Total vegetation cover soil protection Region:LGA Tablelands (R) 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: March 2024

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 Mar 2024

Land use and forest cover

Catchment Scale

of Australia (2018)

Derived from

Use of Australia

(2018) and Forests

of Australia (2018)

Anomaly show how many percetage points each pixel is from

the mean. That

is, red pixels are about 20%

lower than the

using baseline from 2001 to 2019.

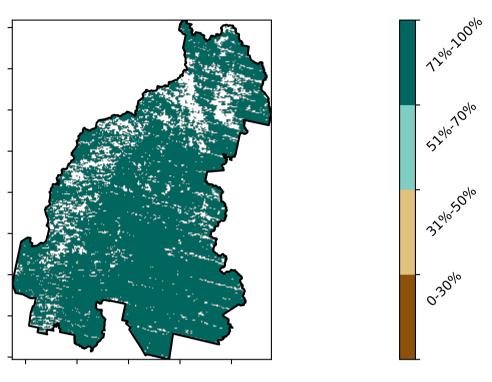
mean of that pixel. The mean is only for the month of the map

Land Use and Forests

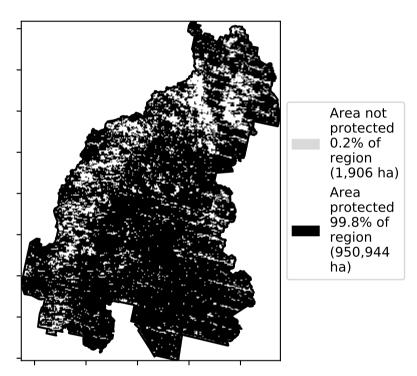
Catchment Scale Land

Legend with land class forest cover and number, i.e. Forests is 12 1 Conservation and natural environments - Non-forest 2 Conservation and natural environments - Woodland forest 3 Conservation and natural environments -Non-Woodland forest 4 Agriculture - Grazing - Non-forest 5 Agriculture - Grazing - Woodland forest 6 Agriculture - Grazing - Non-woodland forest 7 Agriculture - Grazing - Irrigated 8 Agriculture - Cropping - Non-irrigated 9 Agriculture - Cropping - Irrigated 10 Agriculture - Horticulture - Non-irrigated 11 Agriculture - Horticulture - Irrigated 12 Production native forests and plantation forests 13 Other uses

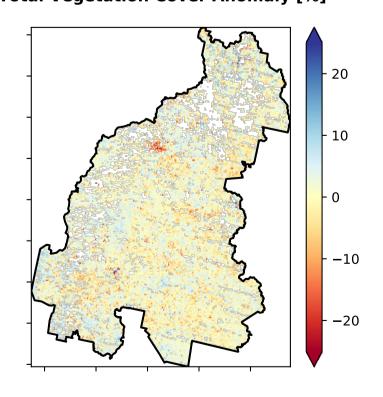
Total Vegetation Cover [%]



% Area protected from water erosion (>70%)

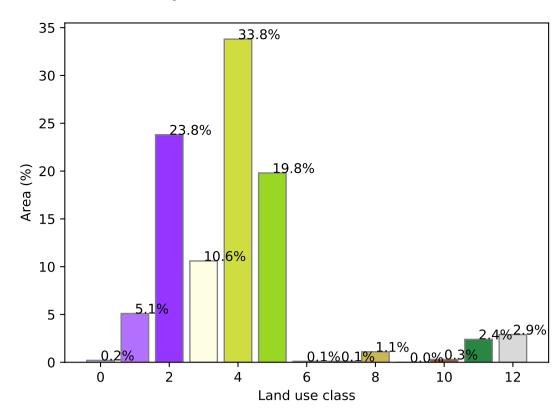


Total Vegetation Cover Anomaly [%]

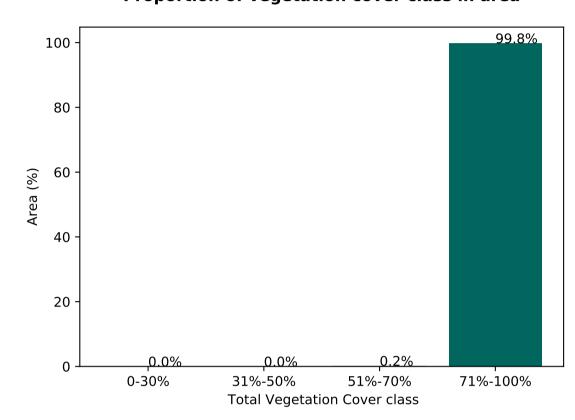


Deciles show where the pixel value lies in the record, from highest to lowest, for that month. That is, red pixels are in the lowest 10% of records for that month of the map using baseline from 2001 to 2019.

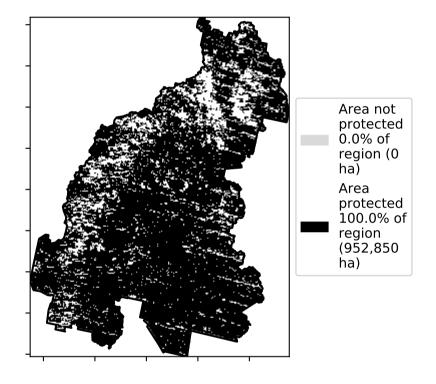
Proportion of each land class in area

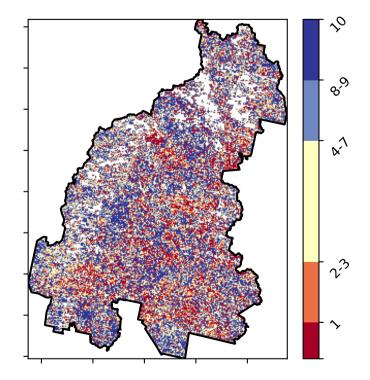


Proportion of vegetation cover class in area



% Area protected from wind erosion (>50%)



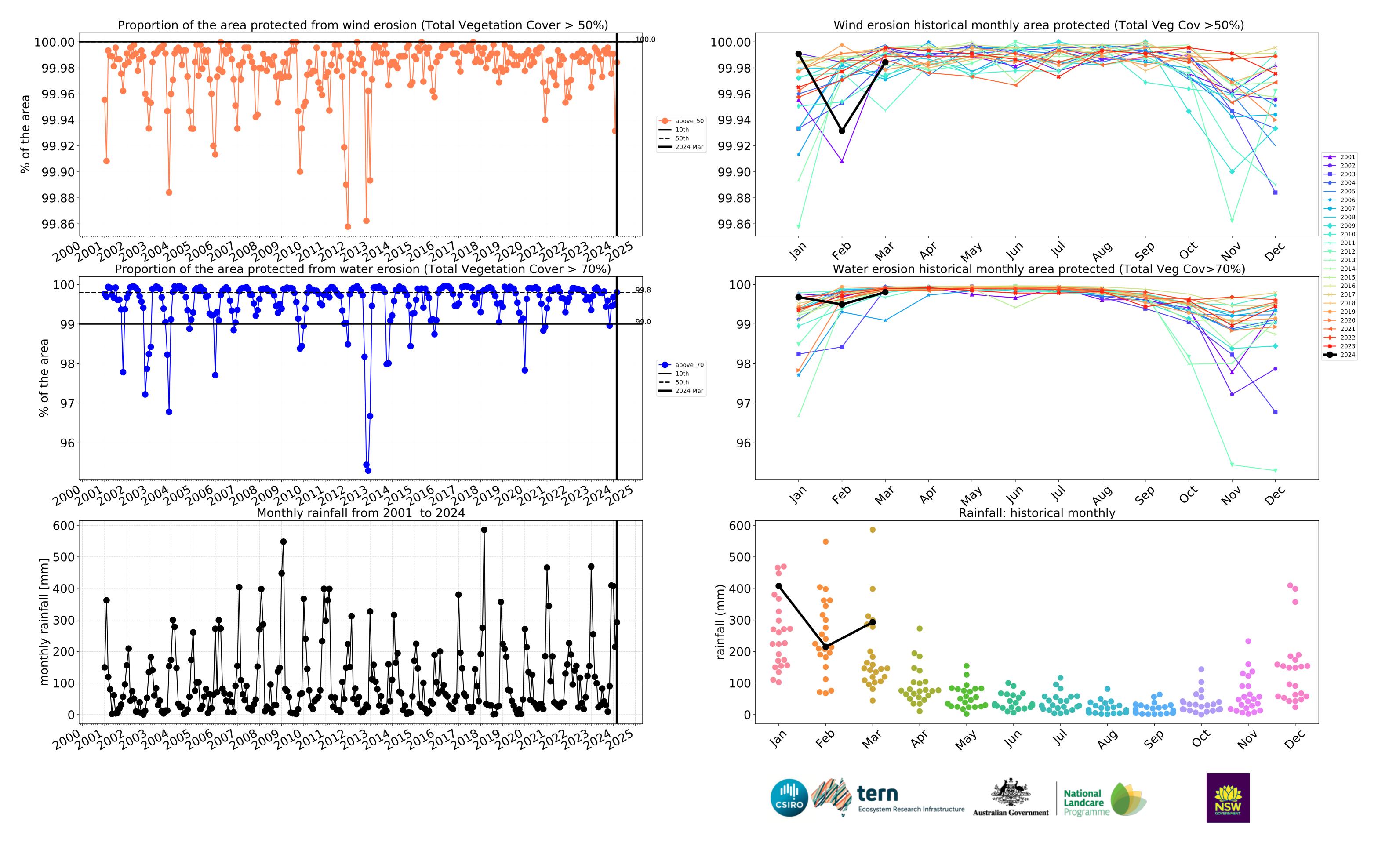


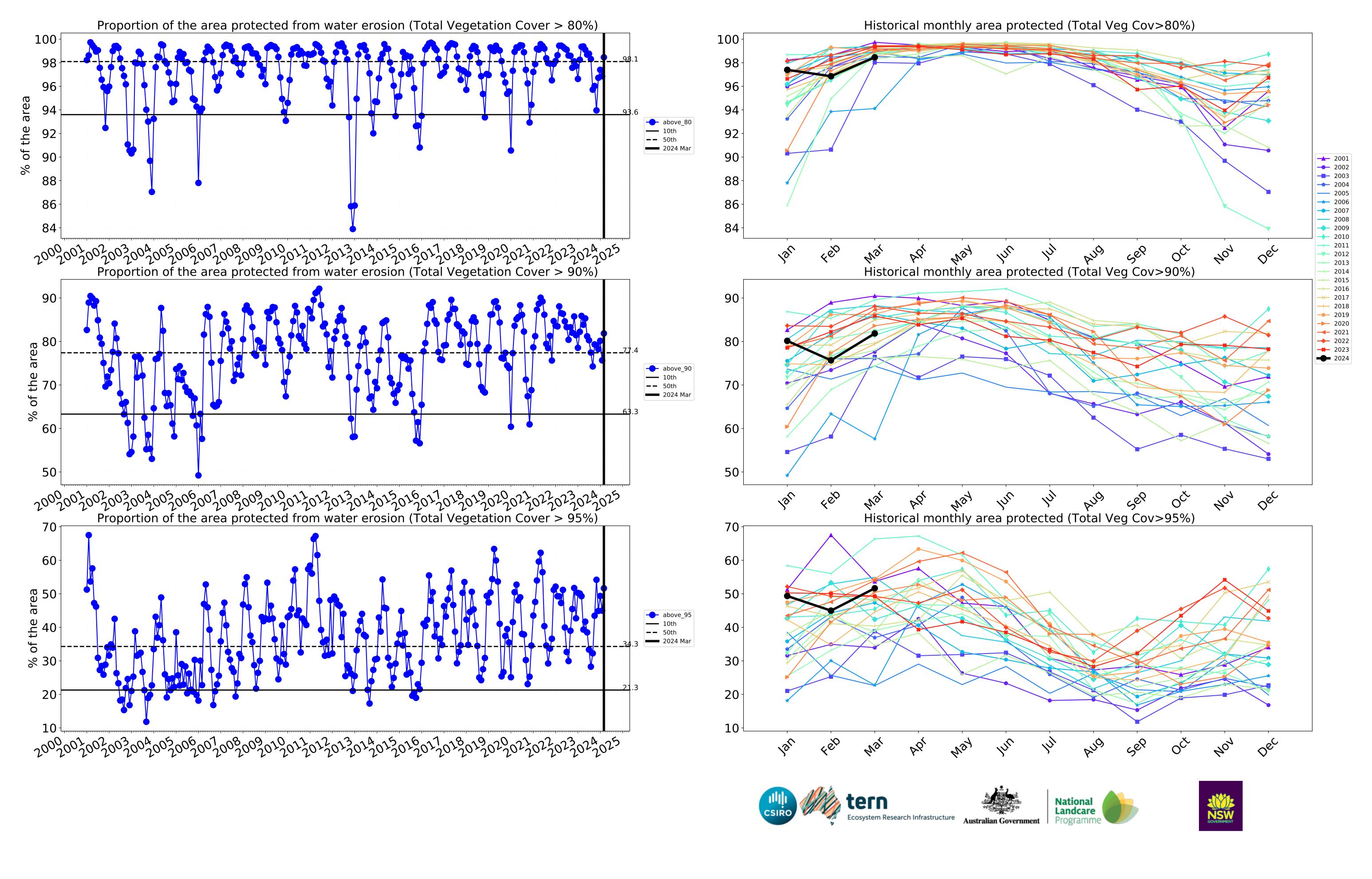












Conservation and natural environments

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

Anomaly show how many percetage points each

pixel is from the mean. That

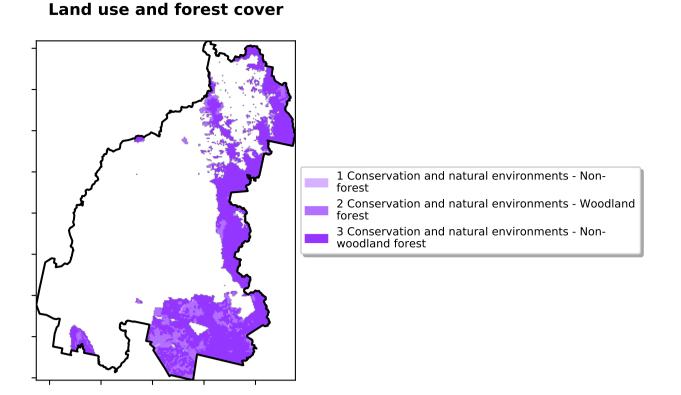
are about 20% lower than the mean of that

pixel. The mean

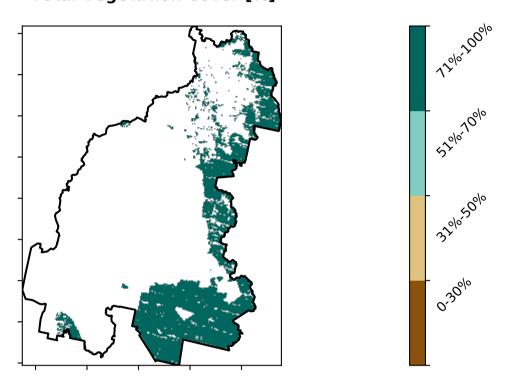
using baseline from 2001 to 2019.

is only for the month of the map

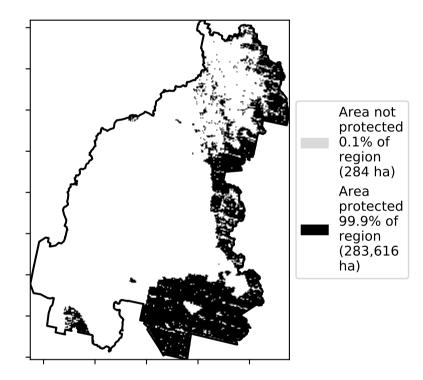
is, red pixels



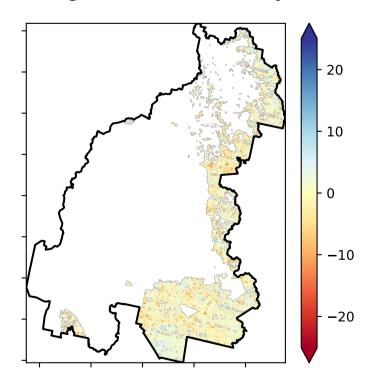
Total Vegetation Cover [%]



% Area protected from water erosion (>70%)

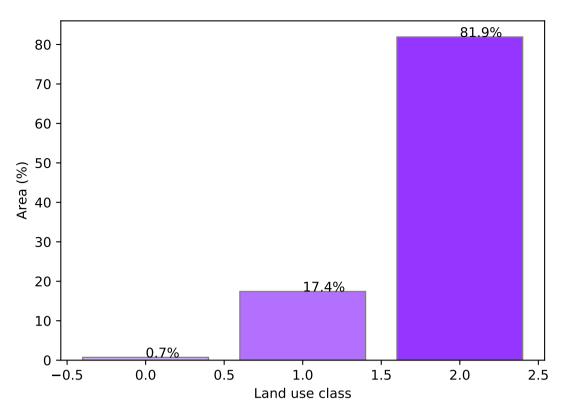


Total Vegetation Cover Anomaly [%]

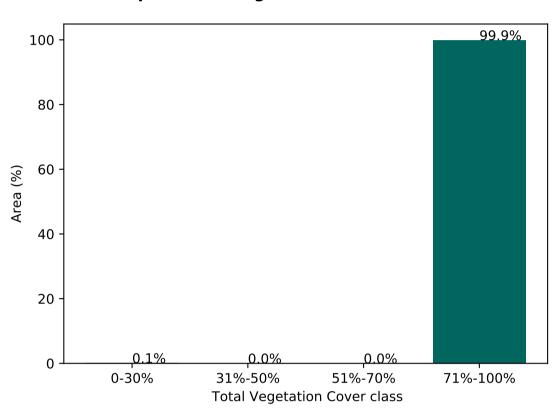


Deciles show where the pixel value lies in the record, from highest to lowest, for that month. That is, red pixels are in the lowest 10% of records for that month of the map using baseline from 2001 to 2019.

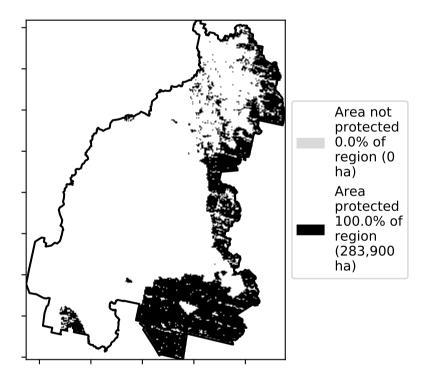
Proportion of each land class in area

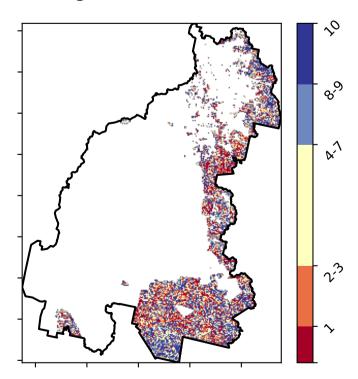


Proportion of vegetation cover class in area



% Area protected from wind erosion (>50%)









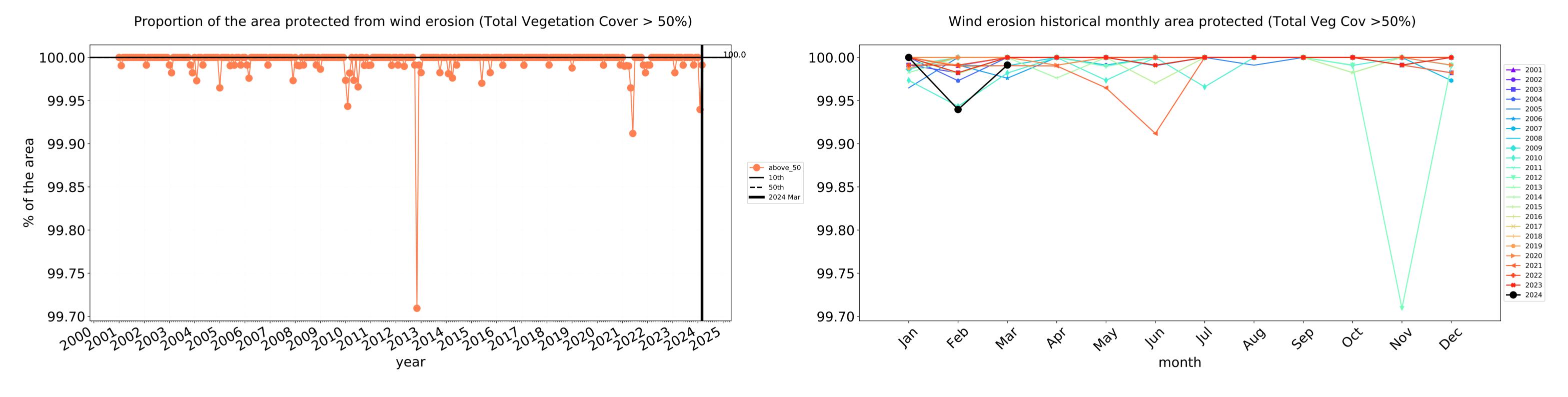


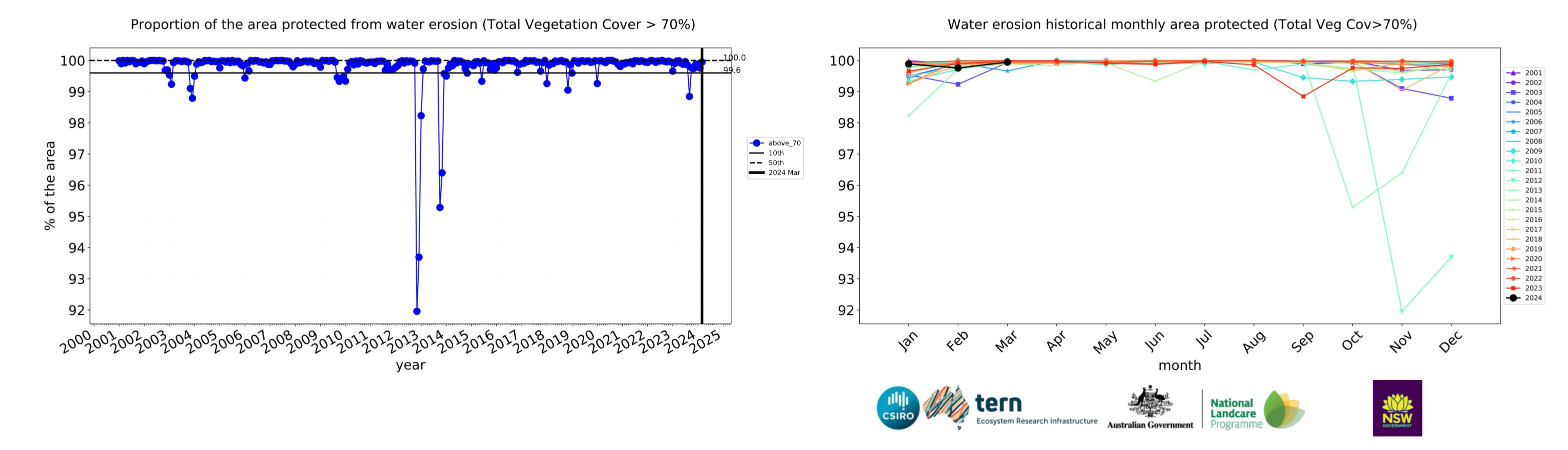


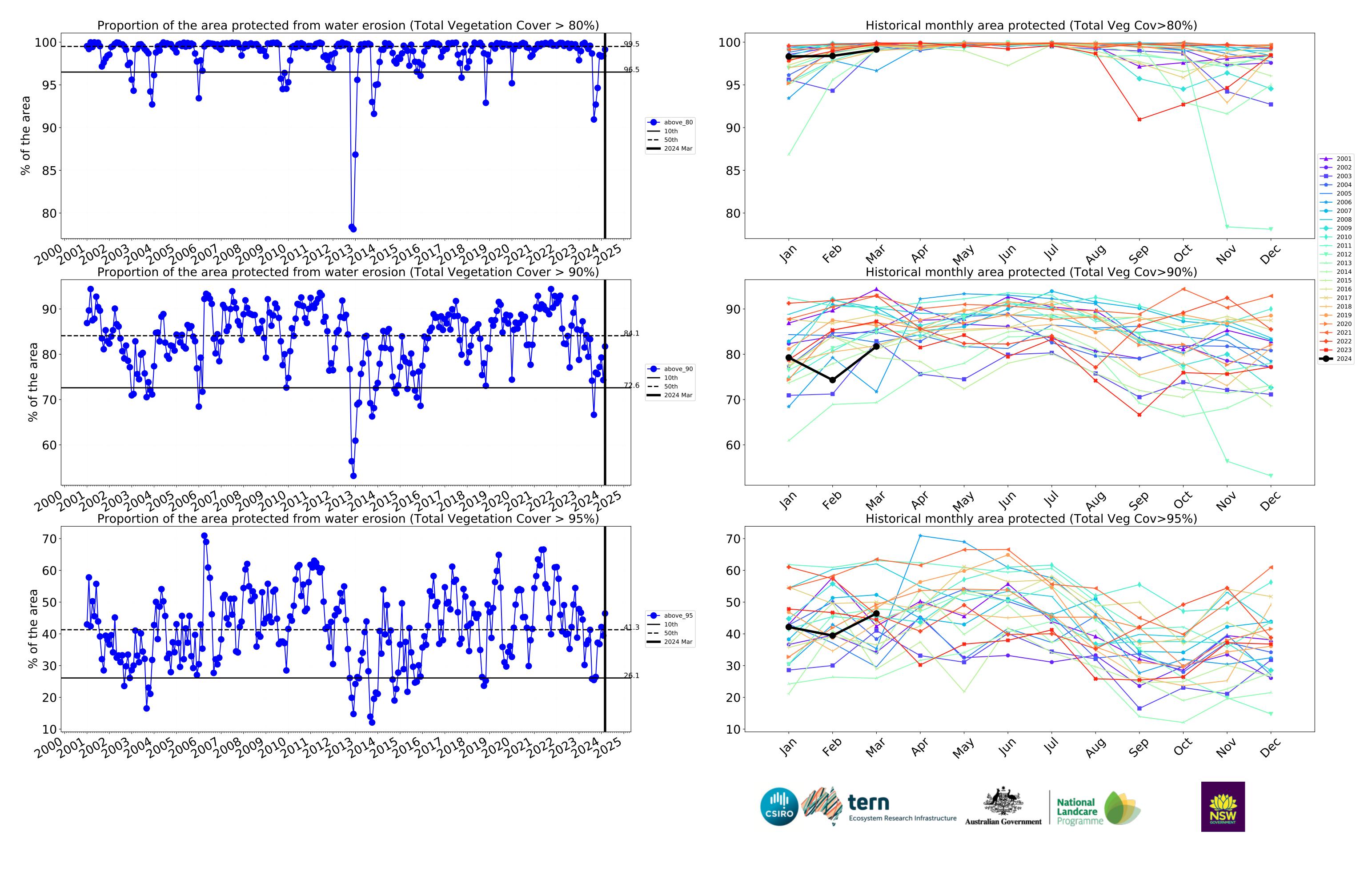




Conservation and natural environments timeseries



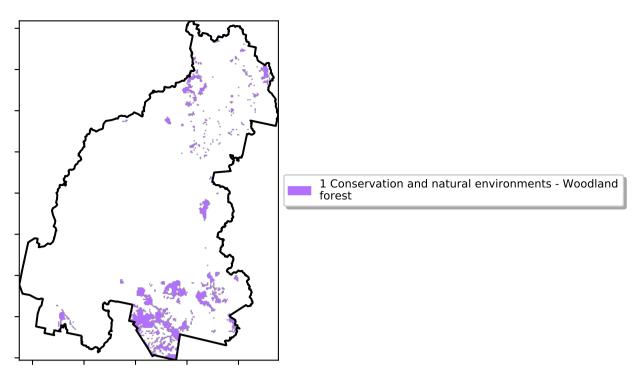




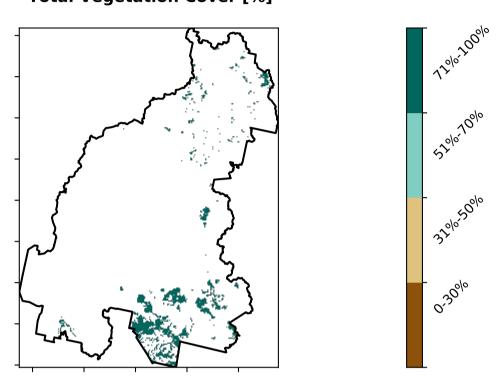
Conservation and natural environments Woodland forest

Land use and forest cover

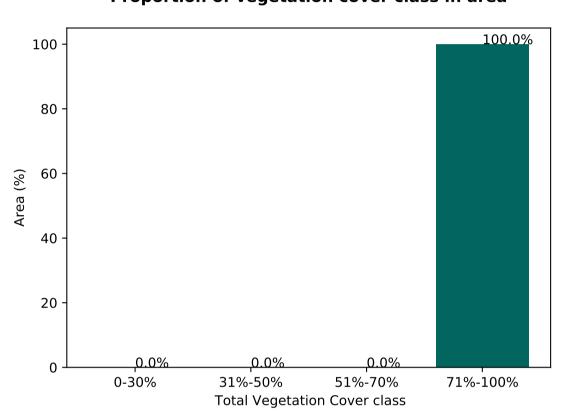
Catchment Scale Land Use and Forests of Australia (2018) Derived from Catchment Scale Land Use of Australia (2018) and Forests of Australia (2018)



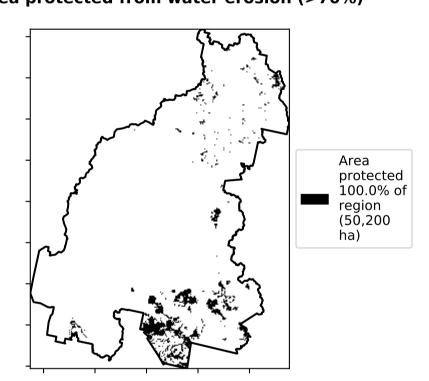
Total Vegetation Cover [%]



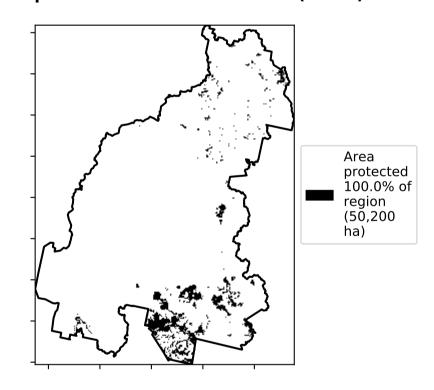
Proportion of vegetation cover class in area



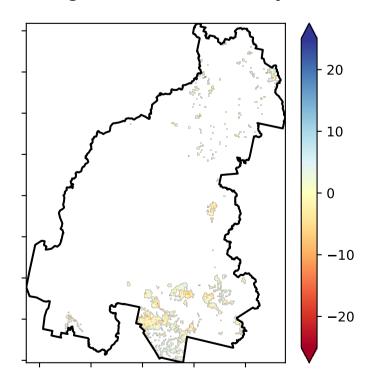
% Area protected from water erosion (>70%)



% Area protected from wind erosion (>50%)

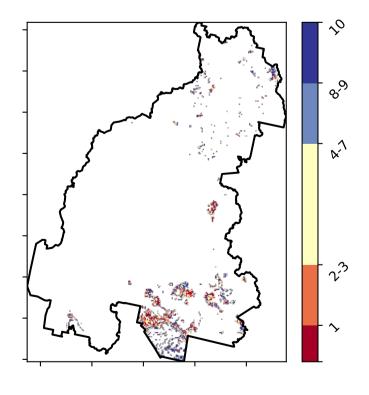


Total Vegetation Cover Anomaly [%]



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 [%]



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.

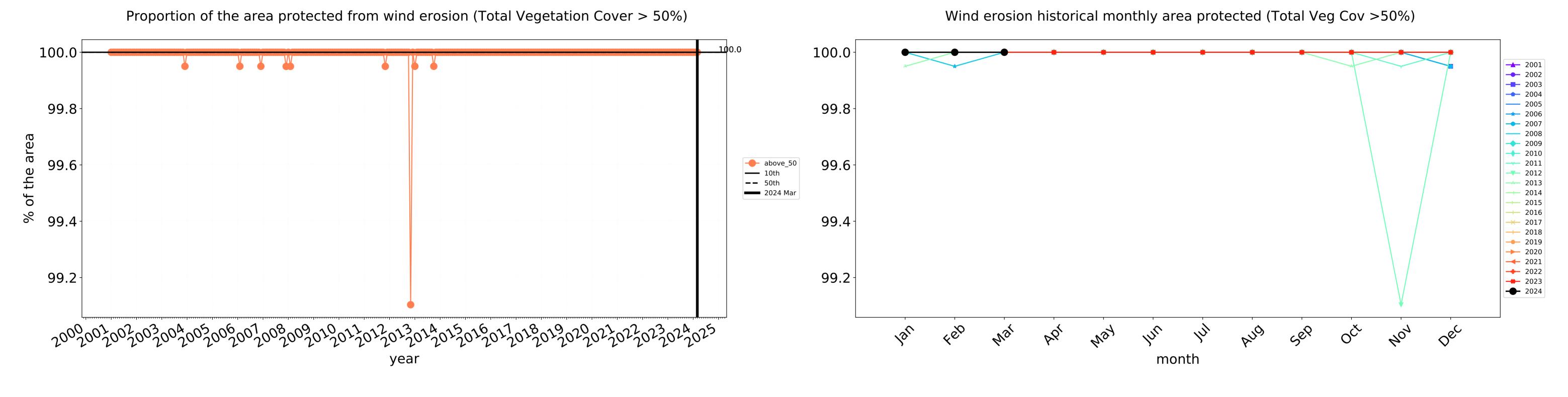


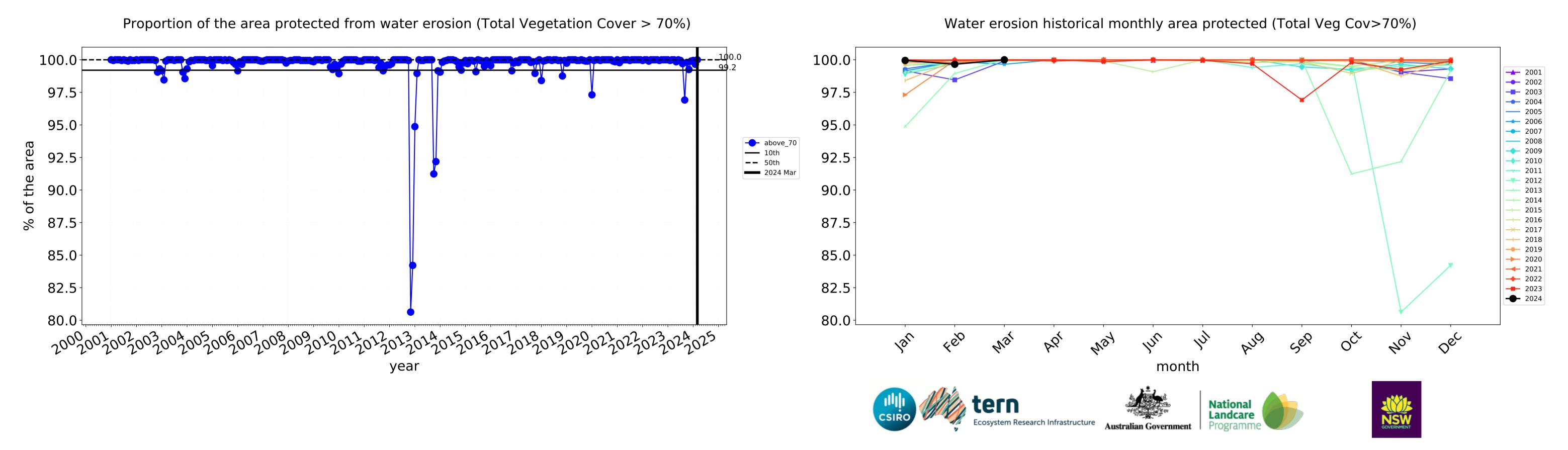


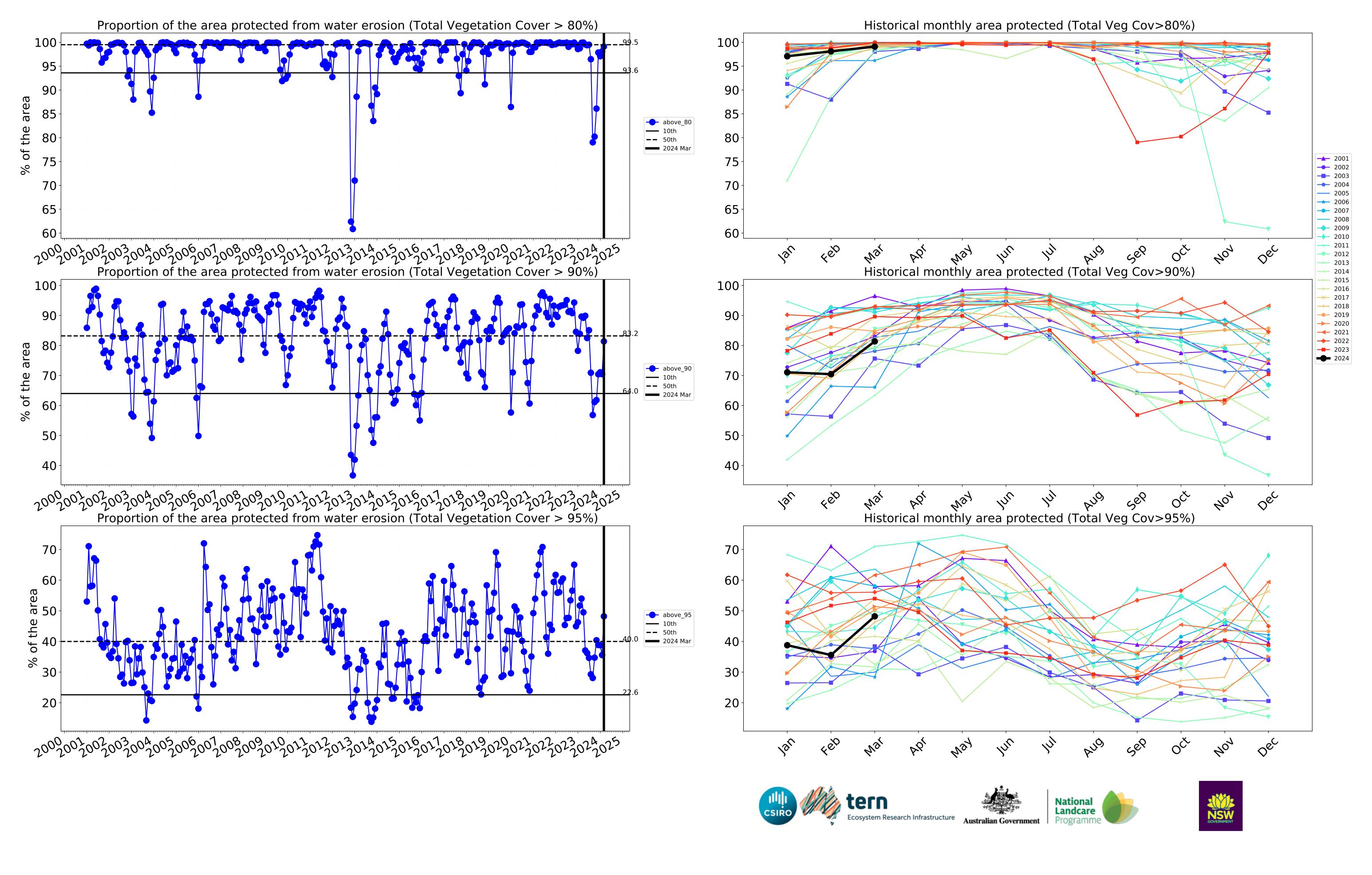




Conservation and natural environments Woodland forest timeseries







Conservation and natural environments Forest (non woodland)

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

of Australia (2018)

Anomaly show how many percetage points each pixel is from

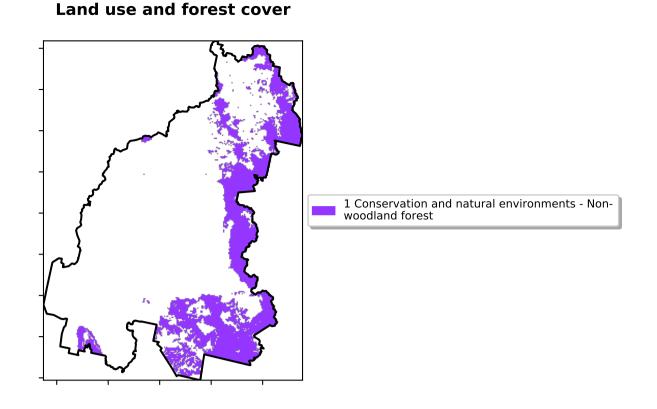
the mean. That

pixel. The mean

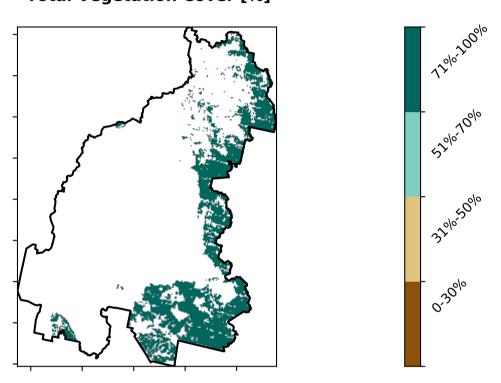
using baseline from 2001 to 2019.

is only for the month of the map

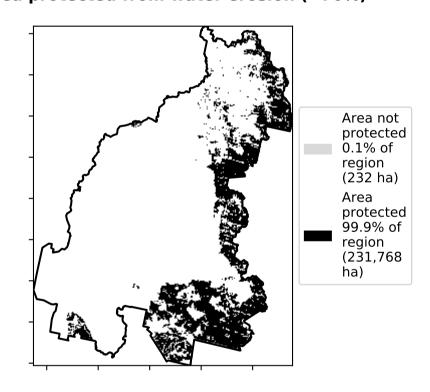
is, red pixels are about 20% lower than the mean of that



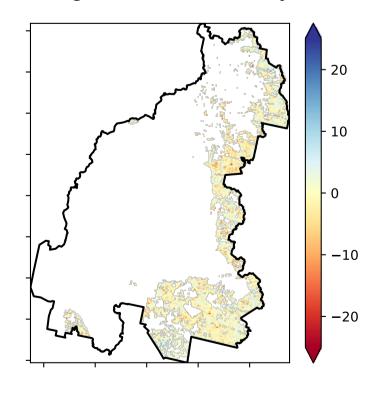
Total Vegetation Cover [%]



% Area protected from water erosion (>70%)

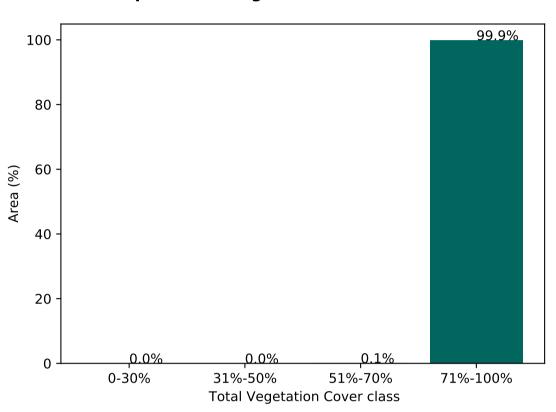


Total Vegetation Cover Anomaly [%]

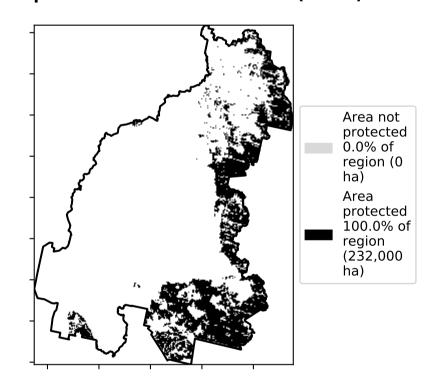


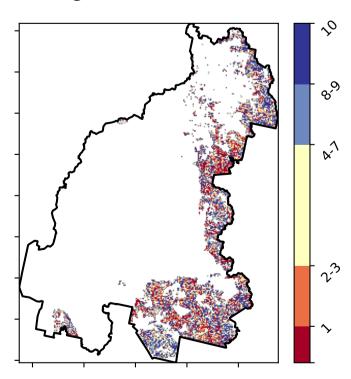
Deciles show where the pixel value lies in the record, from highest to lowest, for that month. That is, red pixels are in the lowest 10% of records for that month of the map using baseline from 2001 to 2019.

Proportion of vegetation cover class in area



% Area protected from wind erosion (>50%)



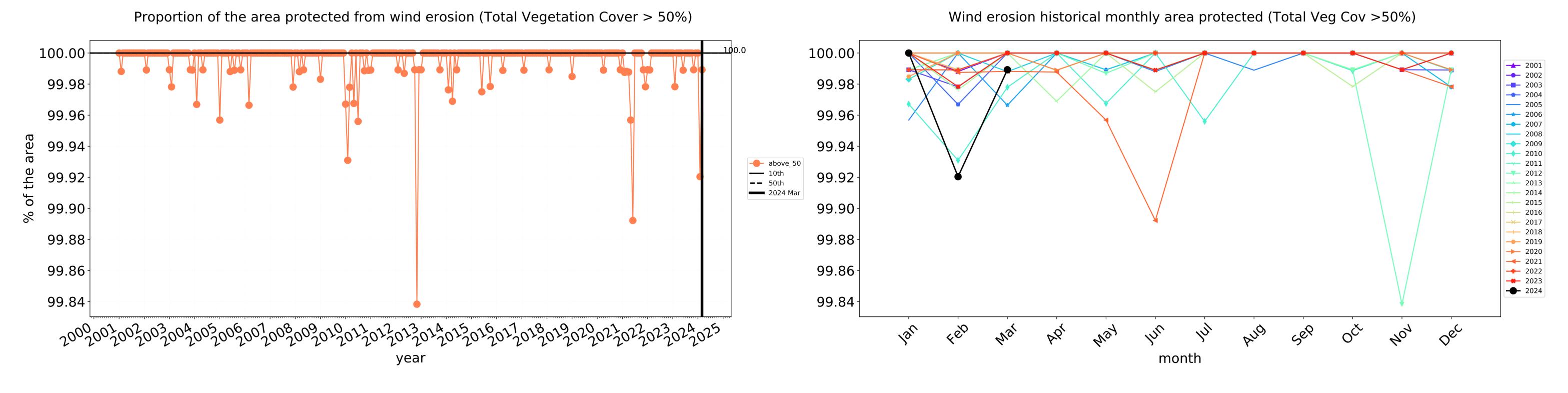


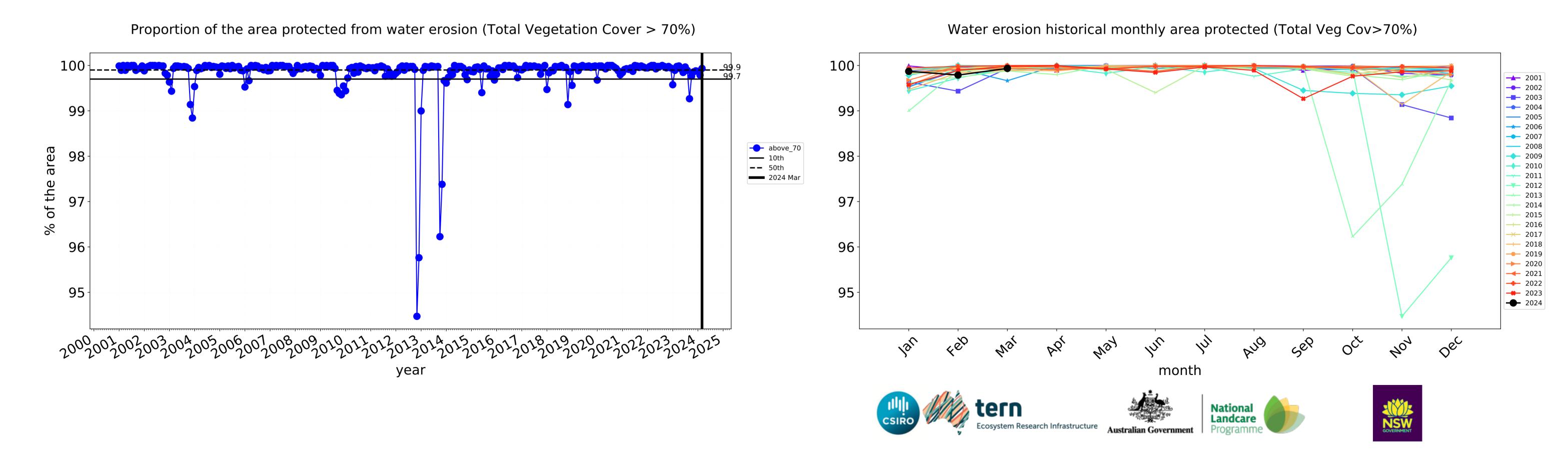


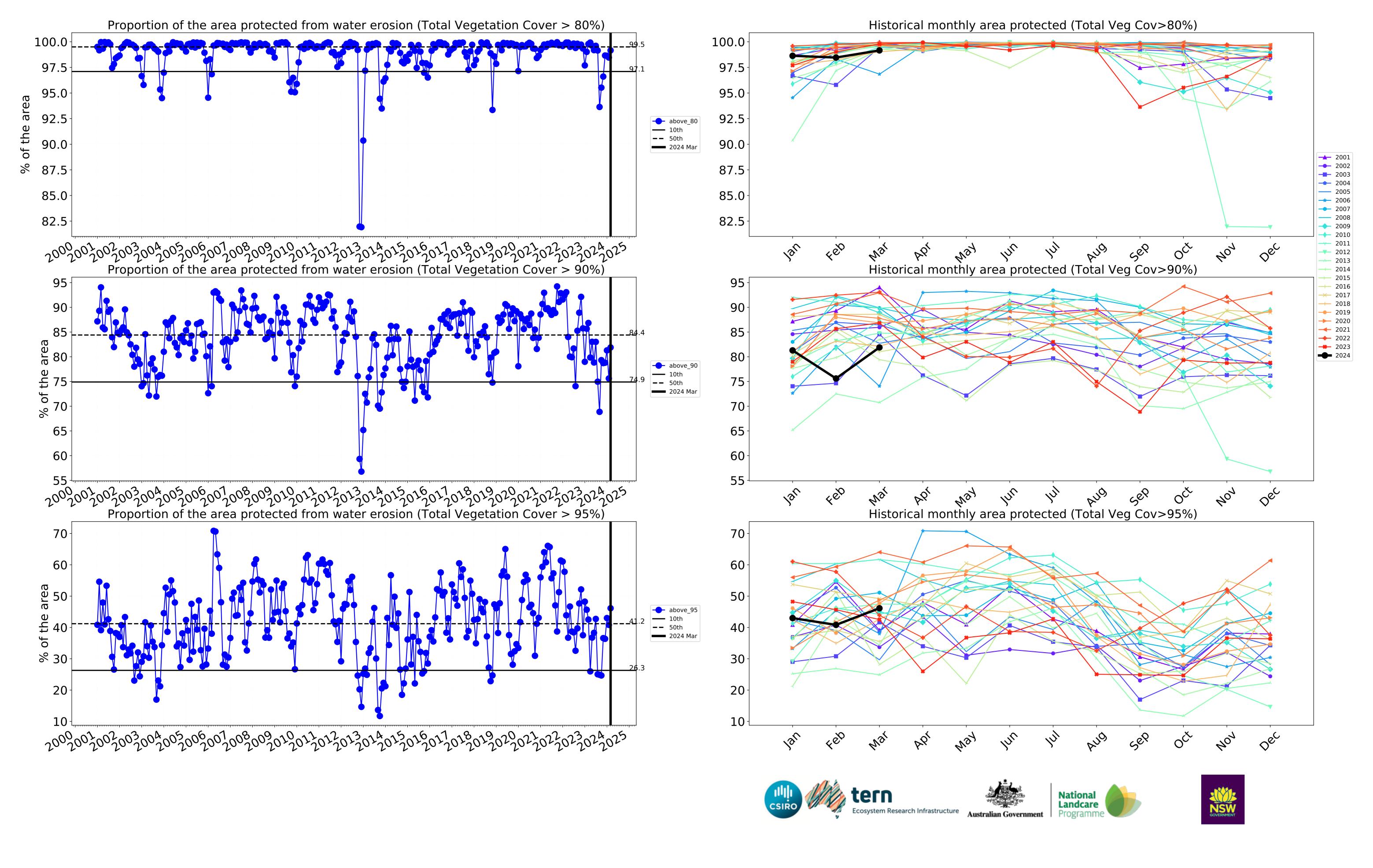










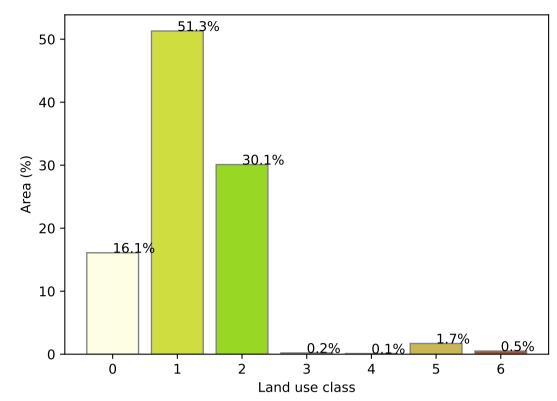


Agriculture

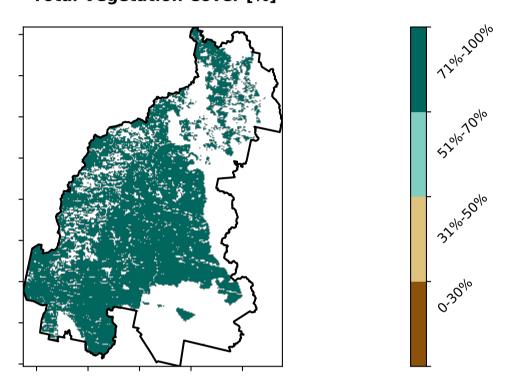
Land use and forest cover

1 Agriculture - Grazing - Non forest 2 Agriculture - Grazing - Woodland forest 3 Agriculture - Grazing - Non-woodland forest 4 Agriculture - Grazing - Irrigated 5 Agriculture - Cropping - Non-irrigated 6 Agriculture - Cropping - Irrigated 7 Agriculture - Horticulture - Irrigated

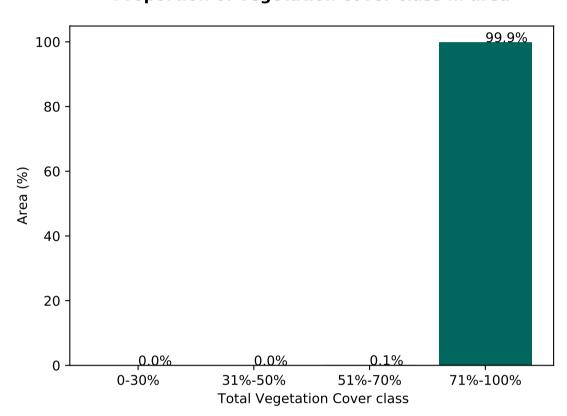
Proportion of each land class in area



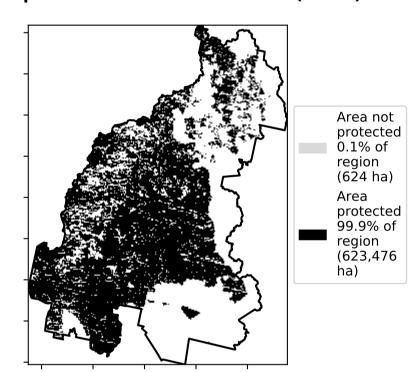
Total Vegetation Cover [%]



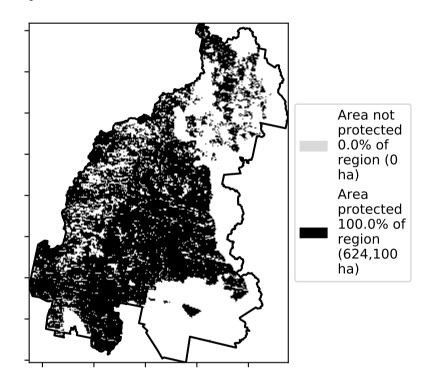
Proportion of vegetation cover class in area



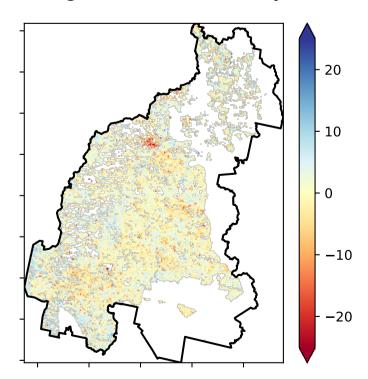
% Area protected from water erosion (>70%)



% Area protected from wind erosion (>50%)

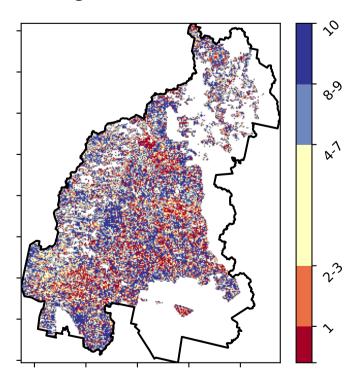


Total Vegetation Cover Anomaly [%]



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 [%]



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)

Land Use and Forests

Catchment Scale Land

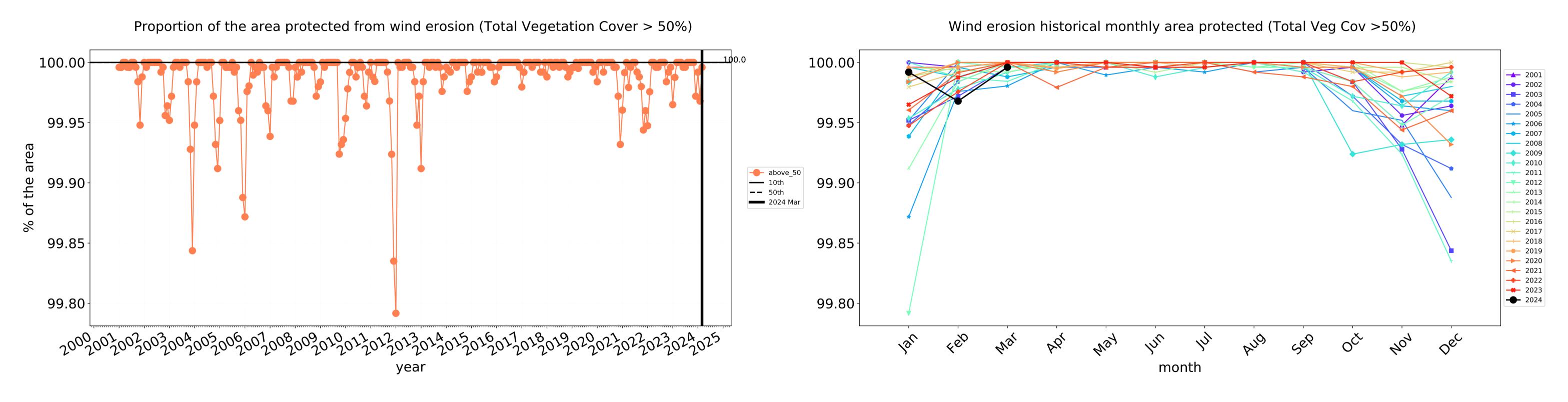


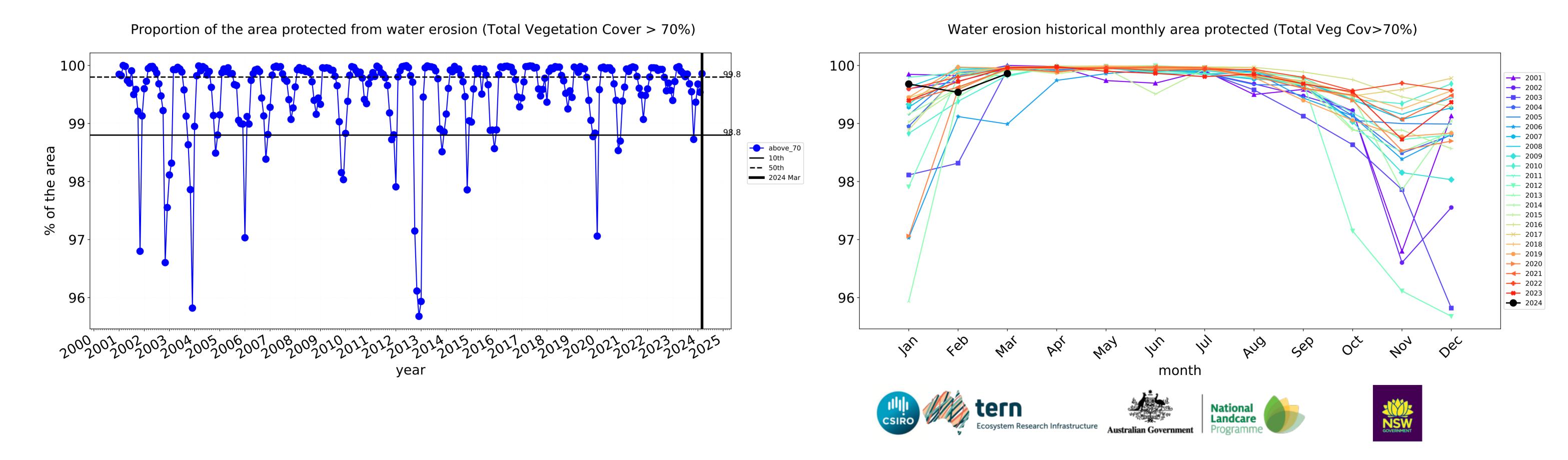


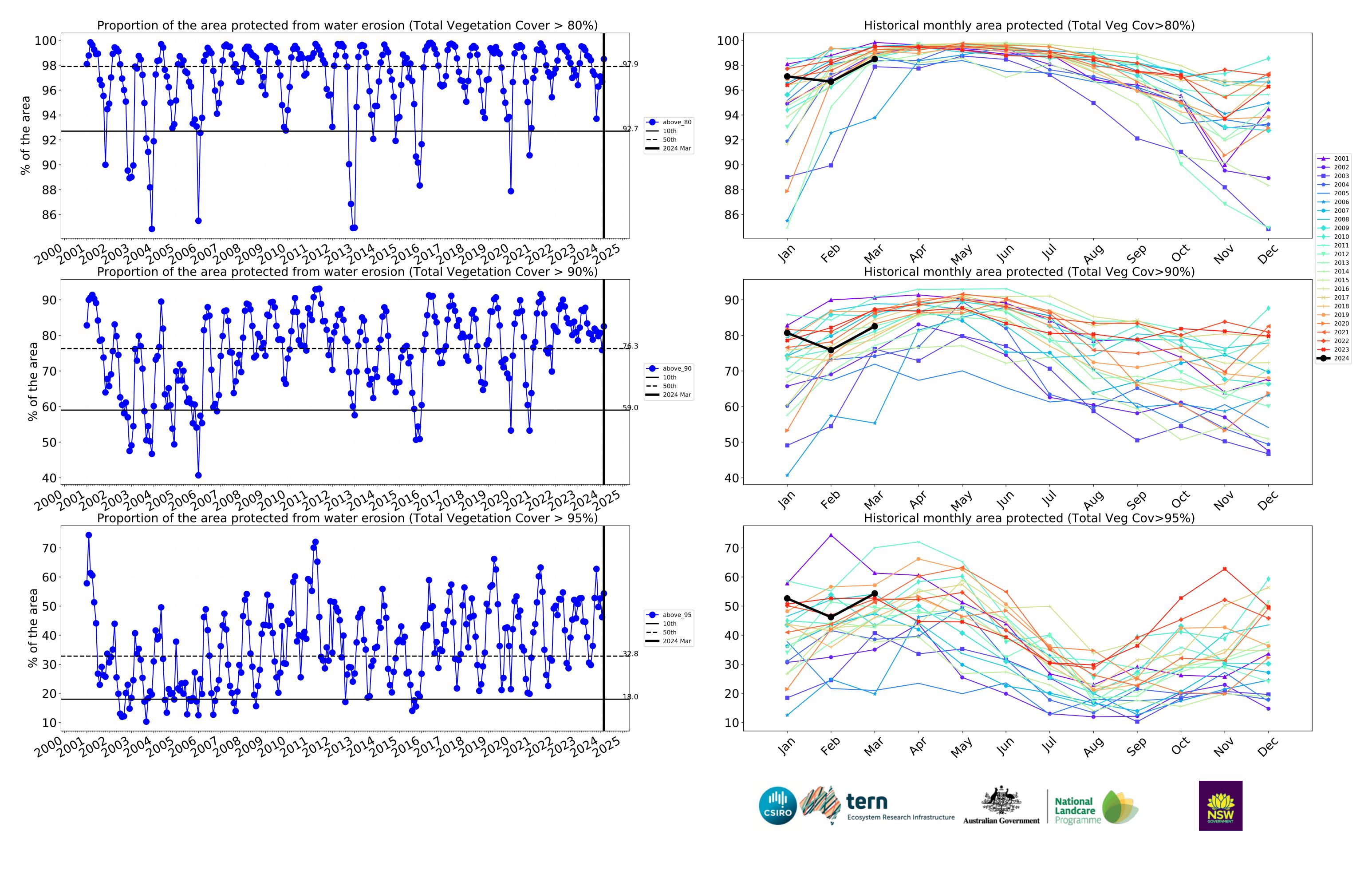




Agriculture timeseries







Grazing

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

(2018) and Forests

of Australia (2018)

Anomaly show how many percetage points each pixel is from the mean. That

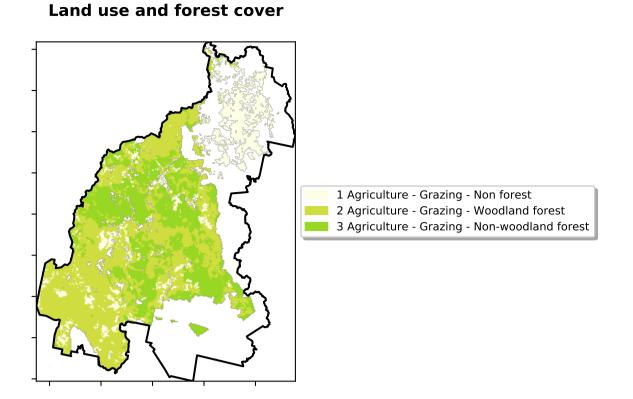
is, red pixels are about 20%

lower than the

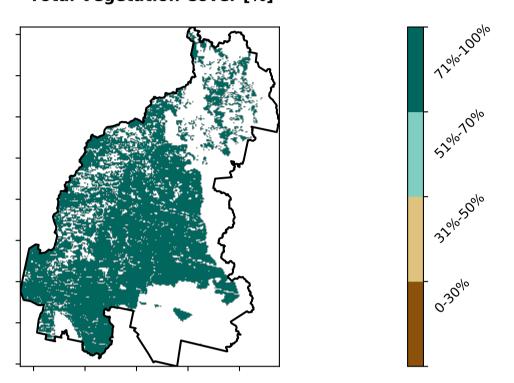
pixel. The mean

is only for the month of the map using baseline from 2001 to 2019.

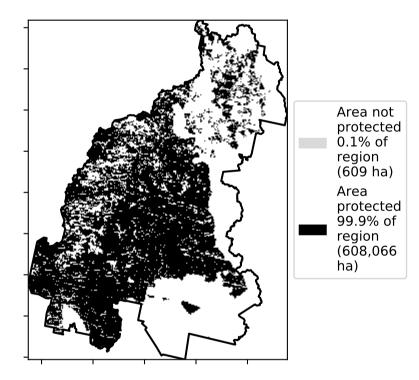
mean of that



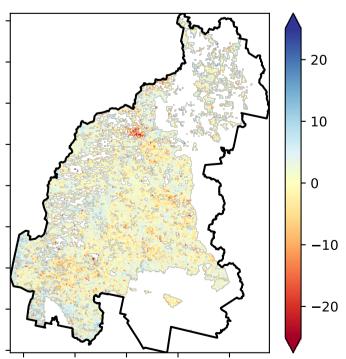
Total Vegetation Cover [%]



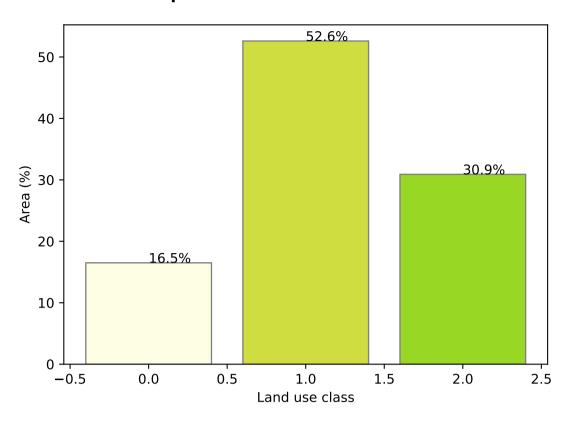
% Area protected from water erosion (>70%)



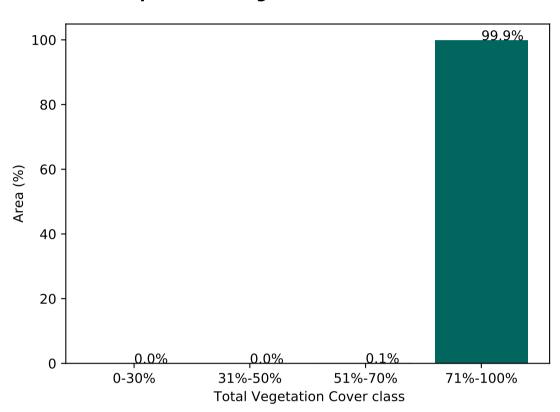
Total Vegetation Cover Anomaly [%]



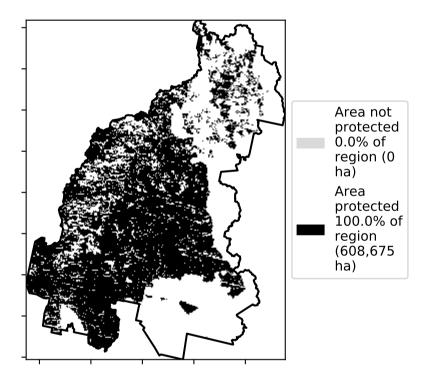
Proportion of each land class in area

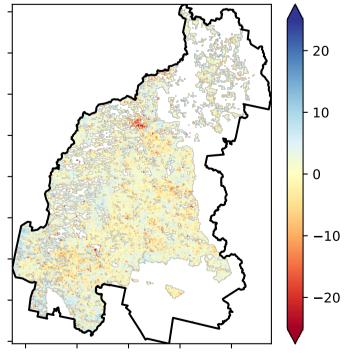


Proportion of vegetation cover class in area

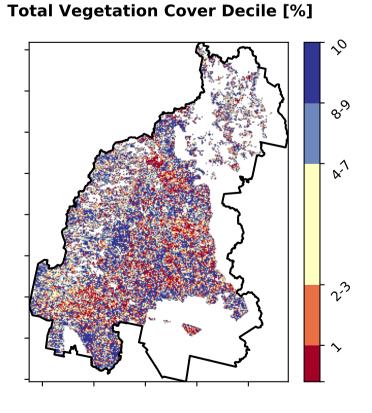


% Area protected from wind erosion (>50%)





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.







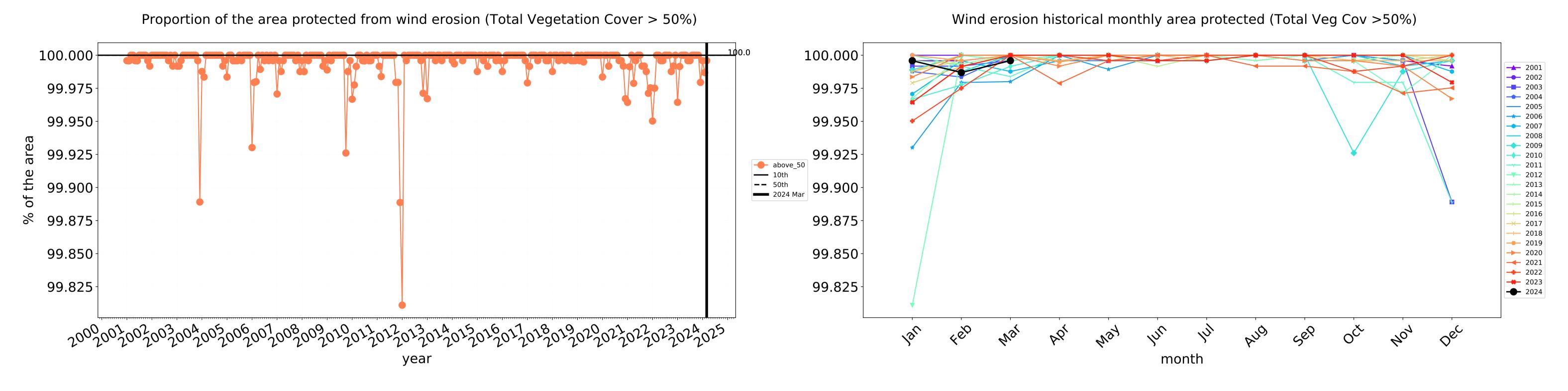


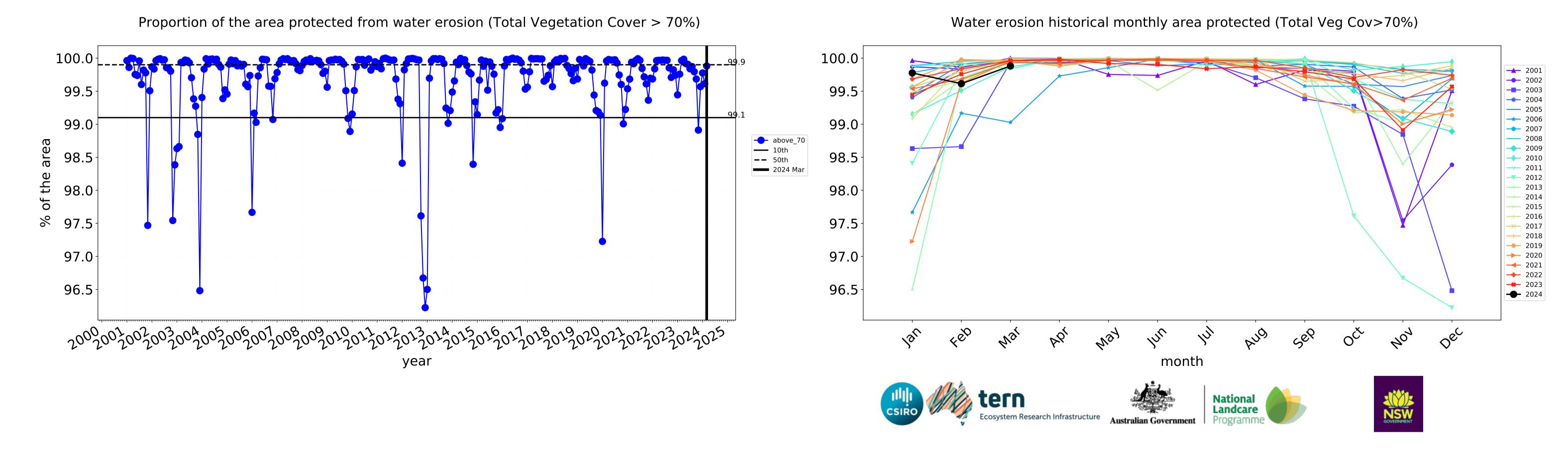


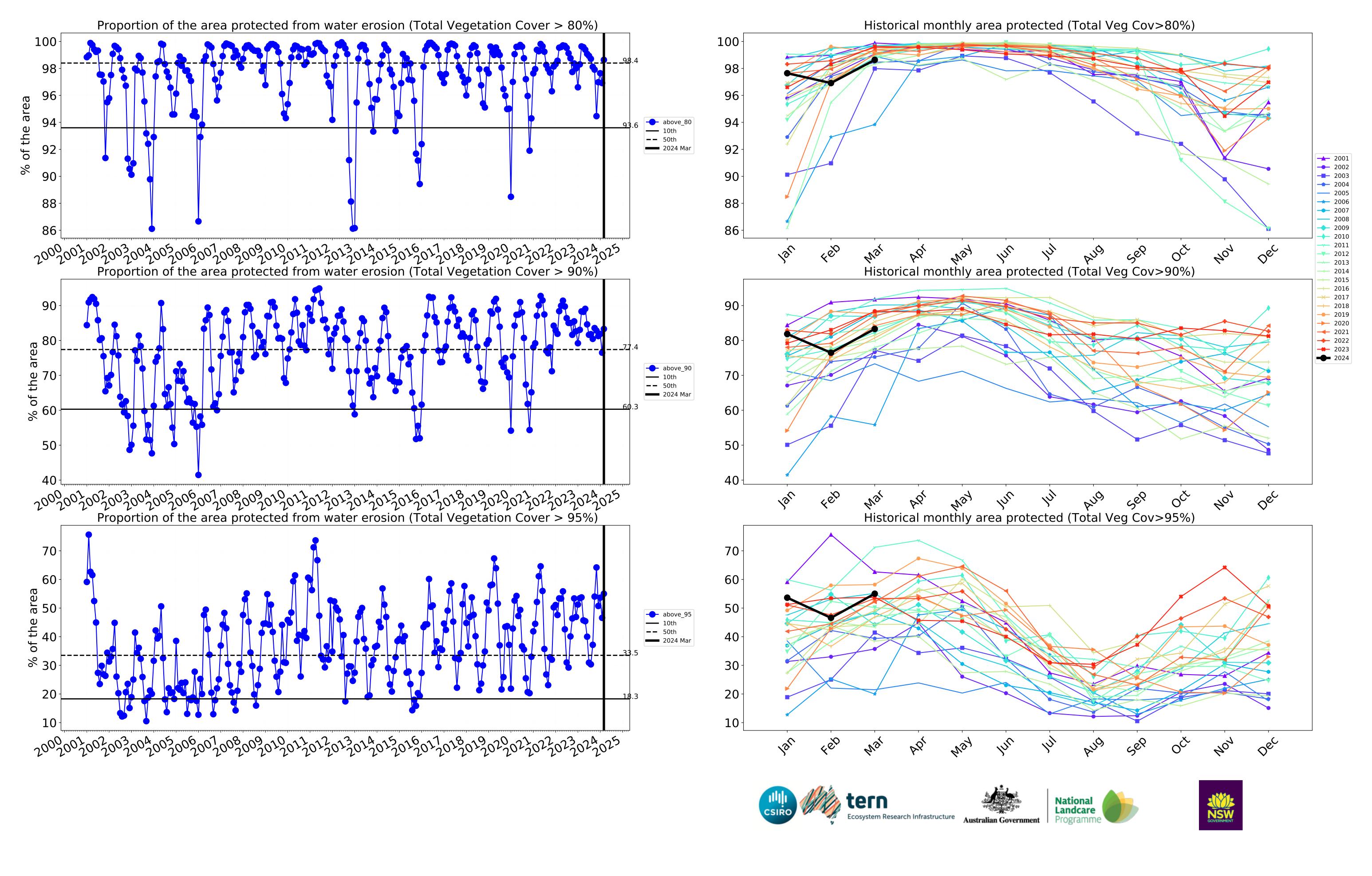




Grazing timeseries







Grazing non forest

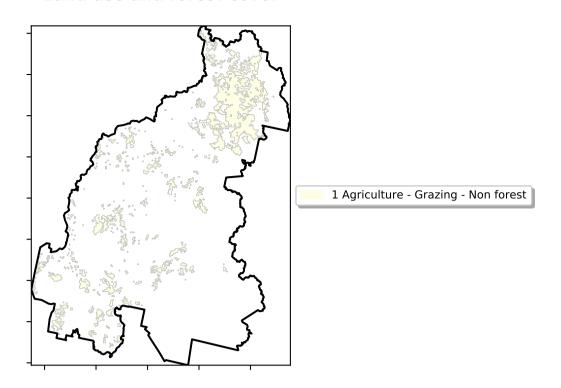
Land use and forest cover

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

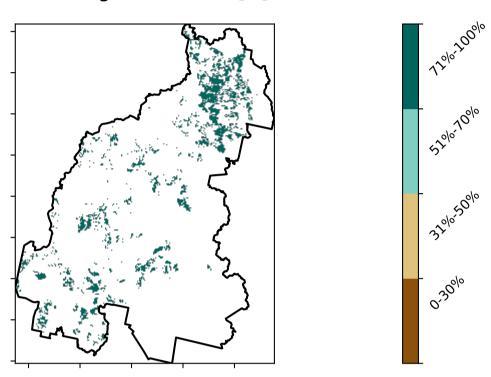
Anomaly show how many percetage points each pixel is from the mean. That is, red pixels are about 20%

lower than the mean of that pixel. The mean

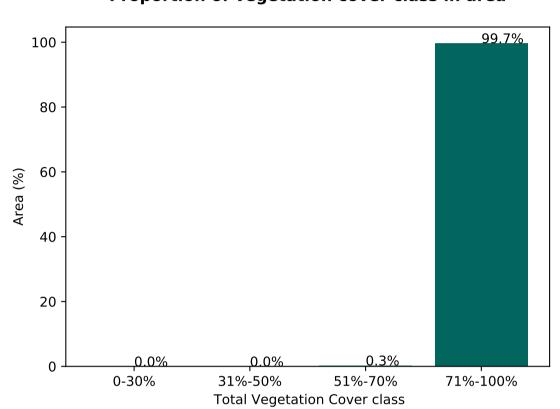
is only for the month of the map using baseline from 2001 to 2019.



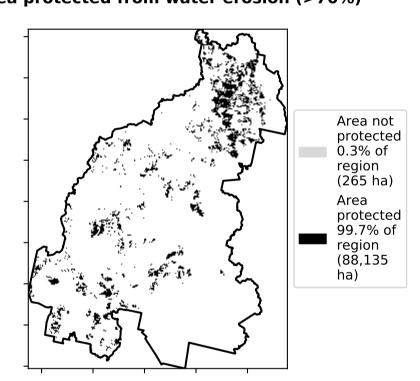
Total Vegetation Cover [%]



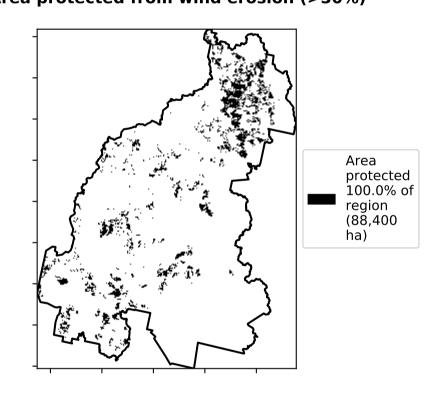
Proportion of vegetation cover class in area



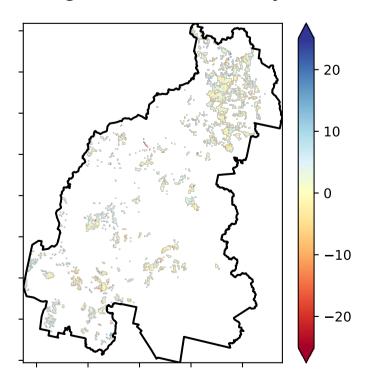
% Area protected from water erosion (>70%)



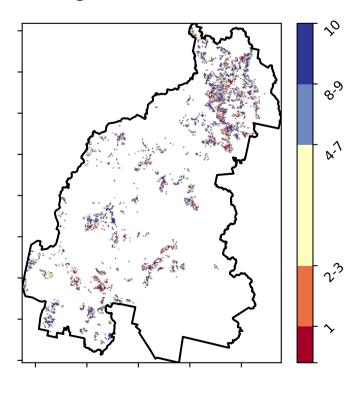
% Area protected from wind erosion (>50%)



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.







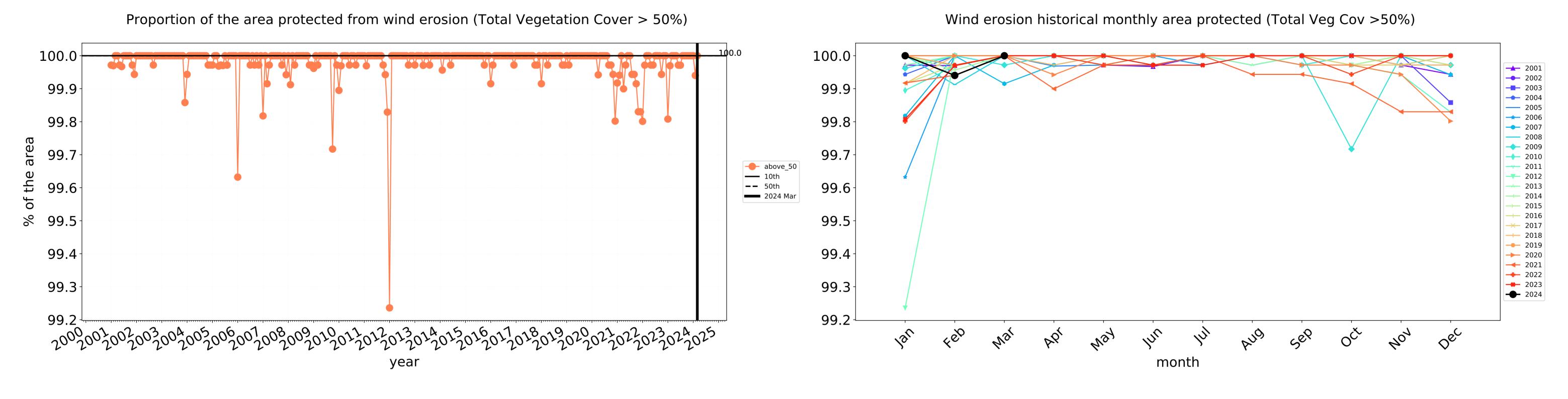


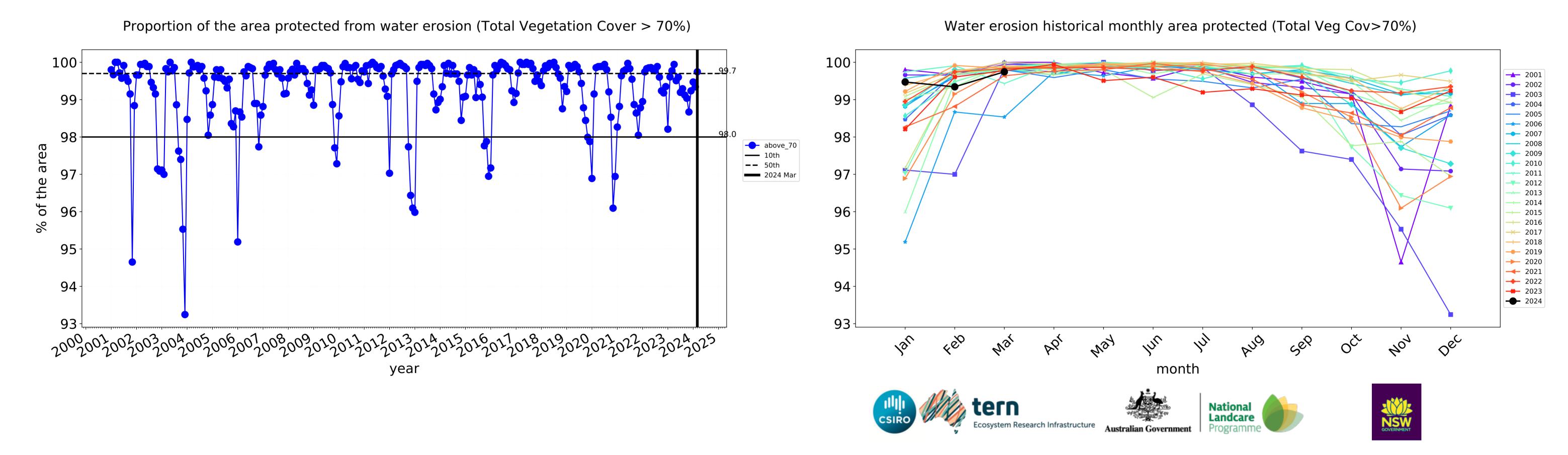


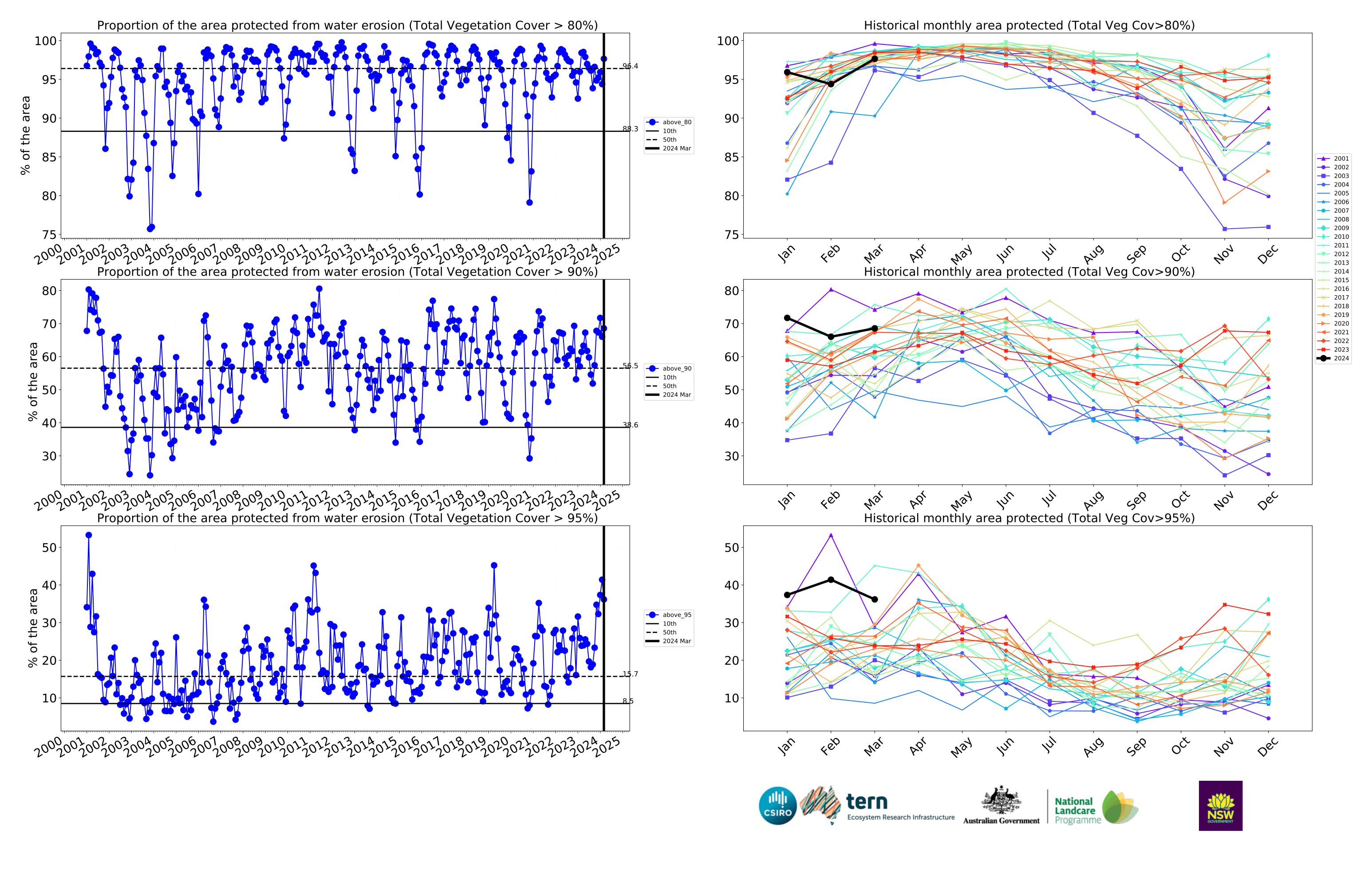




Grazing non forest timeseries







Grazing Woodland forest

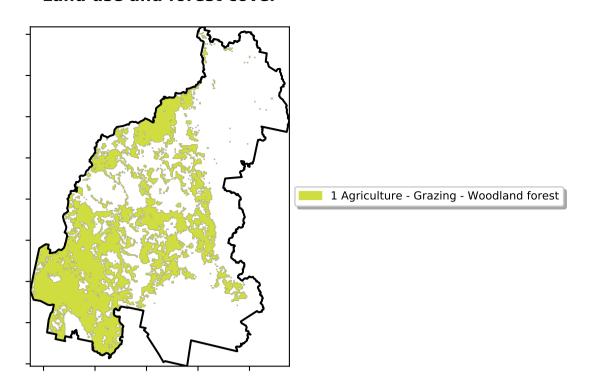
Land use and forest cover

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

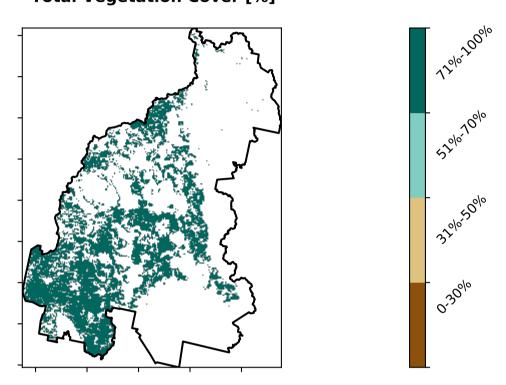
Anomaly show how many percetage points each pixel is from the mean. That is, red pixels are about 20% lower than the

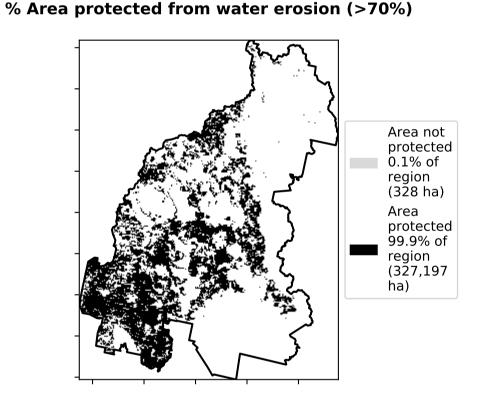
lower than the mean of that pixel. The mean

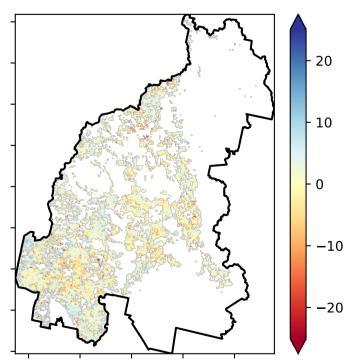
is only for the month of the map using baseline from 2001 to 2019.



Total Vegetation Cover [%]

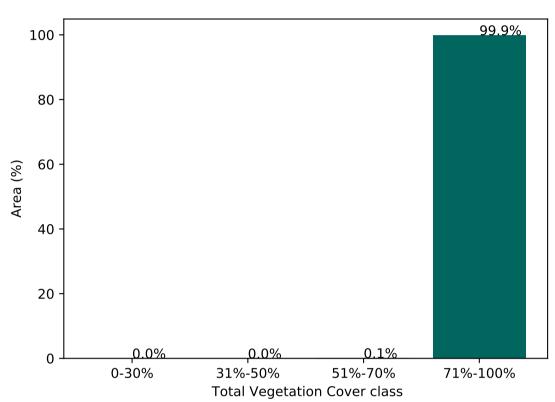




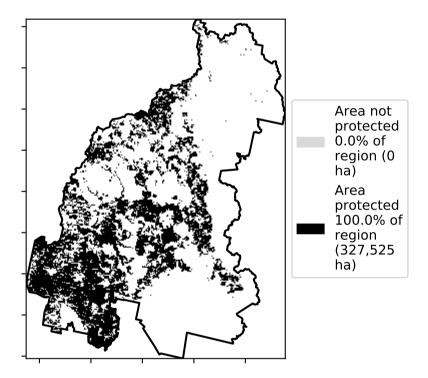


Deciles show where the pixel value lies in the record, from highest to lowest, for that month. That is, red pixels are in the lowest 10% of the map using baseline from 2001 to 2019.

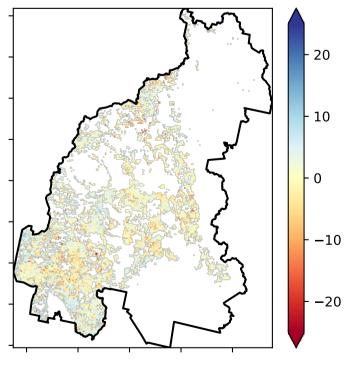
Proportion of vegetation cover class in area



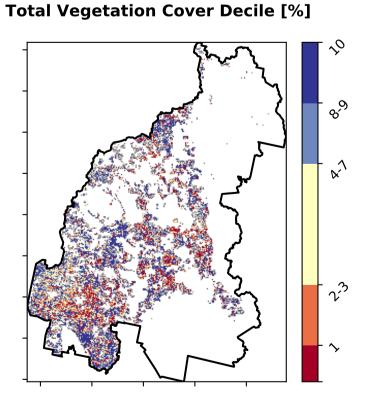
% Area protected from wind erosion (>50%)



Total Vegetation Cover Anomaly [%]



records for that month of







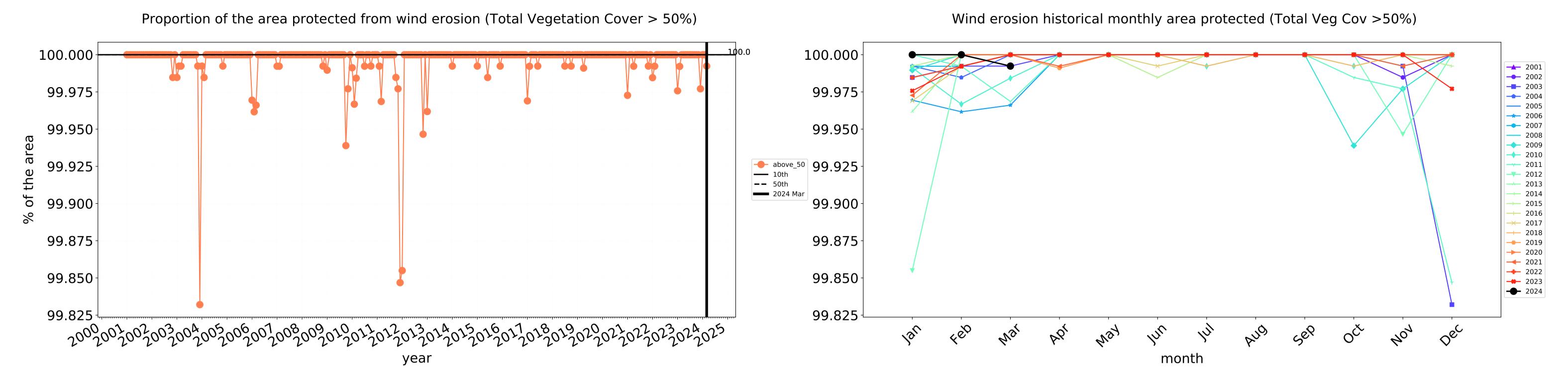


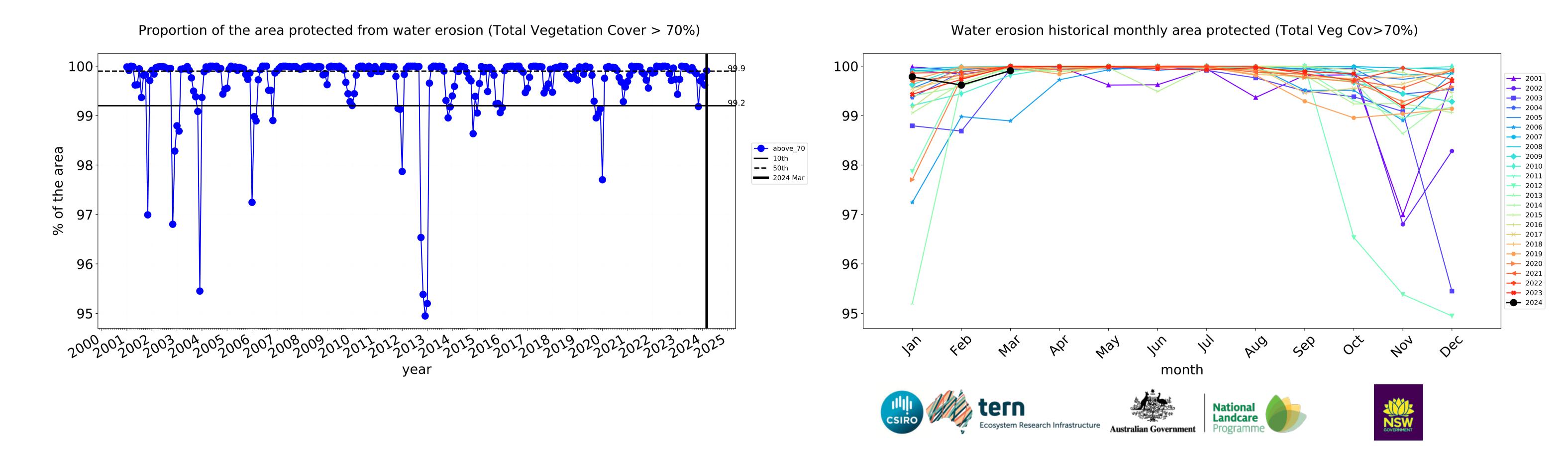


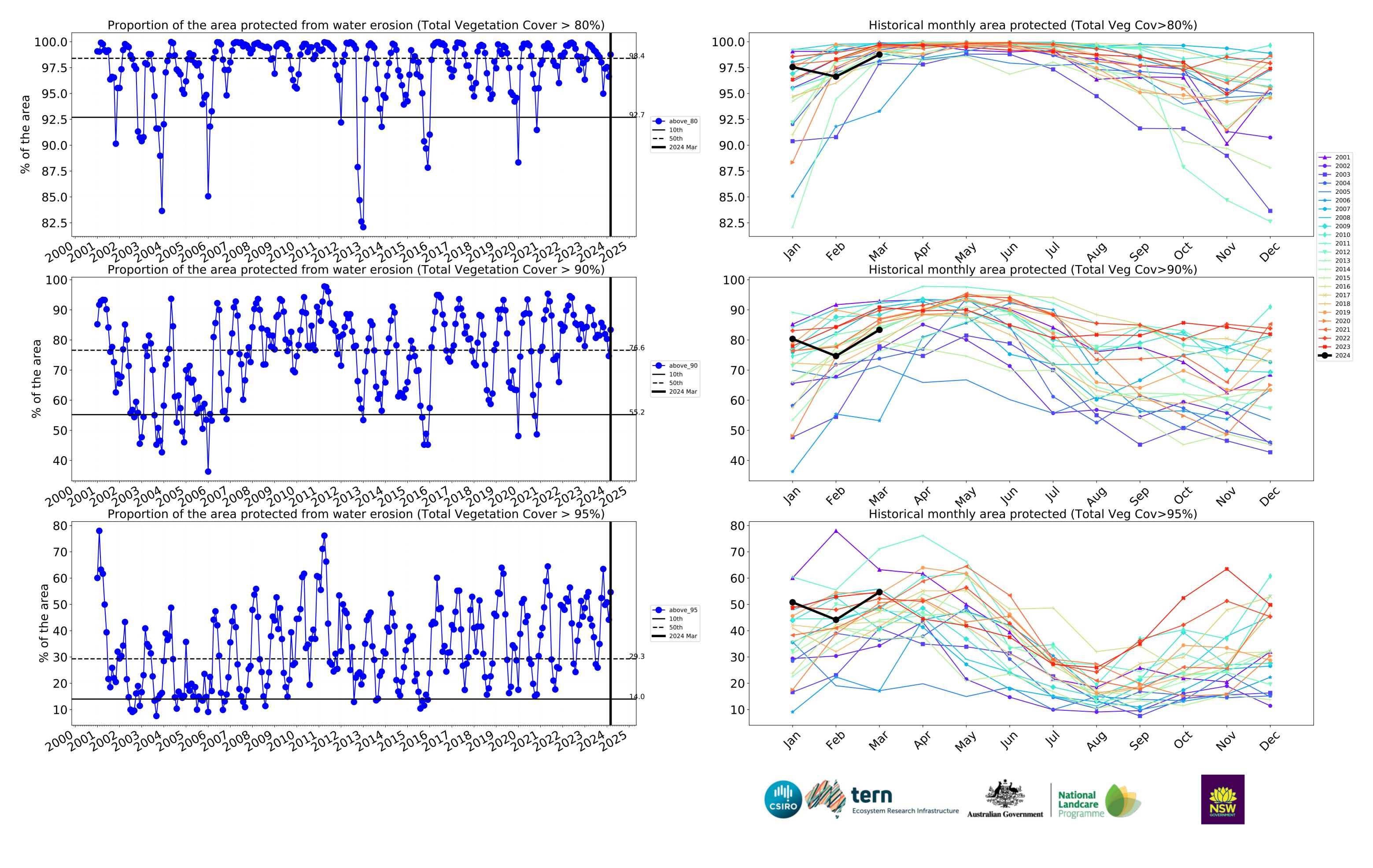




Grazing Woodland forest timeseries







Grazing - Forest (non woodland)

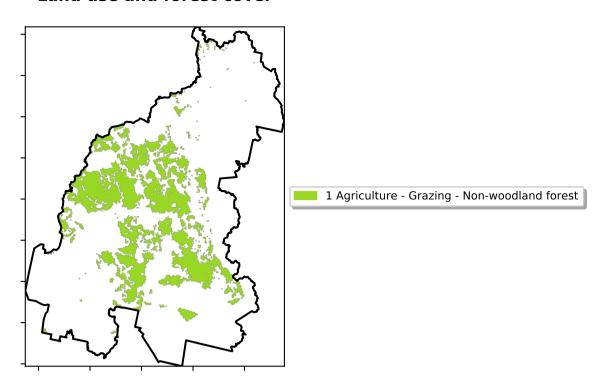
Land use and forest cover

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

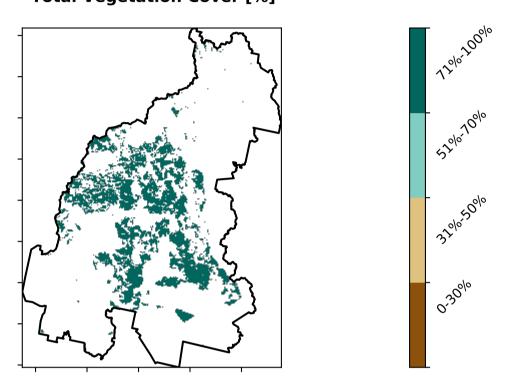
Anomaly show how many percetage points each pixel is from the mean. That is, red pixels are about 20% lower than the

lower than the mean of that pixel. The mean

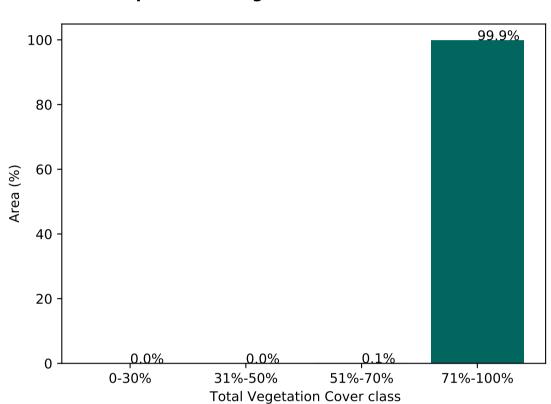
is only for the month of the map using baseline from 2001 to 2019.



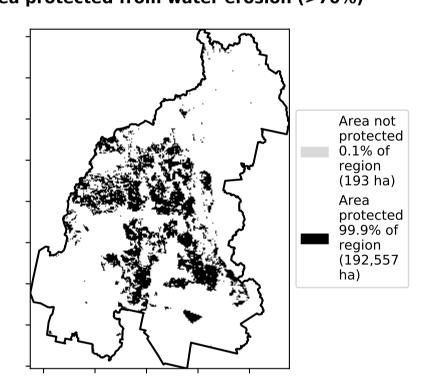
Total Vegetation Cover [%]



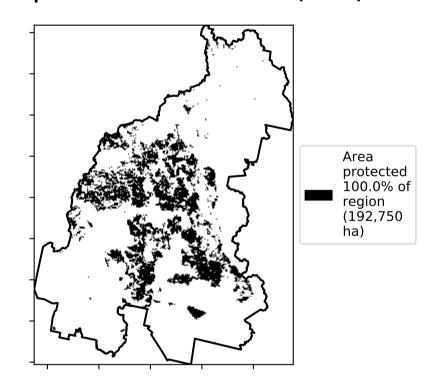
Proportion of vegetation cover class in area



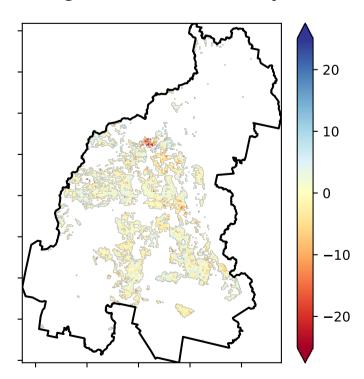
% Area protected from water erosion (>70%)



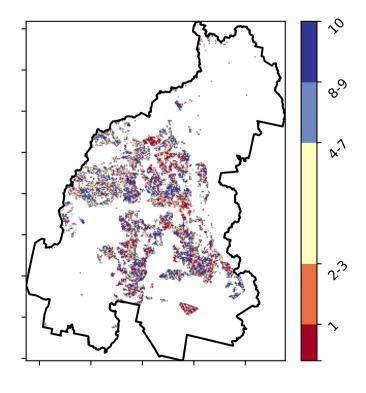
% Area protected from wind erosion (>50%)



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.





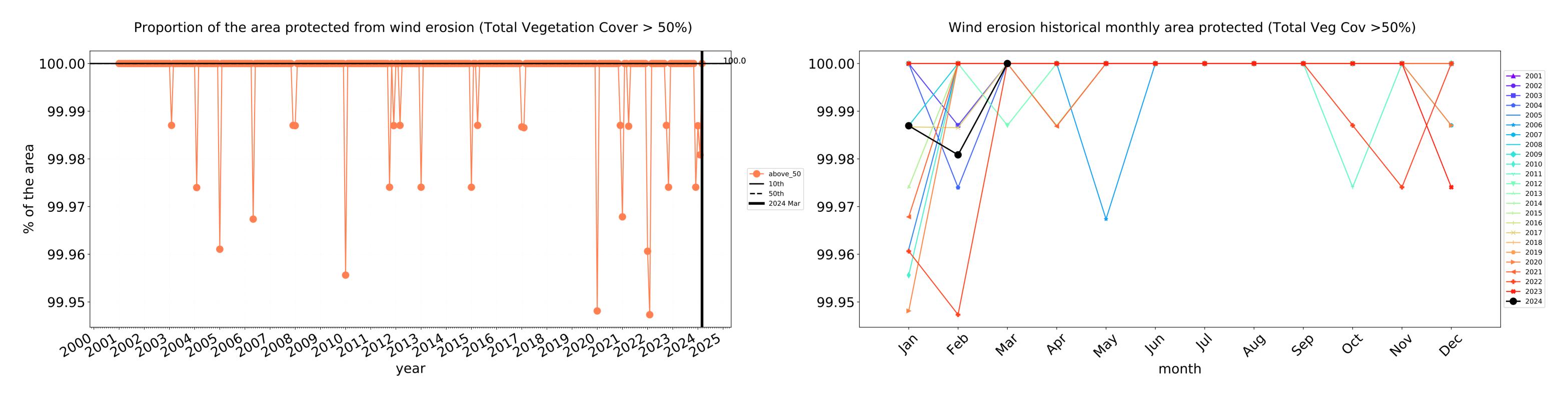


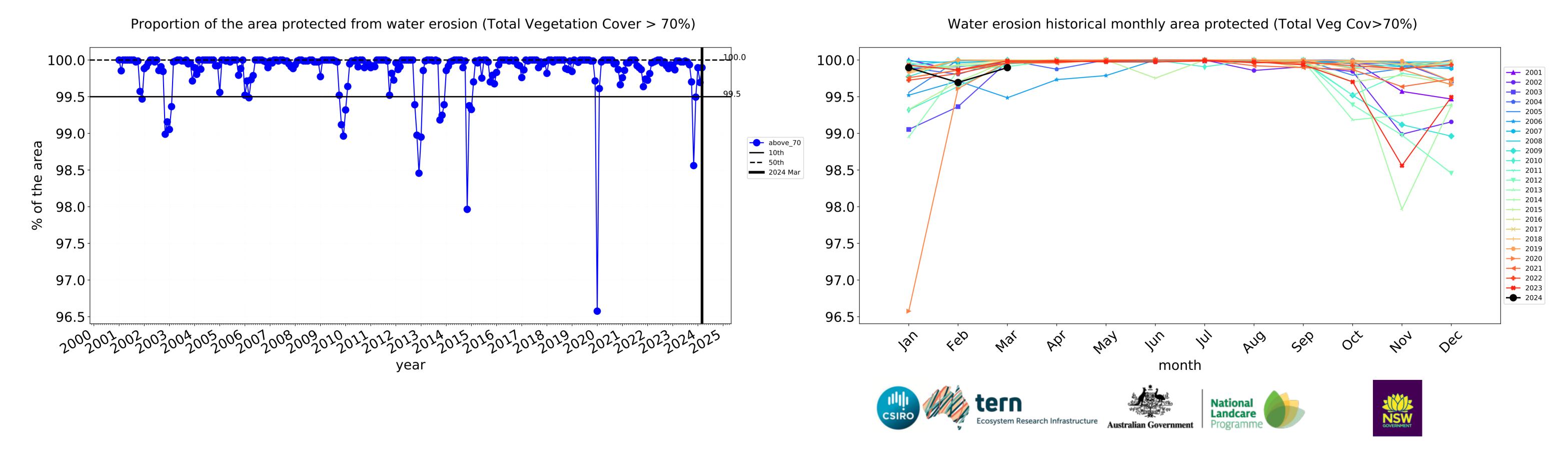


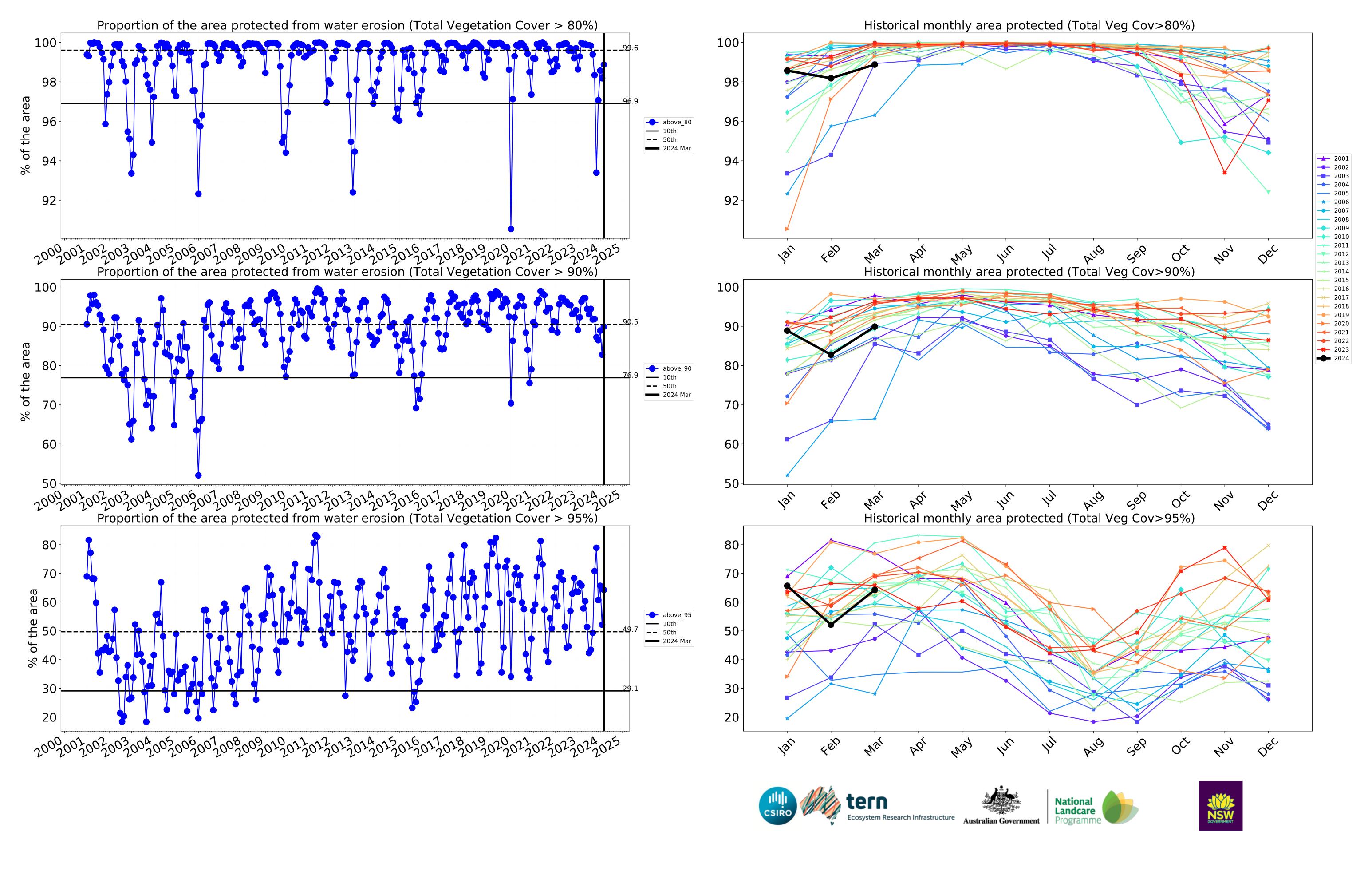












Irrigation

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

Catchment Scale Land

Use of Australia

(2018) and Forests of Australia (2018)

Anomaly show how many percetage points each

pixel is from the mean. That

are about 20% lower than the mean of that

pixel. The mean

using baseline from 2001 to 2019.

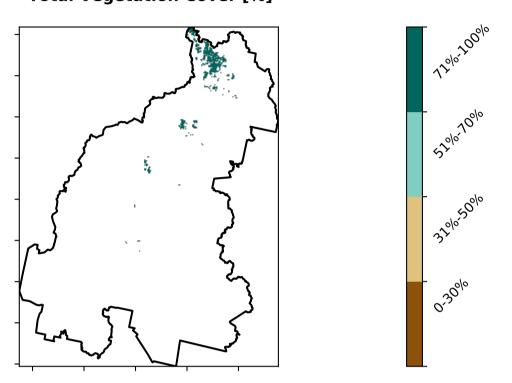
is only for the month of the map

is, red pixels

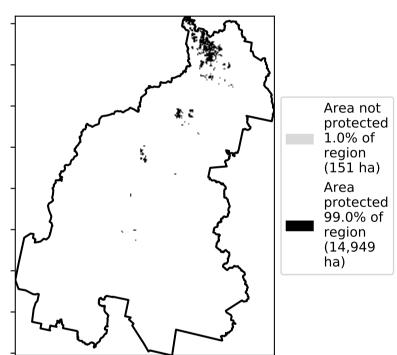
1 Agriculture - Grazing - Irrigated 2 Agriculture - Cropping - Irrigated 3 Agriculture - Horticulture - Irrigated

Total Vegetation Cover [%]

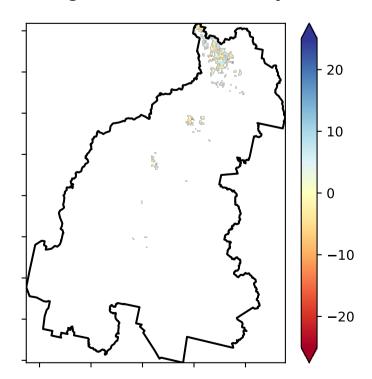
Land use and forest cover



% Area protected from water erosion (>70%)

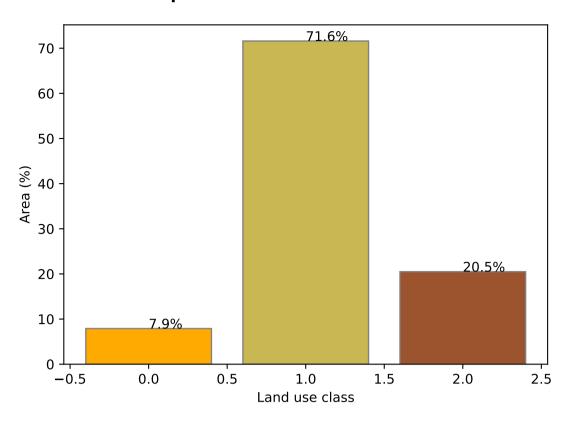


Total Vegetation Cover Anomaly [%]

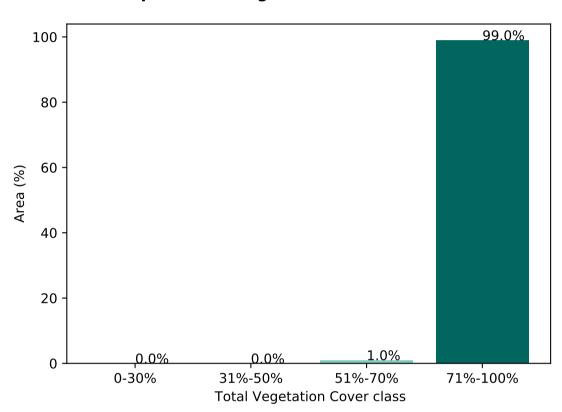


Deciles show where the pixel value lies in the record, from highest to lowest, for that month. That is, red pixels are in the lowest 10% of records for that month of the map using baseline from 2001 to 2019.

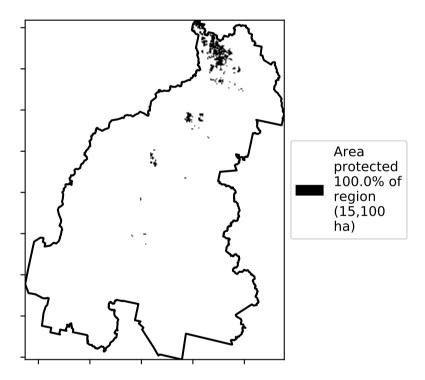
Proportion of each land class in area

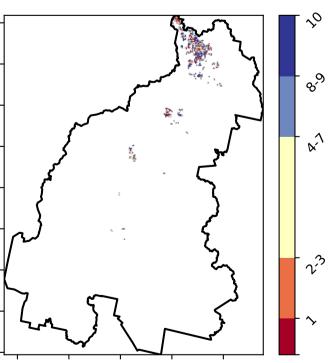


Proportion of vegetation cover class in area



% Area protected from wind erosion (>50%)







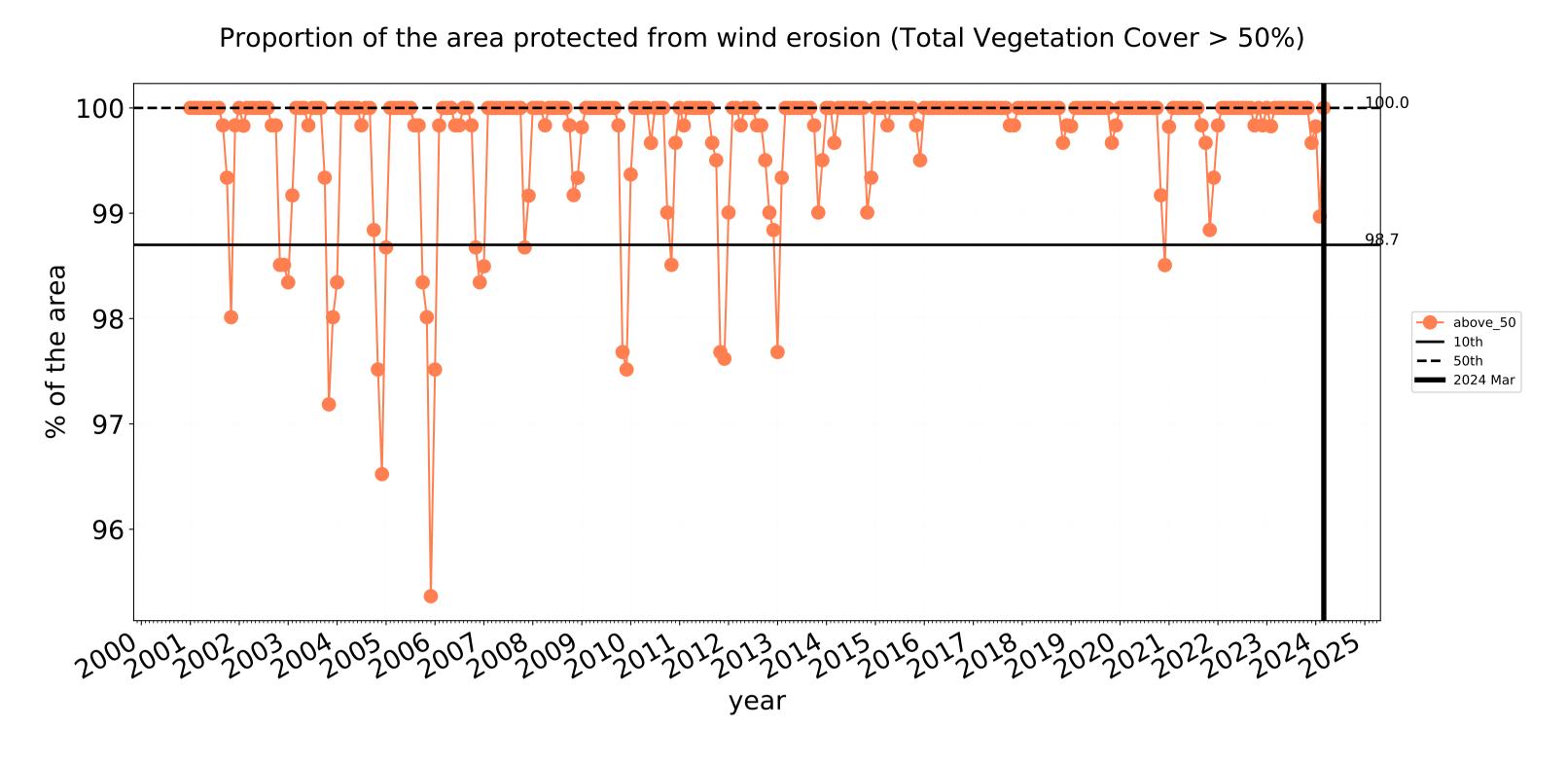


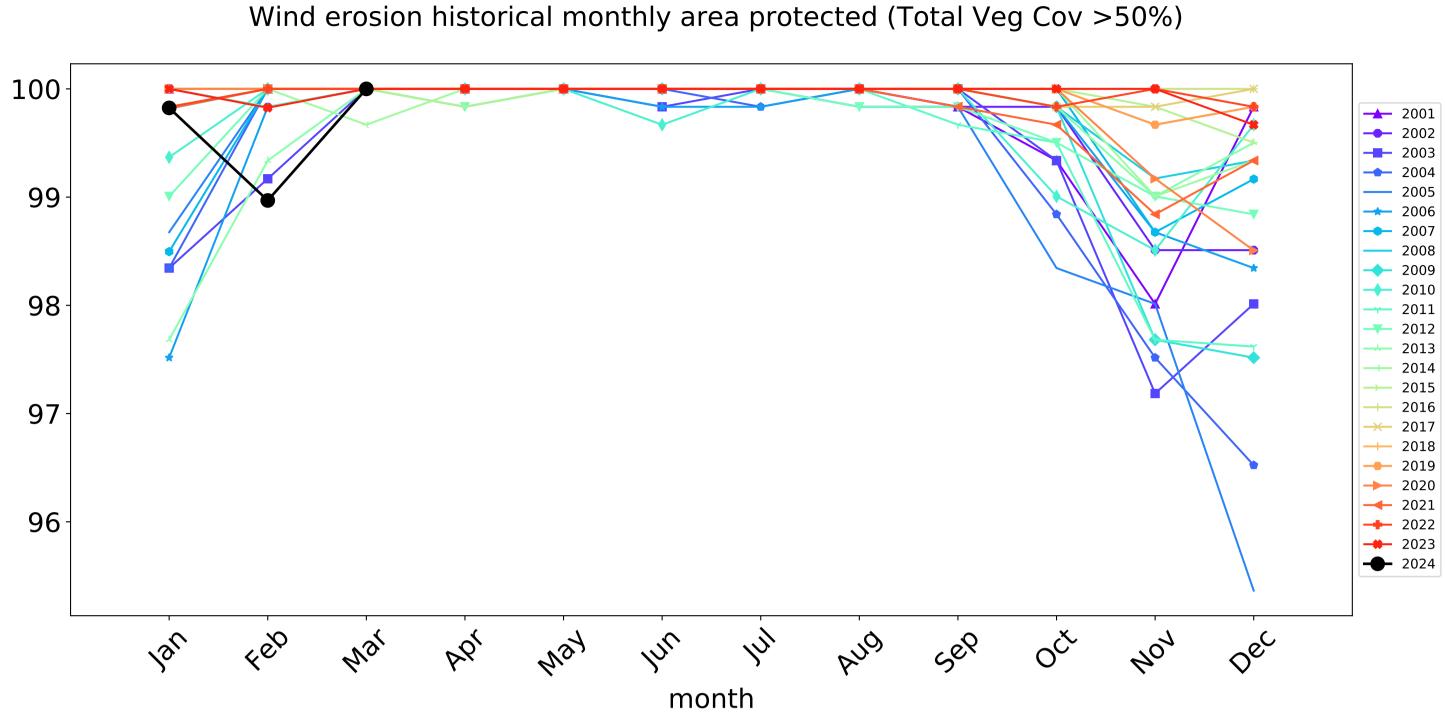


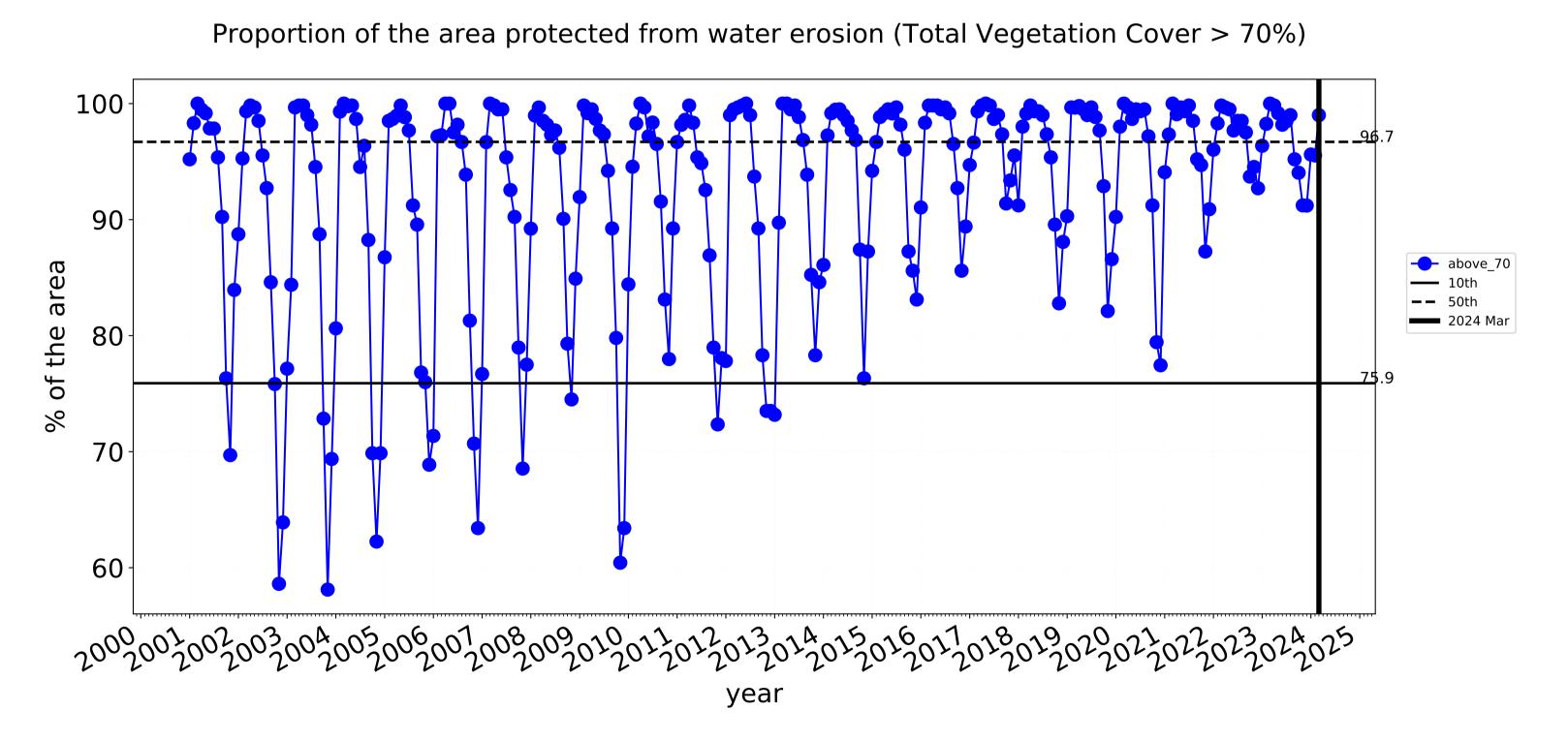


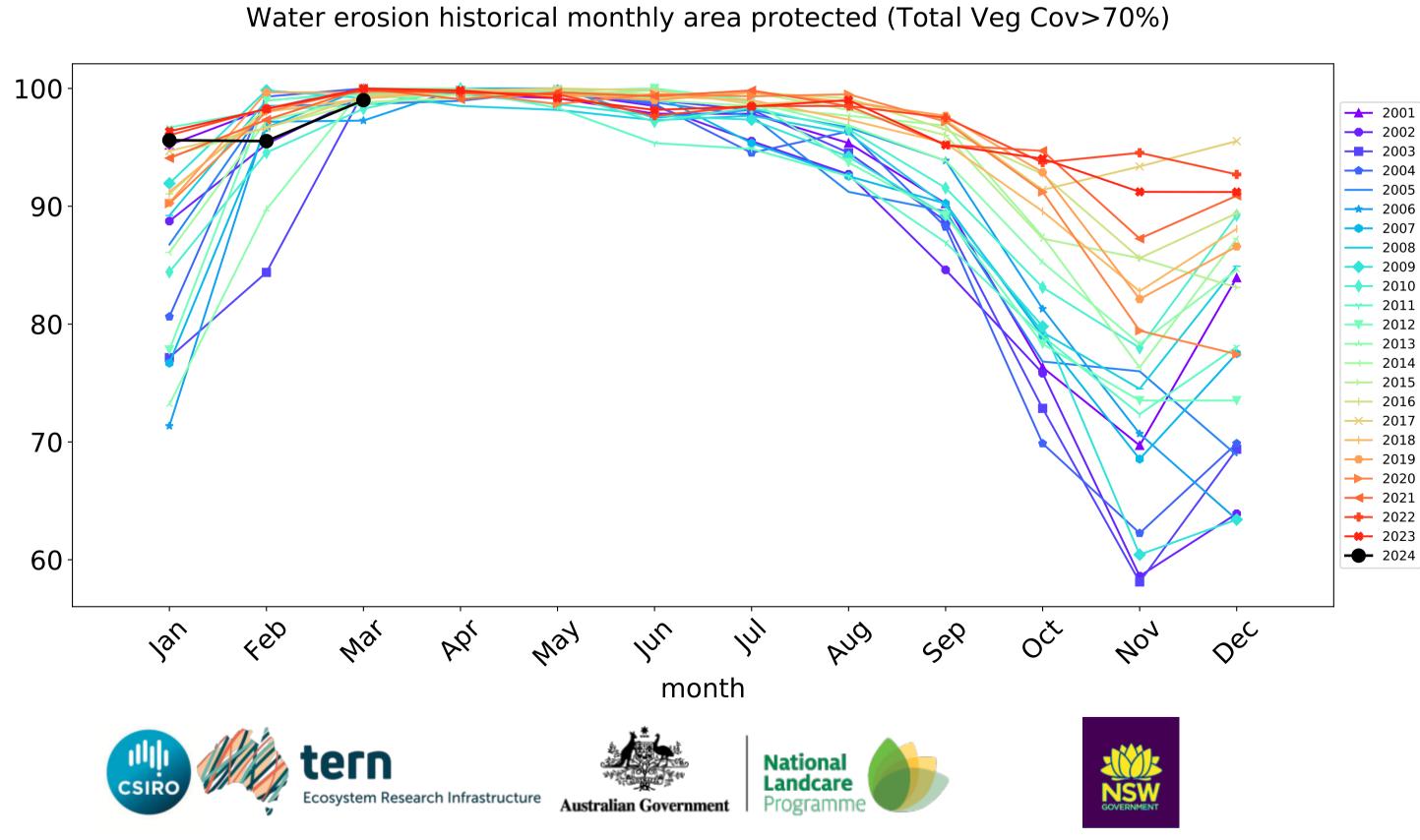


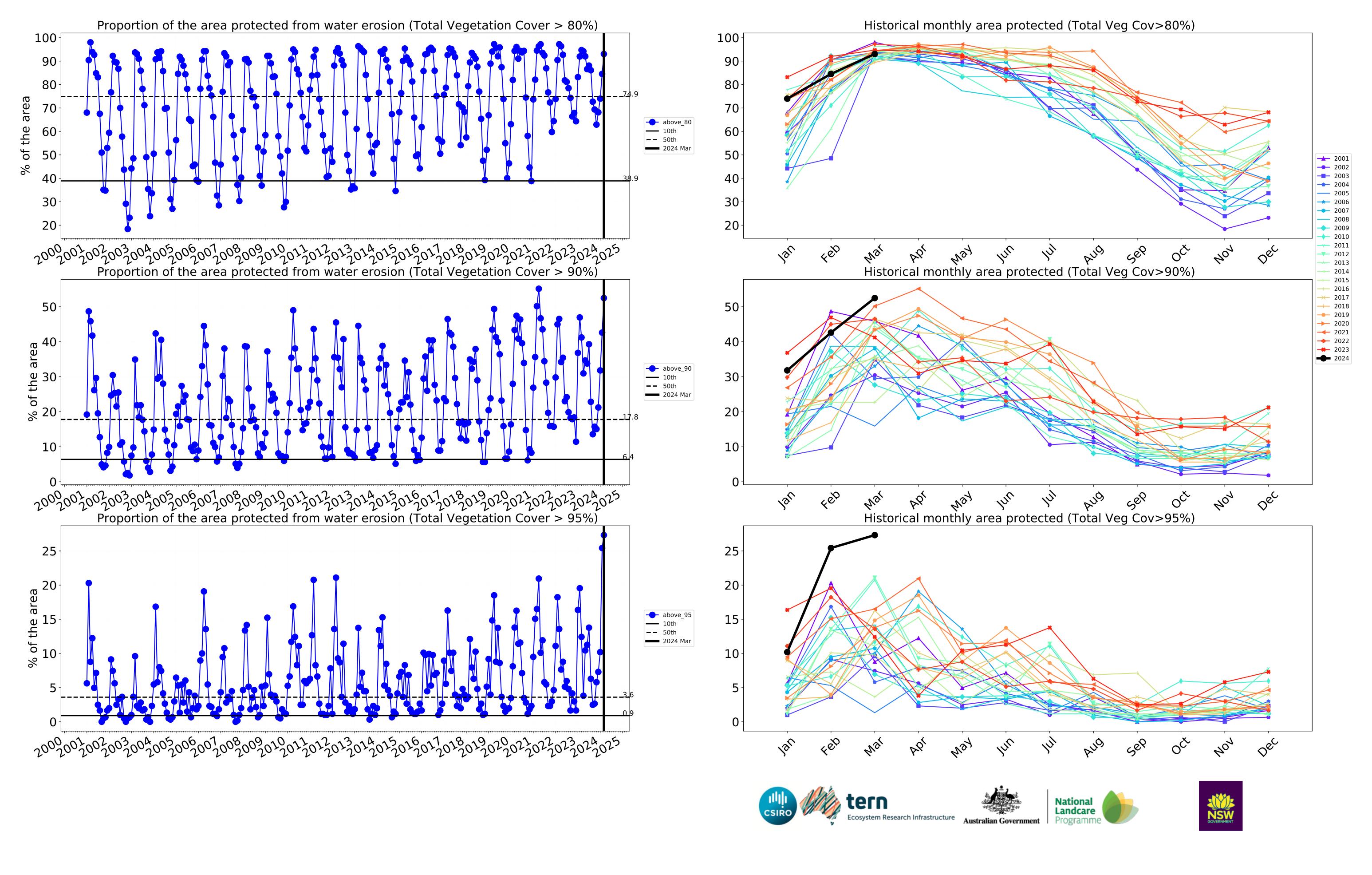












Production native forests and plantation forests

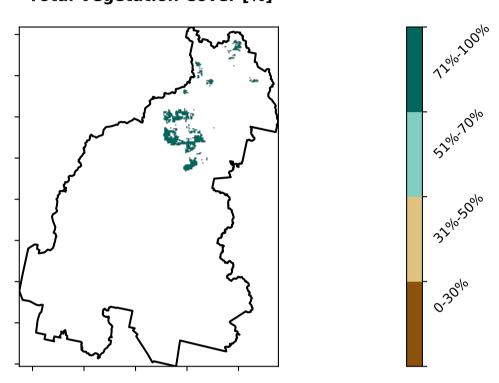
Catchment Scale Land Use and Forests of Australia (2018) Derived from Catchment Scale Land Use of Australia

(2018) and Forests of Australia (2018)

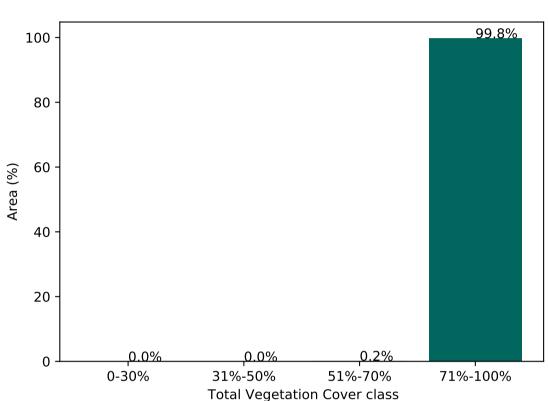
1 Production native forests and plantation forests

Total Vegetation Cover [%]

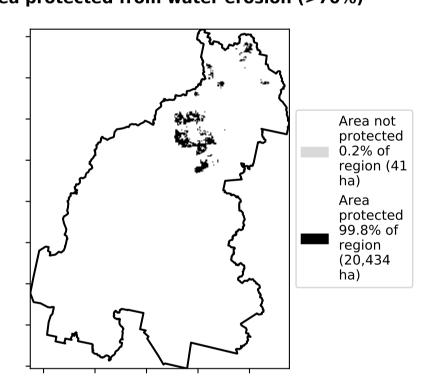
Land use and forest cover



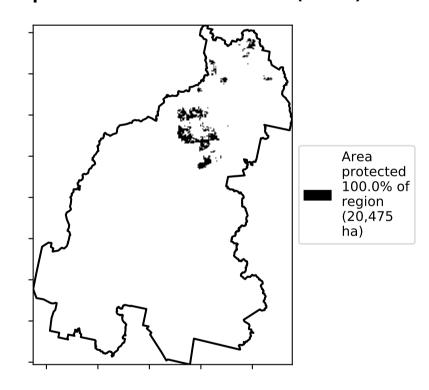
Proportion of vegetation cover class in area



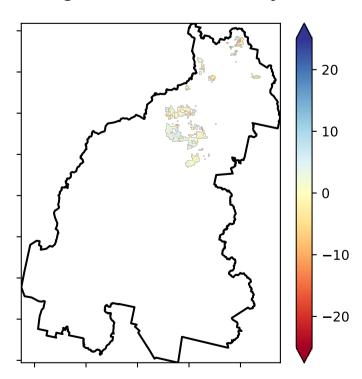
% Area protected from water erosion (>70%)



% Area protected from wind erosion (>50%)

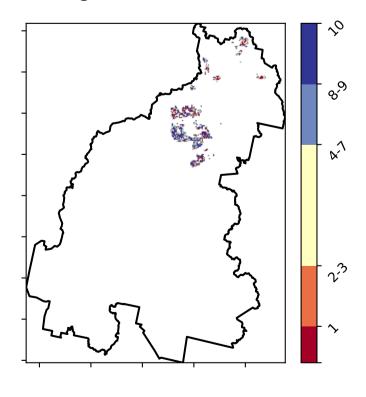


Total Vegetation Cover Anomaly [%]



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 [%]



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.

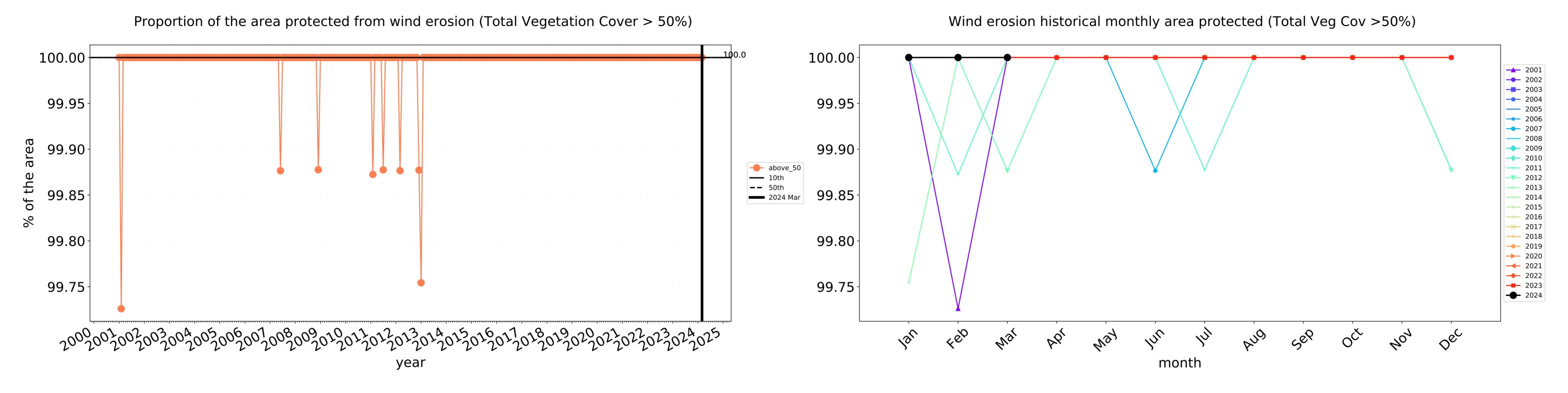


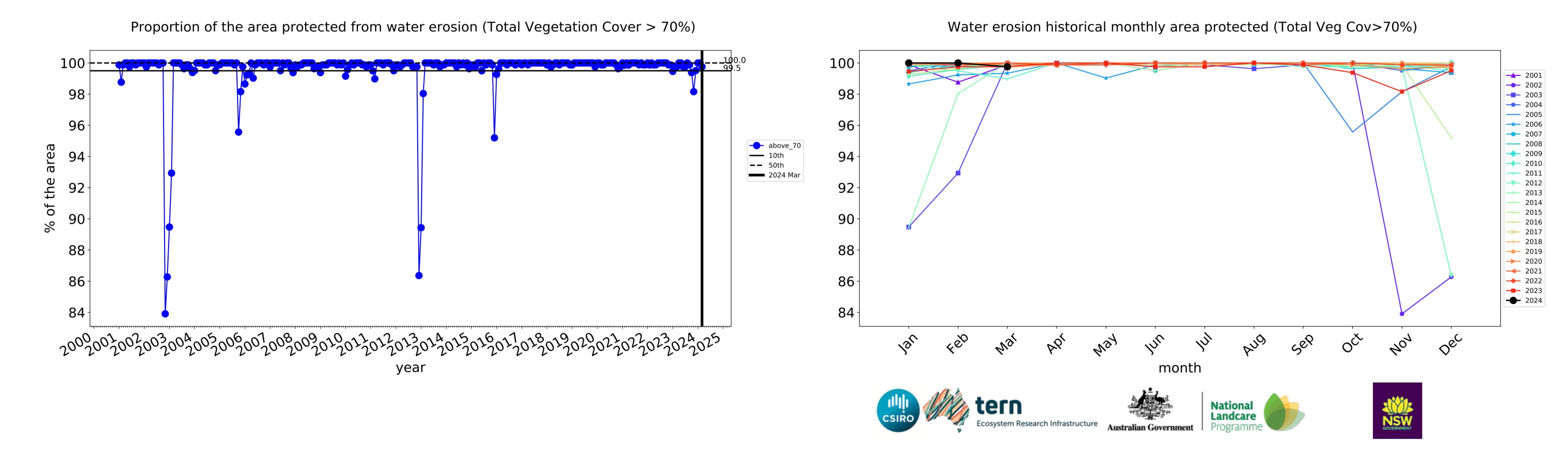


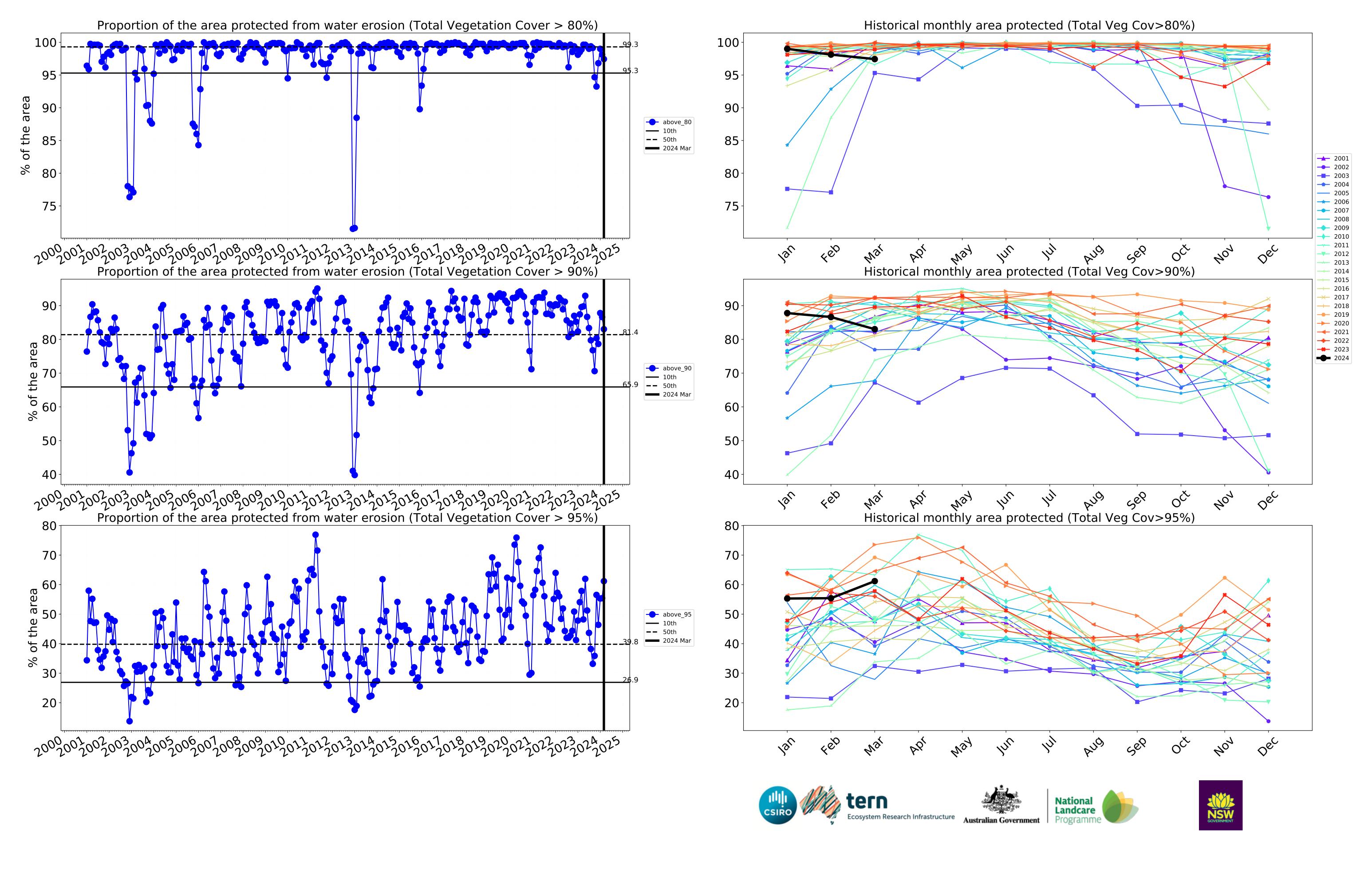




Production native forests and plantation forests timeseries







Tablelands_(R) (952,850 ha and no data 175,436 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	952,850	100.0% 952,800	100.0% 952,700	99.8% 951,000	98.5% 938,200	81.9% 779,975	51.7% 492,200
Conservation and natural environments	283,900	100.0% 283,900	100.0% 283,875	99.9% 283,750	99.1% 281,450	81.7% 232,025	46.4% 131,800
Conservation and natural environments Woodland forest	50,200	100.0% 50,200	100.0% 50,200	100.0% 50,200	99.1% 49,750	81.4% 40,850	48.2% 24,200
Conservation and natural environments Forest (non woodland)	232,000	100.0% 232,000	100.0% 231,975	99.9% 231,850	99.2% 230,050	81.9% 189,975	46.1% 107,025
Agriculture	624,100	100.0% 624,100	100.0% 624,075	99.9% 623,225	98.5% 614,750	82.5% 515,125	54.3% 339,150
Grazing	608,675	100.0% 608,675	100.0% 608,650	99.9% 607,950	98.6% 600,375	83.3% 507,000	55.0% 334,875
Grazing non forest	88,400	100.0% 88,400	100.0% 88,400	99.7% 88,175	97.7% 86,325	68.6% 60,600	36.2% 31,975
Grazing Woodland forest	327,525	100.0% 327,525	100.0% 327,500	99.9% 327,225	98.8% 323,475	83.4% 273,100	54.7% 179,025
Grazing - Forest (non woodland)	192,750	100.0% 192,750	100.0% 192,750	99.9% 192,550	98.9% 190,575	89.9% 173,300	64.3% 123,875
Irrigation	15,100	100.0% 15,100	100.0% 15,100	99.0% 14,950	93.0% 14,050	52.5% 7,925	27.3% 4,125
Production native forests and plantation forests	20,475	100.0% 20,475	100.0% 20,475	99.8% 20,425	97.4% 19,950	83.0% 17,000	61.2% 12,525







