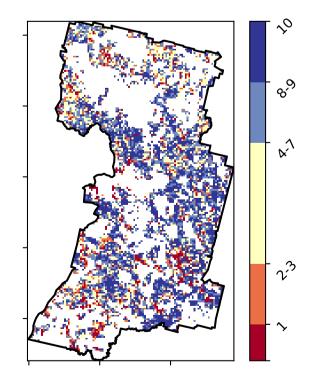
Area not protected 0.0% of region (0 ha) Area protected 100.0% of region (191,750 ha)

Total Vegetation Cover Anomaly [%]

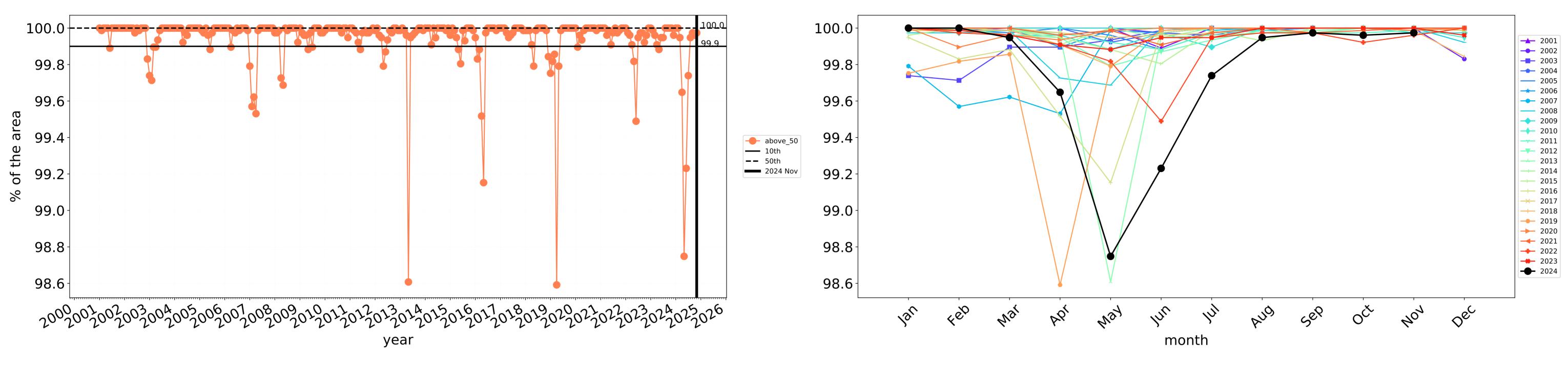
Anomaly show how many percetage points each pixel is from the mean. That is, red pixels are about 20% lower than the lower than the mean of that pixel. The mean is only for the month of the map using baseline from 2001 to 2019.



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.

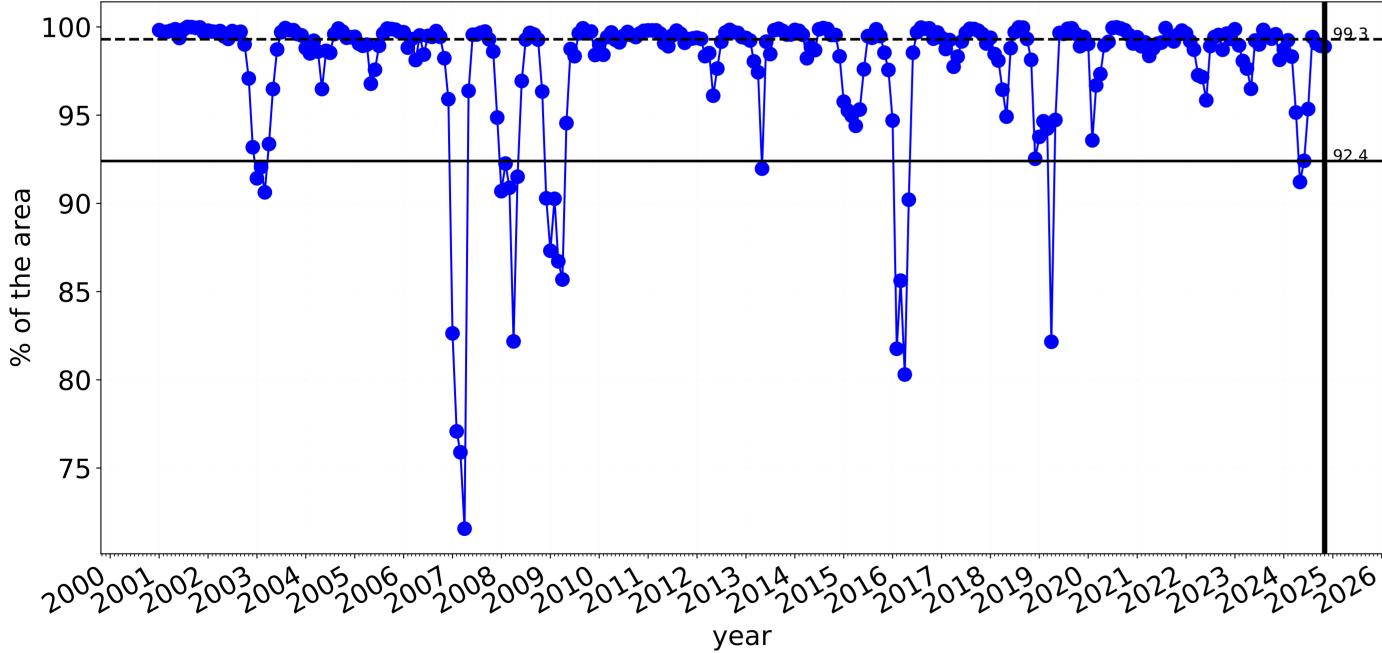






Proportion of the area protected from wind erosion (Total Vegetation Cover > 50%)

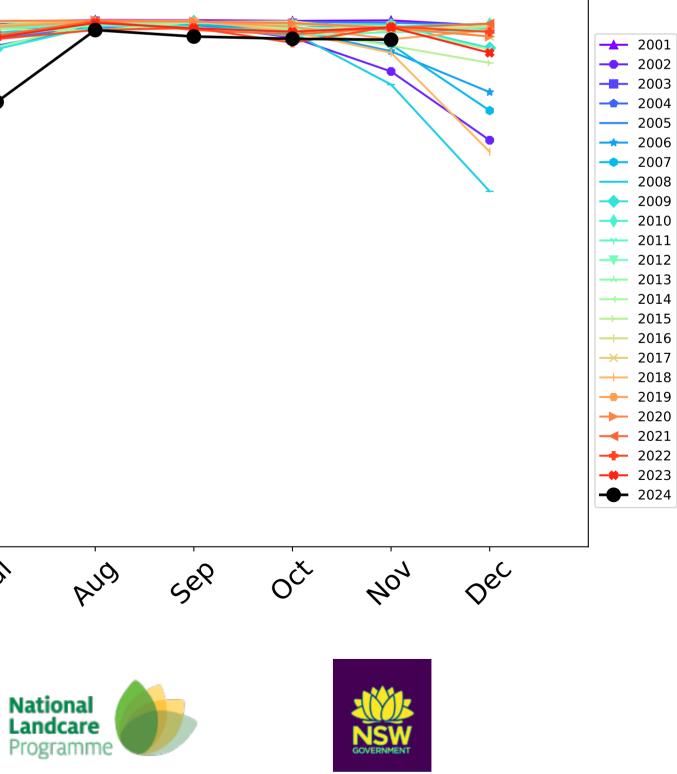
Proportion of the area protected from water erosion (Total Vegetation Cover > 70%)

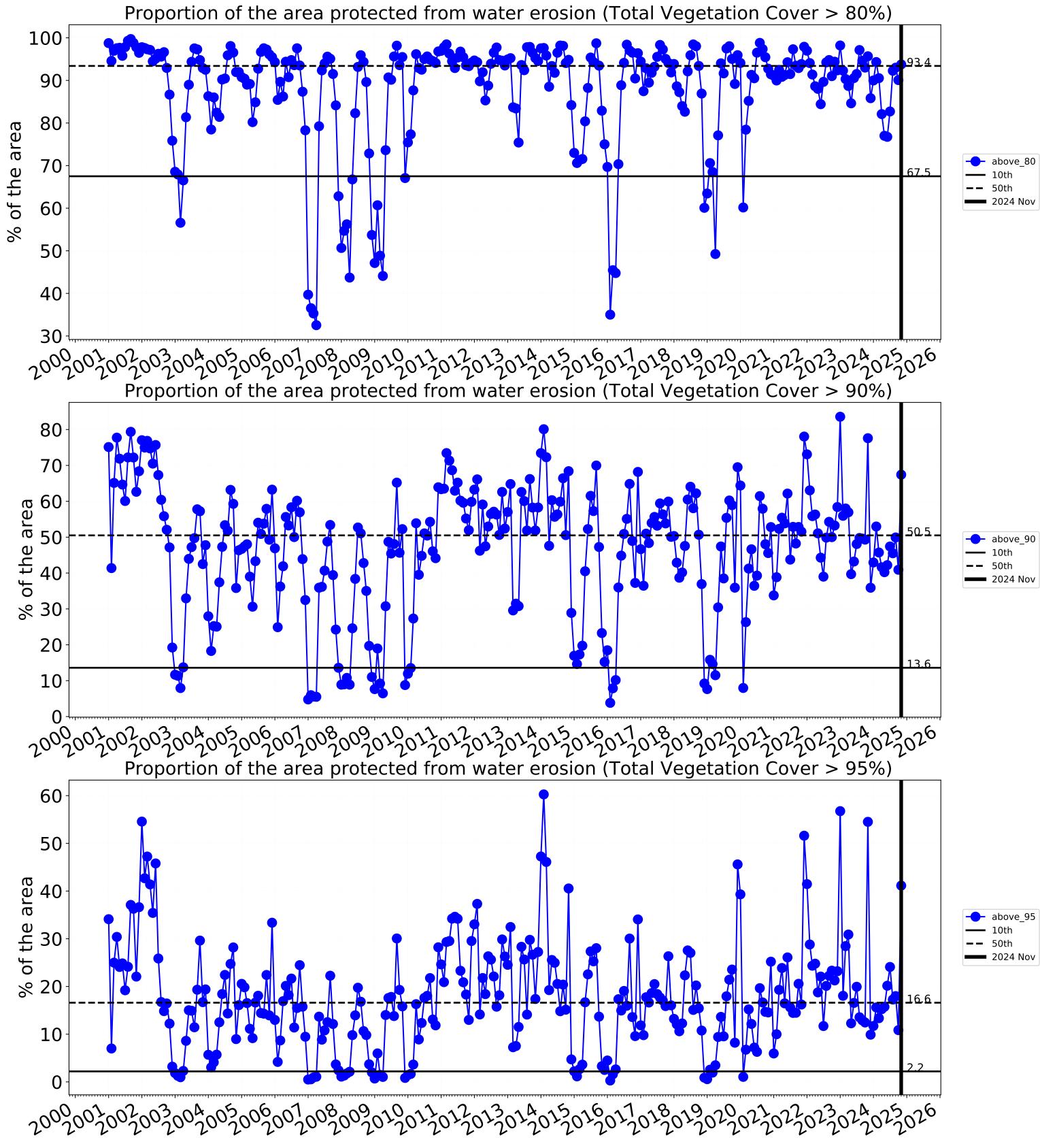


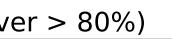
Wind erosion historical monthly area protected (Total Veg Cov >50%)

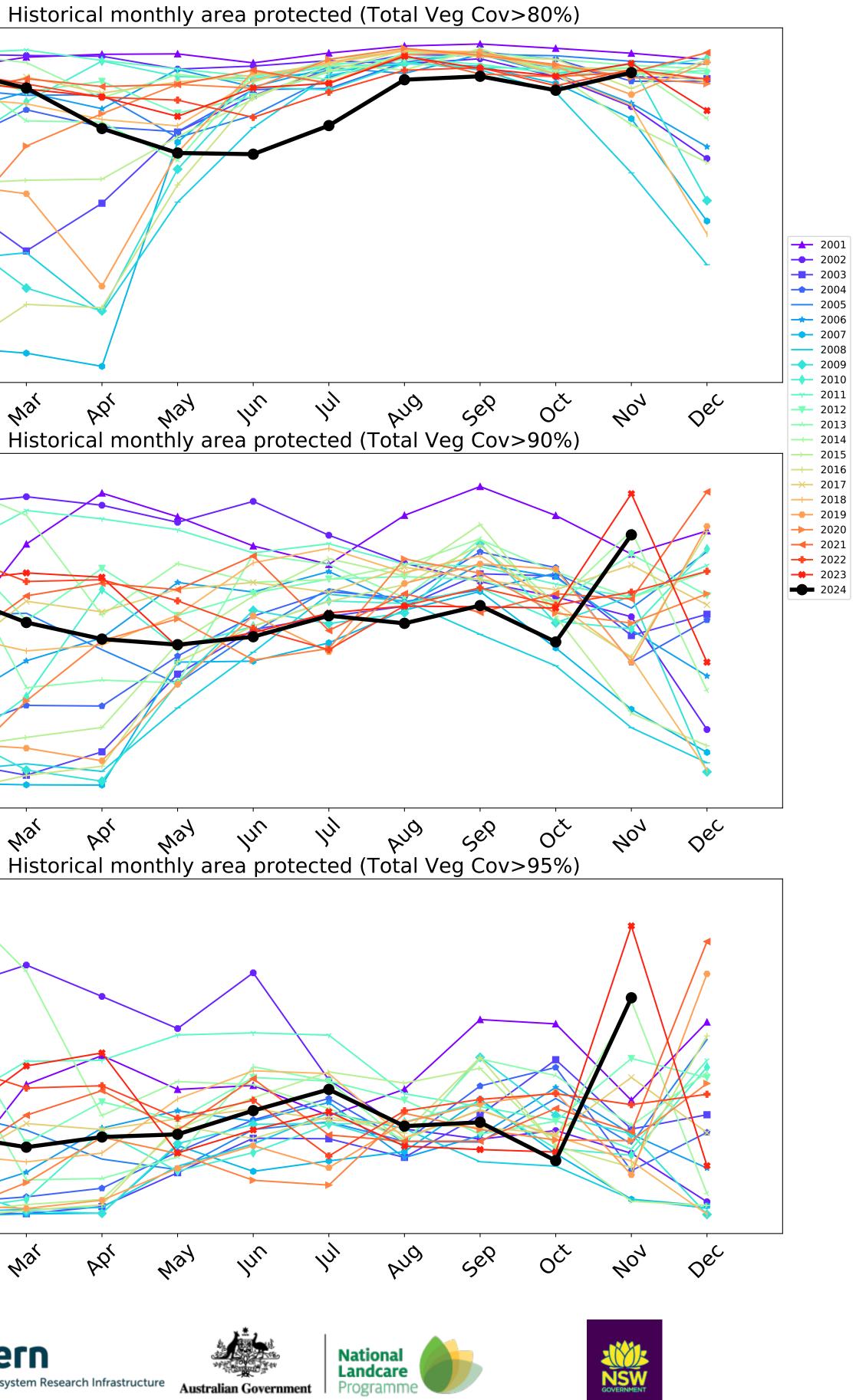
100 95 ---- above_70 90 **——** 10th **——** 50th 2024 Nov 85 80 75 400 1ar way PQ In In In Mai month tern Ecosystem Research Infrastructure Australian Government

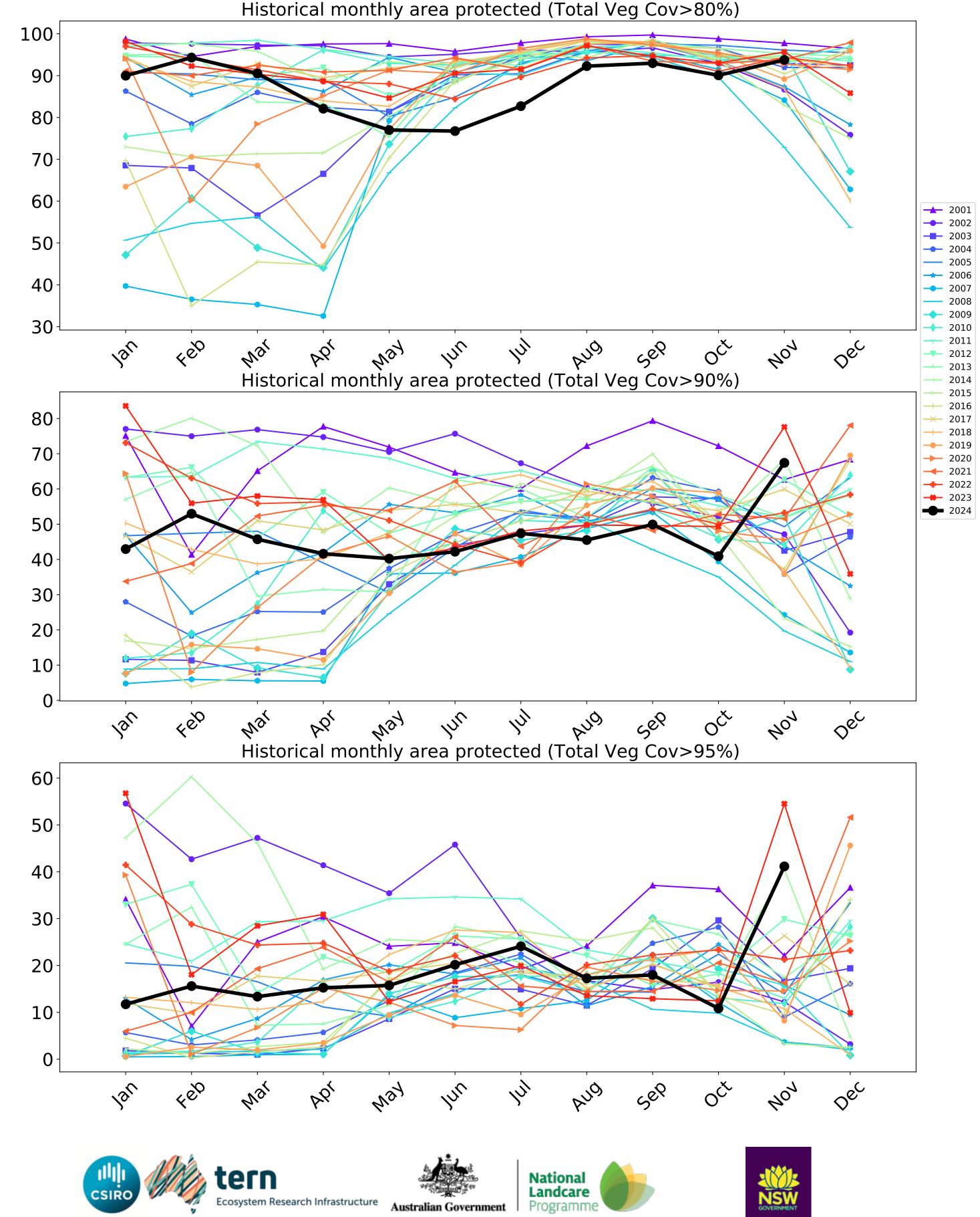
Water erosion historical monthly area protected (Total Veg Cov>70%)

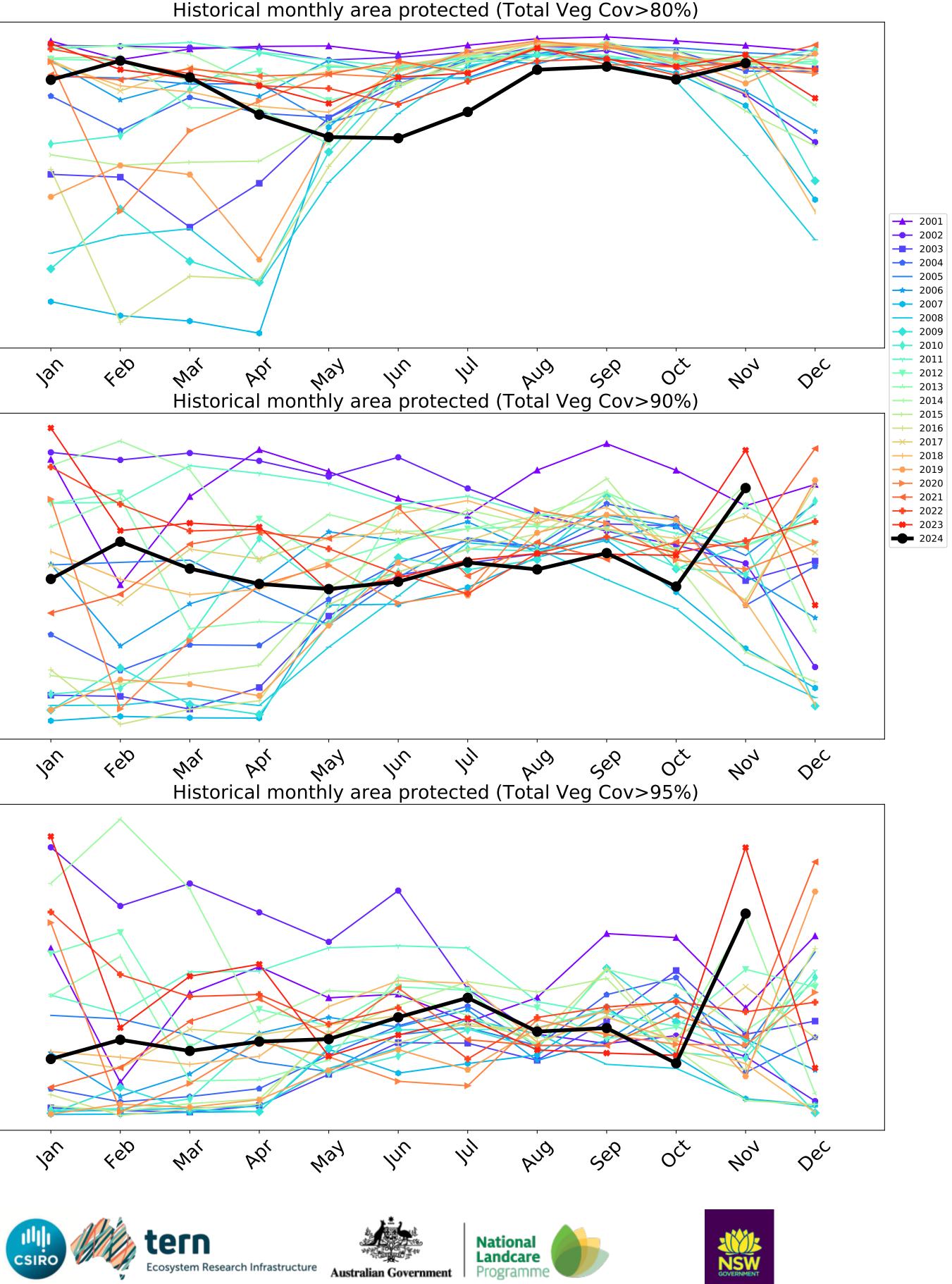






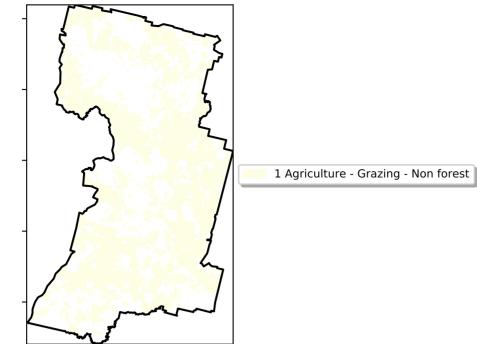




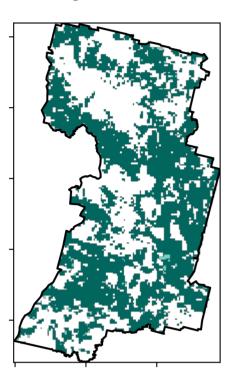


Grazing non forest

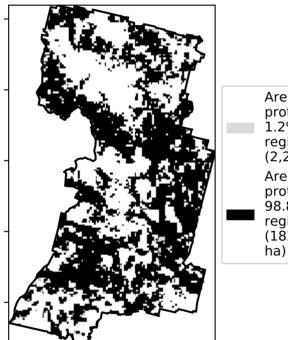
Land use and forest cover

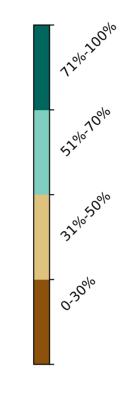


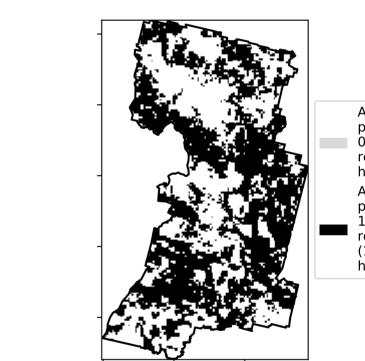
Total Vegetation Cover [%]



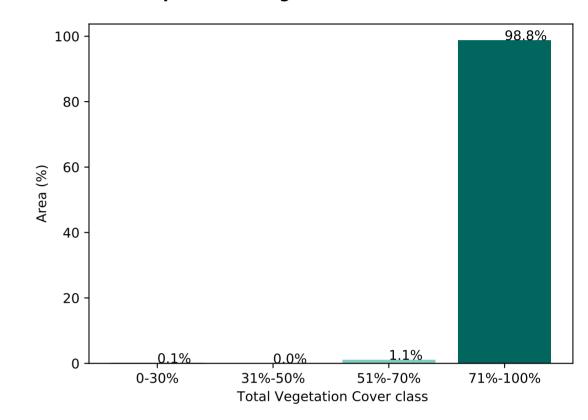








Proportion of vegetation cover class in area



% Area protected from wind erosion (>50%)

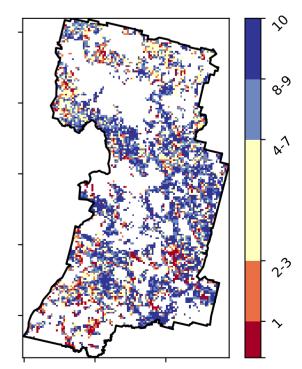


Catchment Scale Land Use and Forests of Australia (2018) Derived from Catchment Scale Land Use of Australia (2018) and Forests of Australia (2018)

> Area not protected 1.2% of region (2,215 ha) Area protected 98.8% of region (182,335 ha)

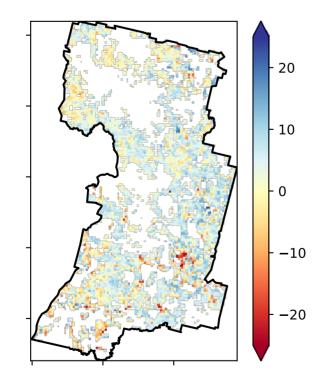
Area not protected 0.0% of region (0 ha) Area protected 100.0% of region (184,550 ha)

Total Vegetation Cover Decile [%]



Total Vegetation Cover Anomaly [%]

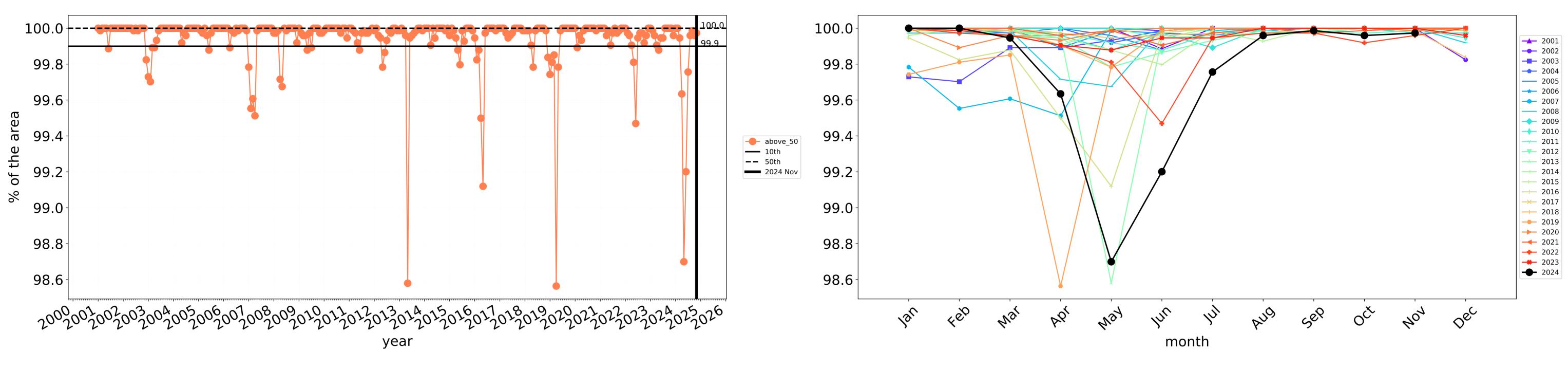
Anomaly show how many percetage points each pixel is from the mean. That is, red pixels are about 20% lower than the mean of that pixel. The mean is only for the month of the map using baseline from 2001 to 2019.



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.

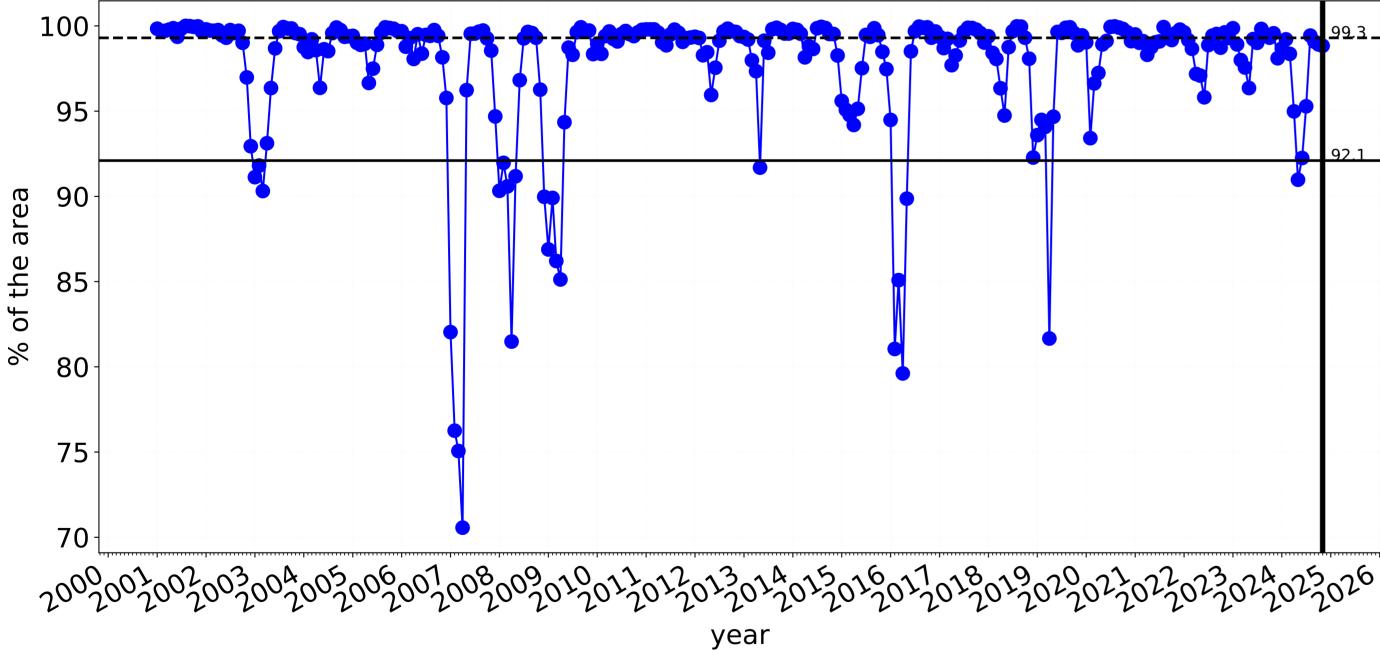






Proportion of the area protected from wind erosion (Total Vegetation Cover > 50%)

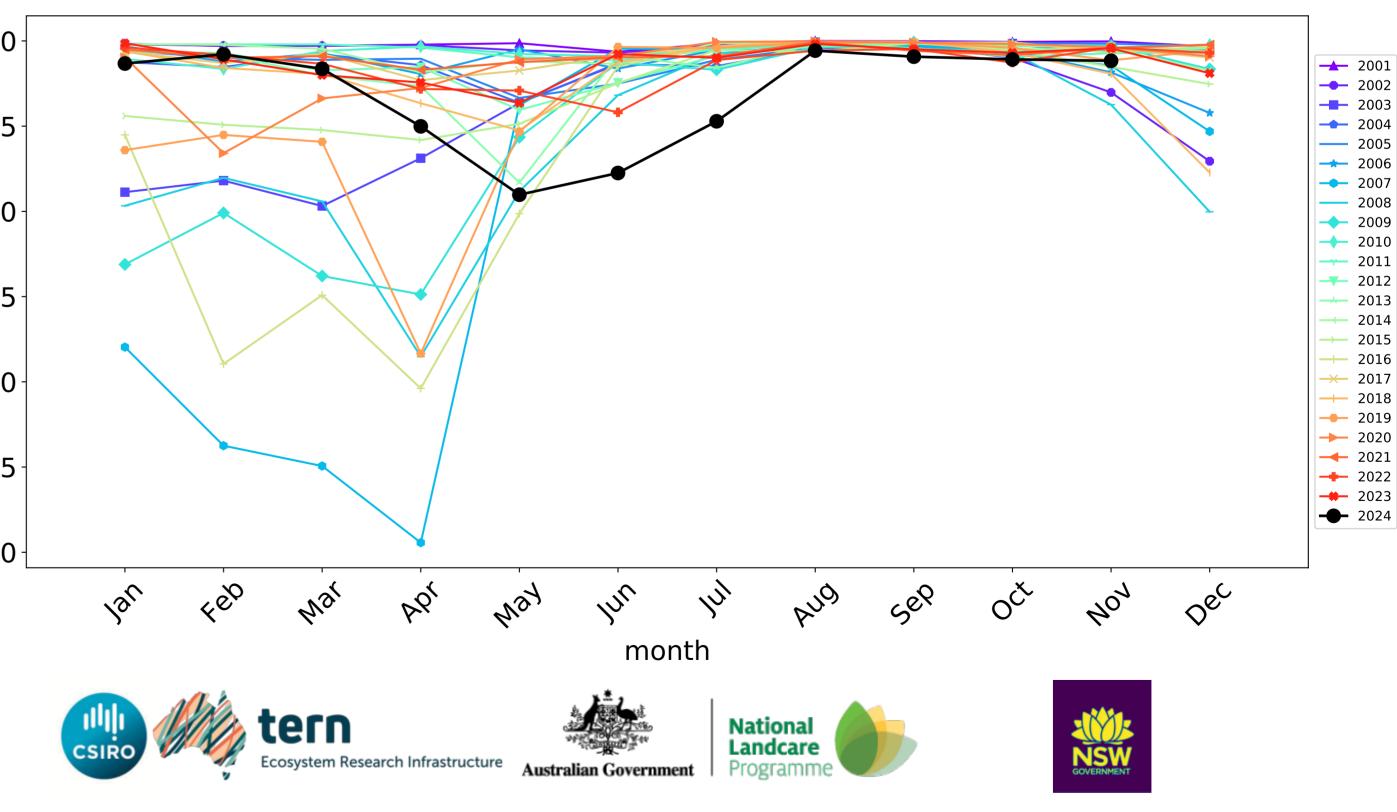
Proportion of the area protected from water erosion (Total Vegetation Cover > 70%)

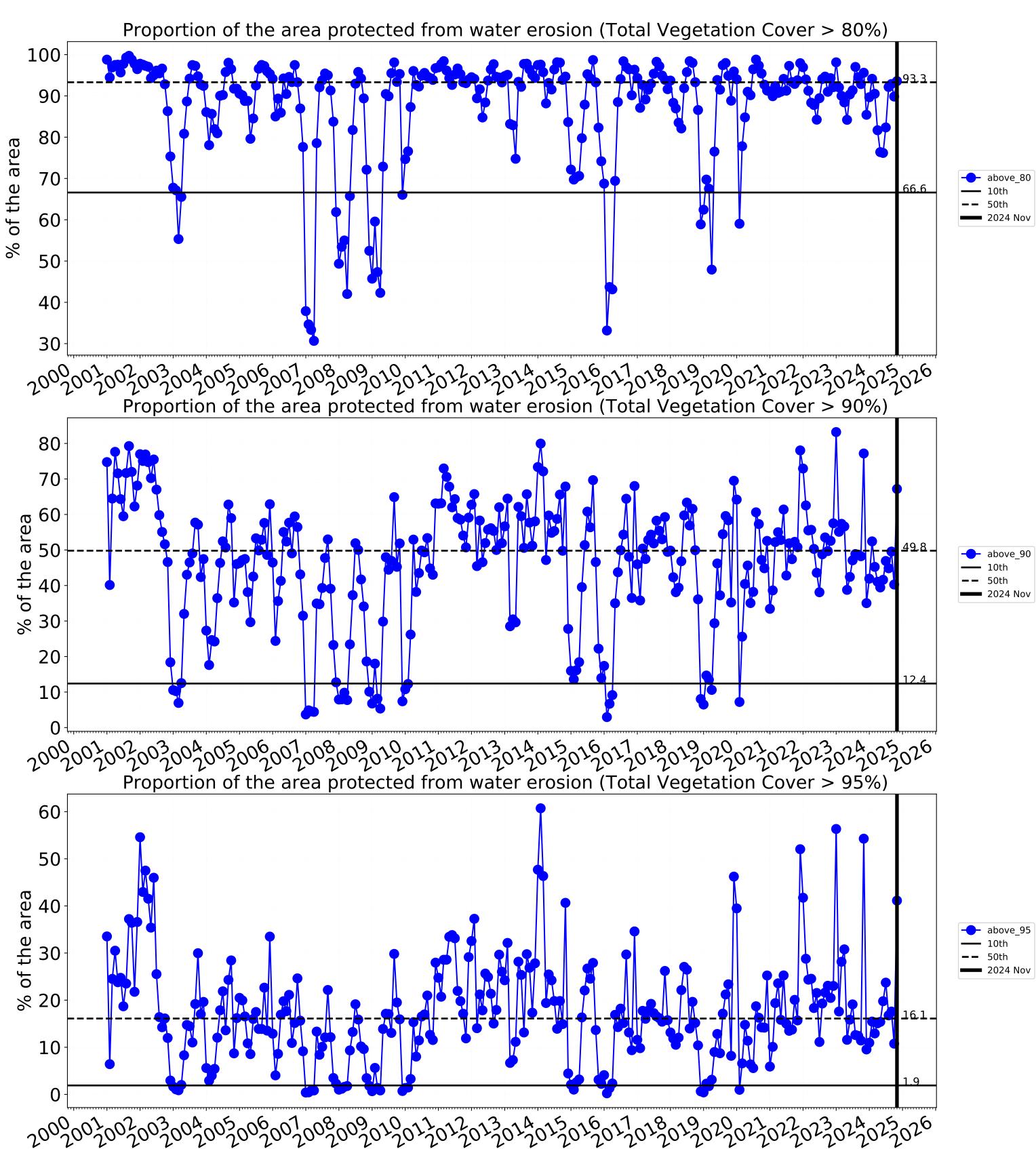


Wind erosion historical monthly area protected (Total Veg Cov >50%)

100 95 90 ---- above_70 **——** 10th **——** 50th 2024 Nov 85 80 75 70 Jan

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



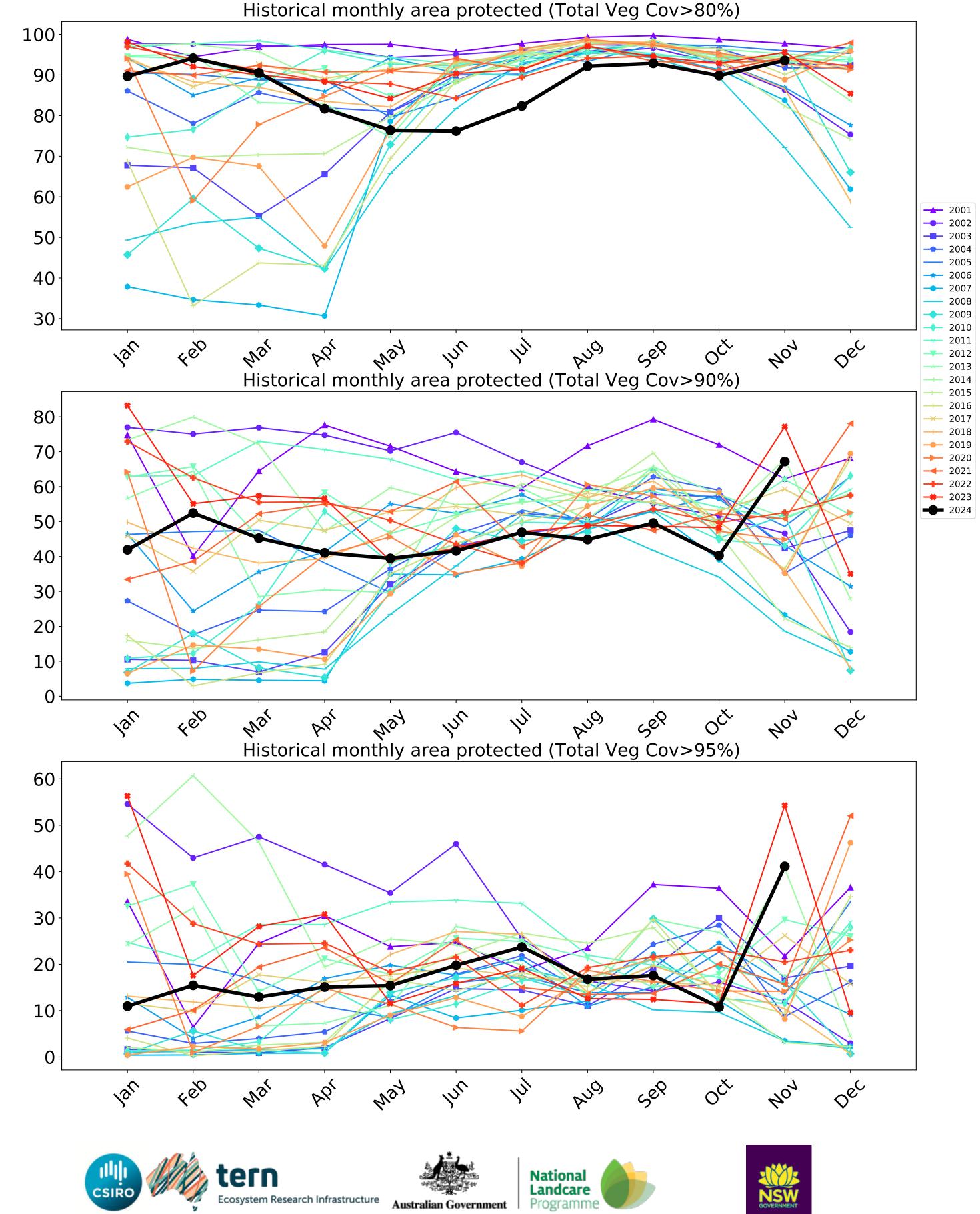


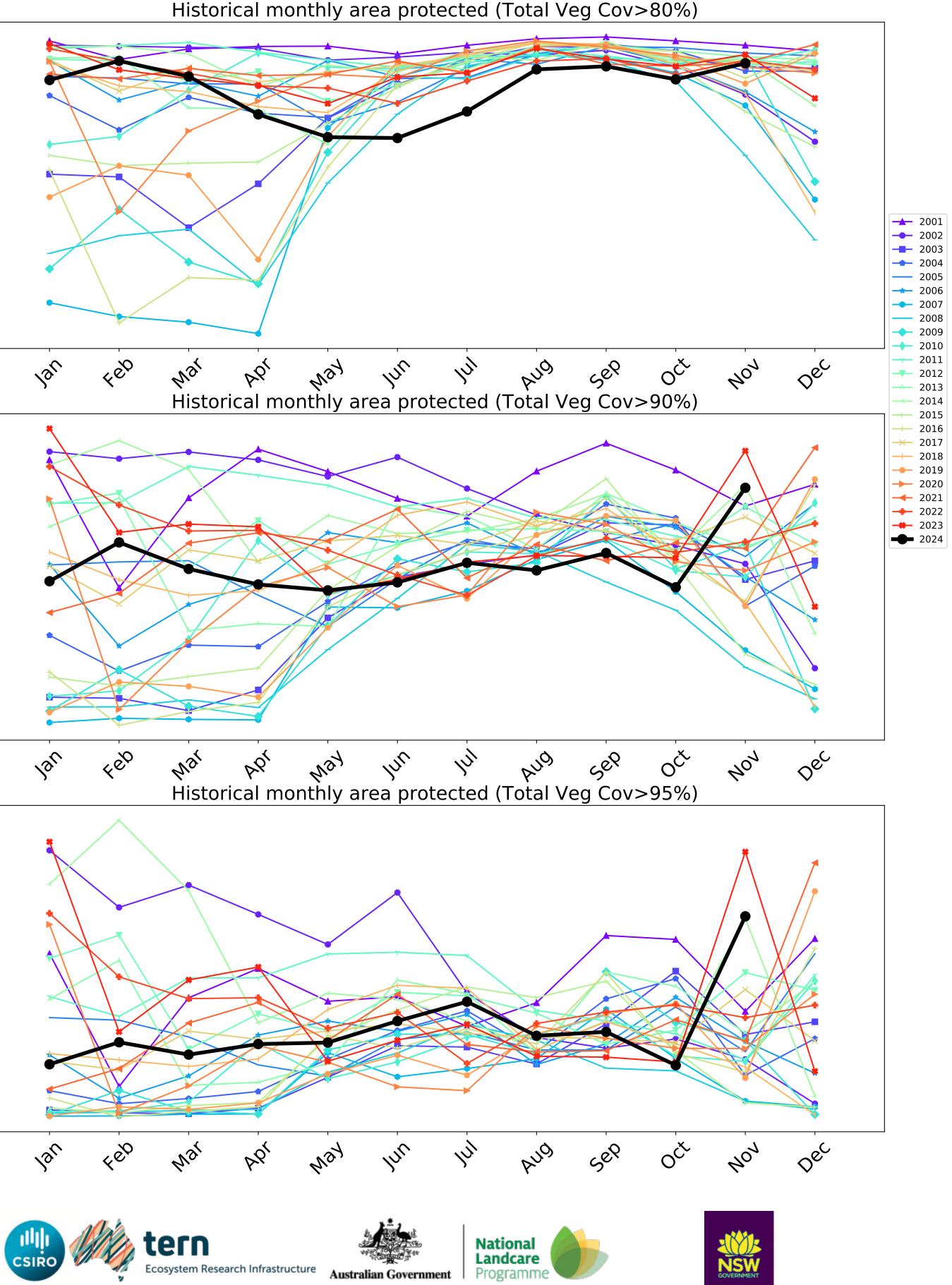
— 10th

2024 Nov

---- above_90

2024 Nov





Grazing - Forest (non woodland)

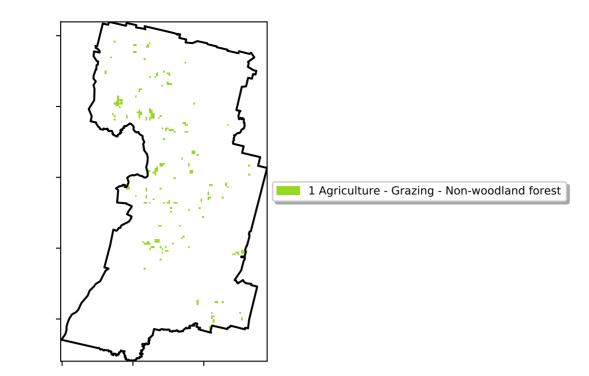
120/010000

1 52°10 70°10

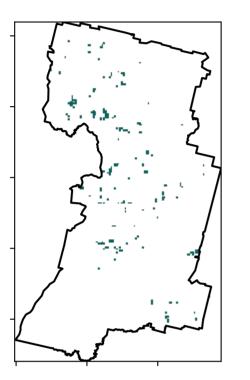
· 32°10'50°10

0.30%

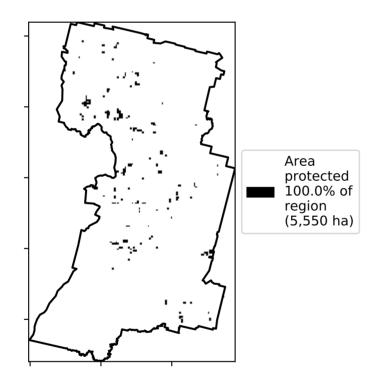
Land use and forest cover



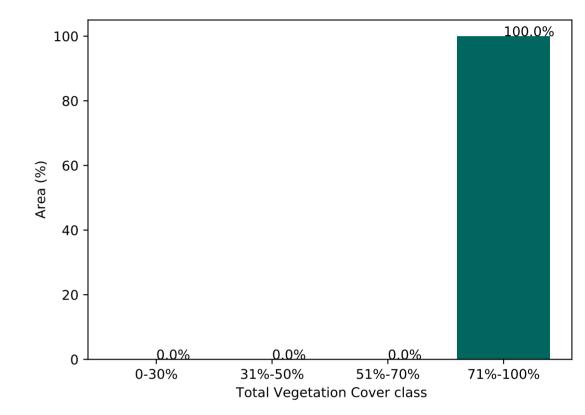
Total Vegetation Cover [%]



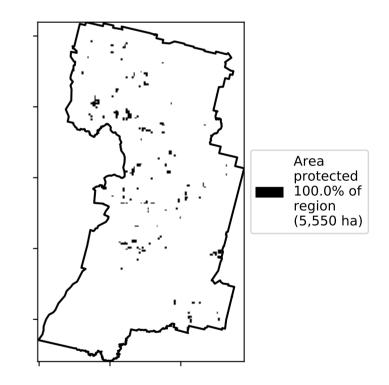




Proportion of vegetation cover class in area



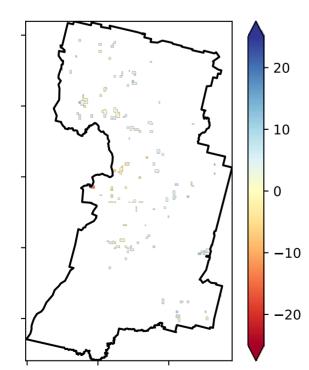
% Area protected from wind erosion (>50%)



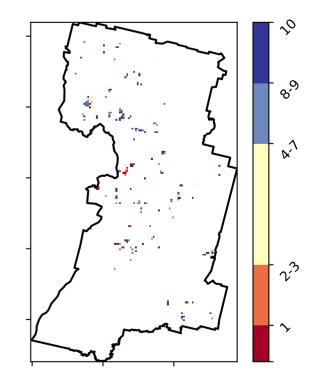
Catchment Scale Land Use and Forests of Australia (2018) Derived from Catchment Scale Land Use of Australia (2018) and Forests of Australia (2018)

Total Vegetation Cover Anomaly [%]

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

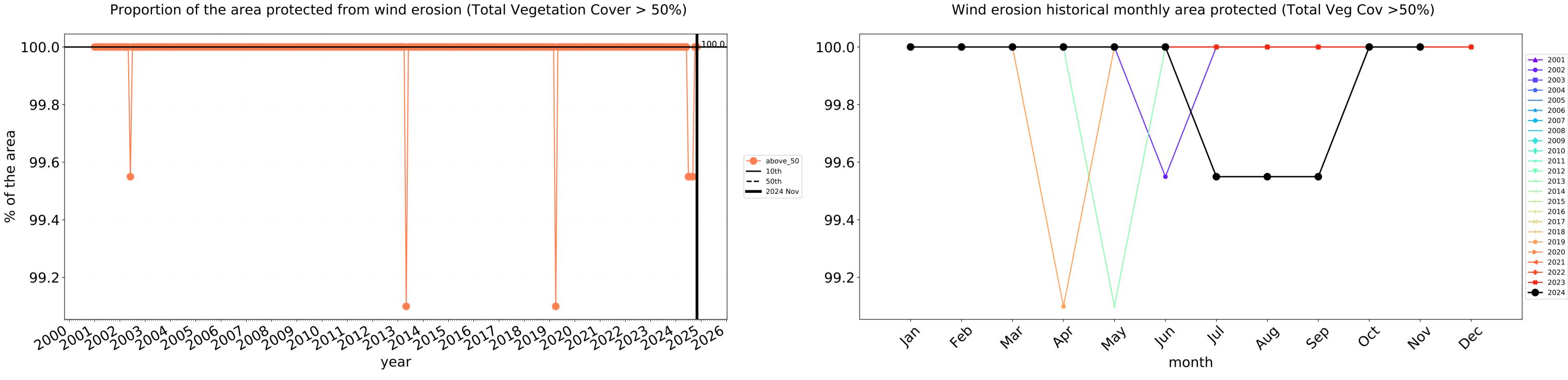


Deciles show where the pixel value lies in the record, from highest to lowest, for that month. That is, red pixels are in the lowest 10% of records for that month of the map using baseline from 2001 to 2019.

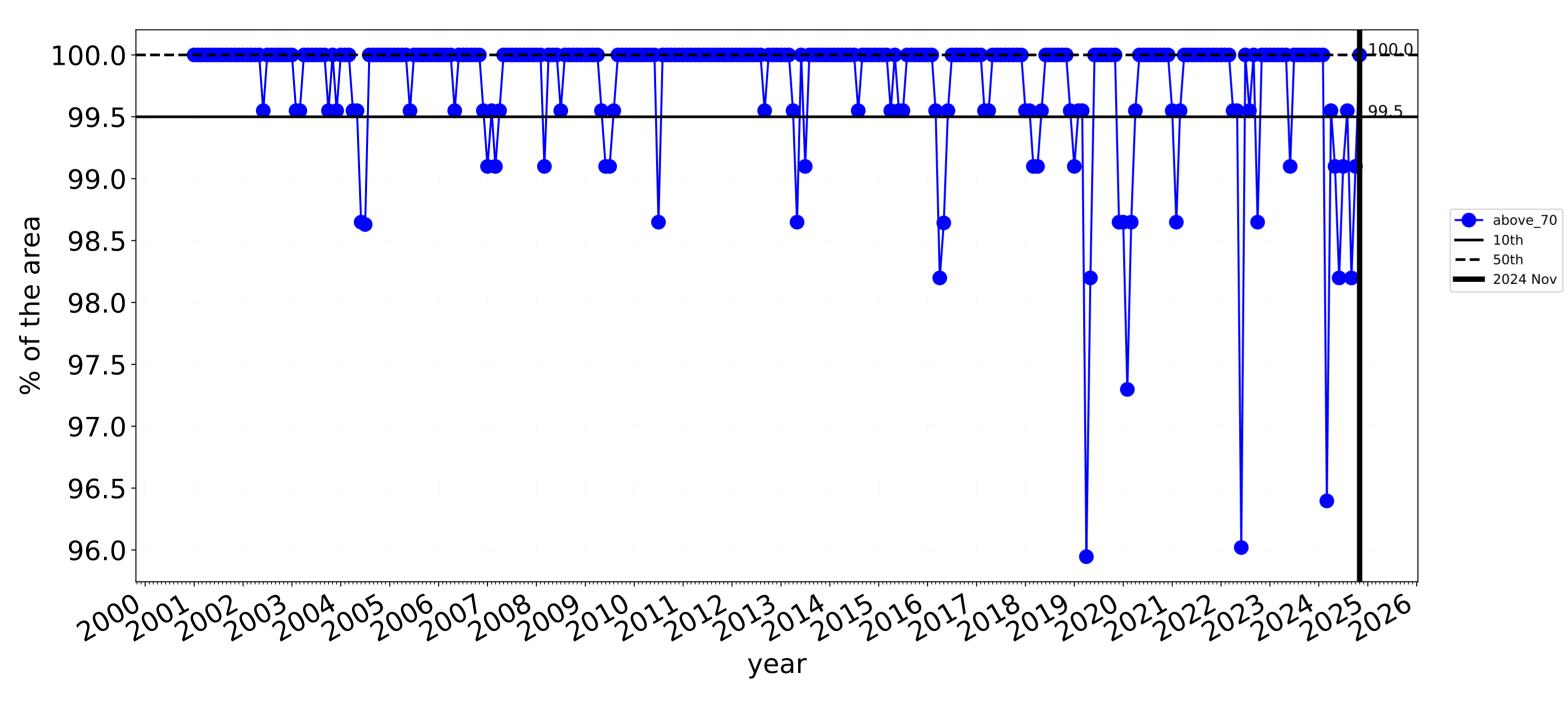




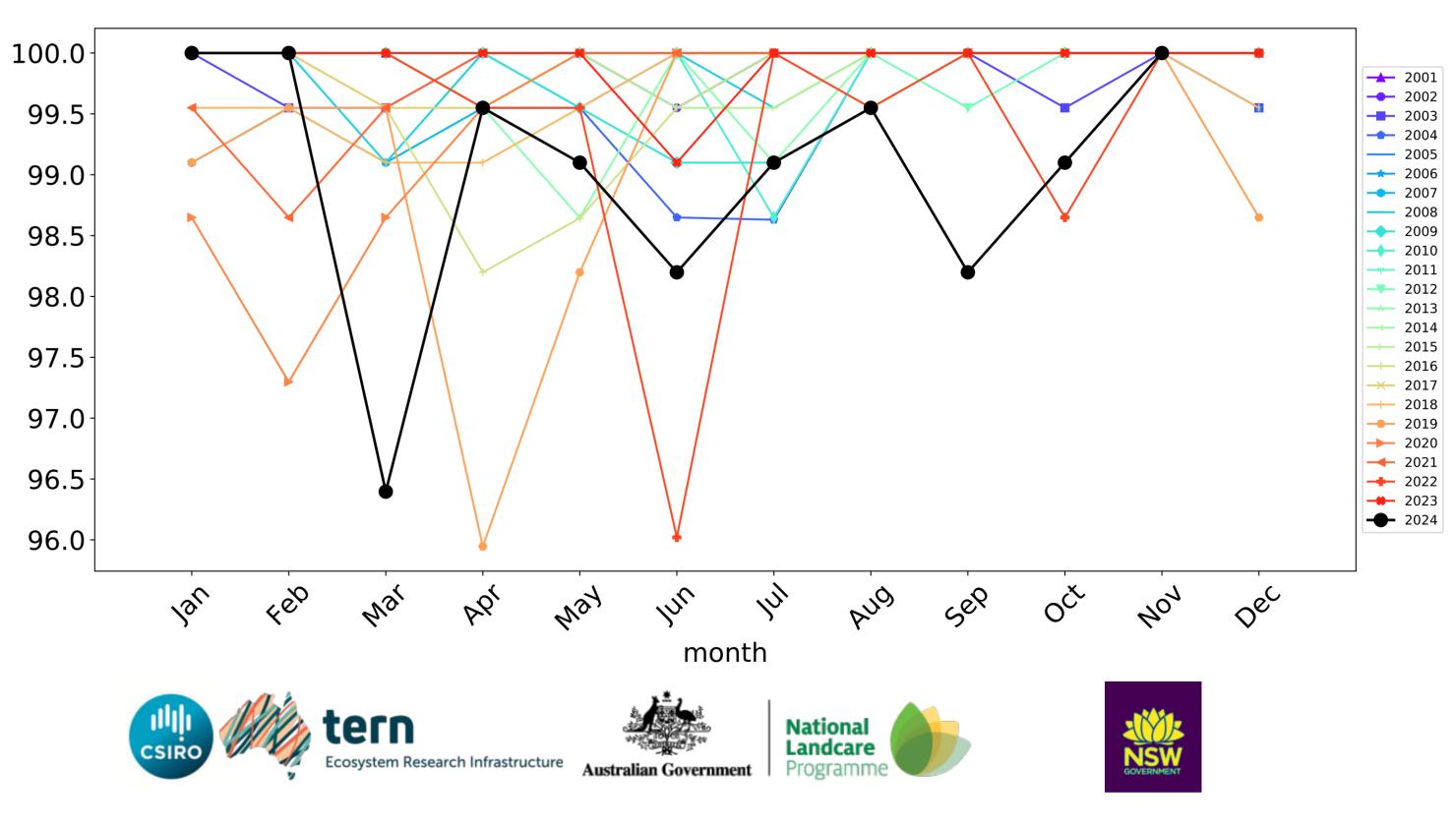


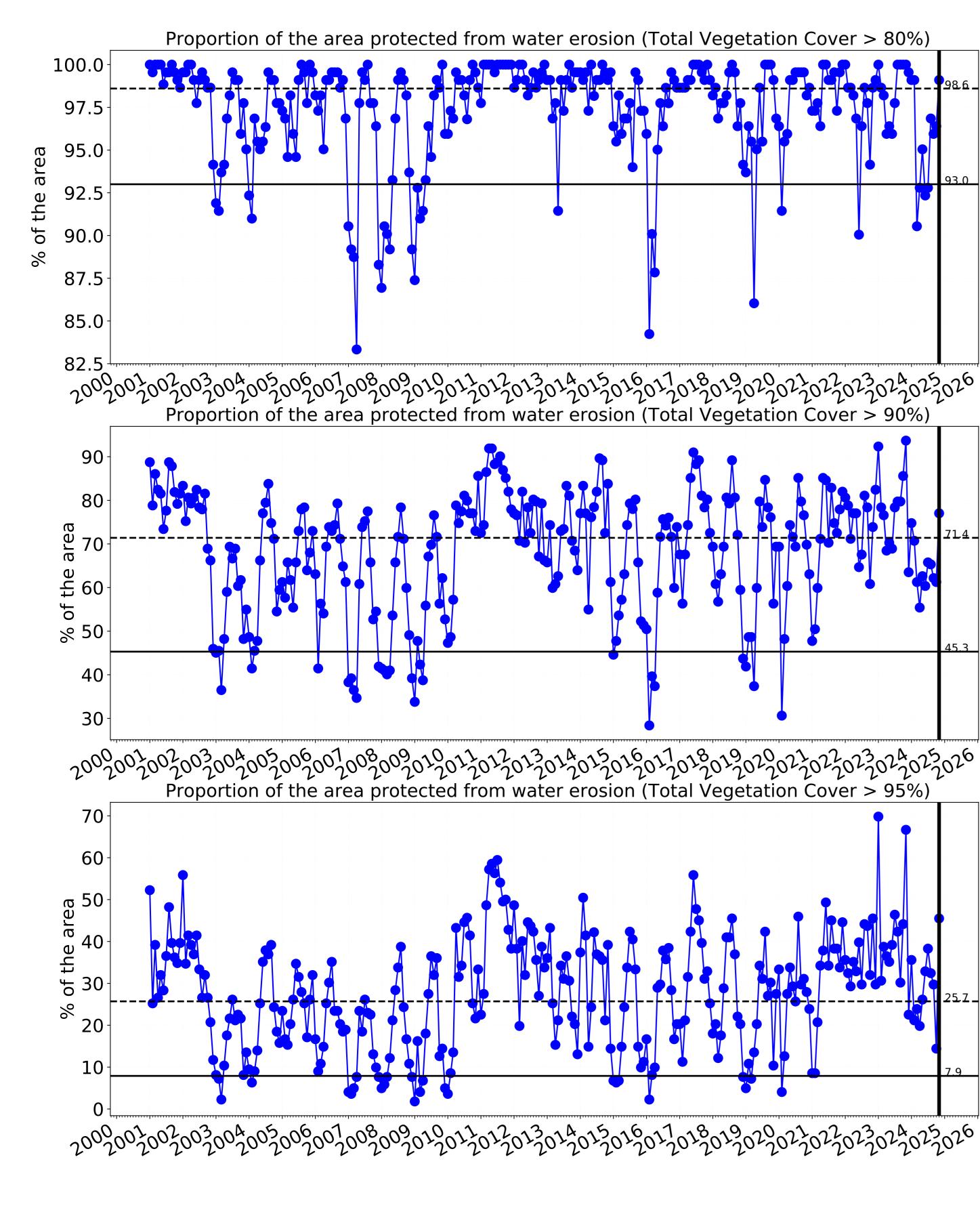


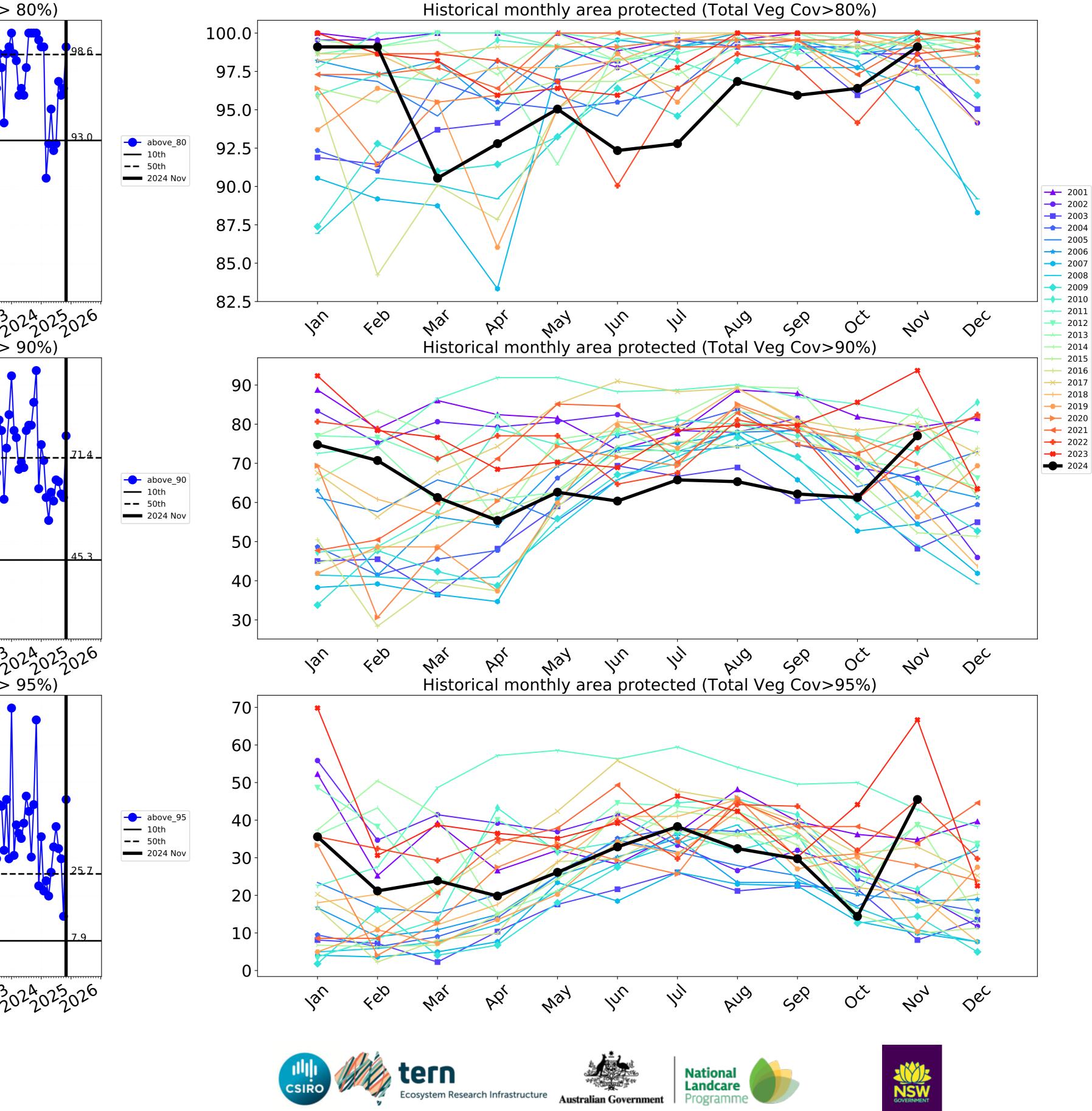
Proportion of the area protected from water erosion (Total Vegetation Cover > 70%)



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

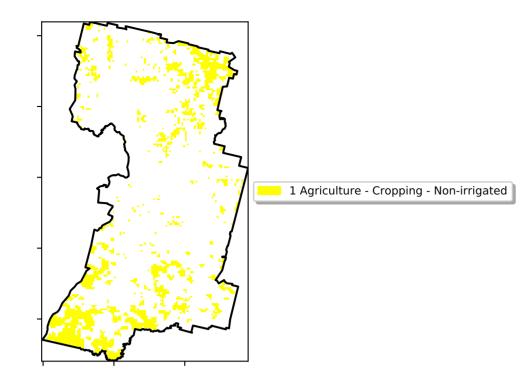






Cropping

Land use and forest cover



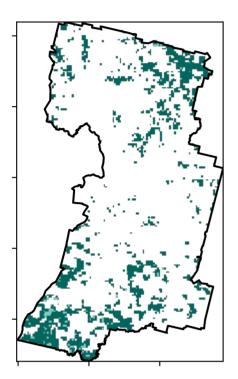
120/010000

52°10'10°10

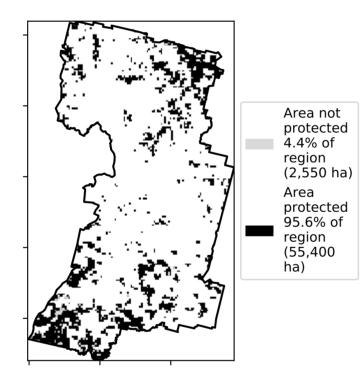
32%50%

0.30%

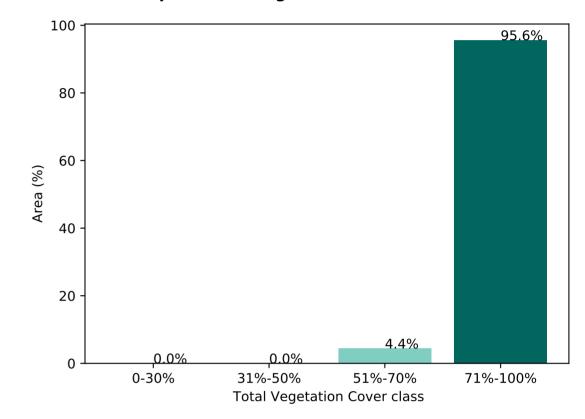
Total Vegetation Cover [%]



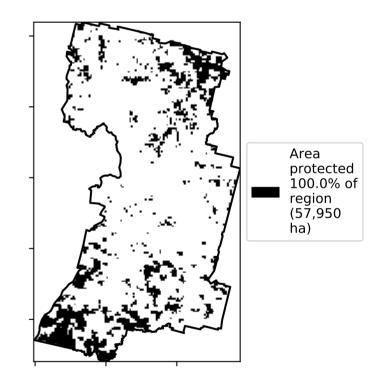




Proportion of vegetation cover class in area



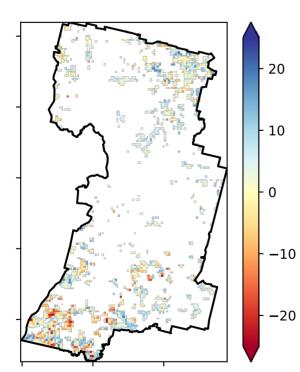
% Area protected from wind erosion (>50%)



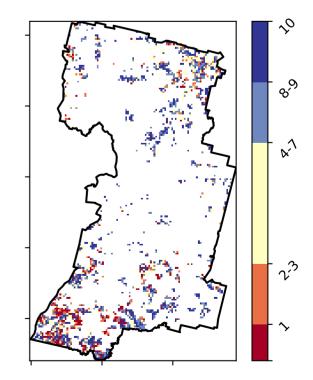
Catchment Scale Land Use and Forests of Australia (2018) Derived from Catchment Scale Land Use of Australia (2018) and Forests of Australia (2018)

Total Vegetation Cover Anomaly [%]

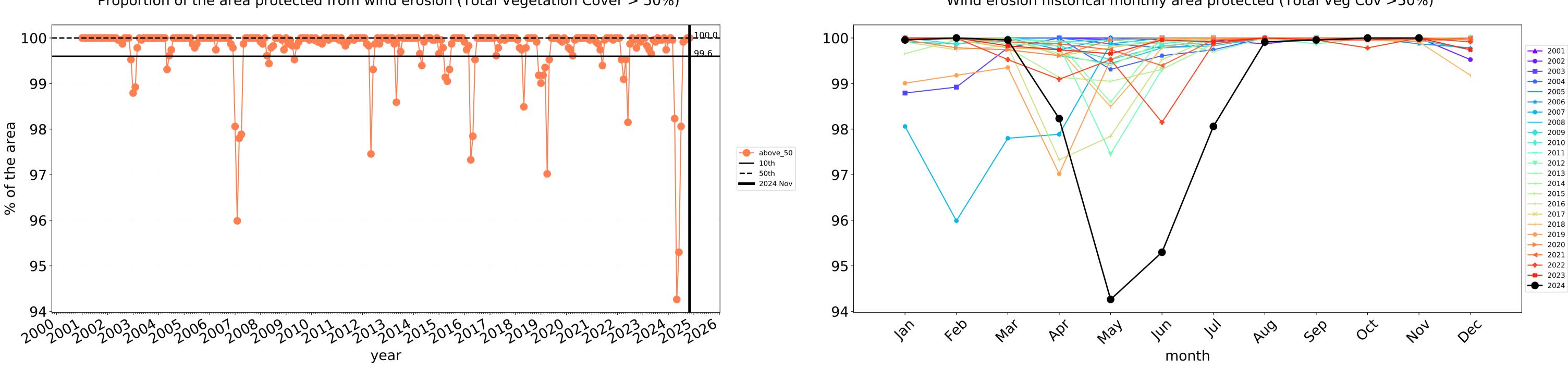
Anomaly show how many percetage points each pixel is from the mean. That is, red pixels are about 20% lower than the mean of that pixel. The mean is only for the month of the map using baseline from 2001 to 2019.



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.

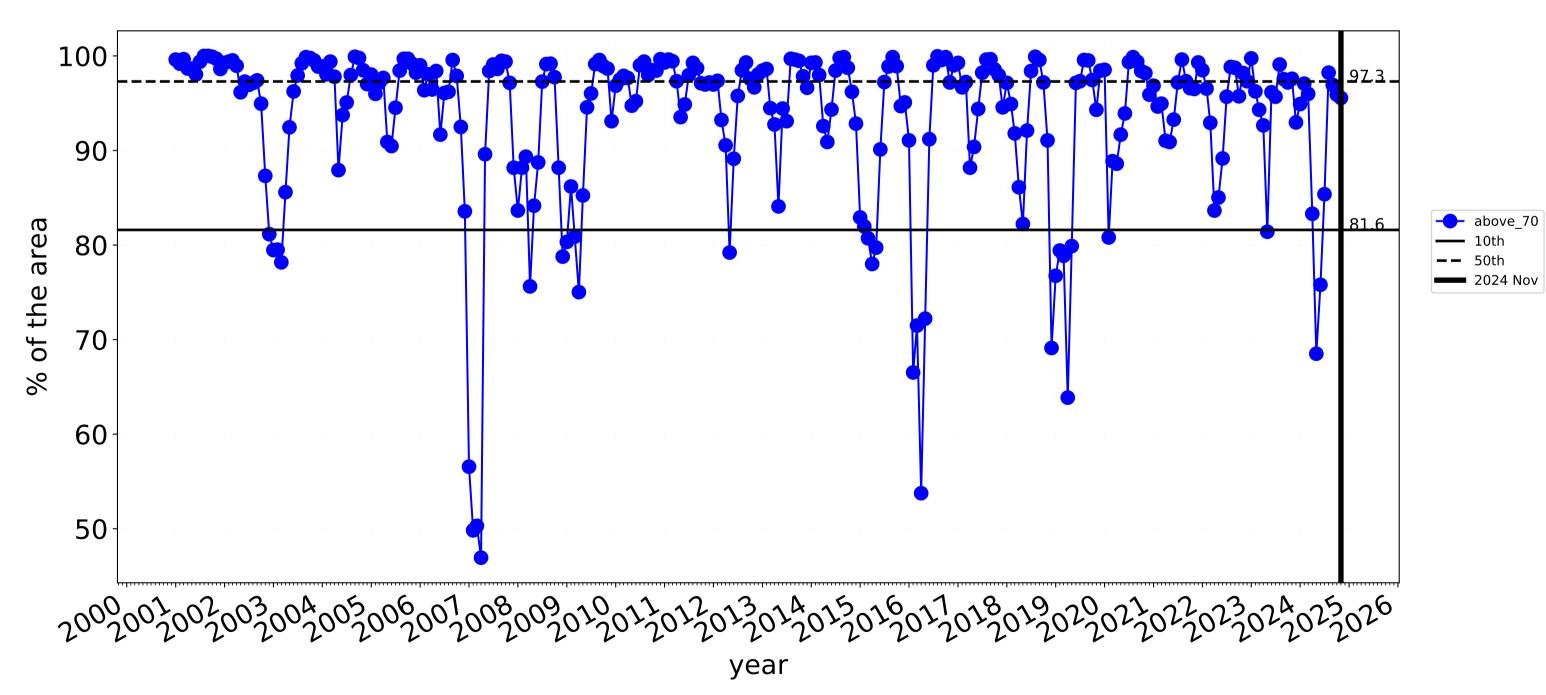






Proportion of the area protected from wind erosion (Total Vegetation Cover > 50%)

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

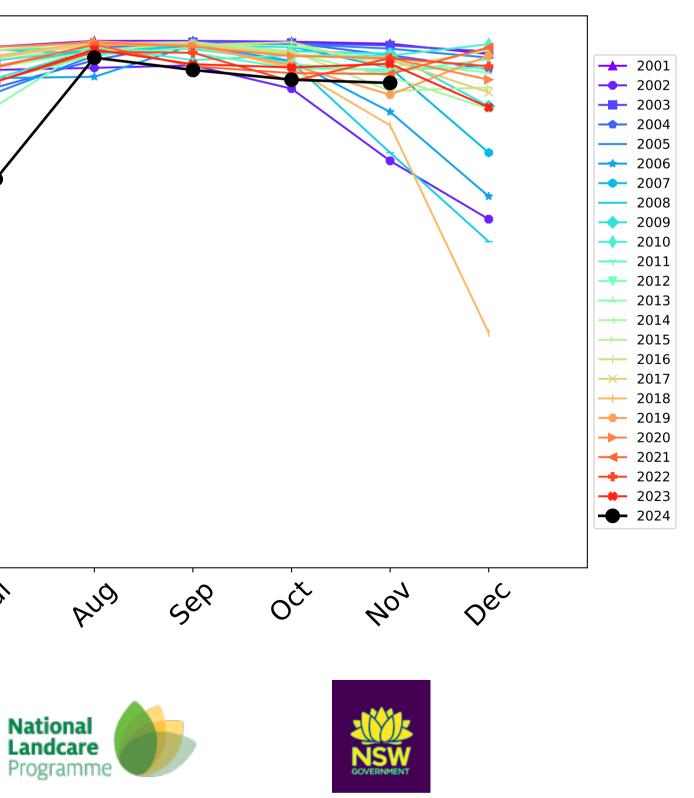


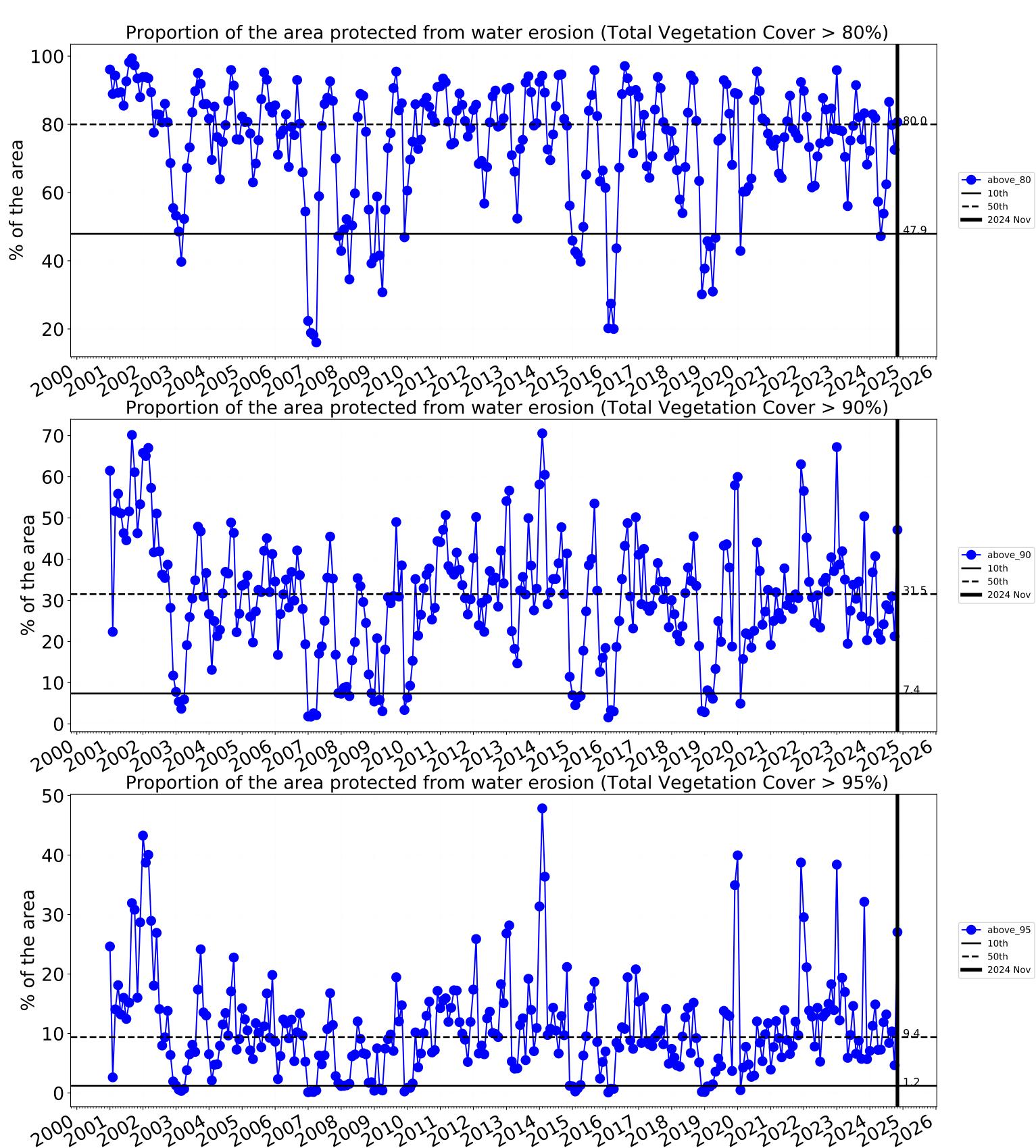
Cropping timeseries

100 90-80-70-60-50feb way In Jan Mai 1/2/ 291 month tern Ecosystem Research Infrastructure Australian Government

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

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





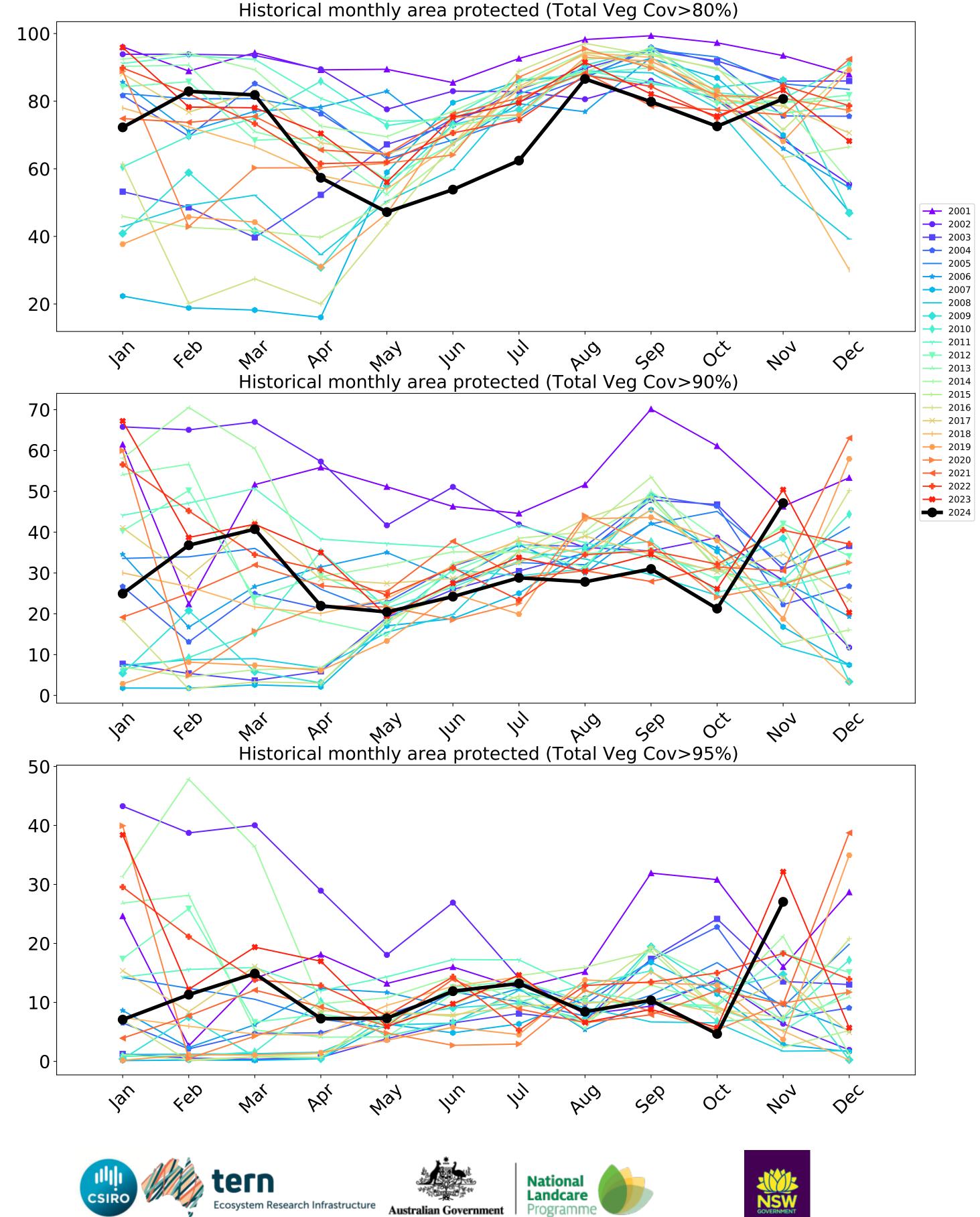
above 80

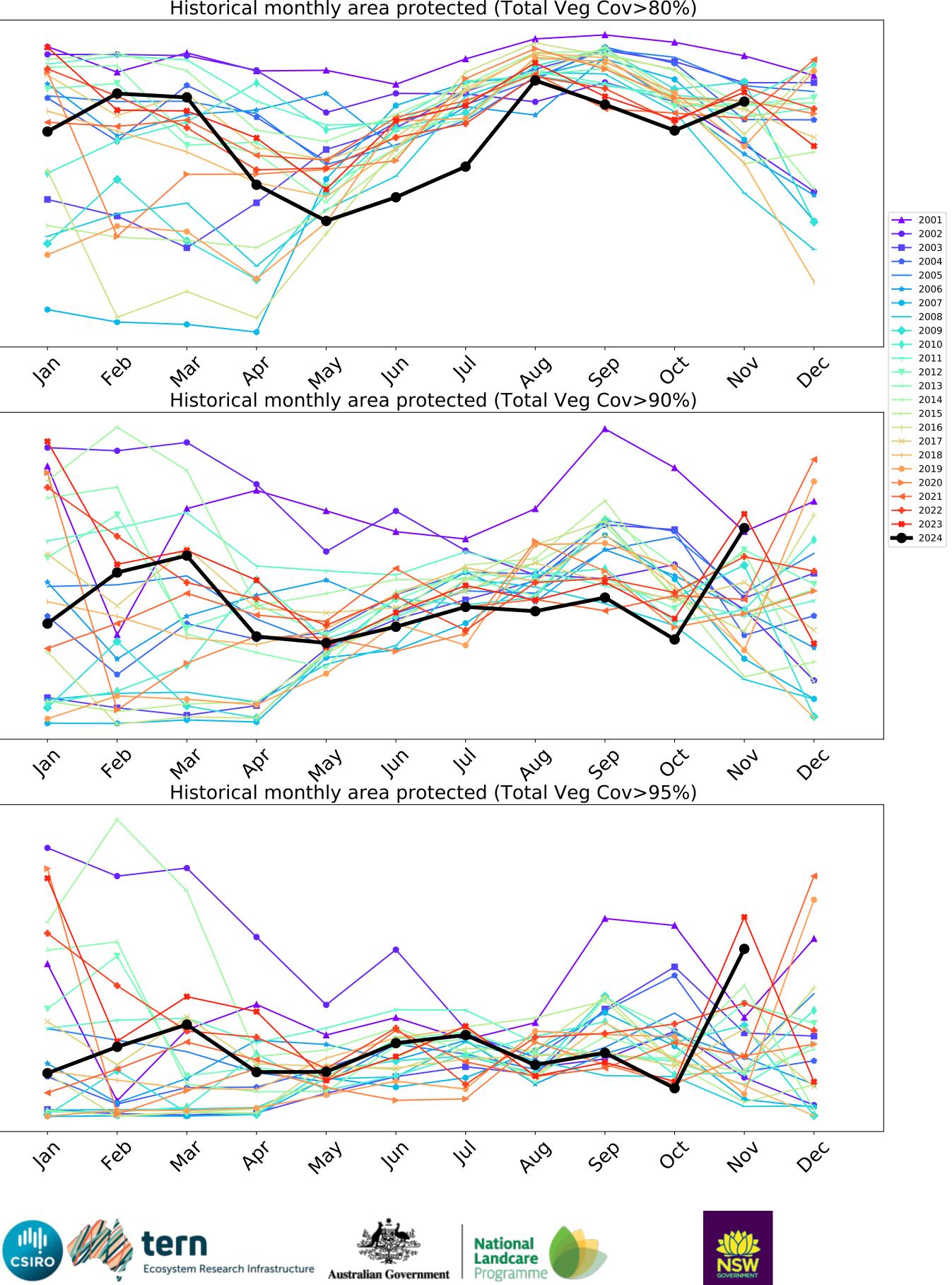
above_90

— 10th

— 10th

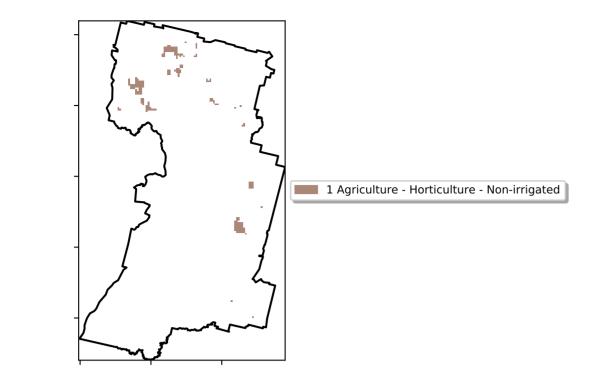
2024 Nov



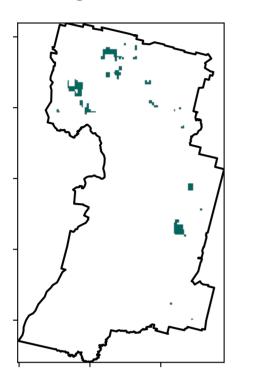


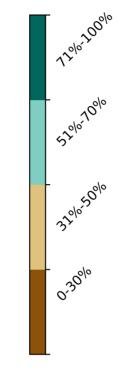
Horticulture

Land use and forest cover

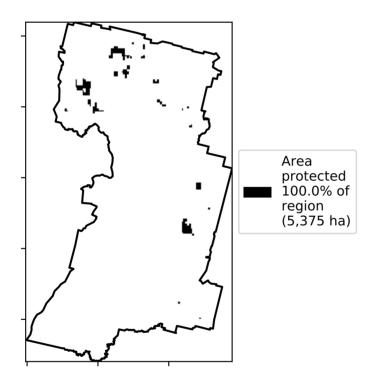


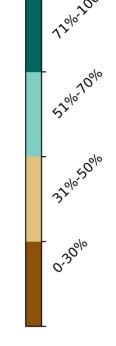
Total Vegetation Cover [%]

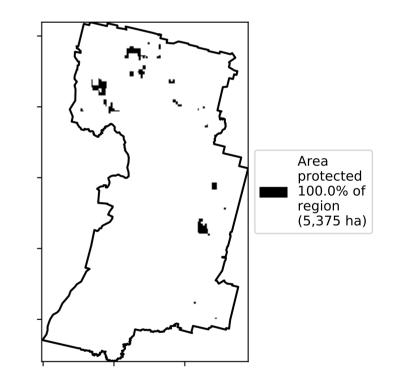




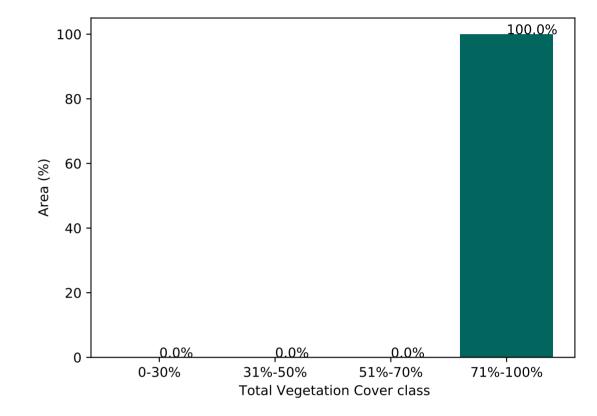
% Area protected from water erosion (>70%)







Proportion of vegetation cover class in area



% Area protected from wind erosion (>50%)

Total Vegetation Cover Anomaly [%]

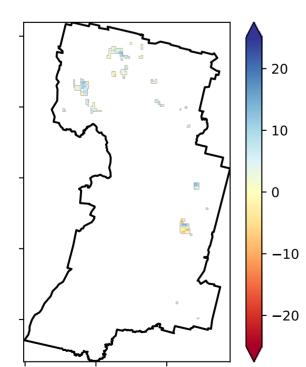
Anomaly show how many percetage points each pixel is from the mean. That is, red pixels are about 20% lower than the mean of that pixel. The mean is only for the month of the map using baseline from 2001 to 2019.

Catchment Scale Land Use and Forests of Australia (2018)

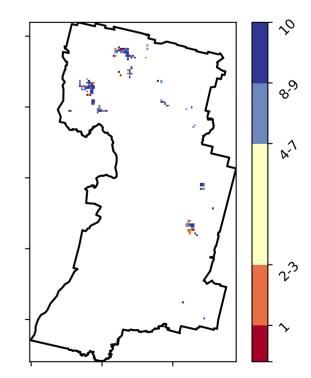
Catchment Scale Land Use of Australia (2018) and Forests

of Australia (2018)

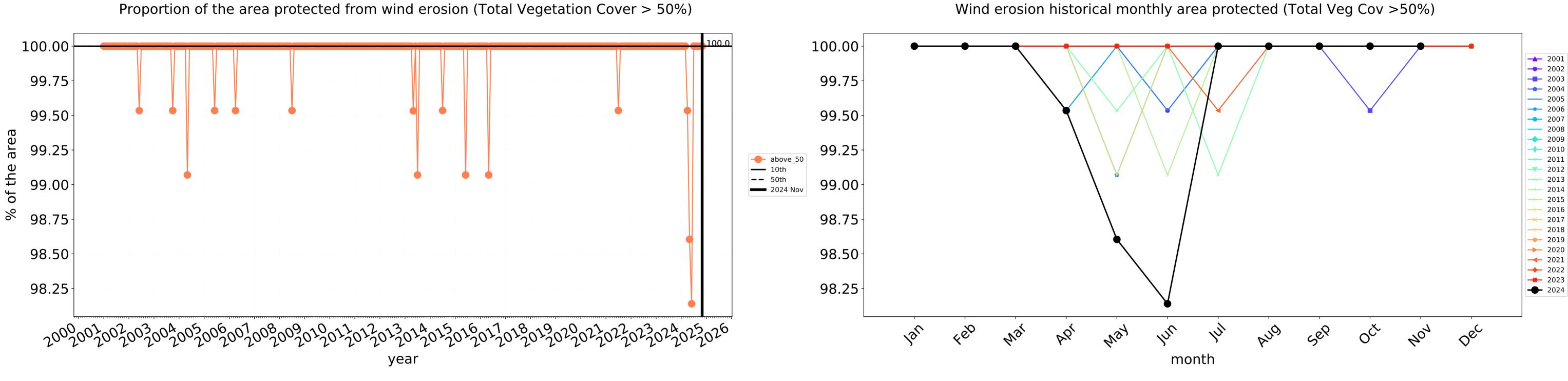
Derived from



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.

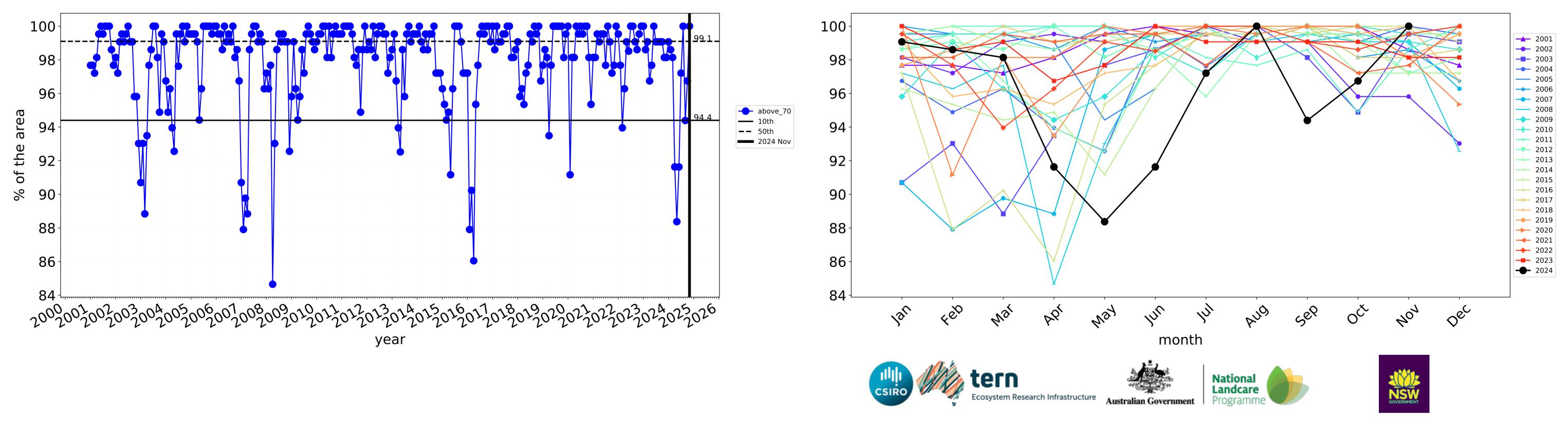




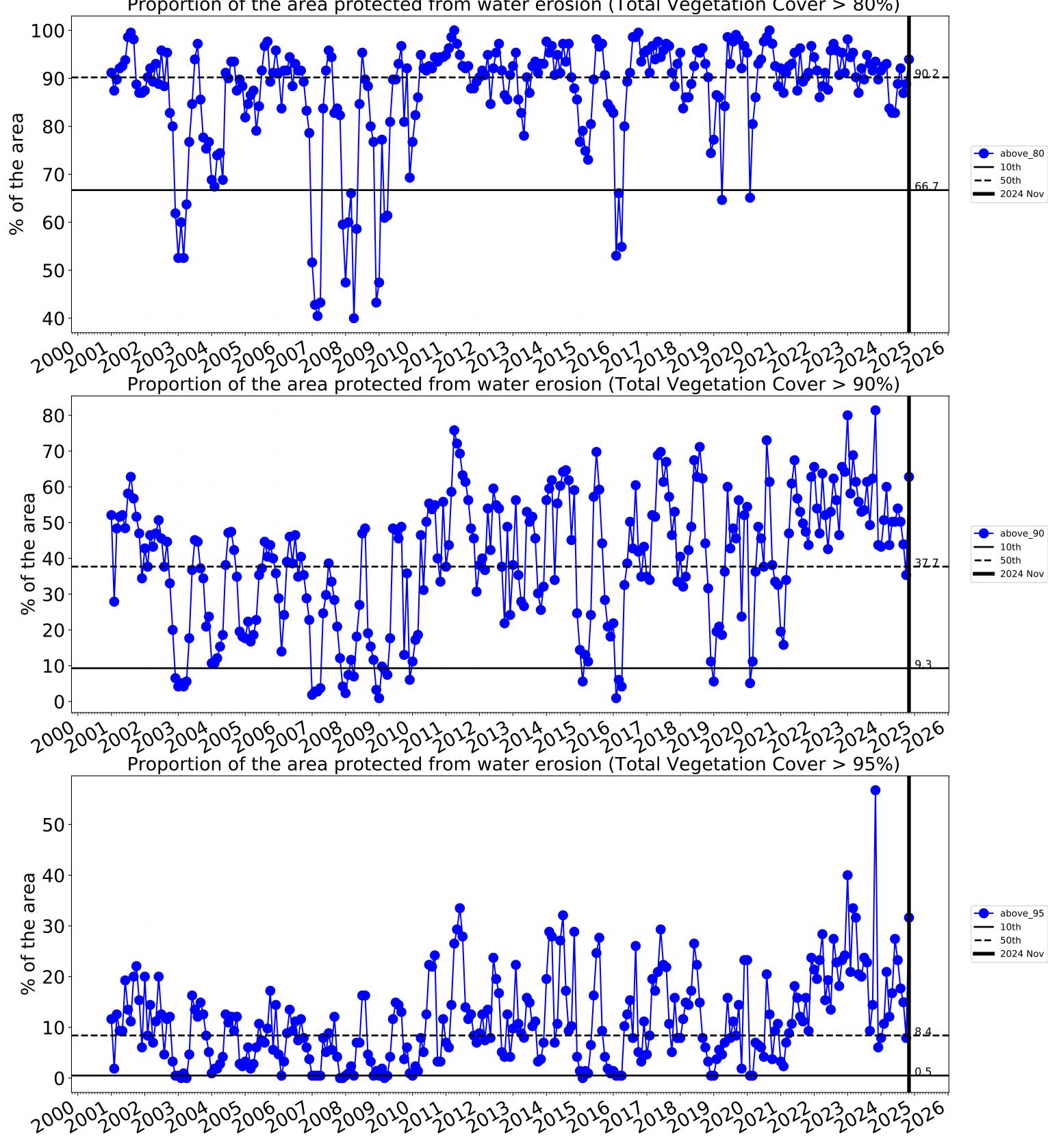


Proportion of the area protected from wind erosion (Total Vegetation Cover > 50%)





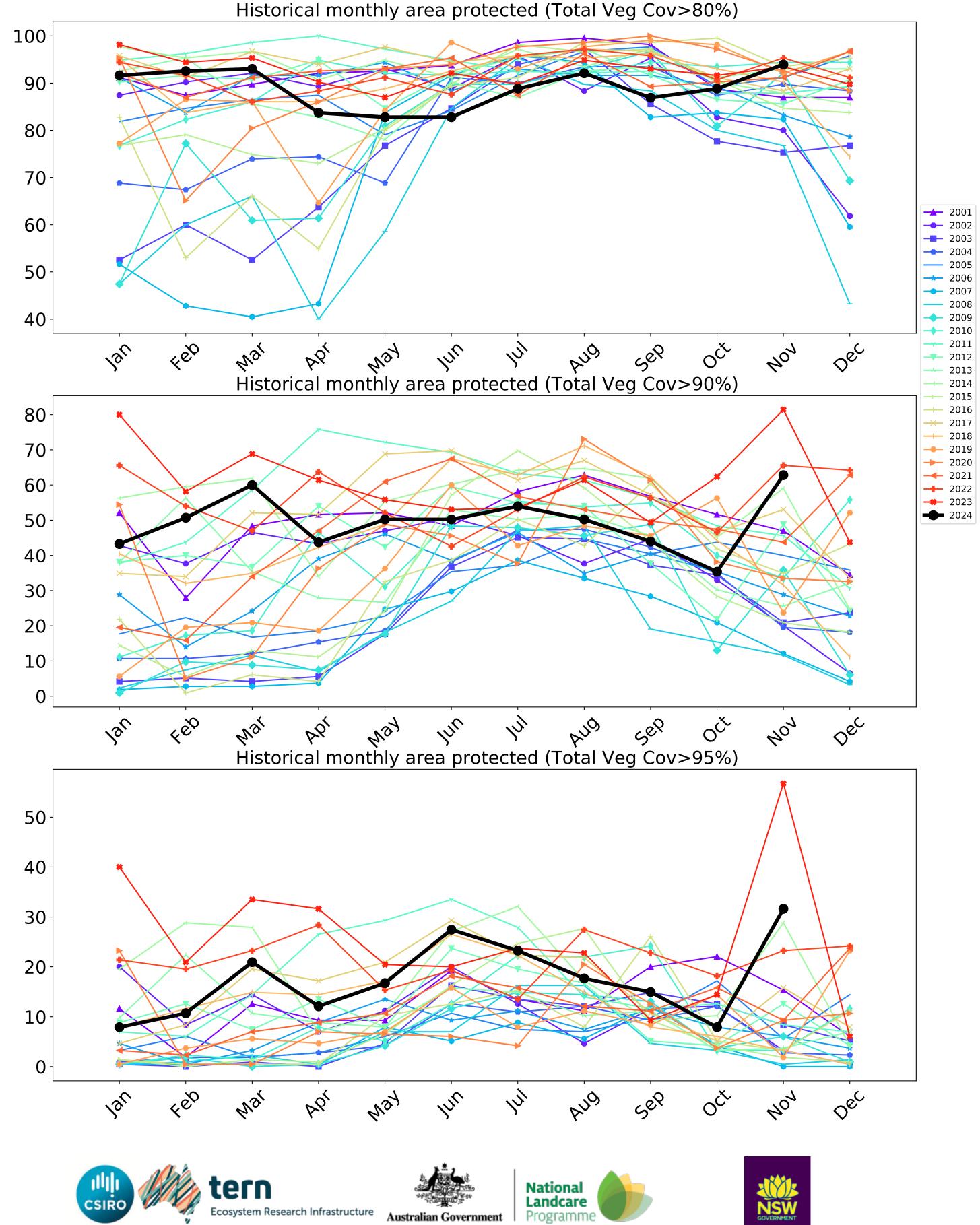
Water erosion historical monthly area protected (Total Veg Cov>70%)



Proportion of the area protected from water erosion (Total Vegetation Cover > 80%)



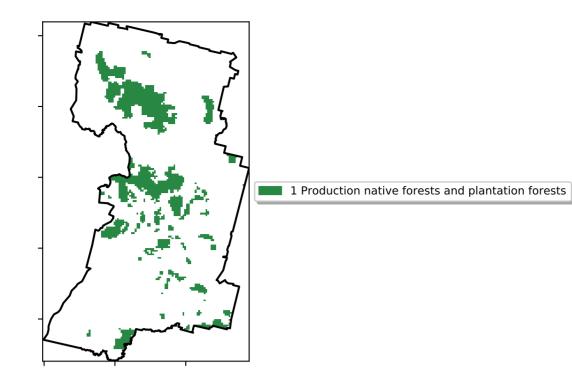
above_90



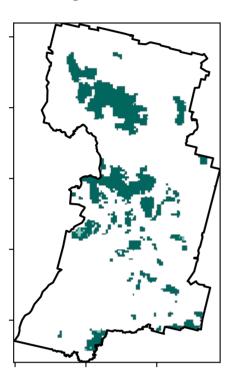


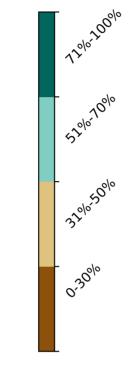
Production native forests and plantation forests

Land use and forest cover

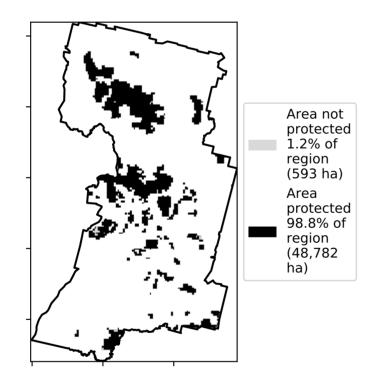


Total Vegetation Cover [%]

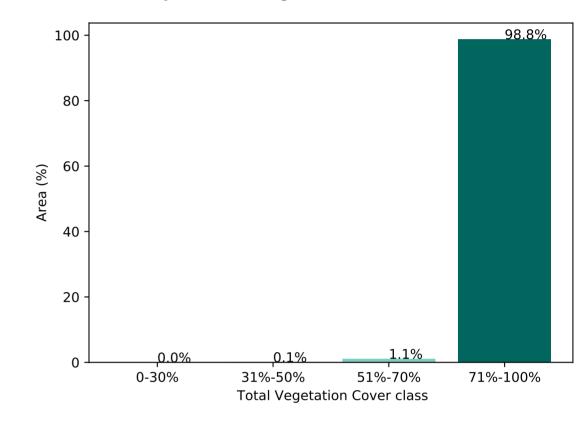




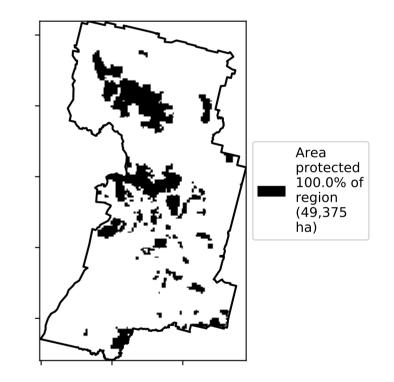
% Area protected from water erosion (>70%)



Proportion of vegetation cover class in area



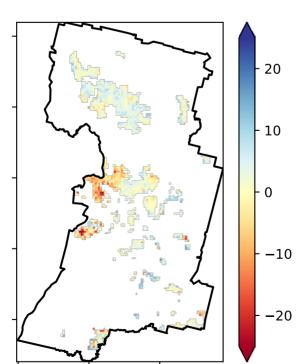
% Area protected from wind erosion (>50%)



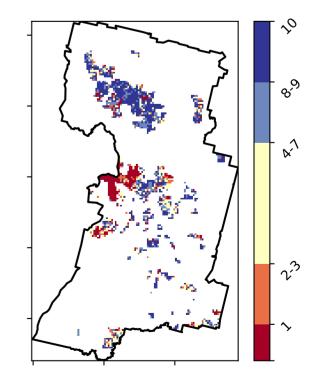
Catchment Scale Land Use and Forests of Australia (2018) Derived from Catchment Scale Land Use of Australia (2018) and Forests of Australia (2018)

Total Vegetation Cover Anomaly [%]

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

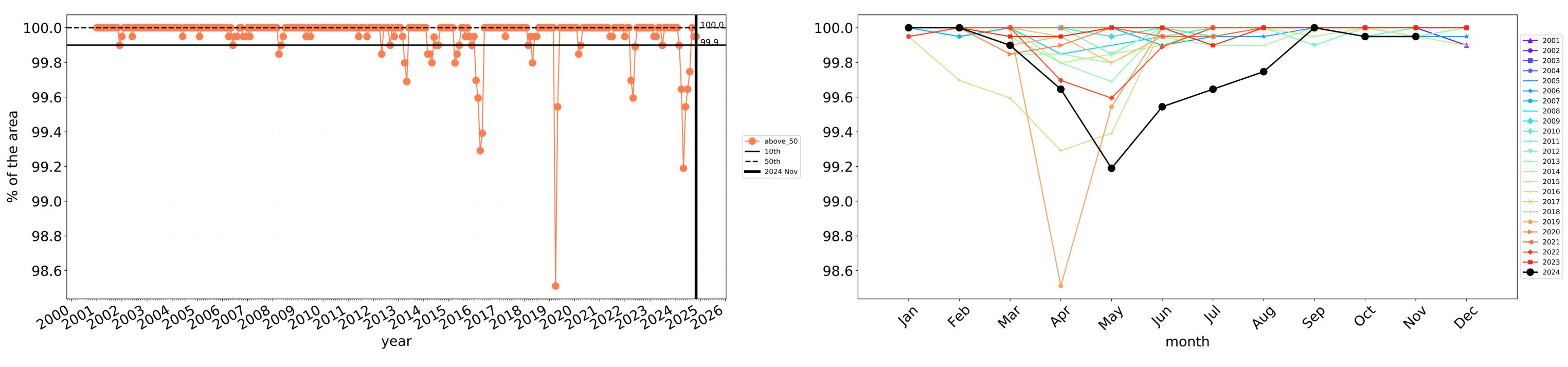


Deciles show where the pixel value lies in the record, from highest to lowest, for that month. That is, red pixels are in the lowest 10% of records for that month of the map using baseline from 2001 to 2019.



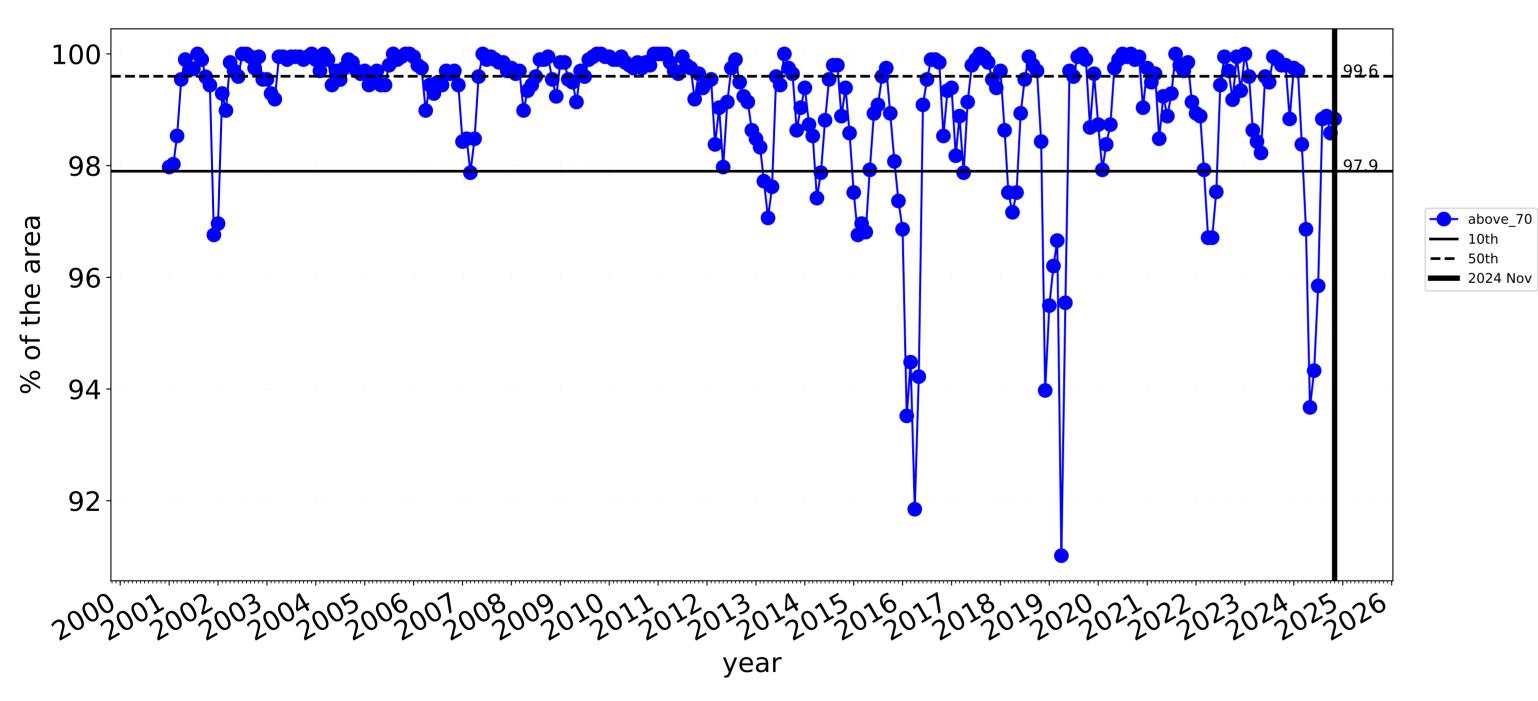


Production native forests and plantation forests timeseries



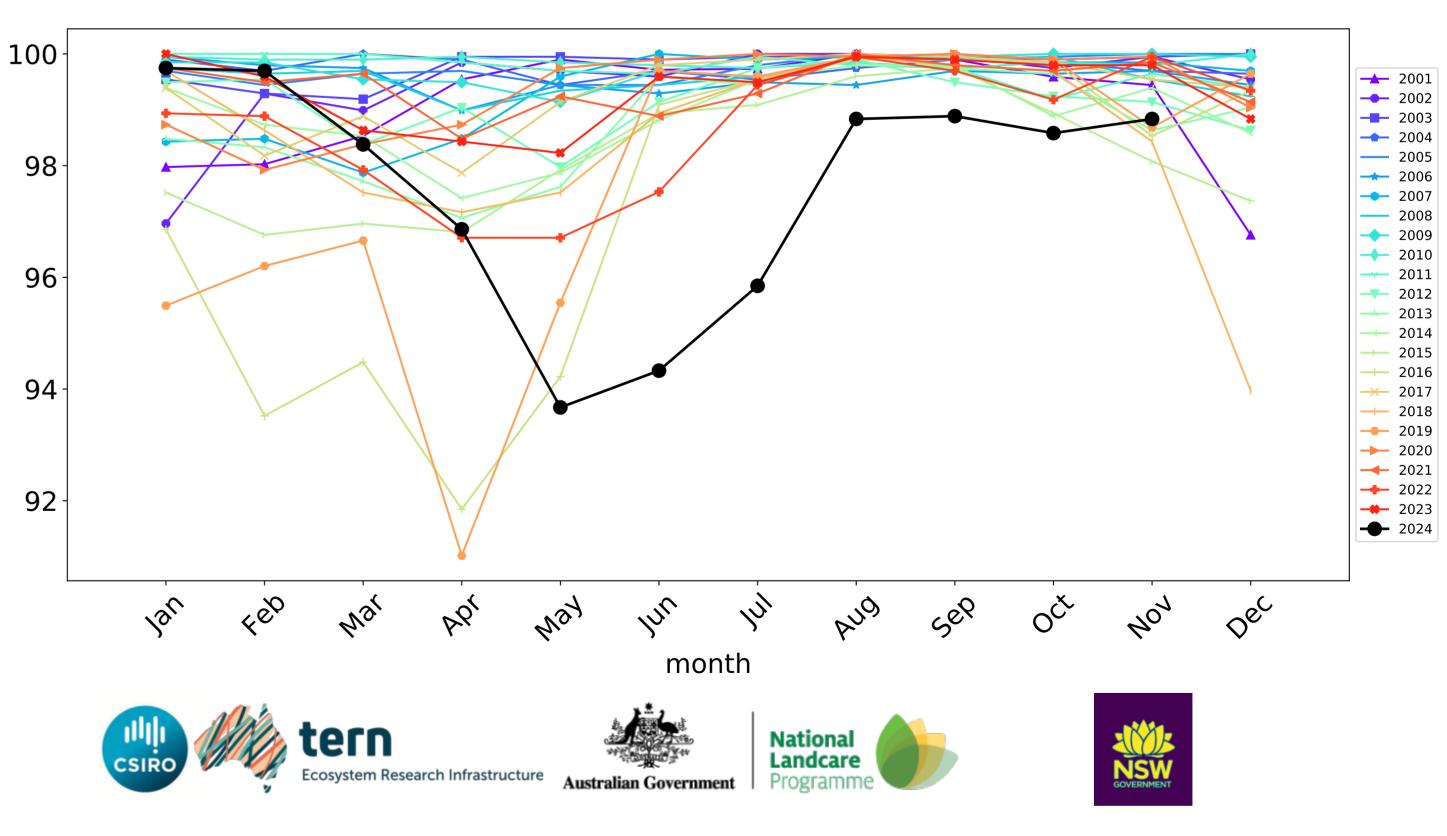
Proportion of the area protected from wind erosion (Total Vegetation Cover > 50%)

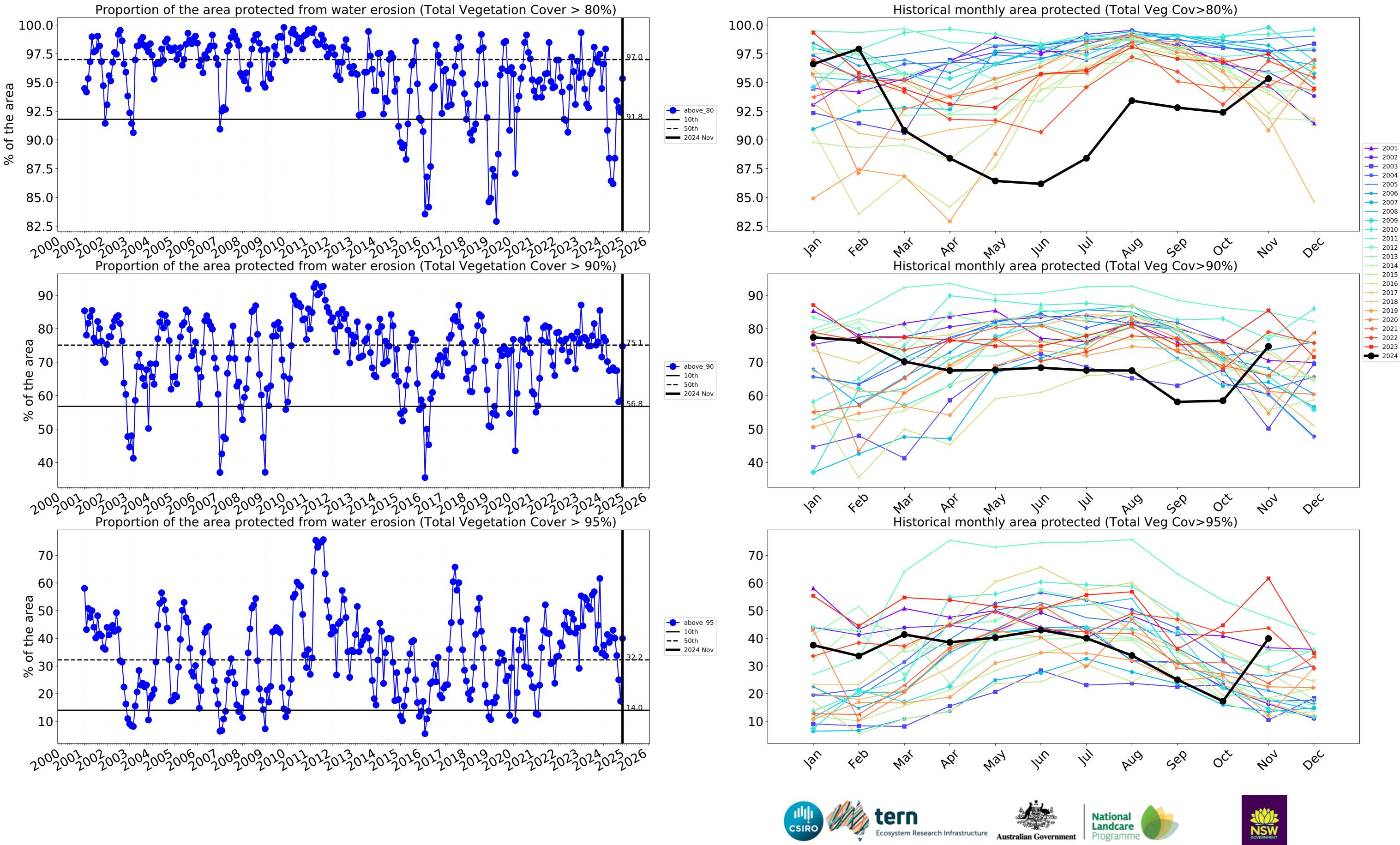
Proportion of the area protected from water erosion (Total Vegetation Cover > 70%)



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

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





Australian Government

Pyrenees_(S) (total 343,625 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	343,625	100.0% 343,625	100.0% 343,525	98.4% 338,200	92.1% 316,600	65.6% 225,450	38.1% 131,075
Conservation and natural environments	16,225	100.0% 16,225	99.8% 16,200	99.4% 16,125	94.9% 15,400	64.1% 10,400	24.7% 4,000
Conservation and natural environments non forest	5,075	100.0% 5,075	99.5% 5,050	99.0% 5,025	93.6% 4,750	57.6% 2,925	35.5% 1,800
Conservation and natural environments Forest (non woodland)	10,350	100.0% 10,350	100.0% 10,350	99.8% 10,325	97.6% 10,100	69.3% 7,175	19.6% 2,025
Agriculture	255,325	100.0% 255,325	100.0% 255,275	98.1% 250,600	90.8% 231,725	62.7% 159,975	37.7% 96,300
Grazing	191,750	100.0% 191,750	100.0% 191,700	98.9% 189,600	93.8% 179,775	67.4% 129,275	41.1% 78,900
Grazing non forest	184,550	100.0% 184,550	100.0% 184,500	98.8% 182,400	93.6% 172,700	67.2% 124,000	41.1% 75,900
Grazing - Forest (non woodland)	5,550	100.0% 5,550	100.0% 5,550	100.0% 5,550	99.1% 5,500	77.0% 4,275	45.5% 2,525
Cropping	57,950	100.0% 57,950	100.0% 57,950	95.6% 55,375	80.7% 46,750	47.1% 27,300	27.0% 15,675
Horticulture	5,375	100.0% 5,375	100.0% 5,375	100.0% 5,375	94.0% 5,050	62.8% 3,375	31.6% 1,700
Production native forests and plantation forests	49,375	100.0% 49,375	99.9% 49,350	98.8% 48,800	95.3% 47,075	74.7% 36,900	39.9% 19,725

