Total vegetation cover soil protection Region:LGA Whitsunday (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: August 2025

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

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

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

Erosion protection: Wind erosion 50% total vegetation cover

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

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

Comparison with previous years:

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

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

Erosion protection

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

Rainfall

• Millimetres rainfall each month (black line).

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

Water erosion protection for higher rainfall and steeper slopes:

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

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

Acknowledgment of data:

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

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









Vegetation Cover Aug 2025

Land use and forest cover

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

is, red pixels are about 20% lower than the

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

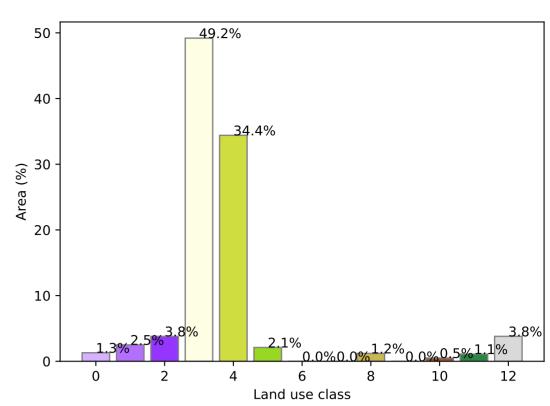
using baseline from 2001 to

2019.

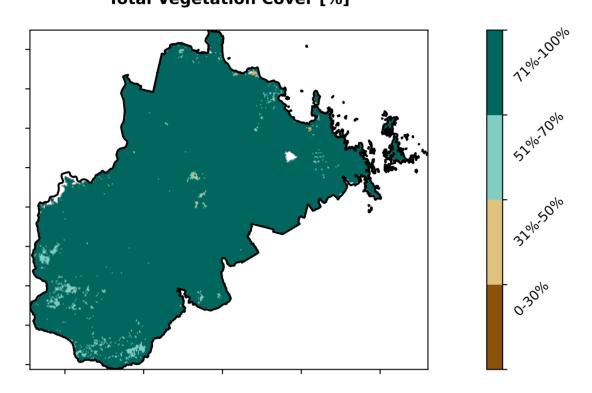
the mean. That

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 Land Use and Forests 4 Agriculture - Grazing - Non-forest 5 Agriculture - Grazing - Woodland forest Catchment Scale Land 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

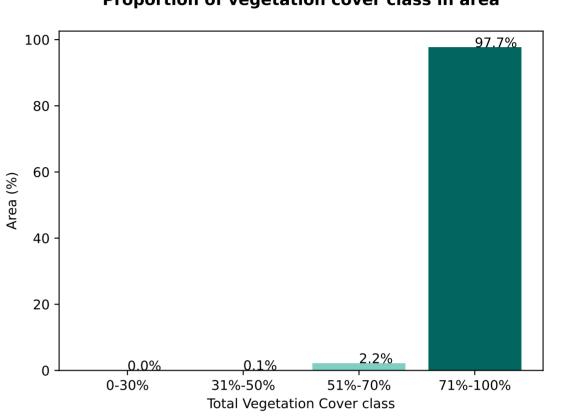
Proportion of each land class in area

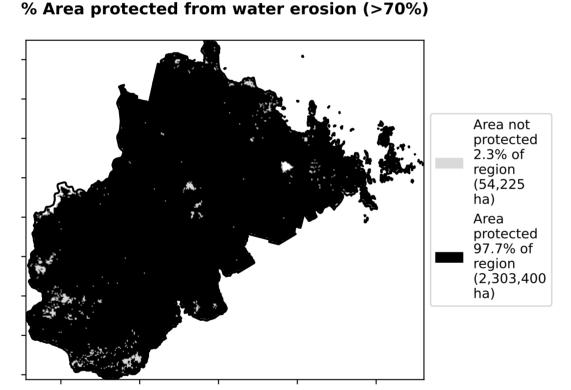


Total Vegetation Cover [%]

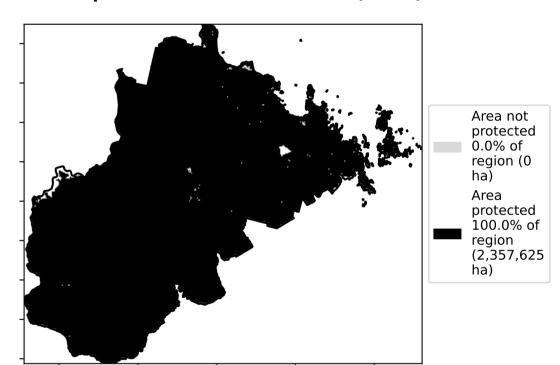


Proportion of vegetation cover class in area

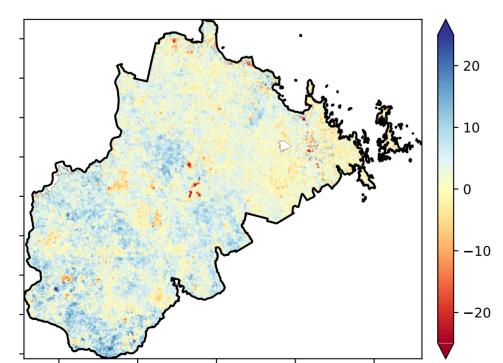




% Area protected from wind erosion (>50%)

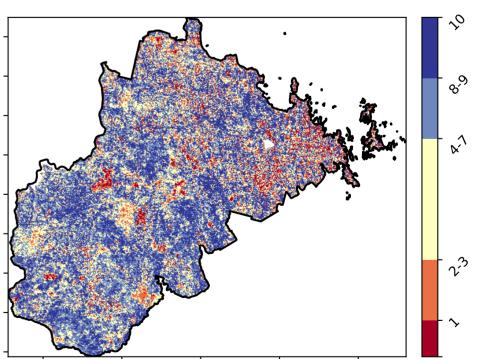


Total Vegetation Cover Anomaly [%]



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

Total Vegetation Cover Decile [%]

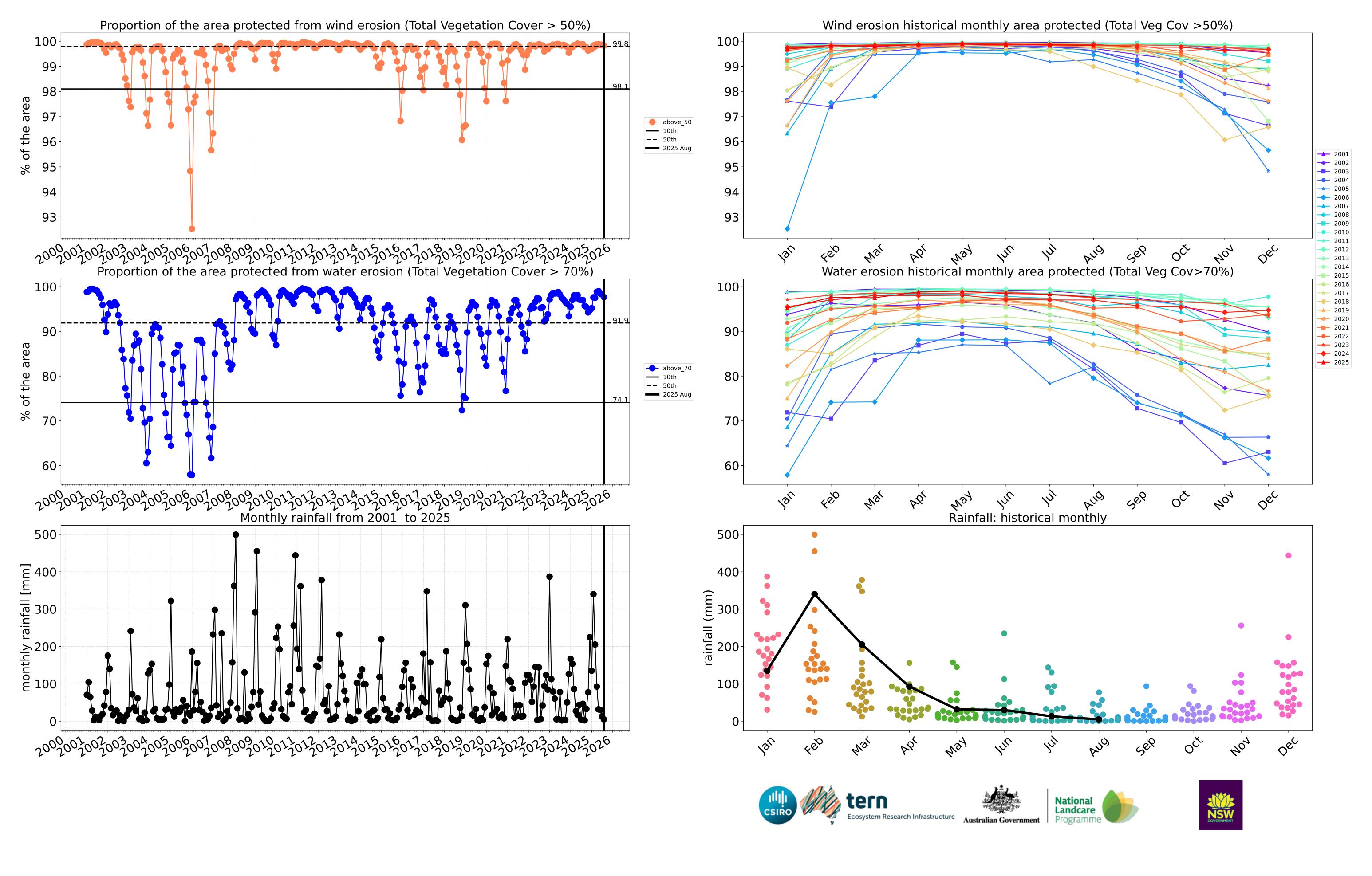








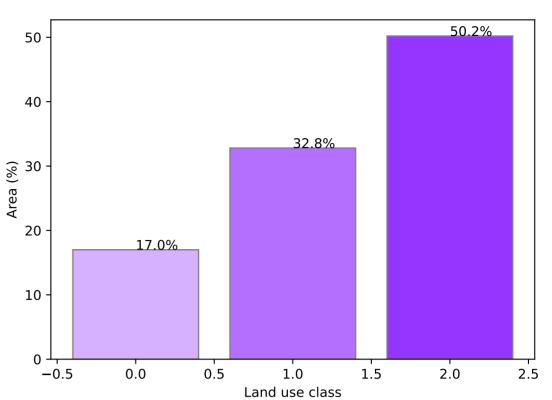




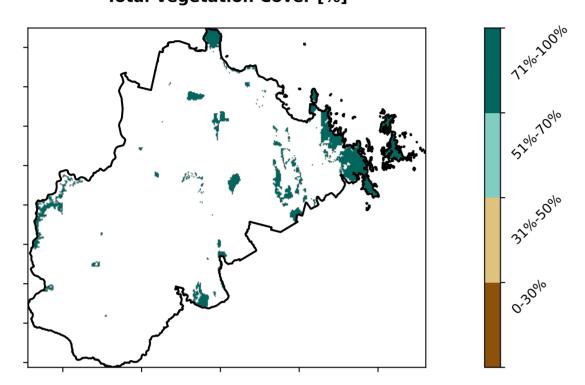
Conservation and natural environments

Catchment Scale Land Use and Forests of Australia (2018) Derived from Catchment Scale Land Use of Australia (2018) and Forests of Australia (2018) Tonservation and natural environments - Nonforest 2 Conservation and natural environments - Woodland forest 3 Conservation and natural environments - Nonwoodland forest Tonservation and natural environments - Nonwoodland forest

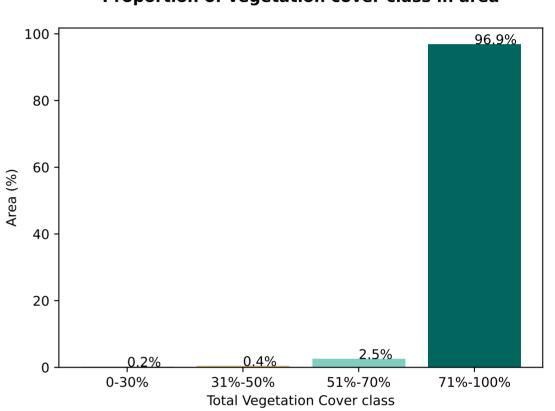
Proportion of each land class in area



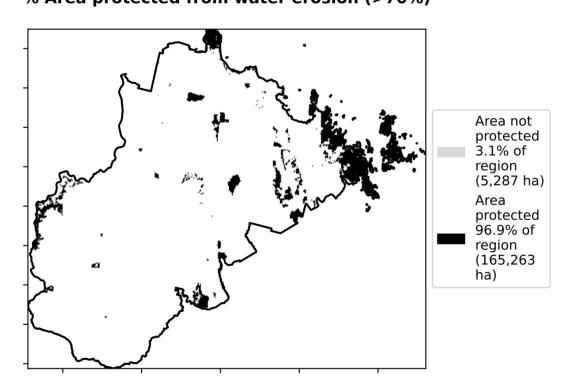
Total Vegetation Cover [%]



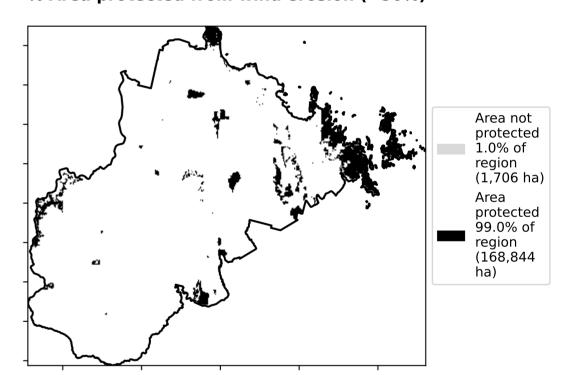
Proportion of vegetation cover class in area



% Area protected from water erosion (>70%)



% Area protected from wind erosion (>50%)



Total Vegetation Cover Anomaly [%]

Anomaly show how many percetage points each

pixel is from

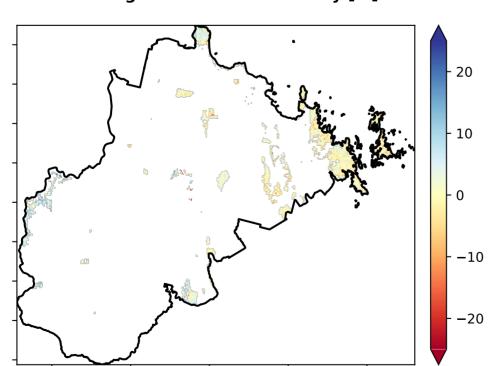
the mean. That is, red pixels

are about 20% lower than the mean of that

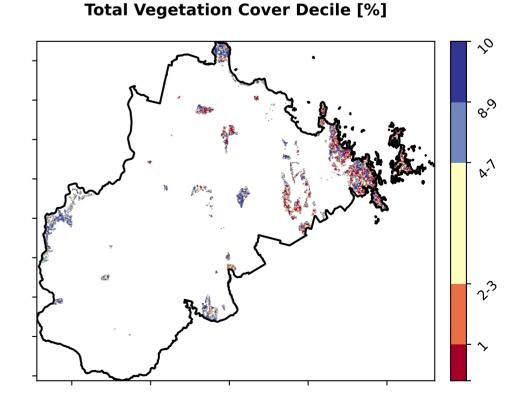
pixel. The mean

using baseline from 2001 to 2019.

is only for the month of the map



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.



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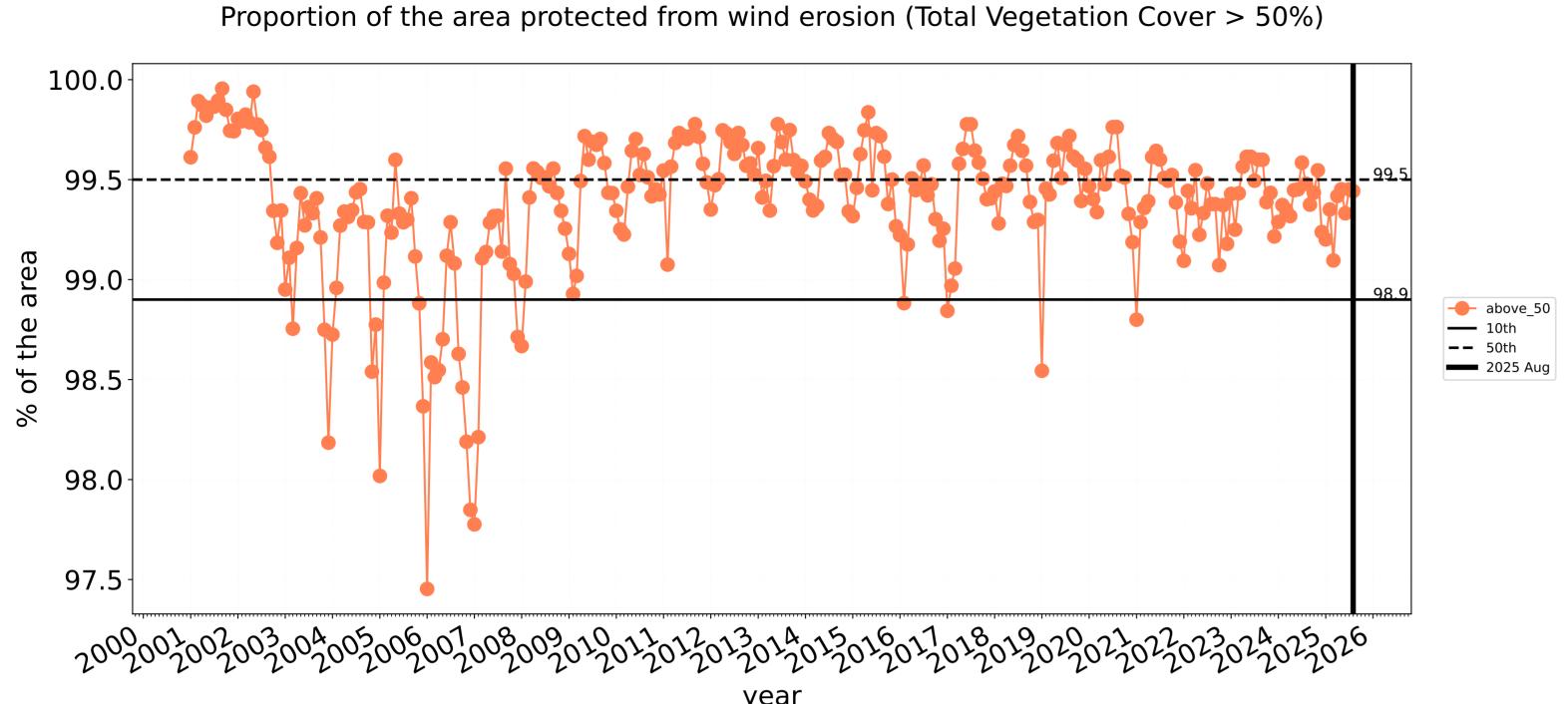
Ecosystem Research Infrastructure

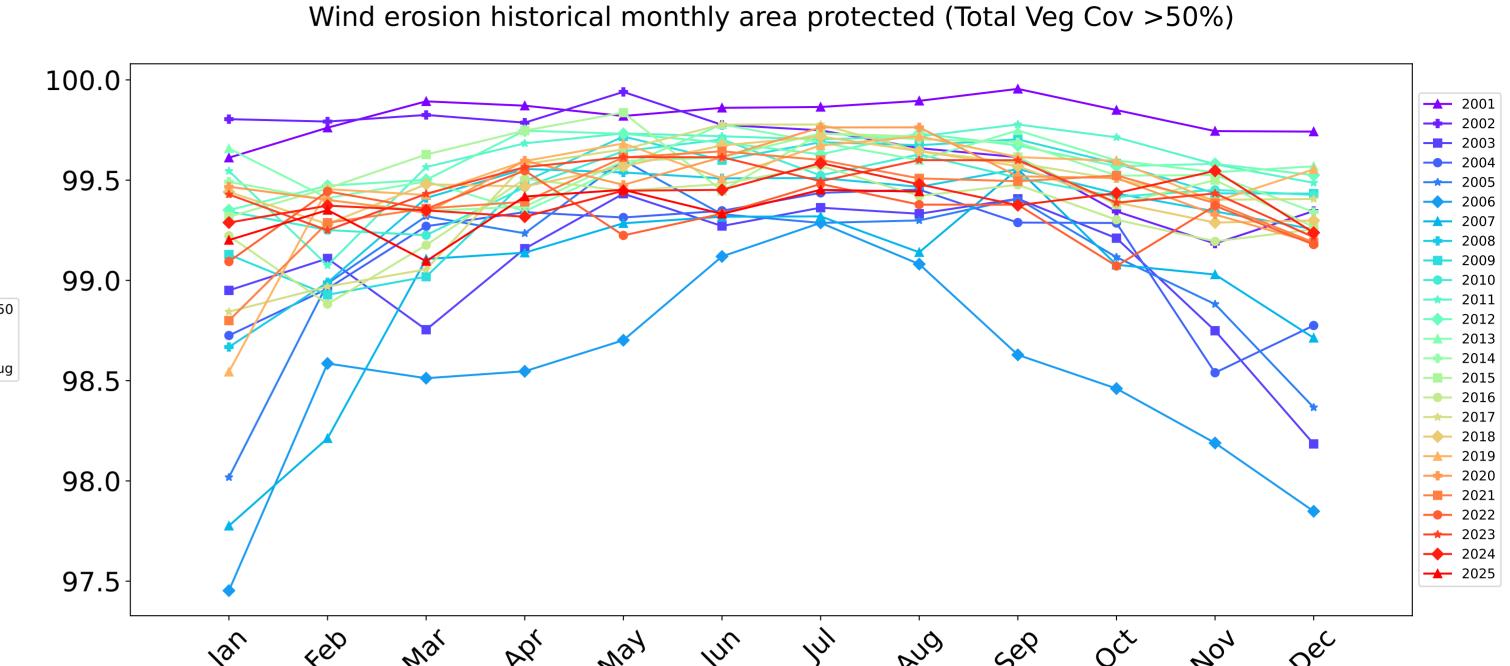




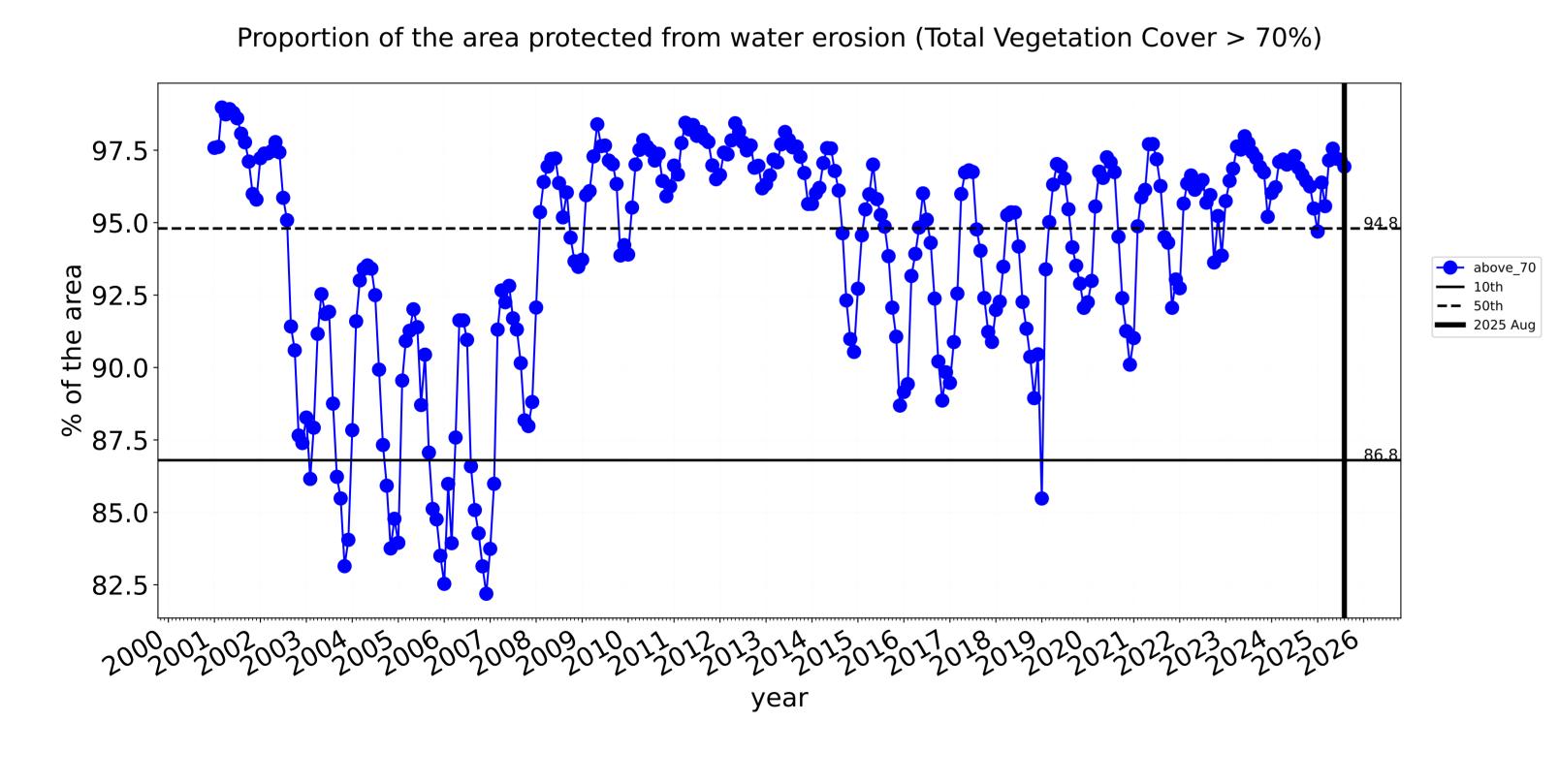


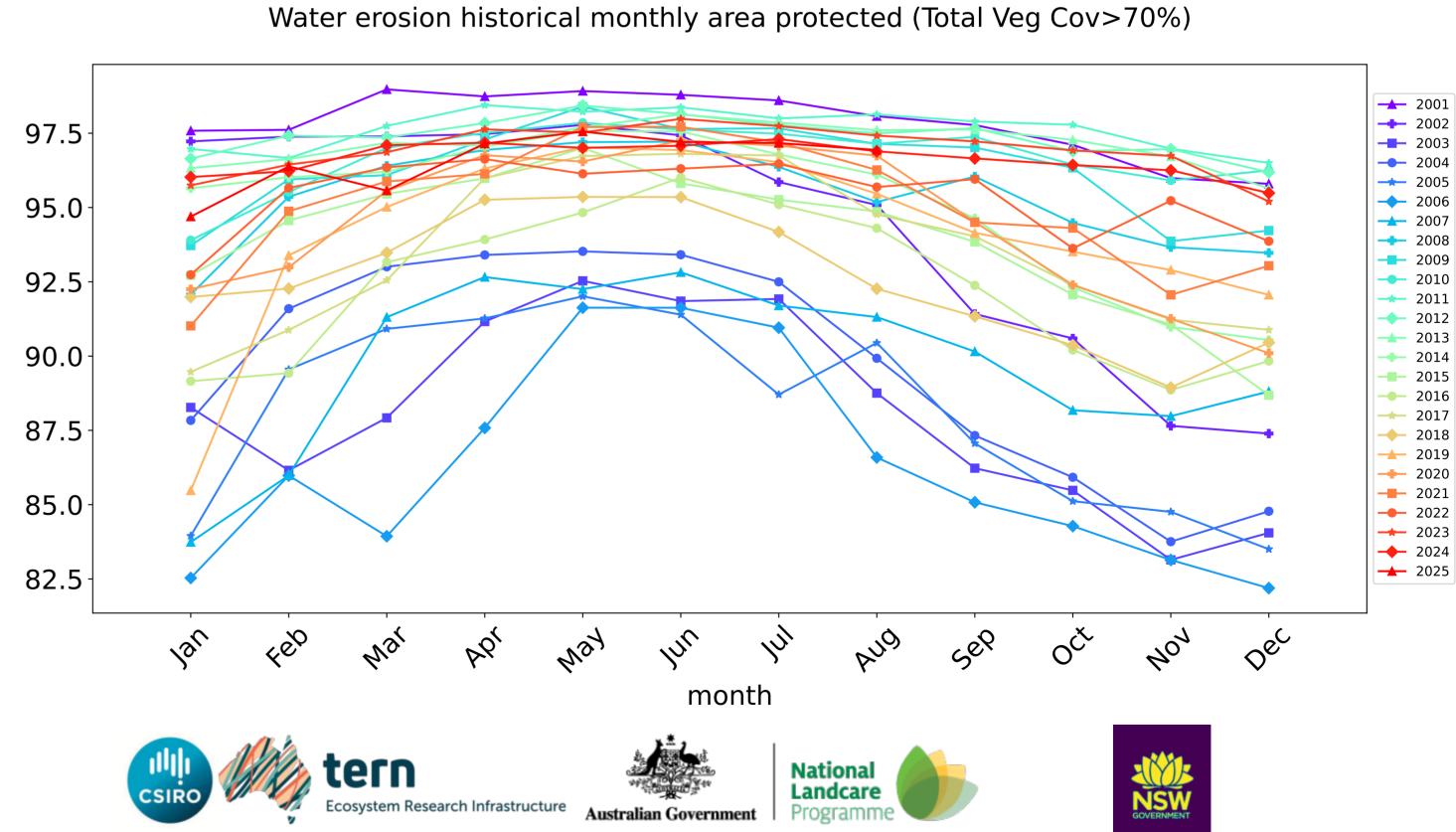
Conservation and natural environments timeseries





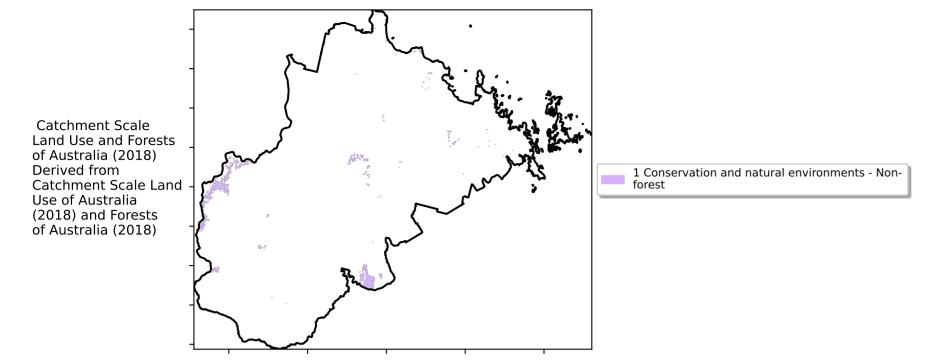
month



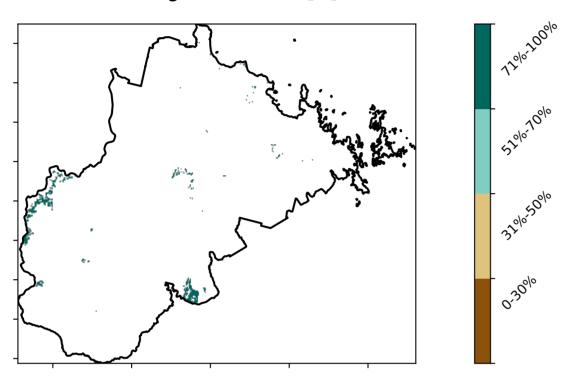


Conservation and natural environments non forest

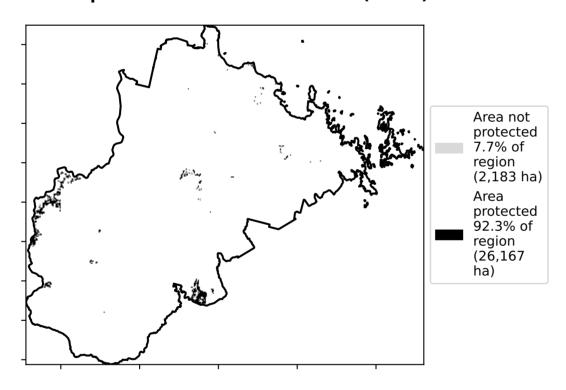
Land use and forest cover



Total Vegetation Cover [%]



% Area protected from water erosion (>70%)



Total Vegetation Cover Anomaly [%]

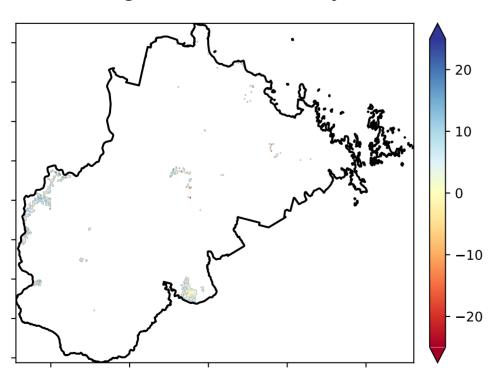
Anomaly show how many percetage points each pixel is from the mean. That

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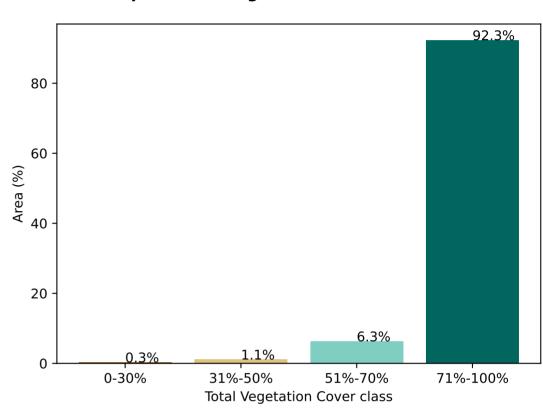
is only for the month of the map

using baseline from 2001 to 2019.

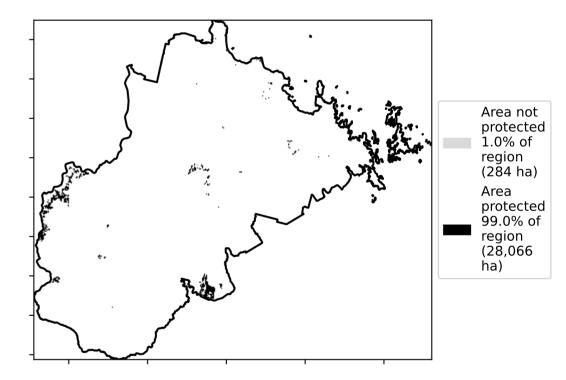


Deciles show where the pixel value lies in the record, from highest to lowest, for that month. That is, red pixels are in the lowest 10% of records for that month of the map using baseline from 2001 to 2019.

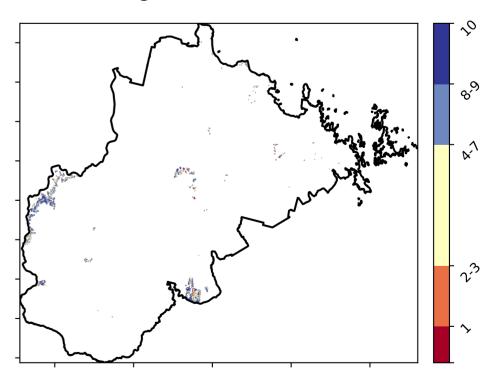
Proportion of vegetation cover class in area



% Area protected from wind erosion (>50%)



Total Vegetation Cover Decile [%]



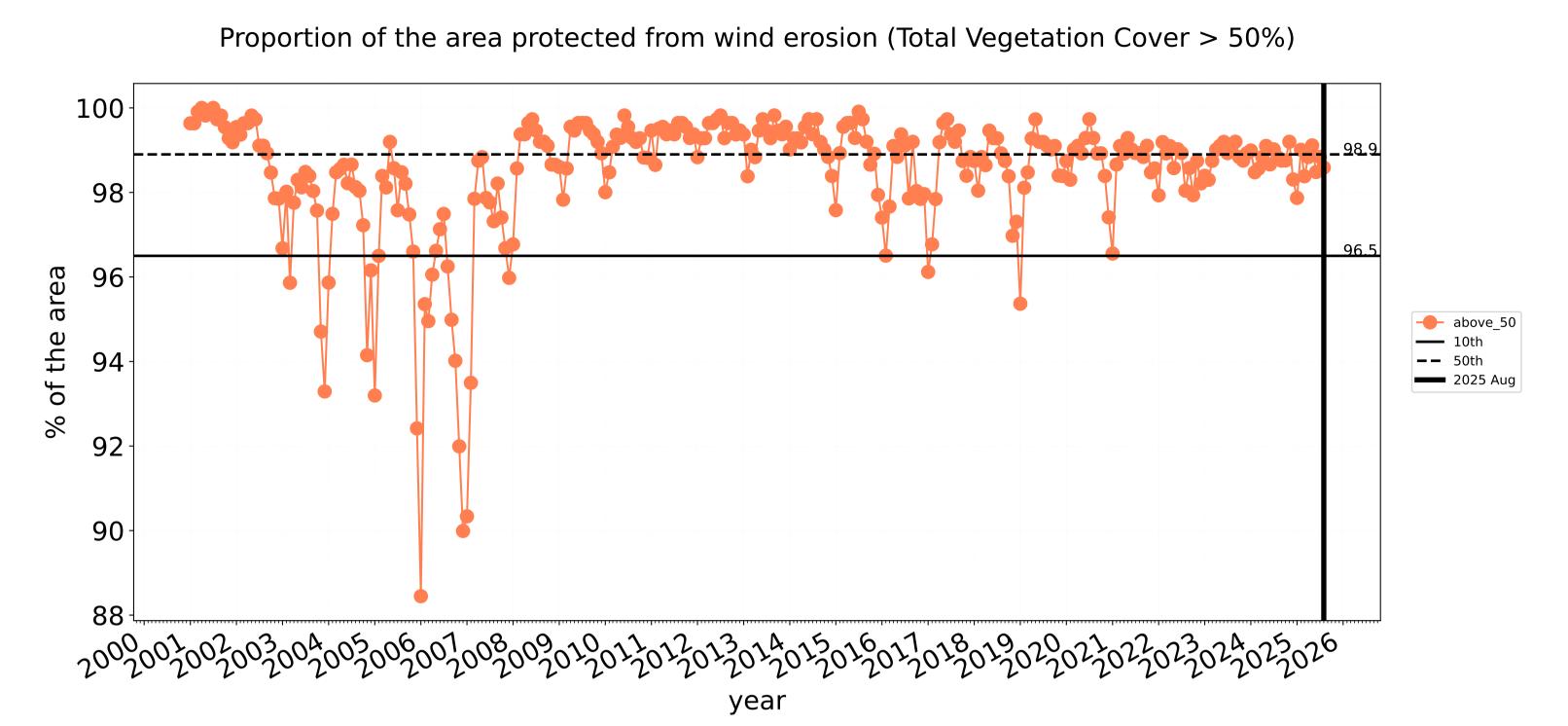


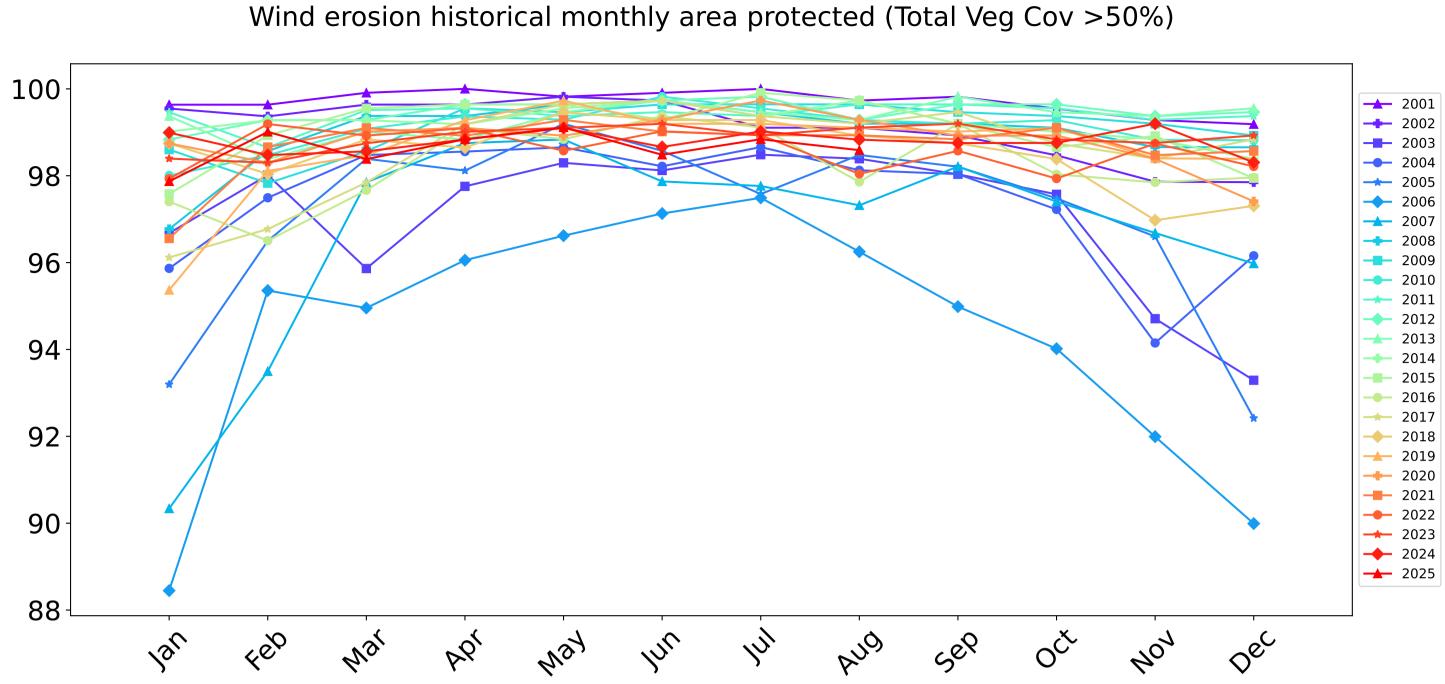




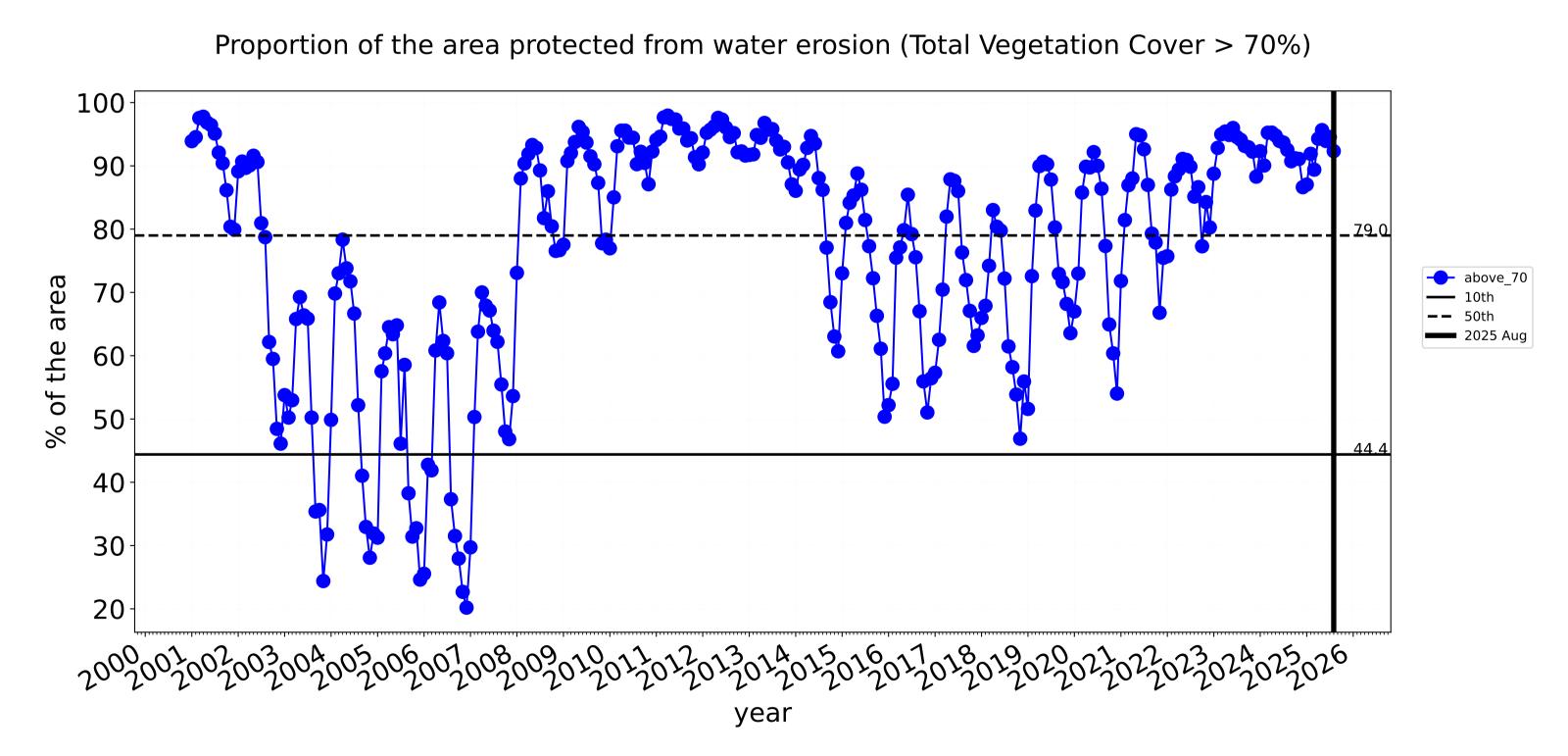


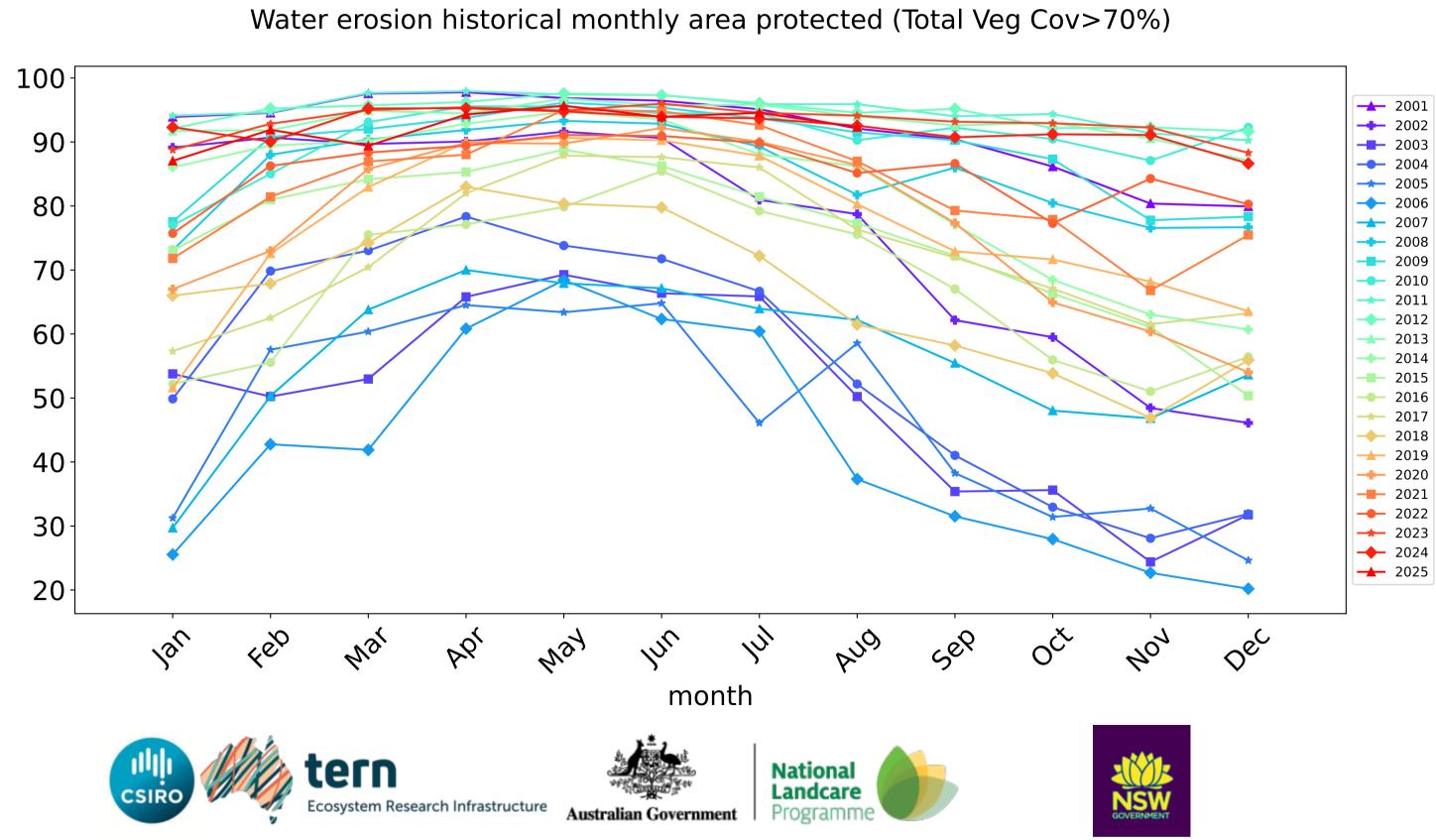
Conservation and natural environments non forest timeseries





month

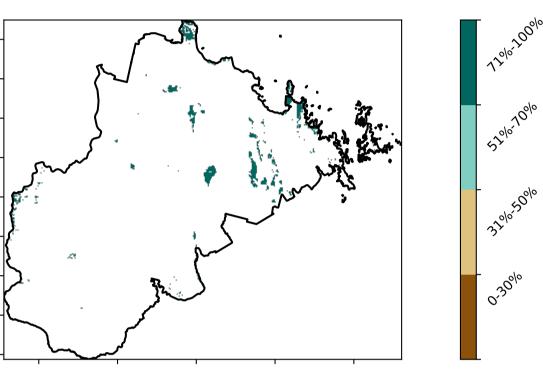


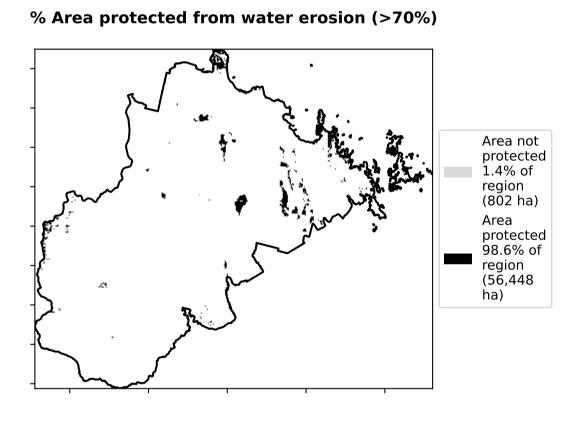


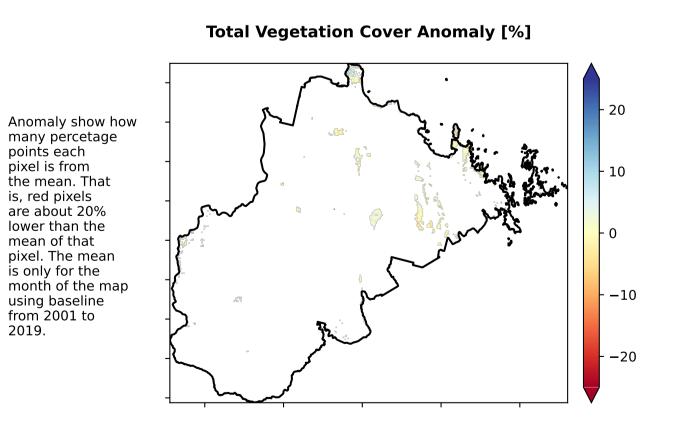
Conservation and natural environments Woodland forest

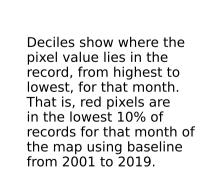
Land use and forest cover Catchment Scale Land Use and Forests of Australia (2018) Derived from 1 Conservation and natural environments - Woodland Catchment Scale Land Use of Australia (2018) and Forests of Australia (2018)

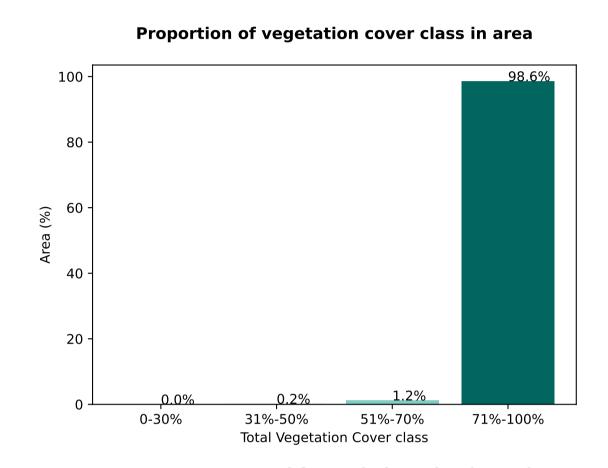
Total Vegetation Cover [%]

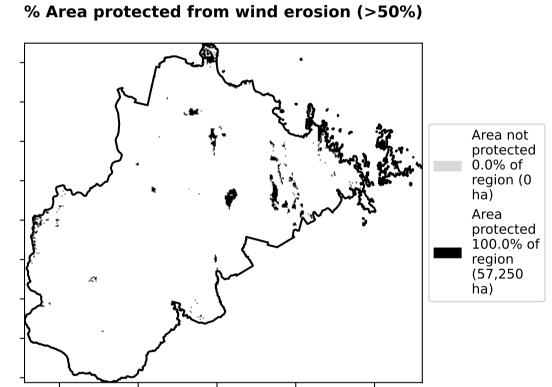


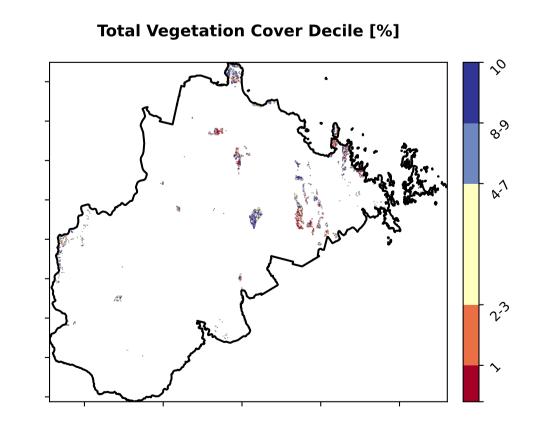












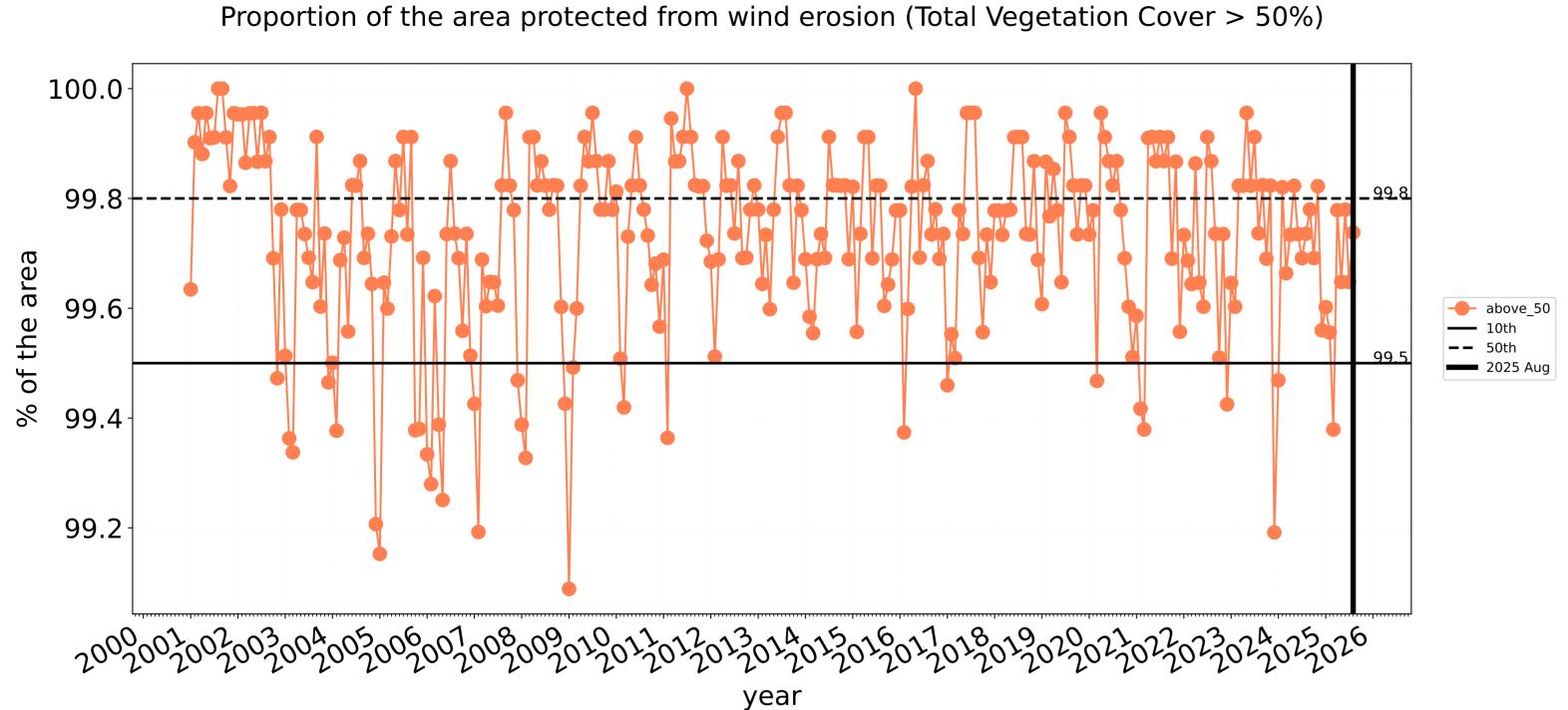


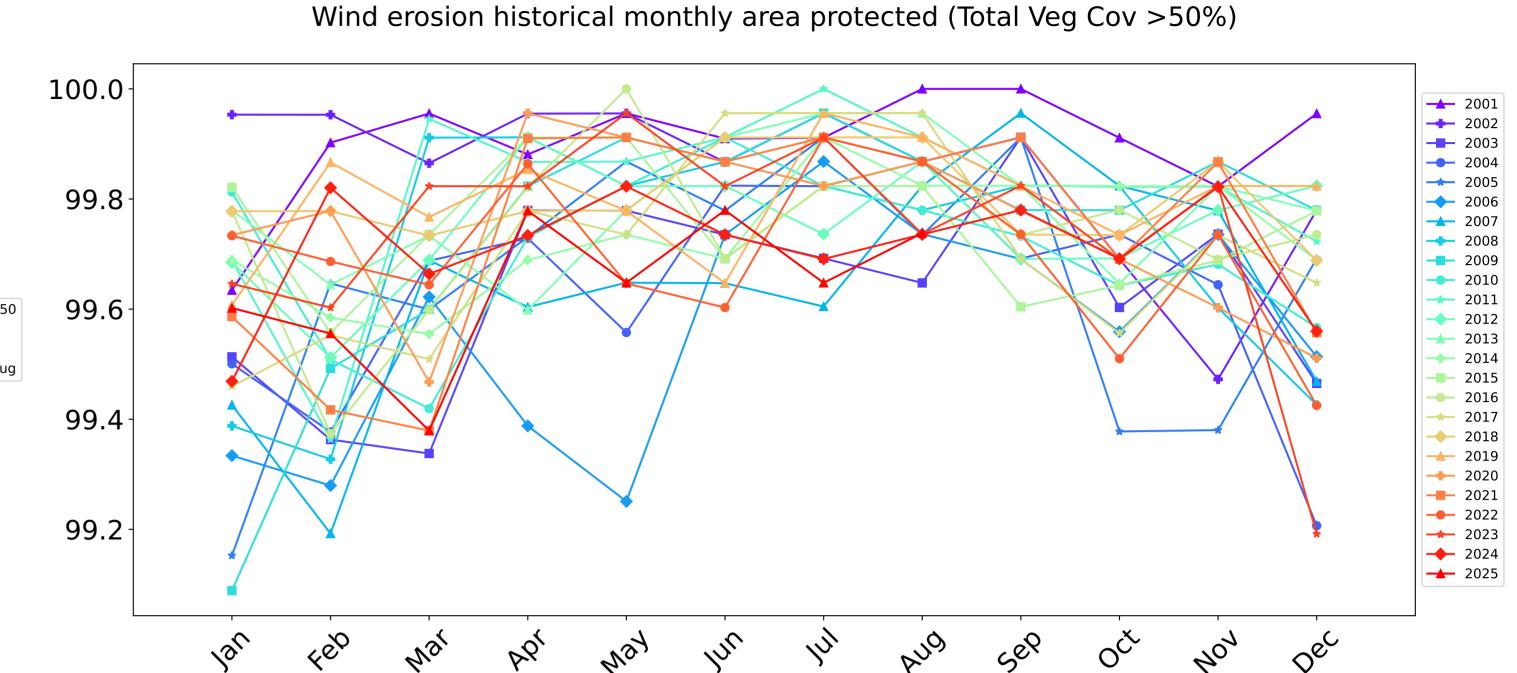




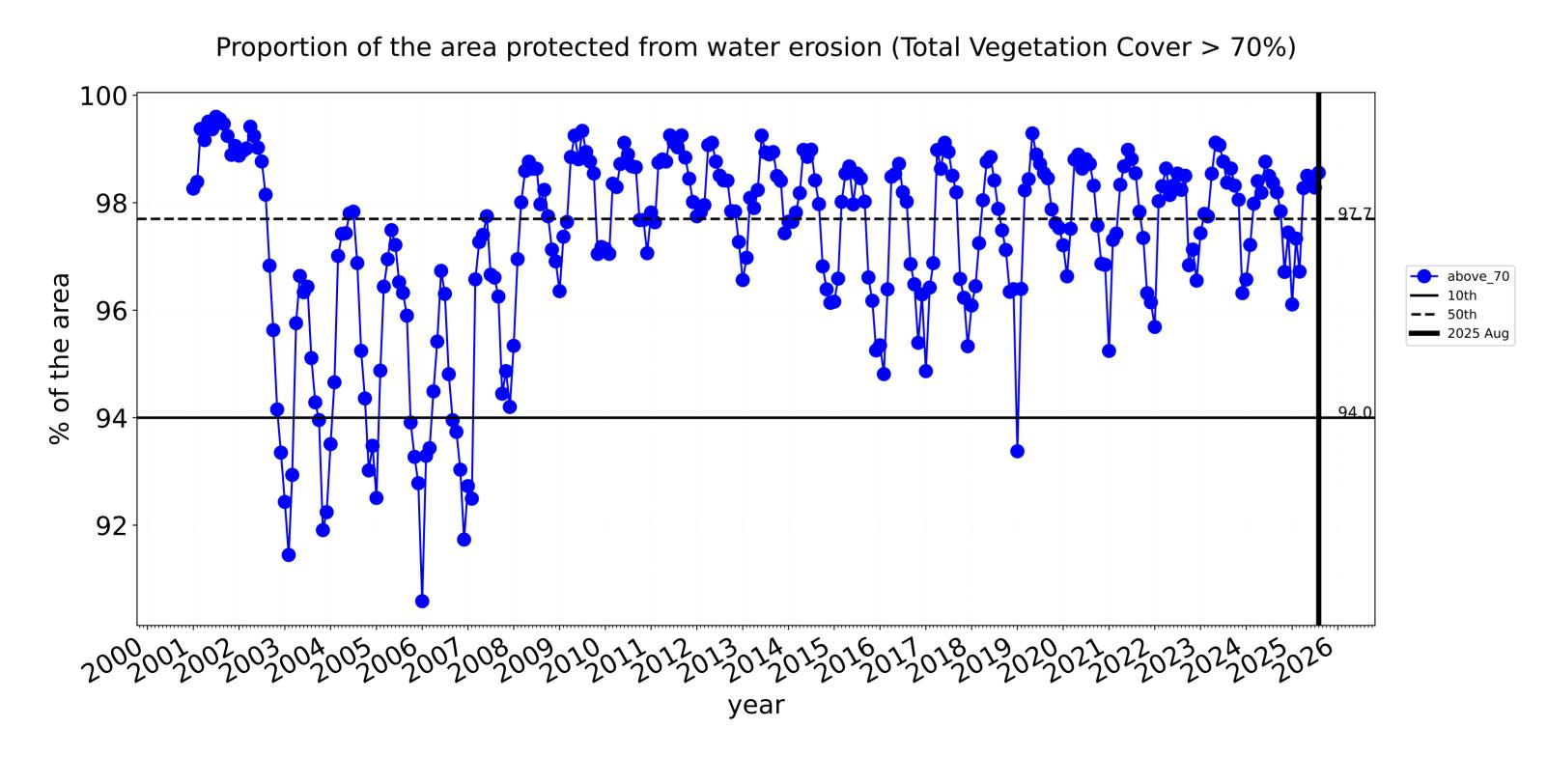


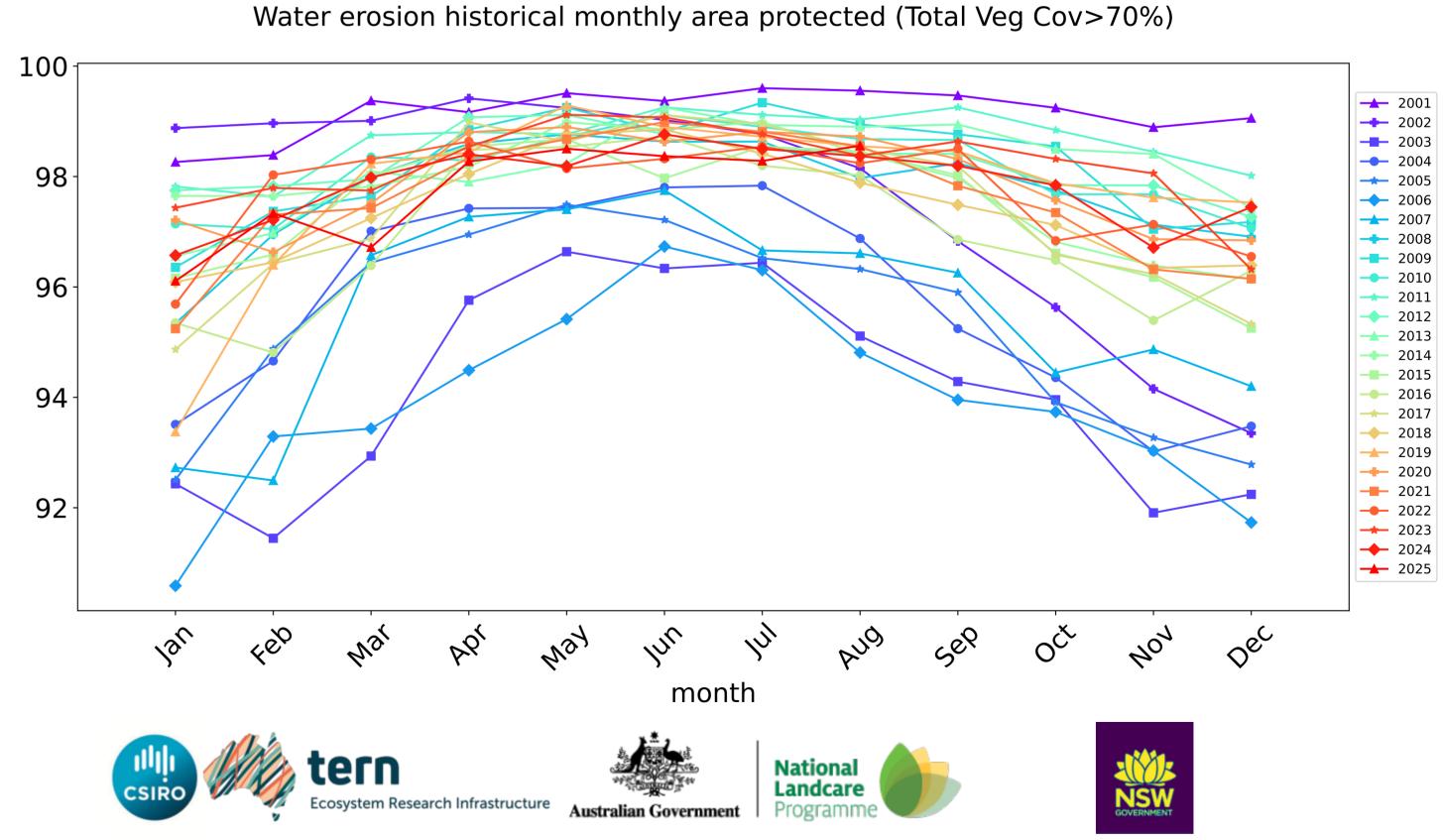
Conservation and natural environments Woodland forest timeseries





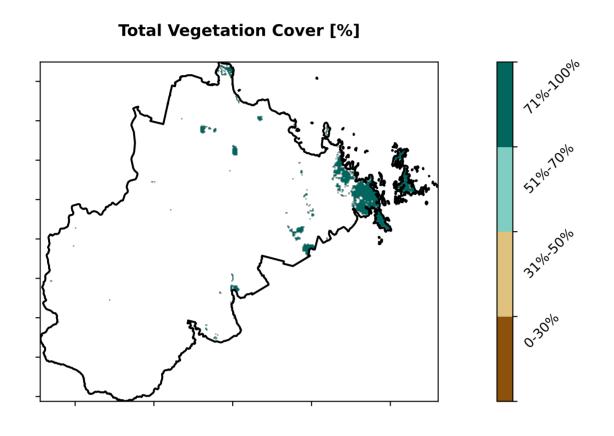
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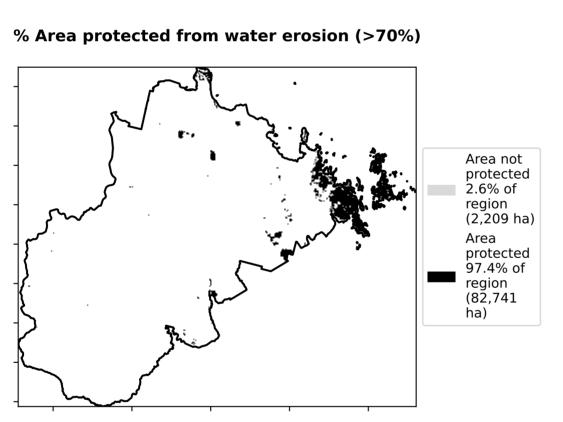


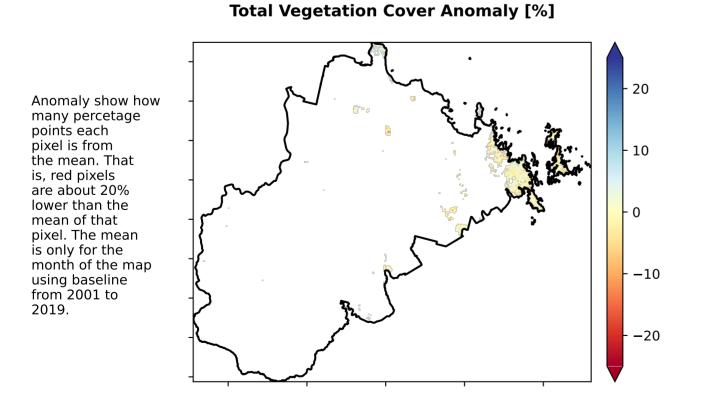


Conservation and natural environments Forest (non woodland)

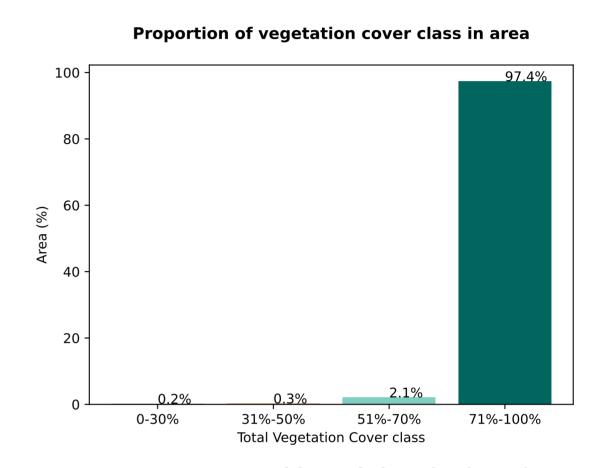
Catchment Scale Land Use and Forests of Australia (2018) Derived from Catchment Scale Land Use of Australia (2018) and Forests of Australia (2018)

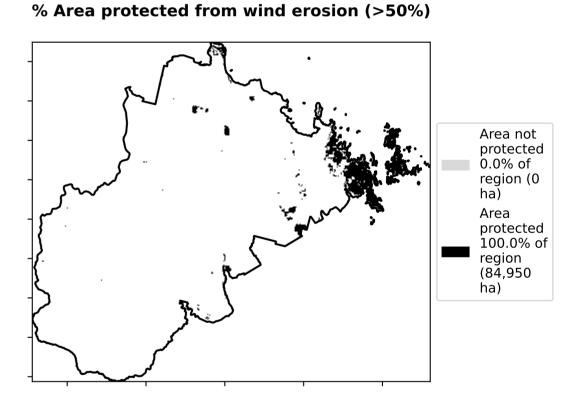


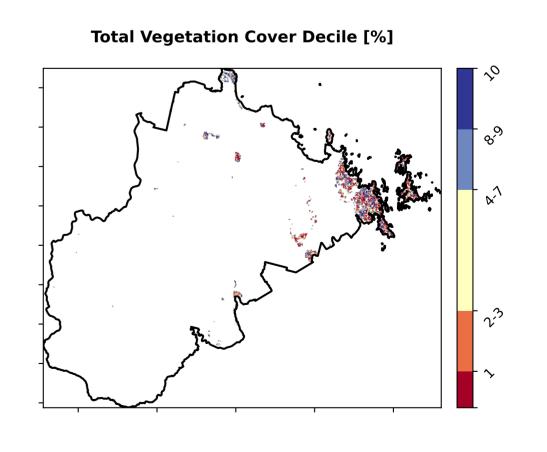




Deciles show where the pixel value lies in the record, from highest to lowest, for that month. That is, red pixels are in the lowest 10% of records for that month of the map using baseline from 2001 to 2019.





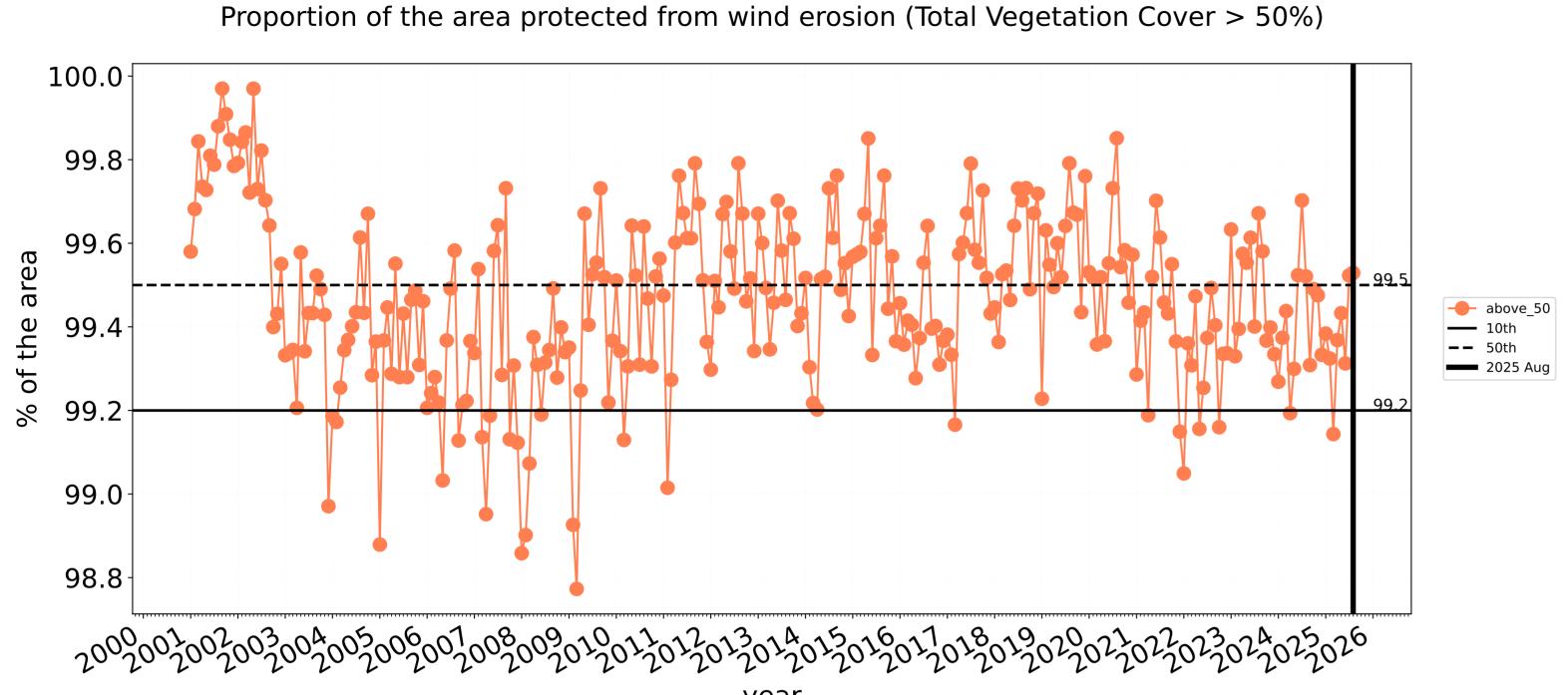


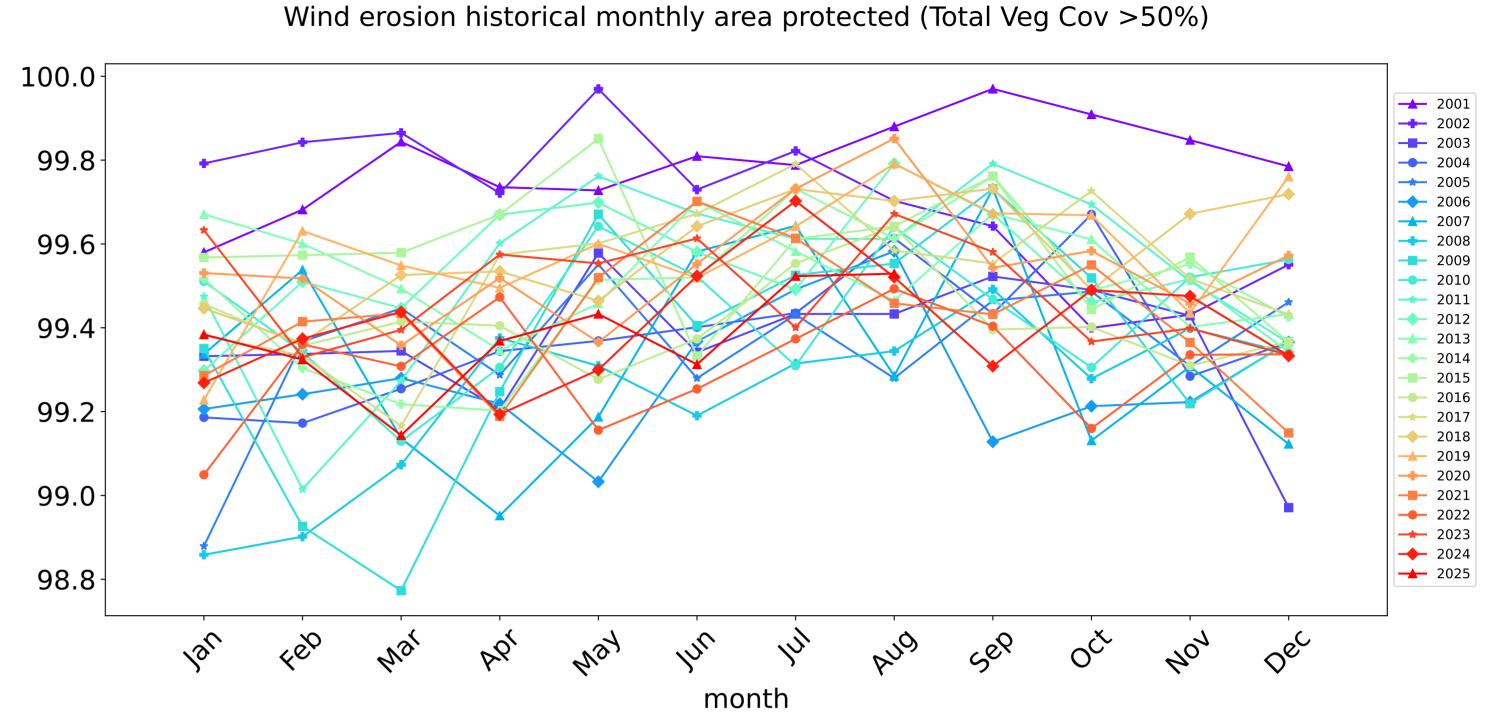


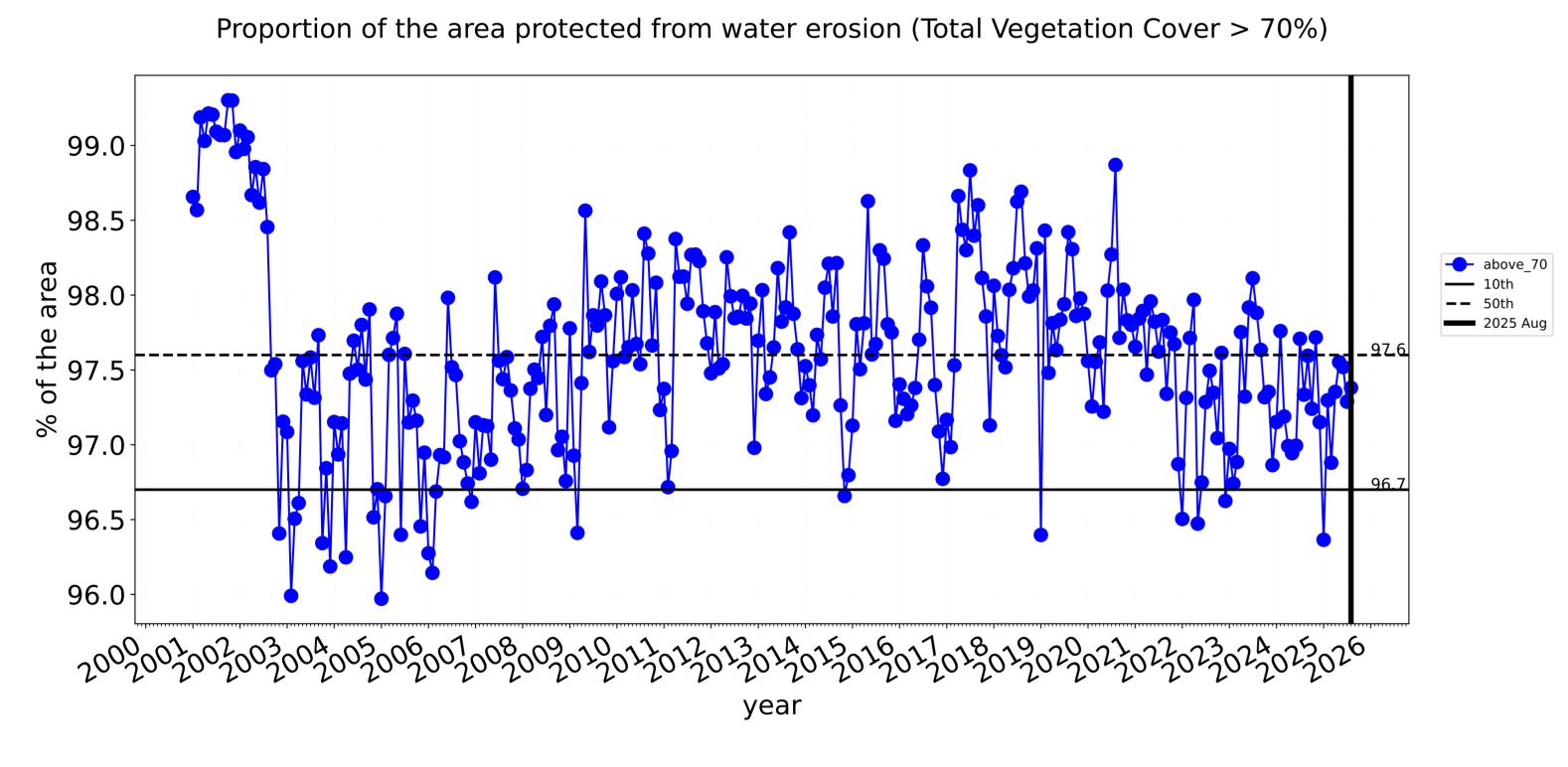


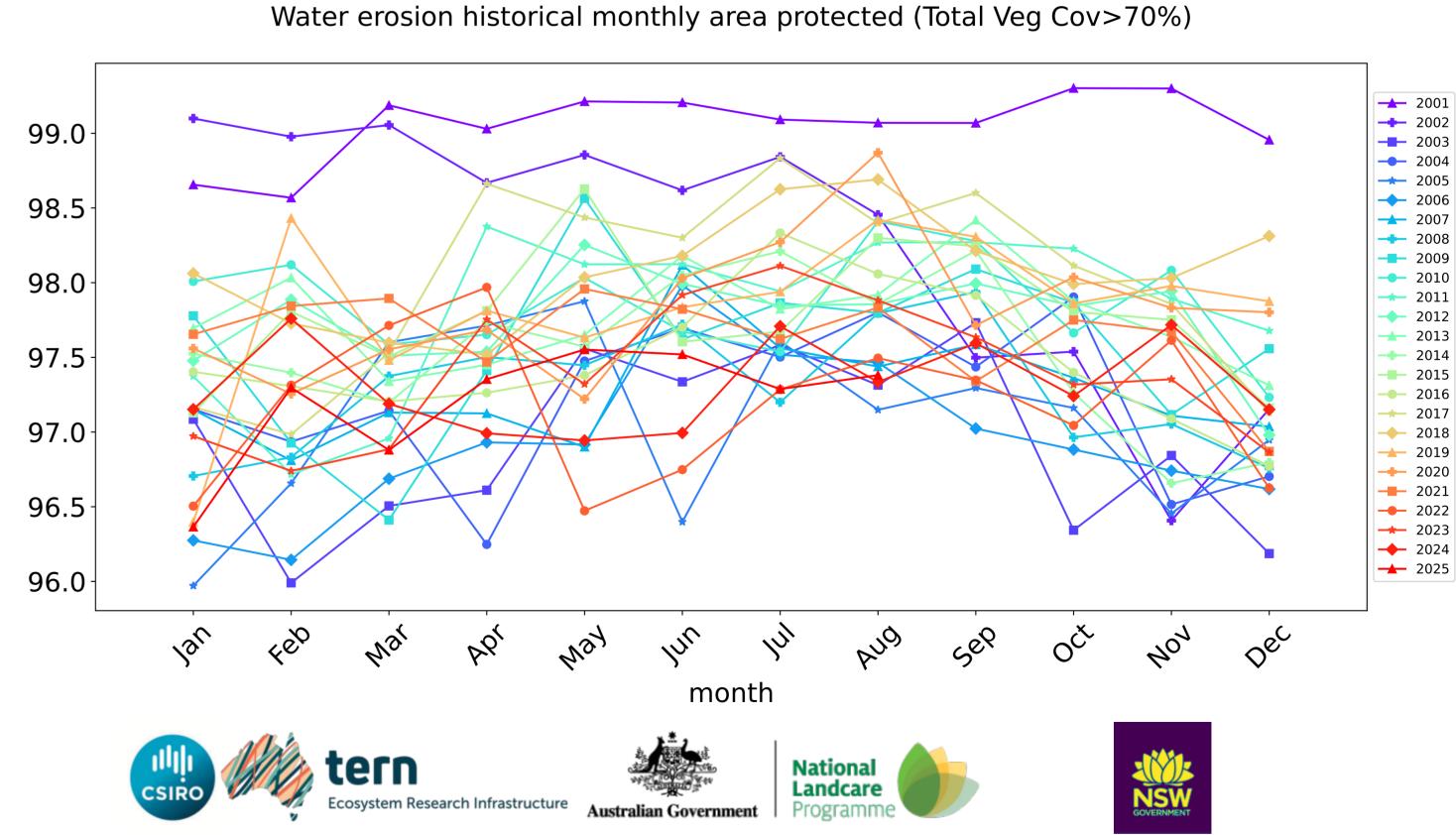












Agriculture

Land use and forest cover

Derived from

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

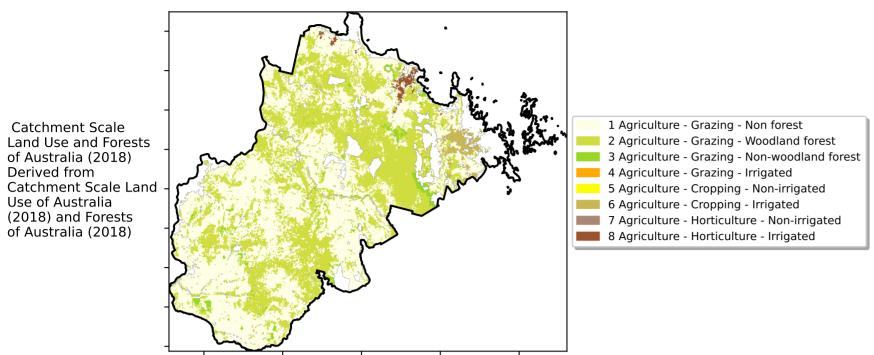
pixel. The mean

using baseline from 2001 to 2019.

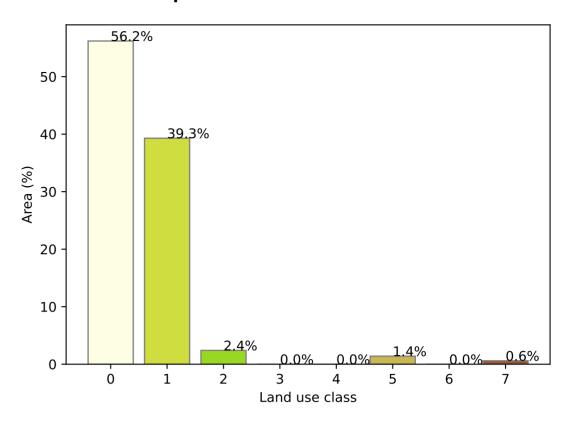
is only for the month of the map

Use of Australia

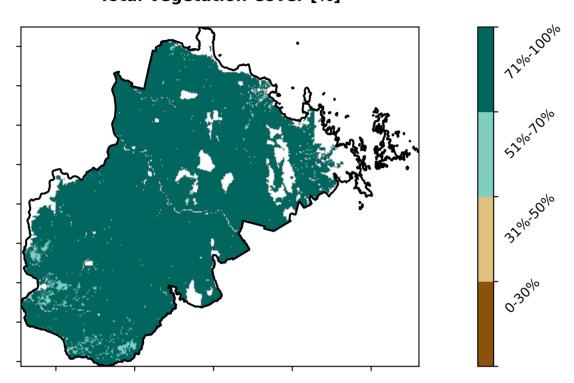
(2018) and Forests of Australia (2018)



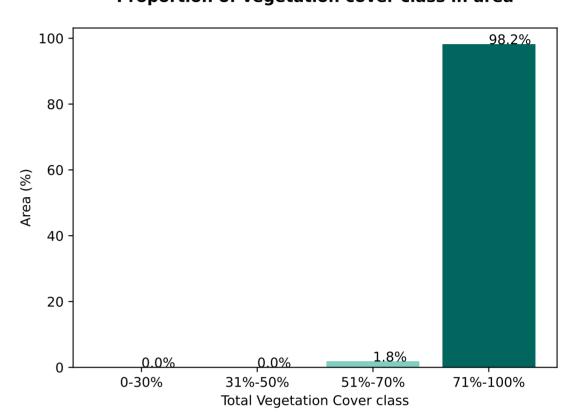
Proportion of each land class in area



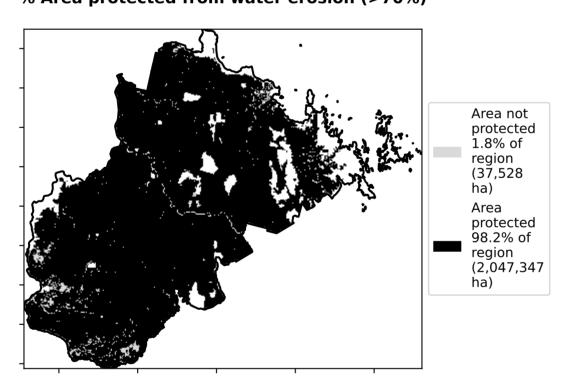
Total Vegetation Cover [%]



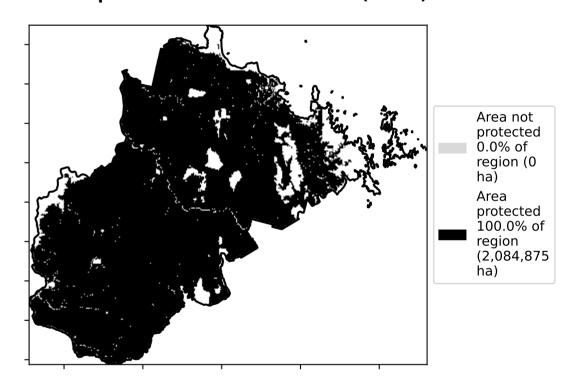
Proportion of vegetation cover class in area



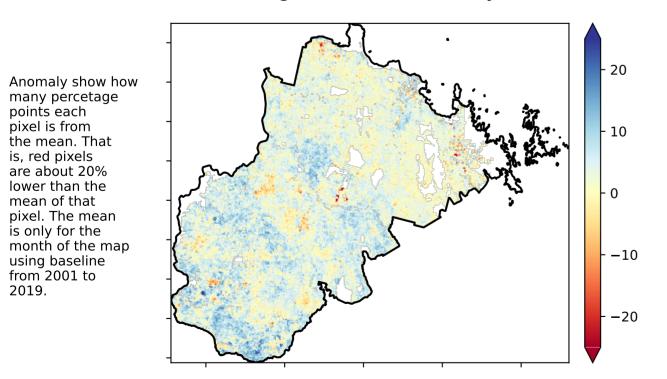
% Area protected from water erosion (>70%)



% Area protected from wind erosion (>50%)

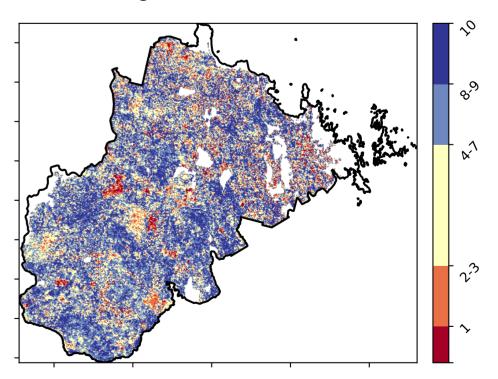


Total Vegetation Cover Anomaly [%]



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 [%]







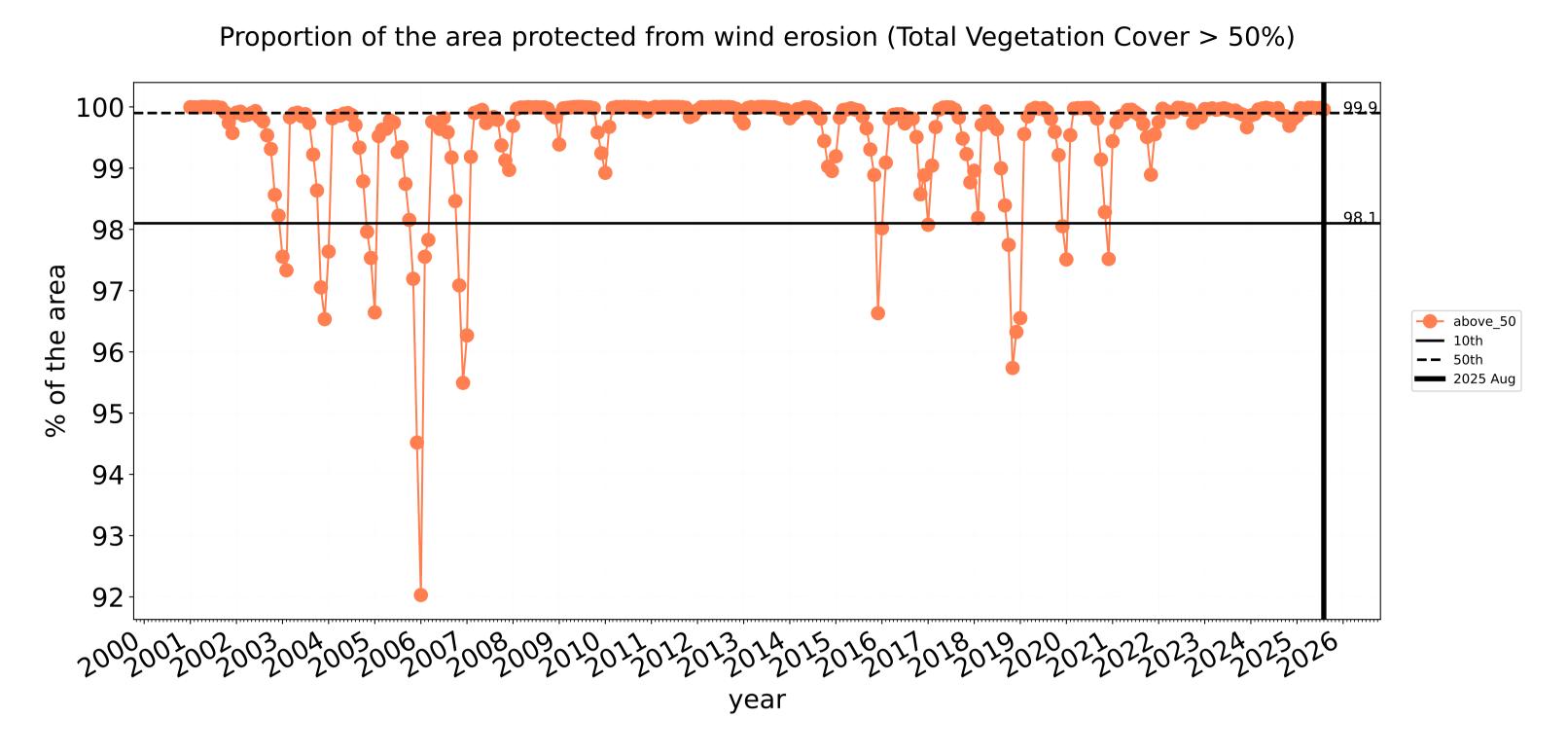


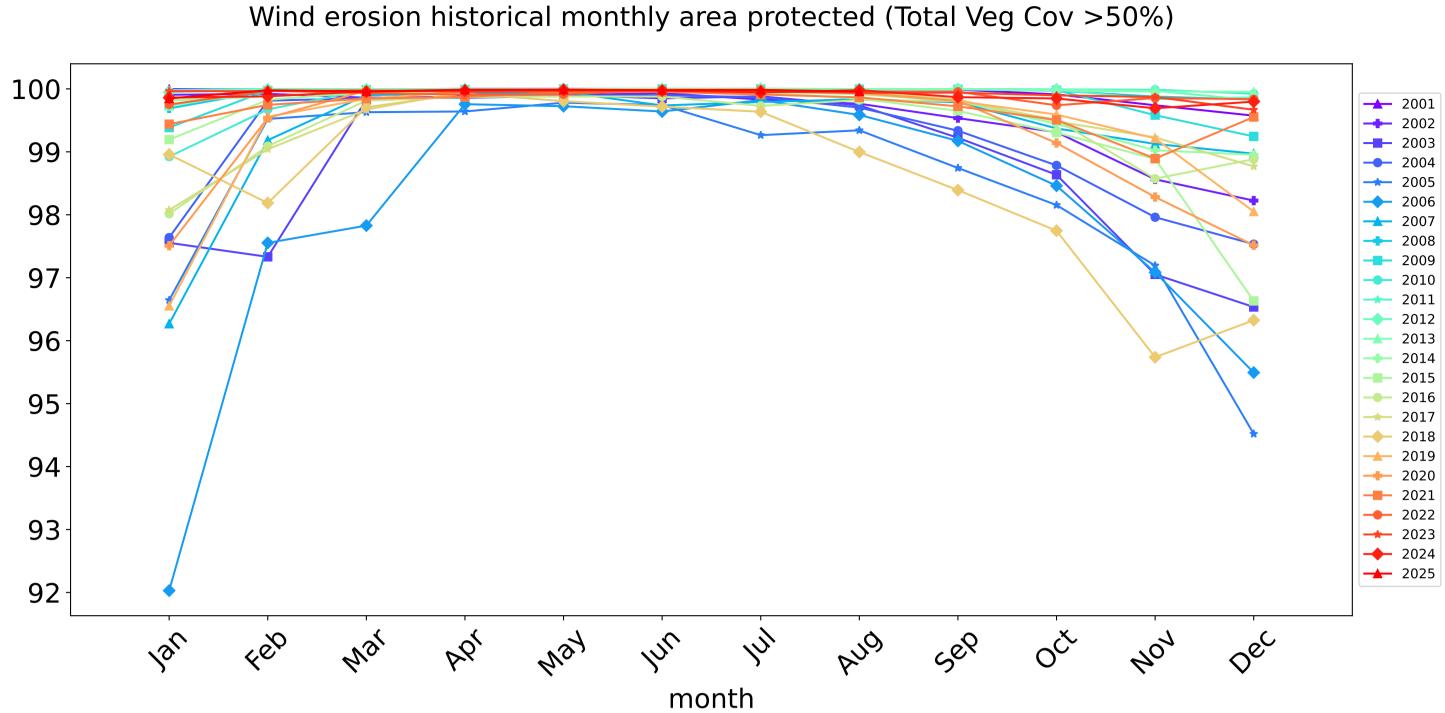


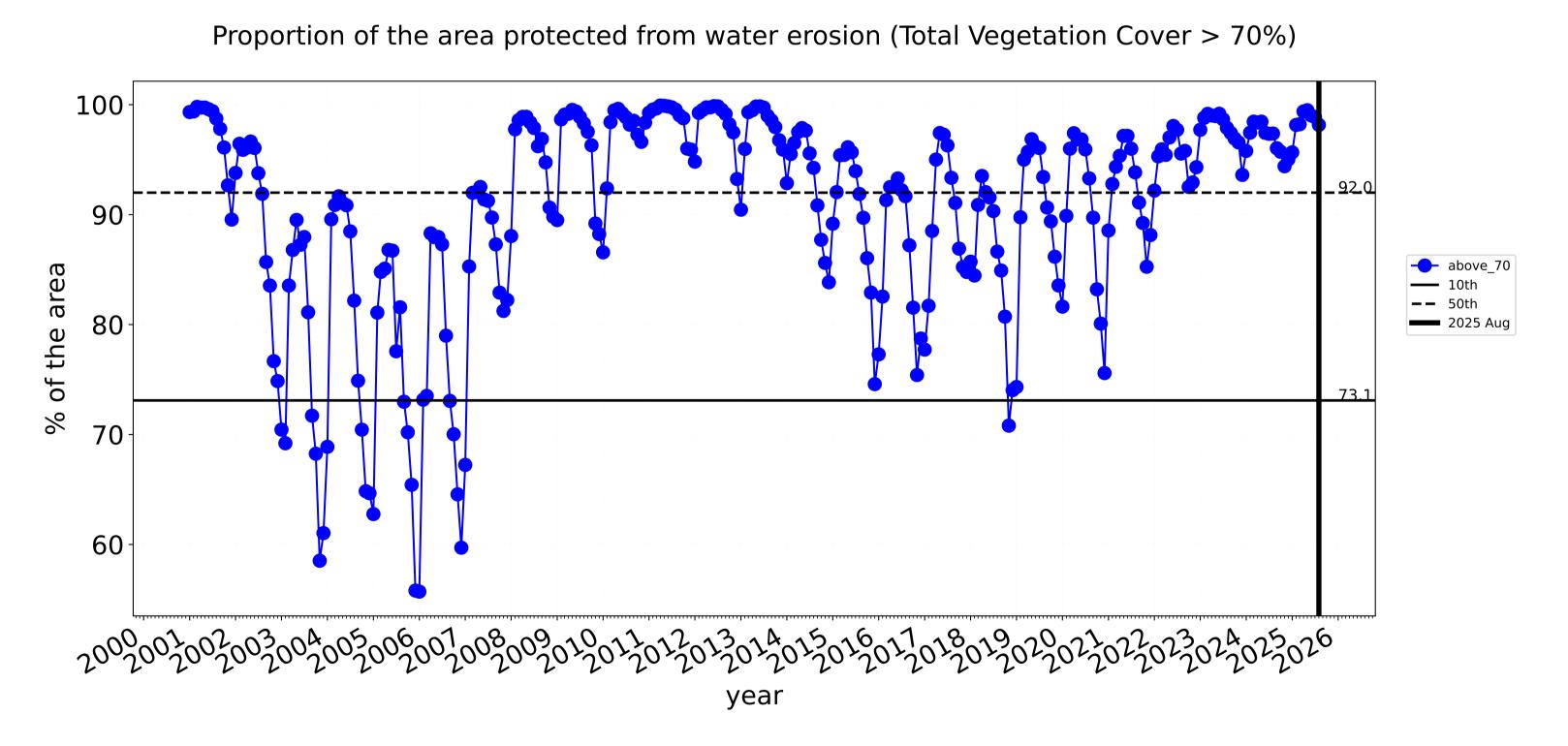


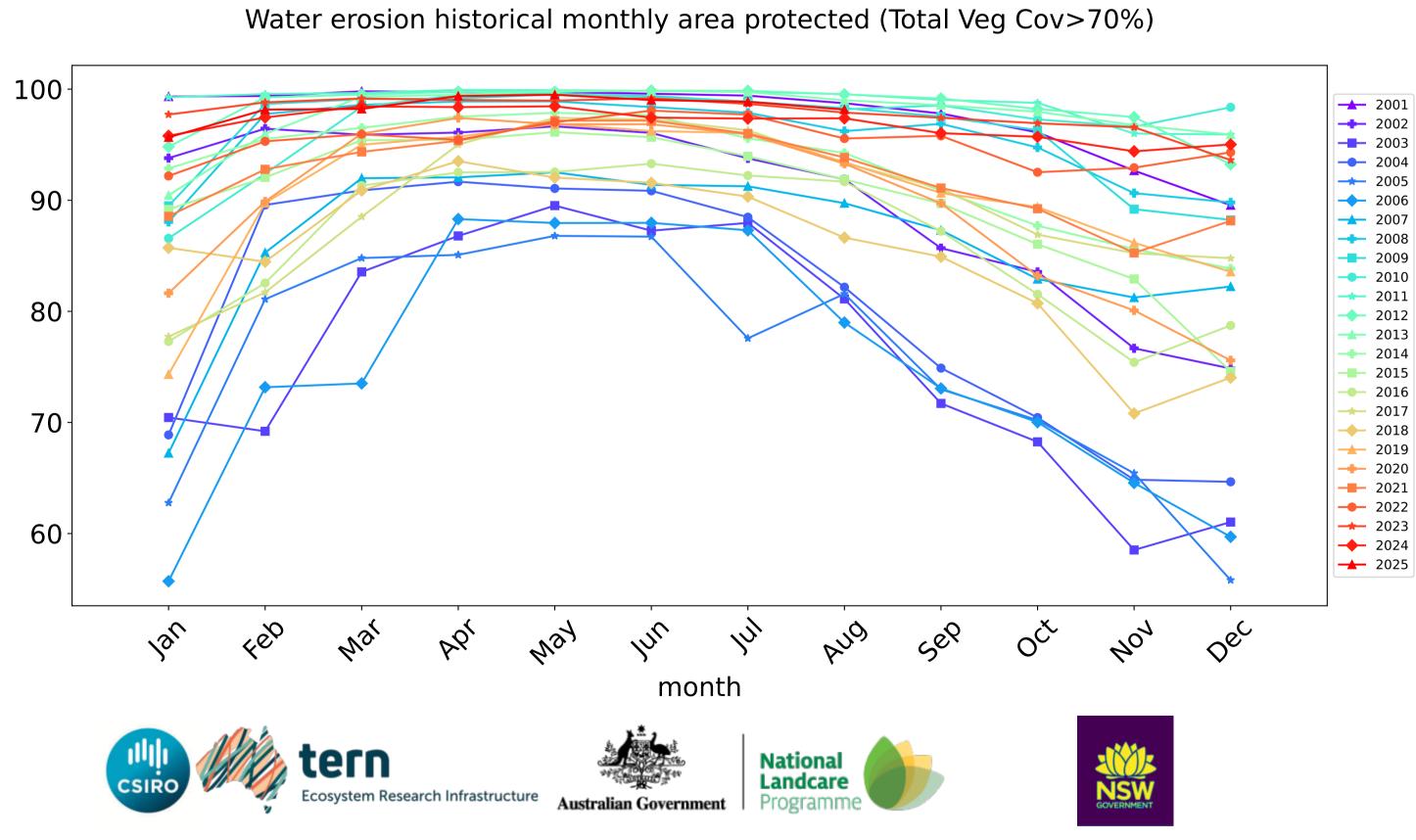


Agriculture timeseries



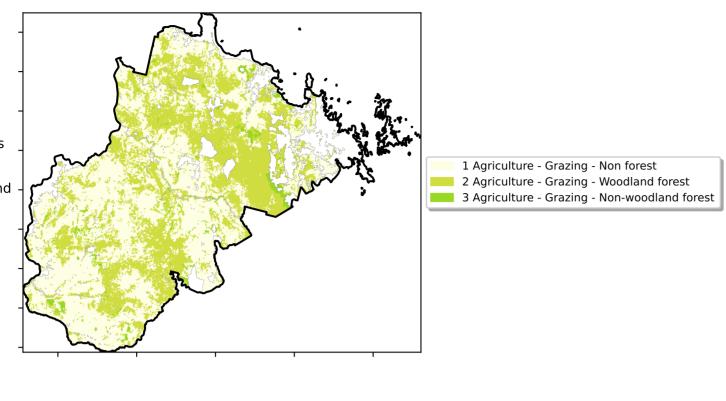


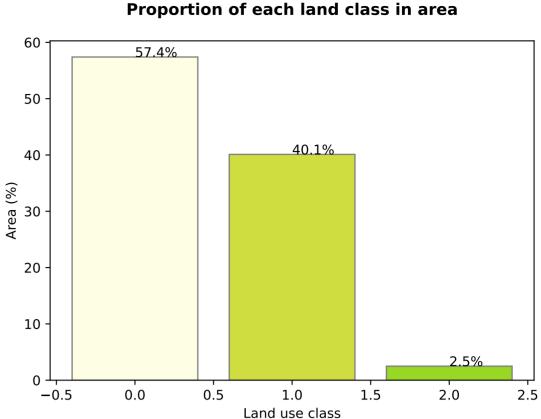


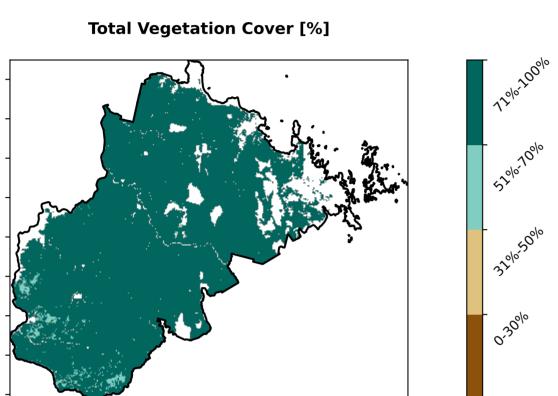


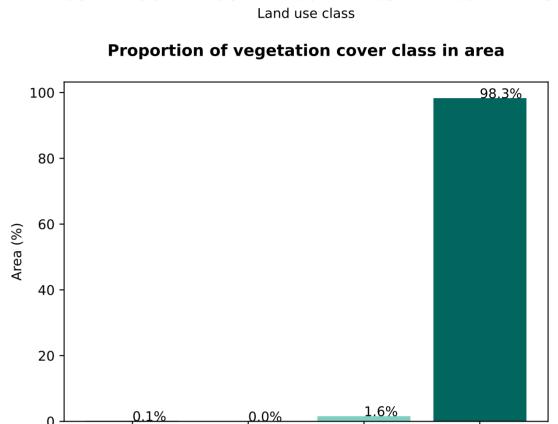
Grazing

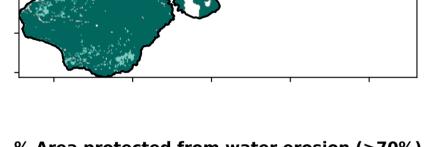
Land use and forest cover Catchment Scale Land Use and Forests of Australia (2018) Derived from 1 Agriculture - Grazing - Non forest 2 Agriculture - Grazing - Woodland forest Catchment Scale Land 3 Agriculture - Grazing - Non-woodland forest Use of Australia (2018) and Forests of Australia (2018)









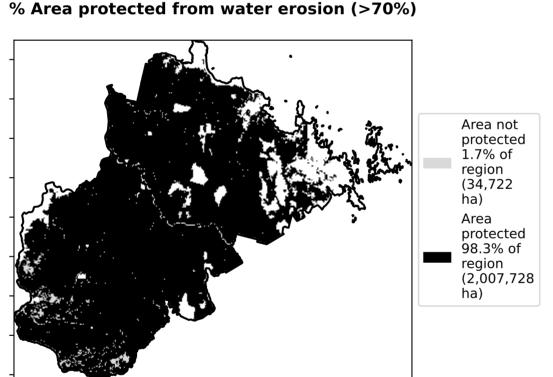


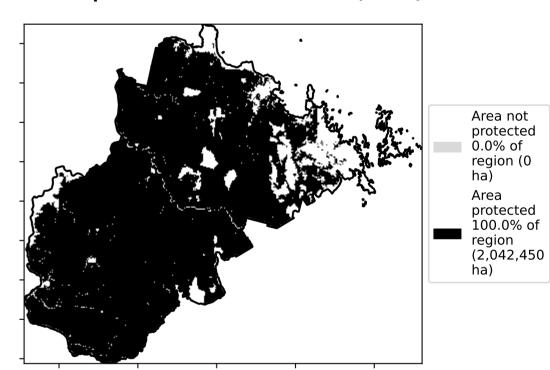
% Area protected from wind erosion (>50%)

Total Vegetation Cover class

31%-50%

0-30%





51%-70%

71%-100%

Total Vegetation Cover Anomaly [%]

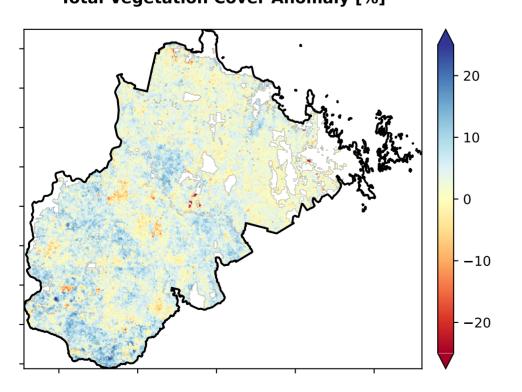
Anomaly show how many percetage points each pixel is from the mean. That

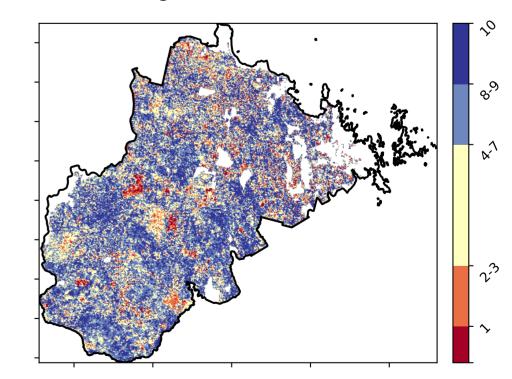
is only for the month of the map

using baseline from 2001 to 2019.

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

Total Vegetation Cover Decile [%]





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.

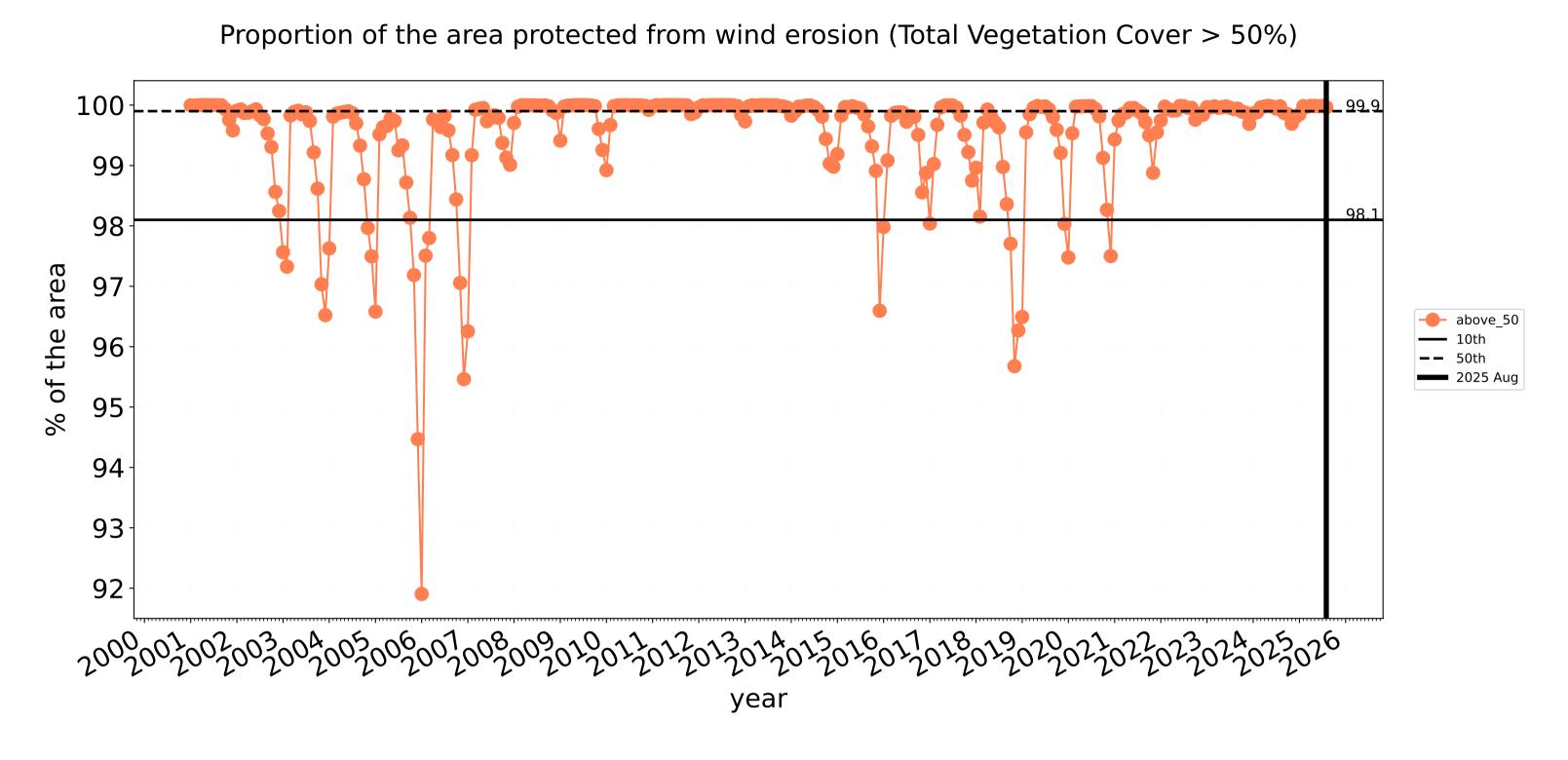


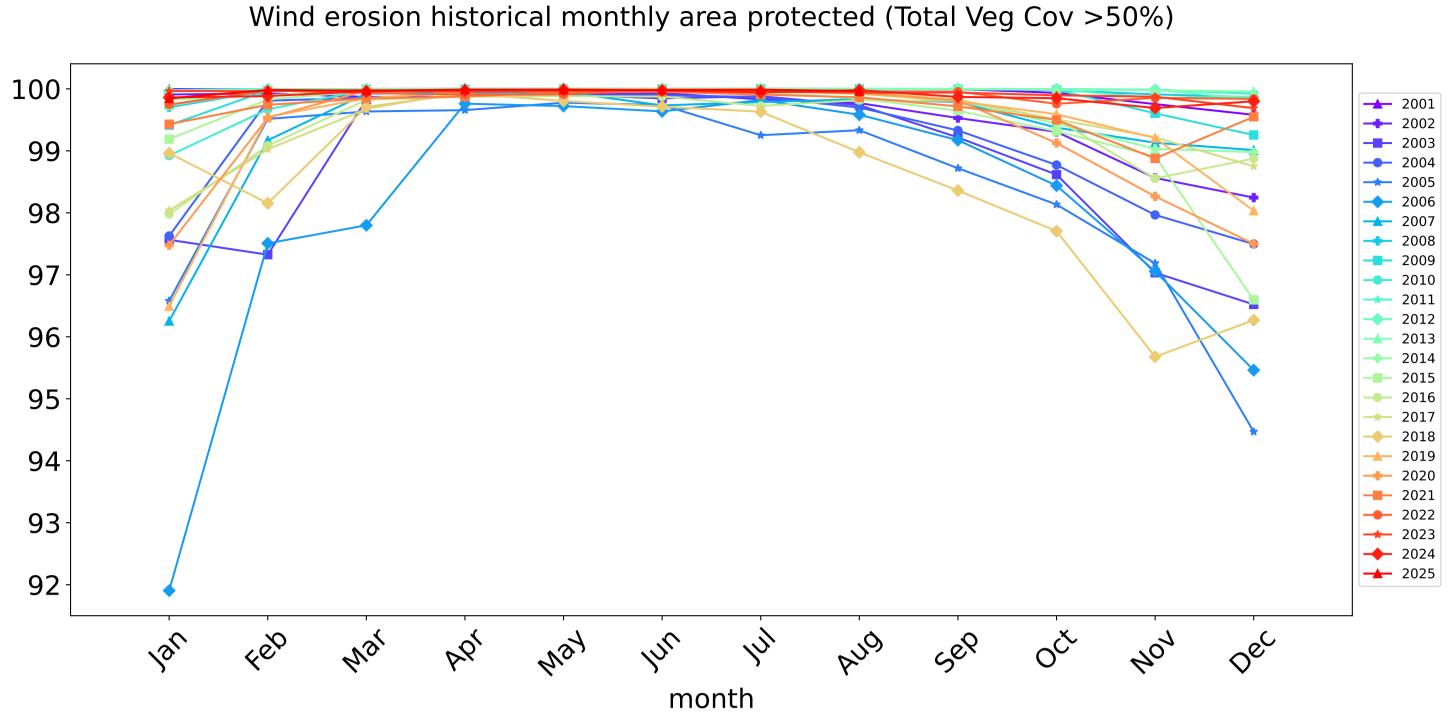


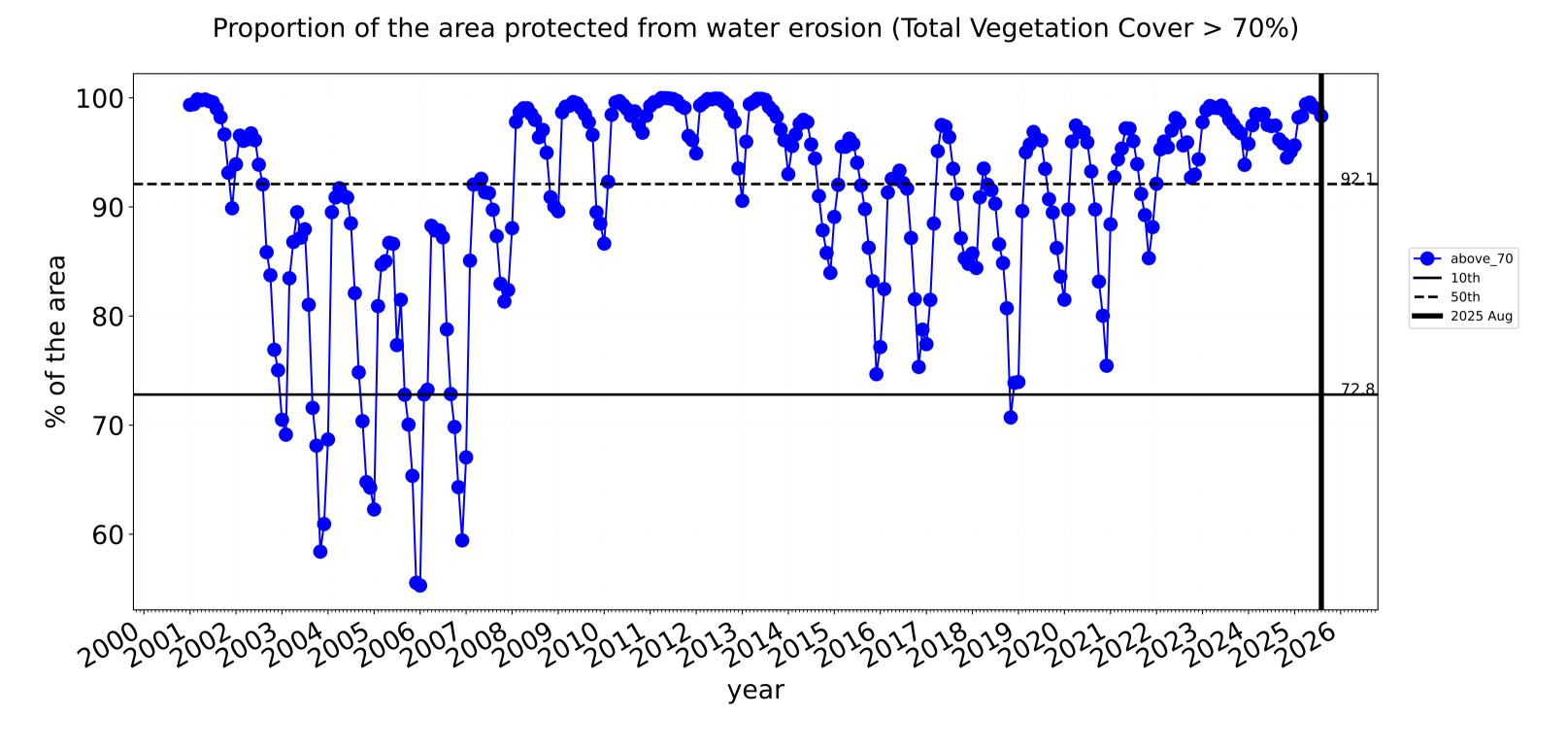


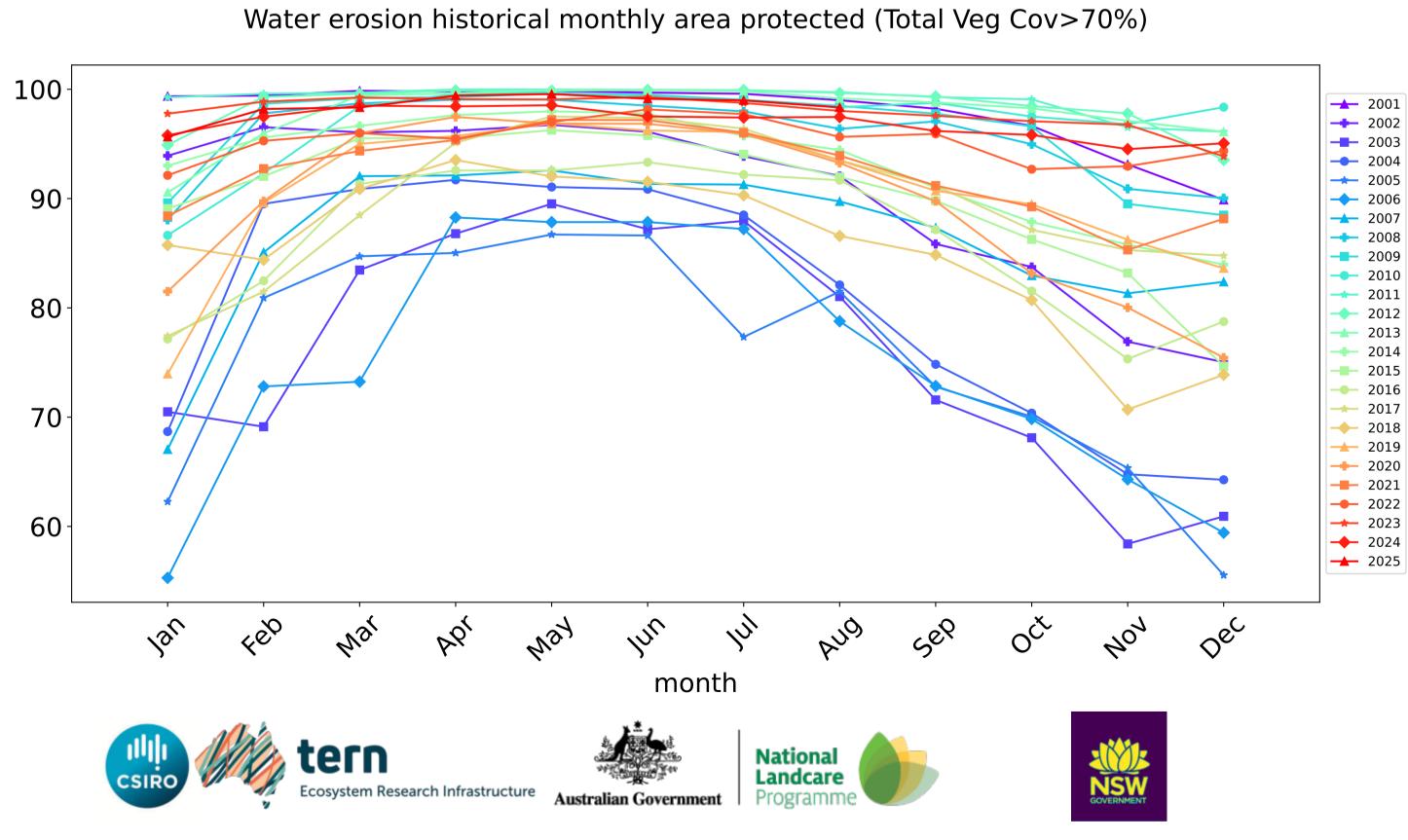


Grazing timeseries







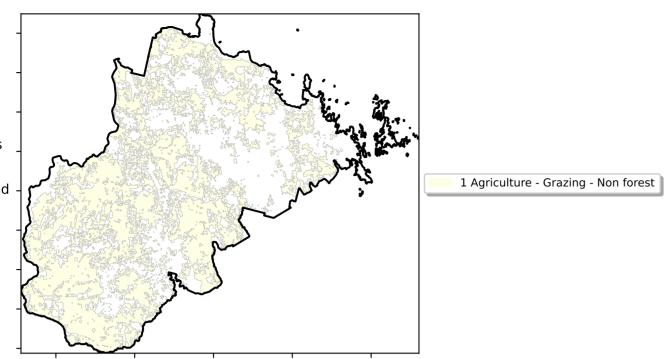


Grazing non forest

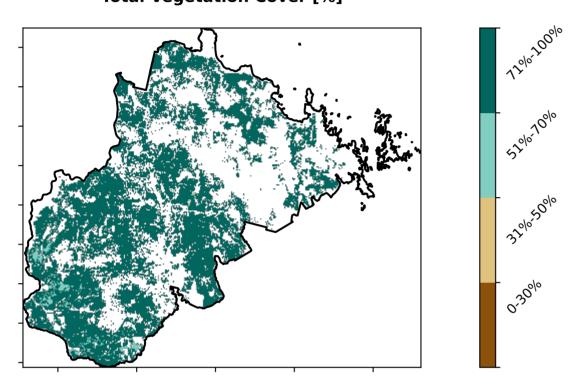
Land use and forest cover



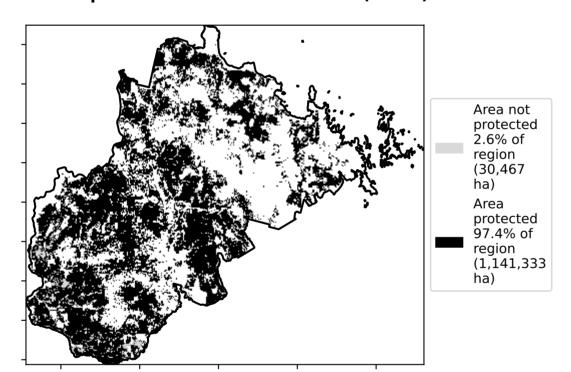
lower than the mean of that pixel. The mean is only for the month of the map using baseline from 2001 to 2019.



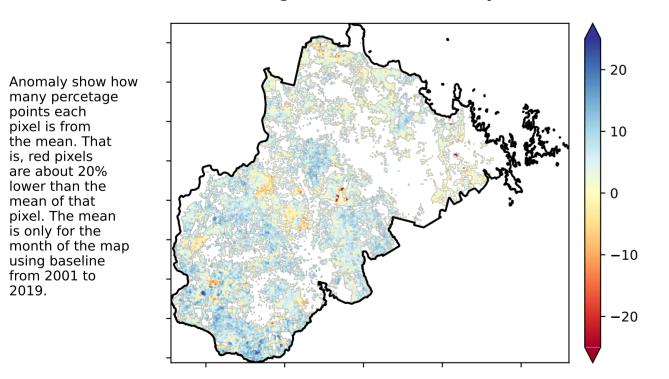
Total Vegetation Cover [%]



% Area protected from water erosion (>70%)

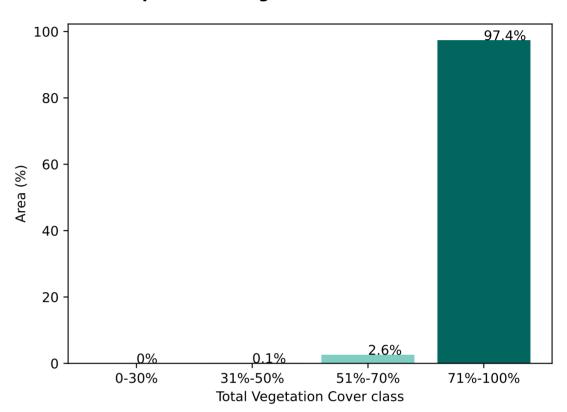


Total Vegetation Cover Anomaly [%]

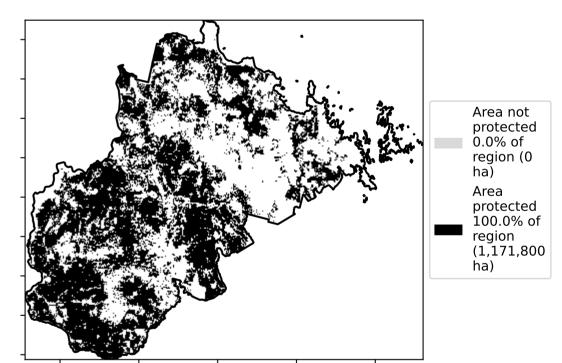


Deciles show where the pixel value lies in the record, from highest to lowest, for that month. That is, red pixels are in the lowest 10% of records for that month of the man using baseline. the map using baseline from 2001 to 2019.

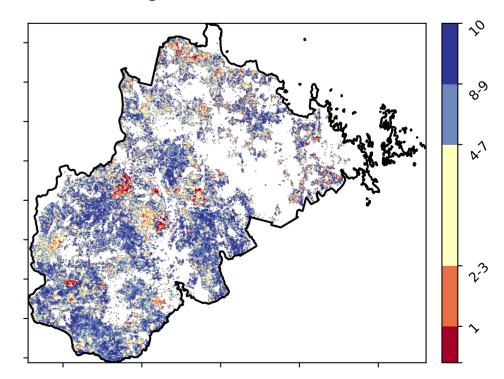
Proportion of vegetation cover class in area



% Area protected from wind erosion (>50%)



Total Vegetation Cover Decile [%]



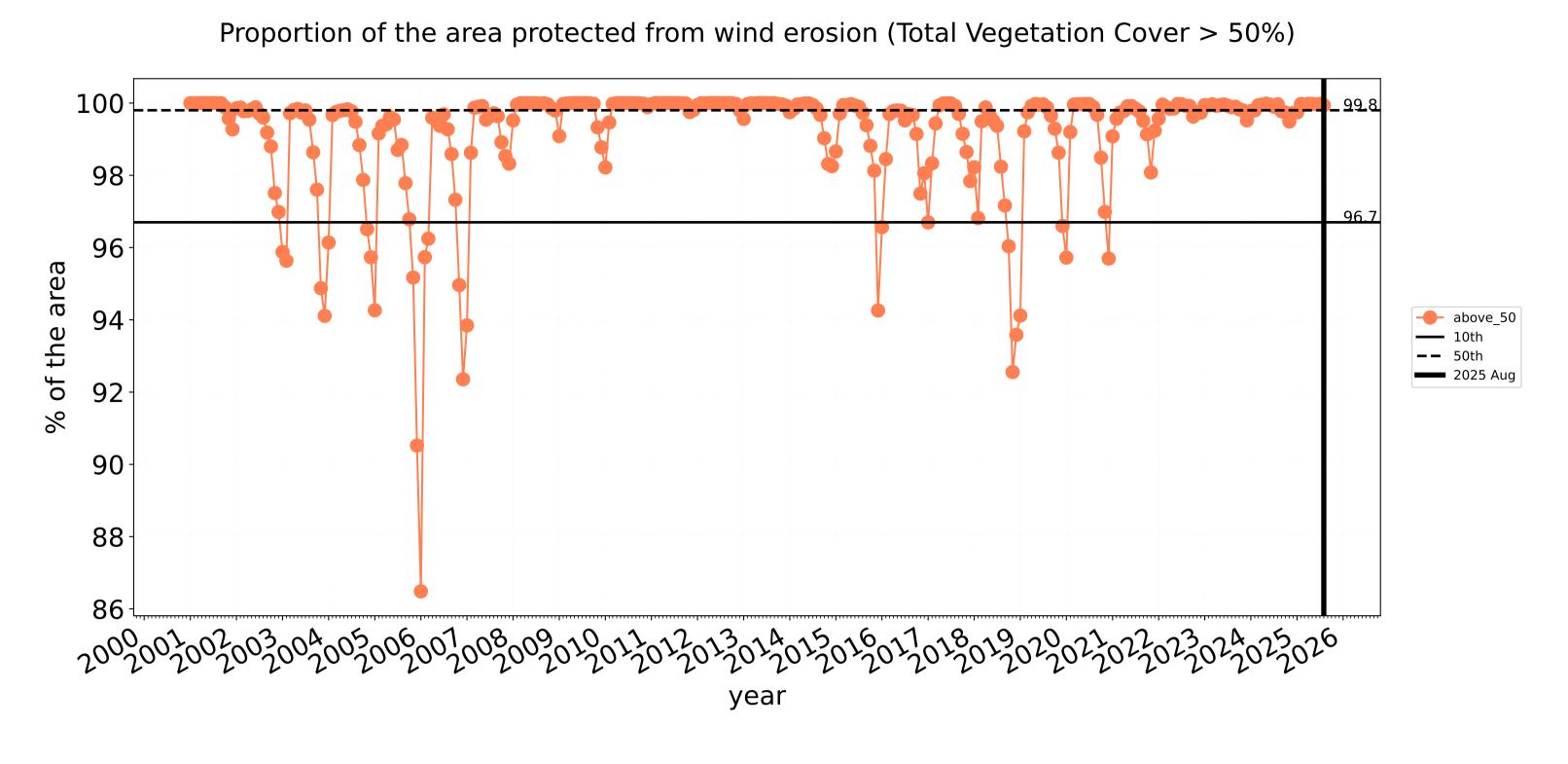


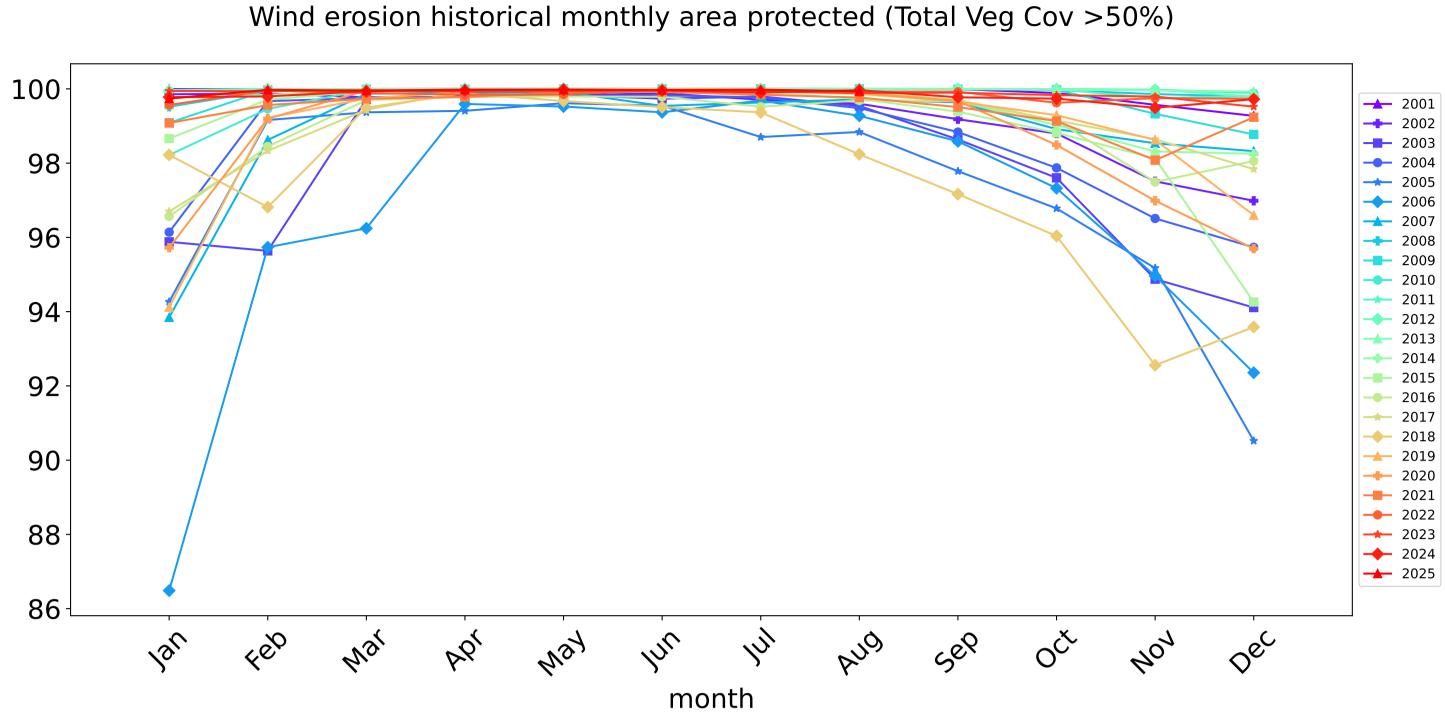


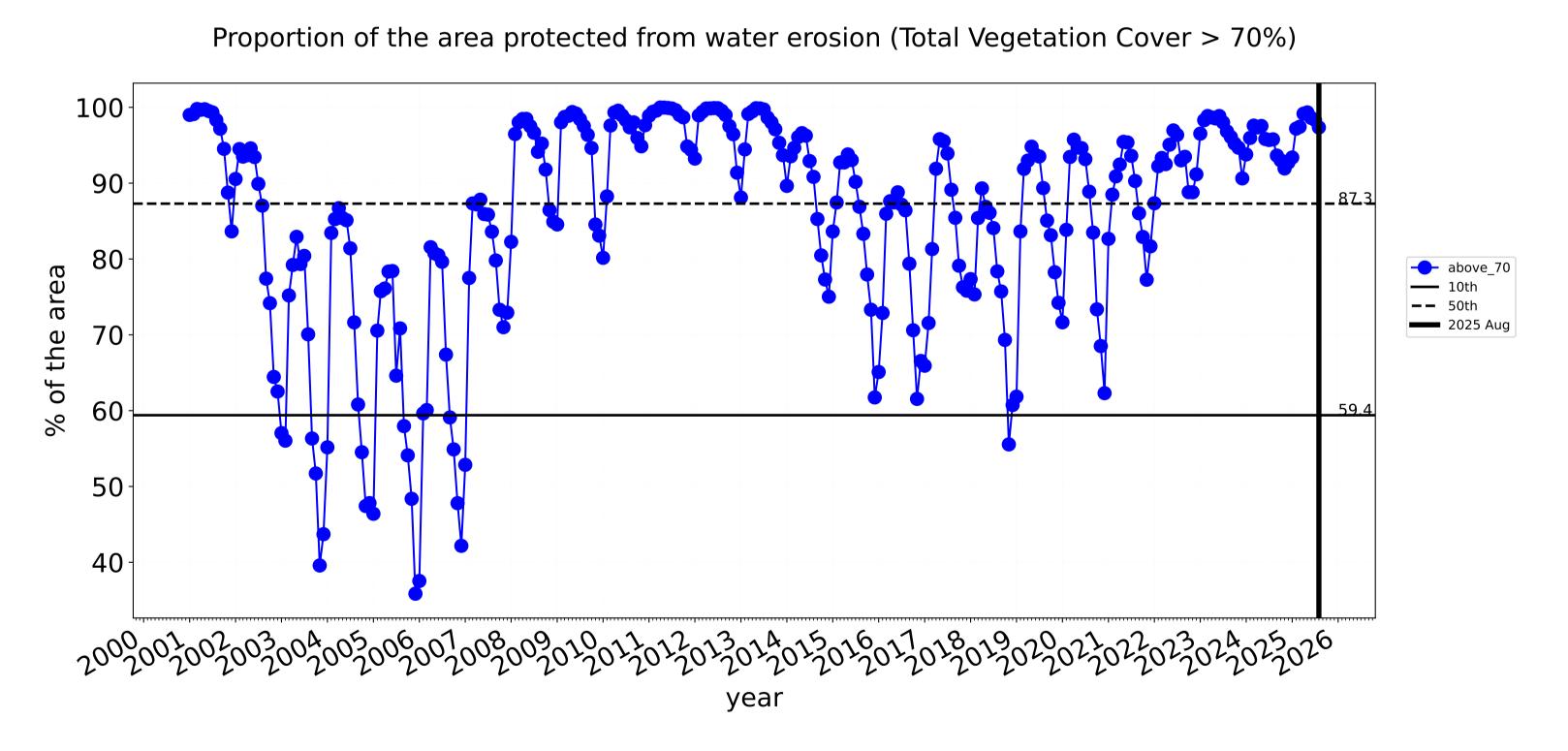


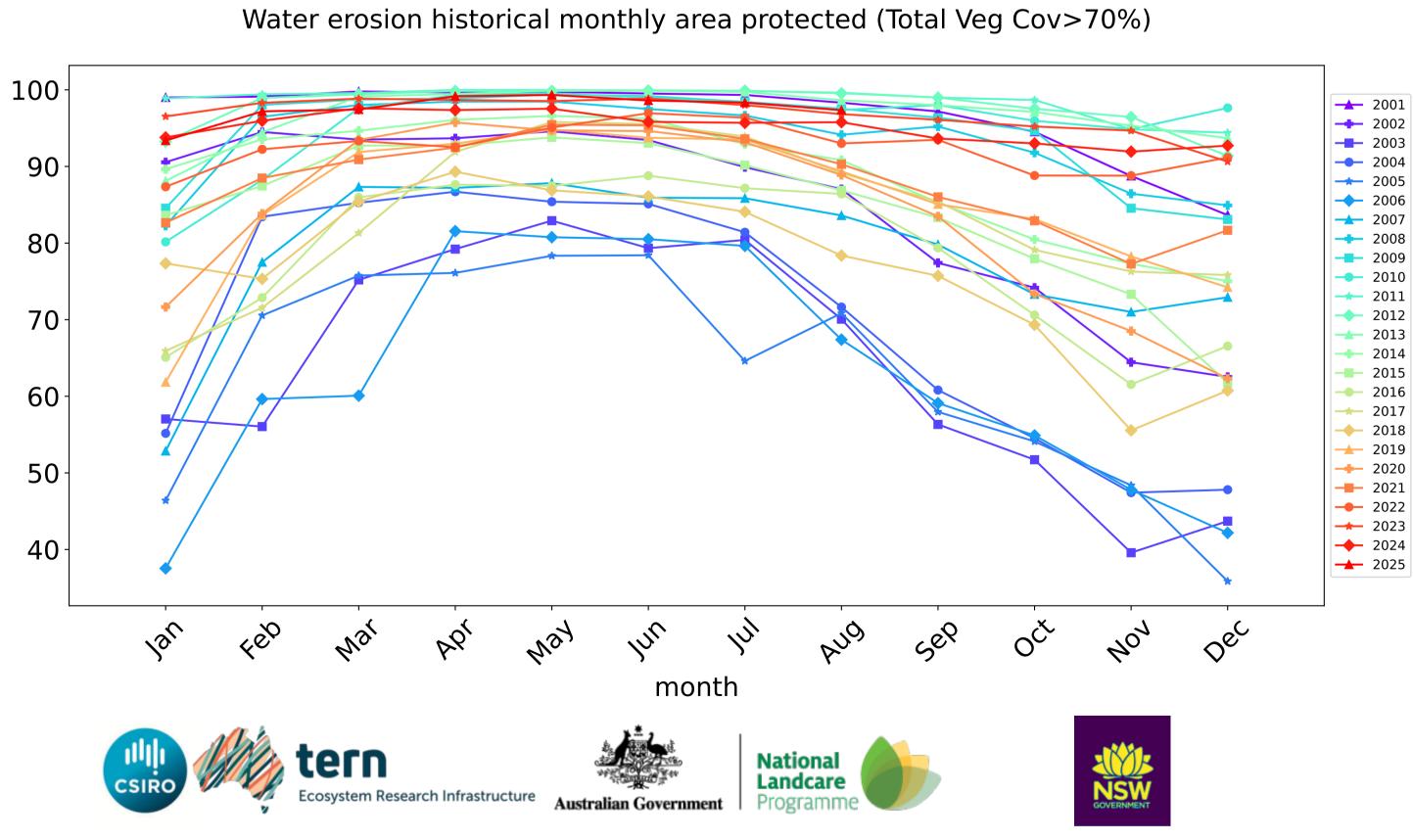


Grazing non forest timeseries









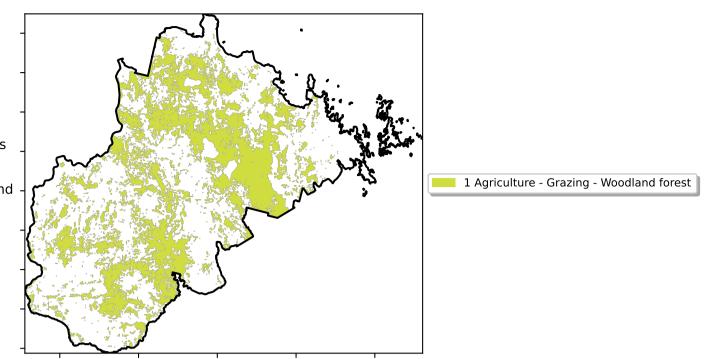
Grazing Woodland forest

Land use and forest cover

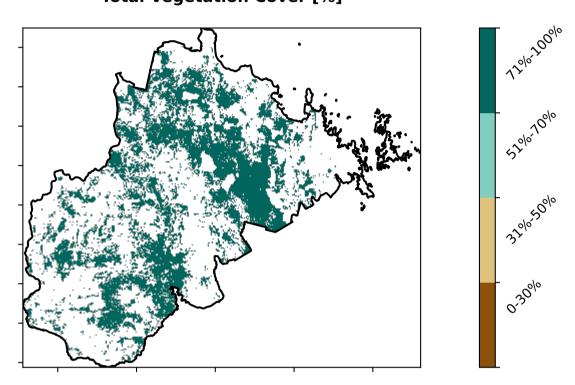


lower than the mean of that

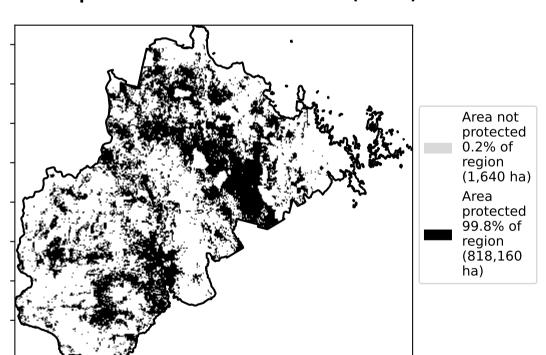
using baseline from 2001 to 2019.



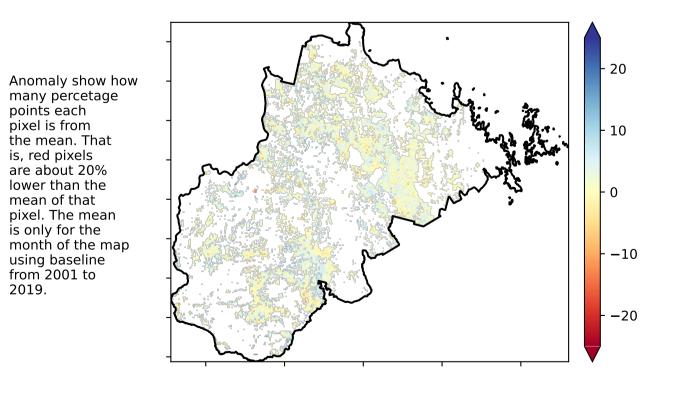
Total Vegetation Cover [%]



% Area protected from water erosion (>70%)

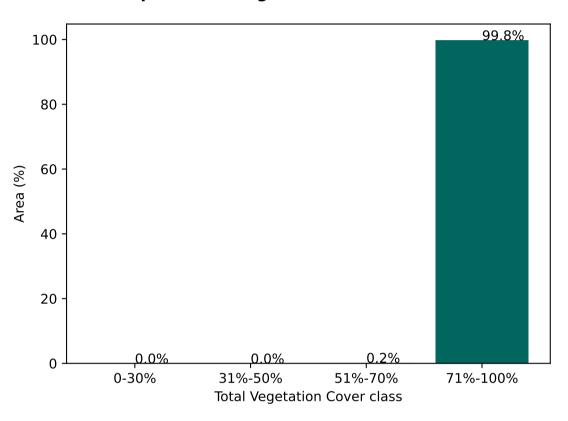


Total Vegetation Cover Anomaly [%]

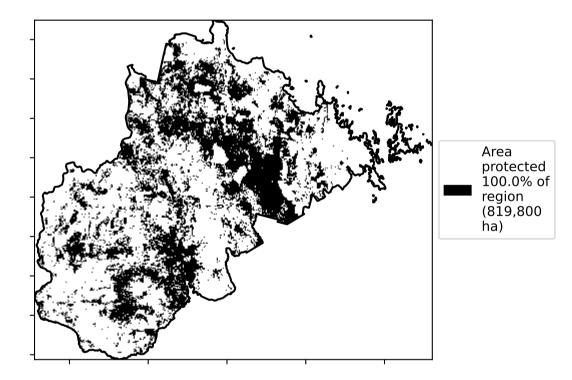


Deciles show where the pixel value lies in the record, from highest to lowest, for that month. That is, red pixels are in the lowest 10% of records for that month of the man using baseline. the map using baseline from 2001 to 2019.

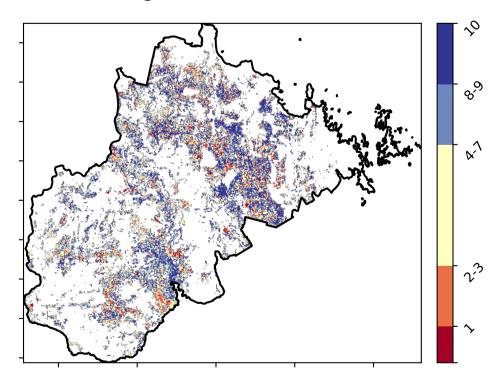
Proportion of vegetation cover class in area



% Area protected from wind erosion (>50%)



Total Vegetation Cover Decile [%]



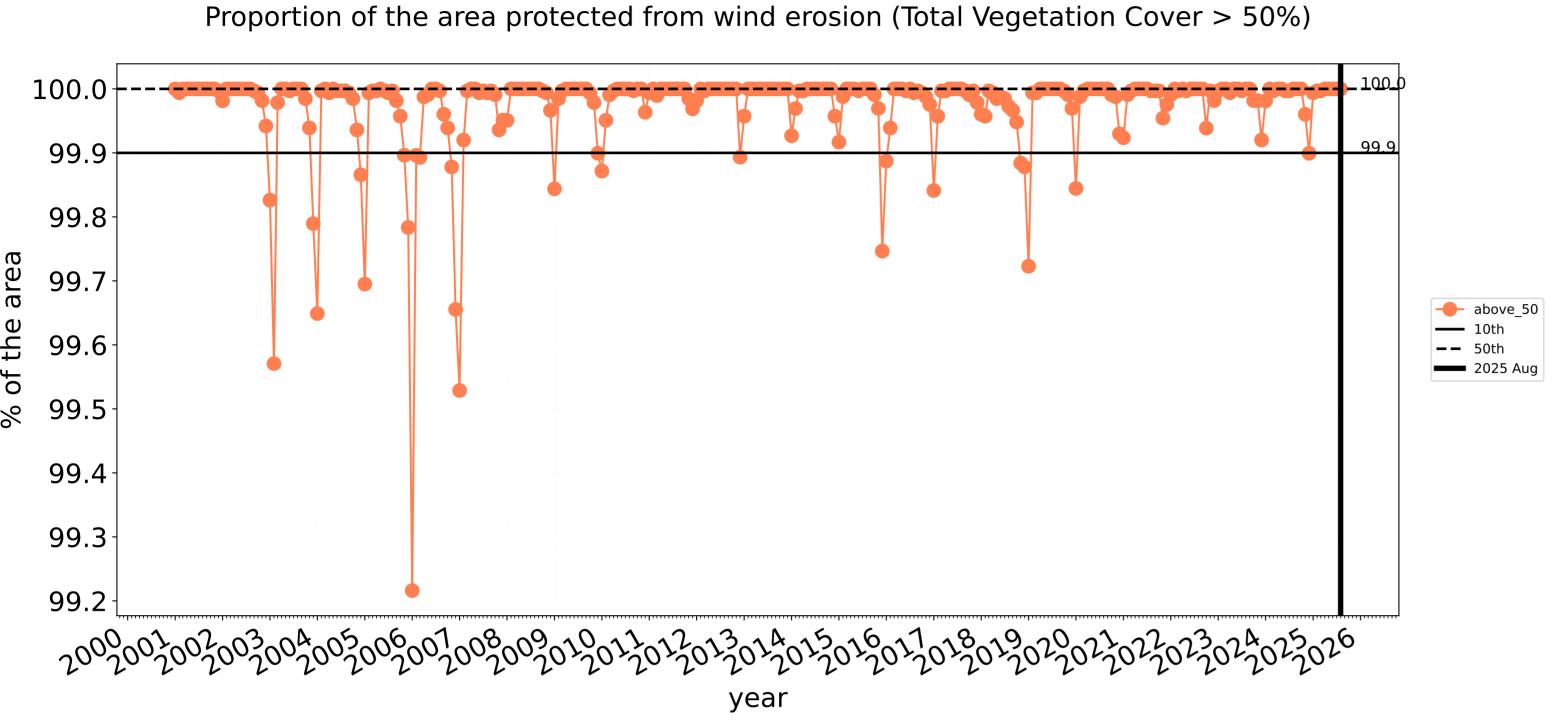


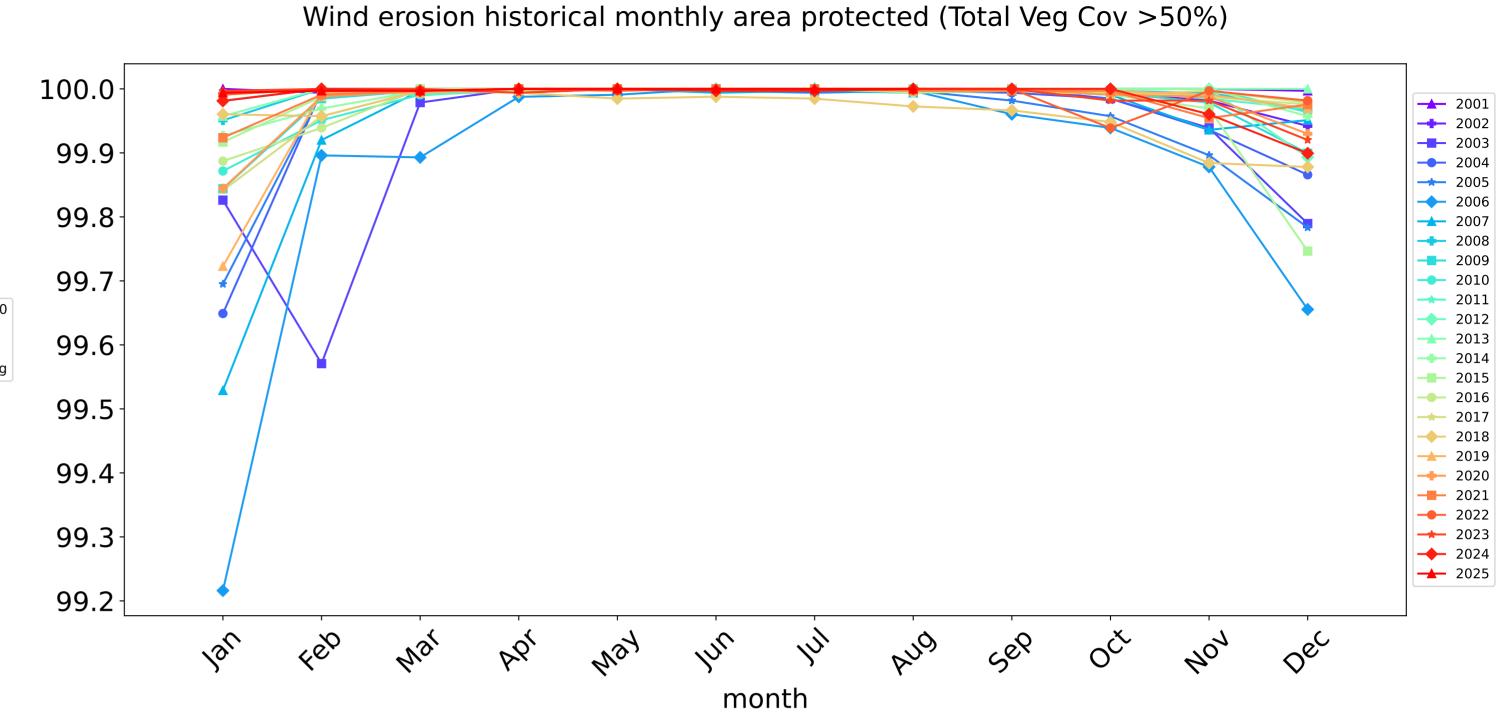


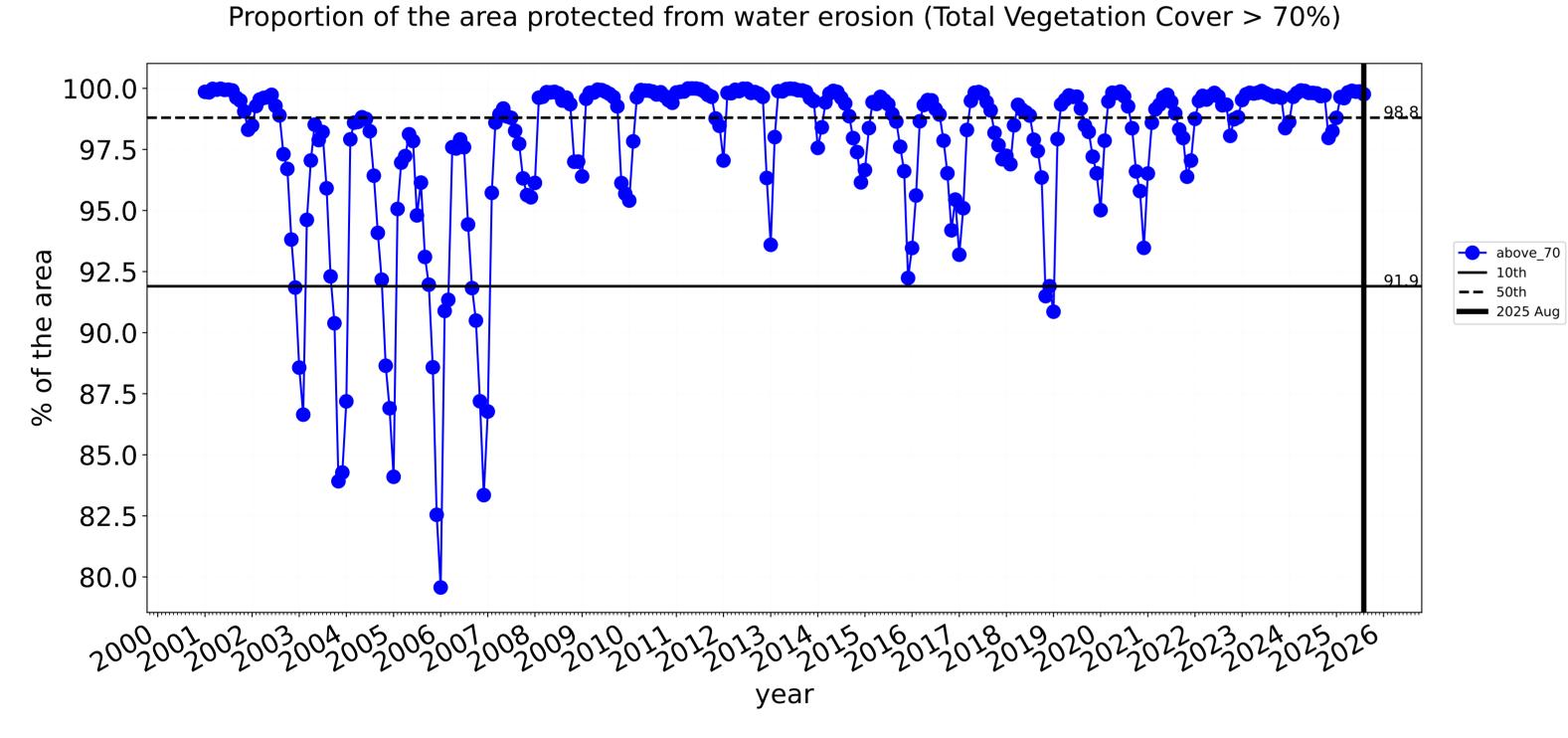


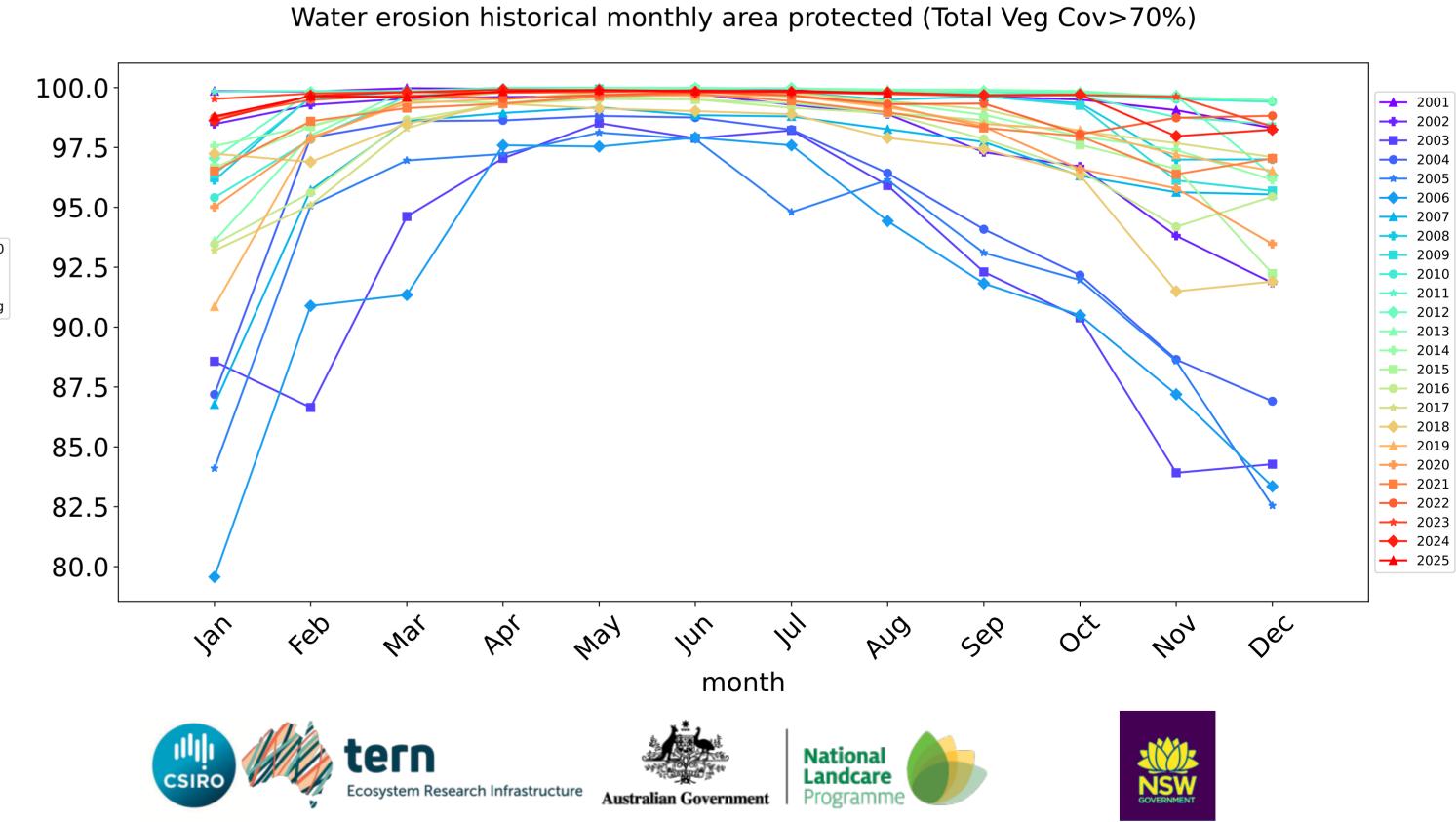


Grazing Woodland forest timeseries







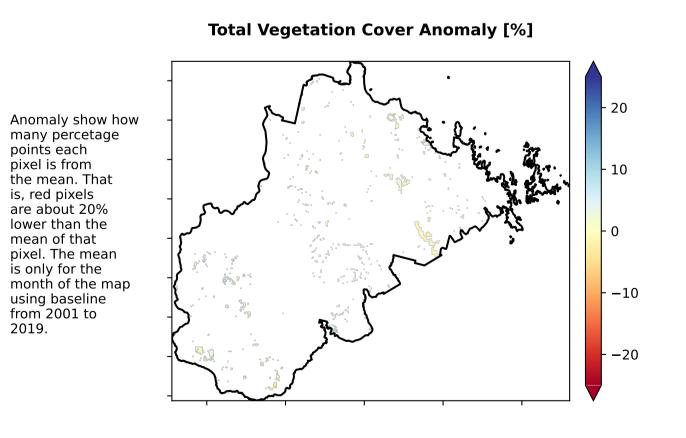


Grazing - Forest (non woodland)

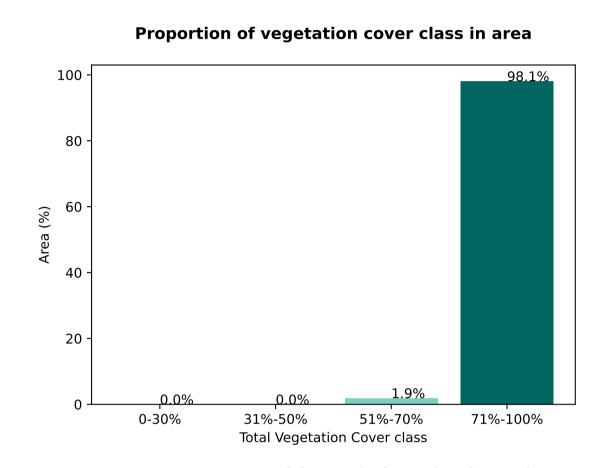
Catchment Scale Land Use and Forests of Australia (2018) Derived from Catchment Scale Land Use of Australia (2018) 3 and Forests of Australia (2018) 4 and Forests of Australia (2018)

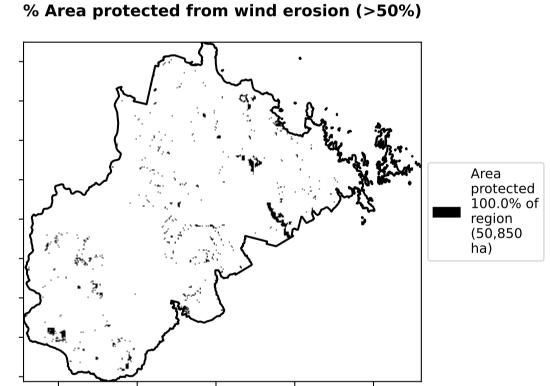
Total Vegetation Cover [%]

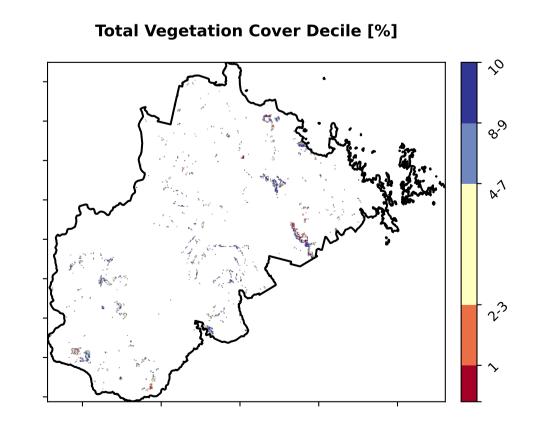
Area not protected 1.9% of region (966 ha) Area protected 98.1% of region (49,884 ha)



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





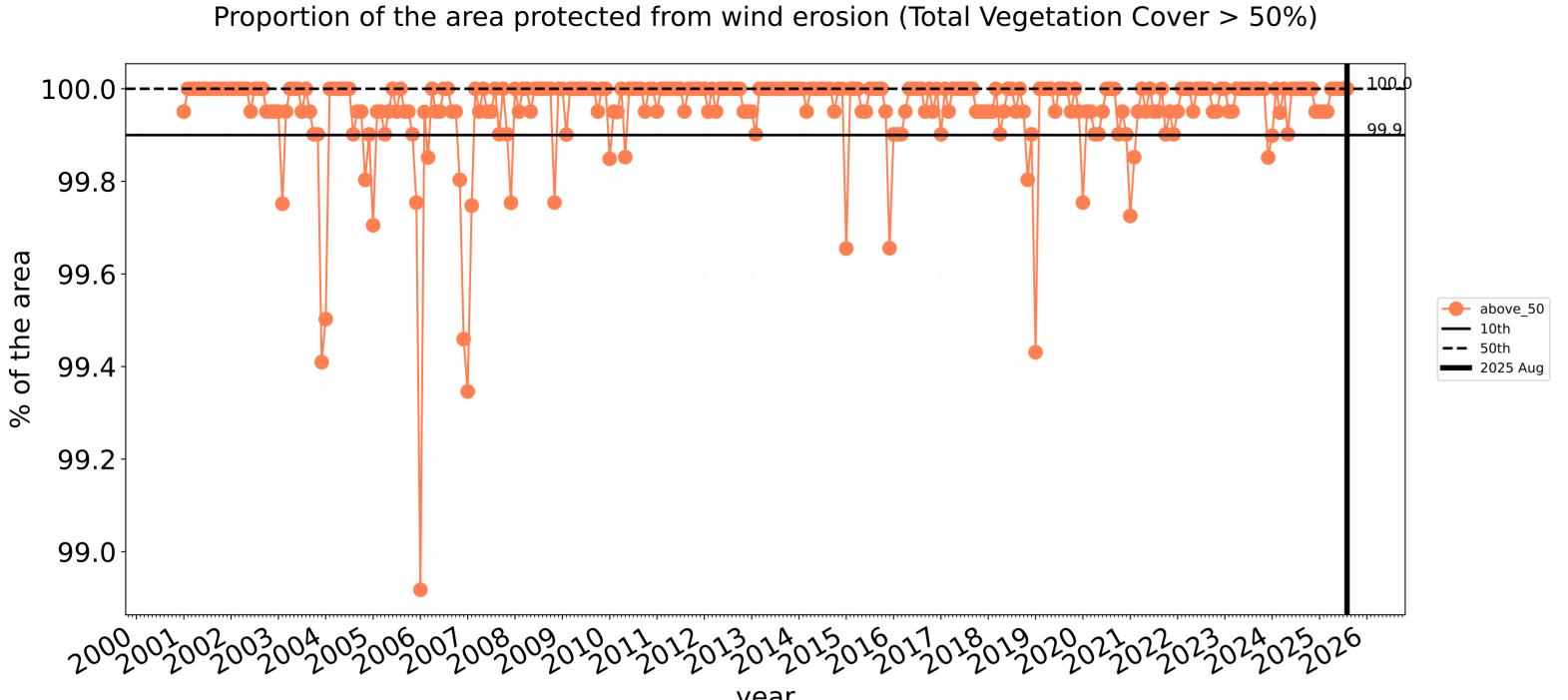


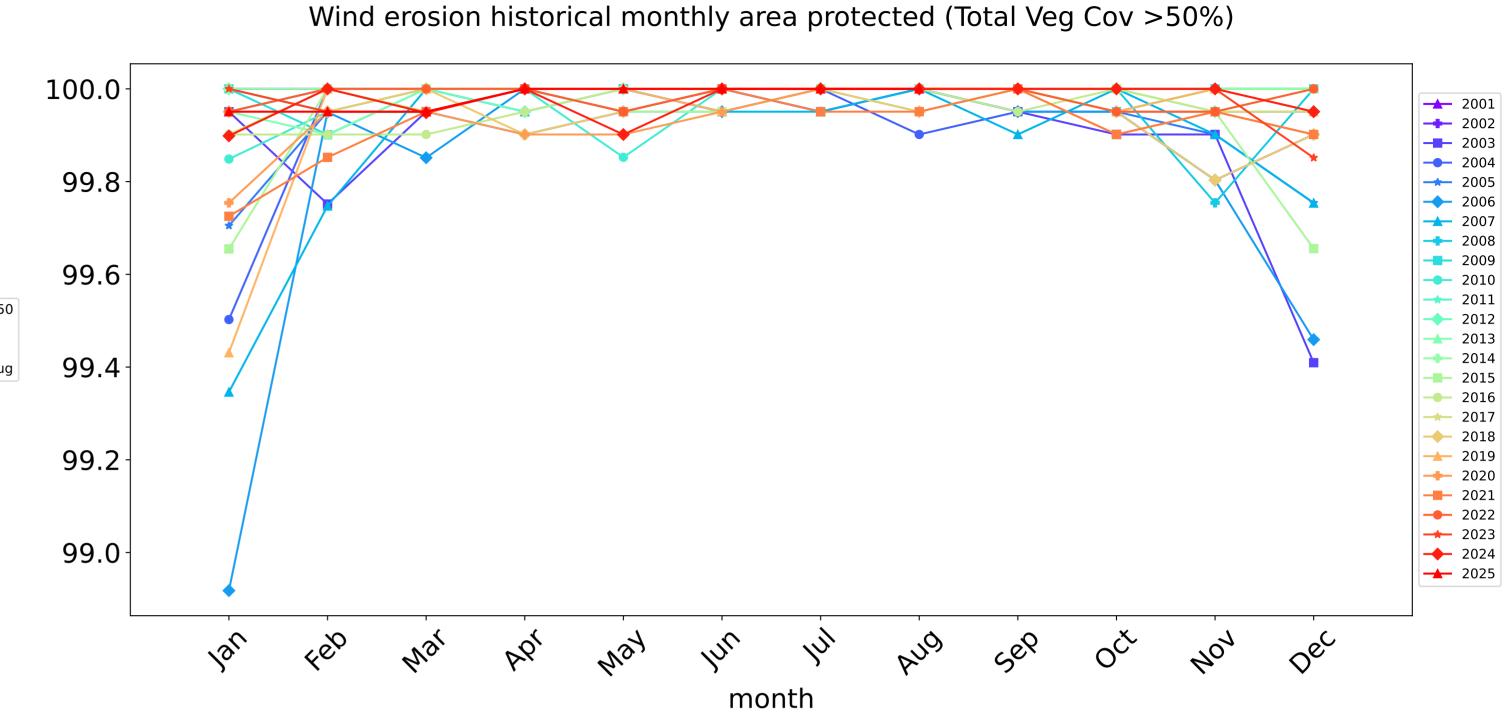


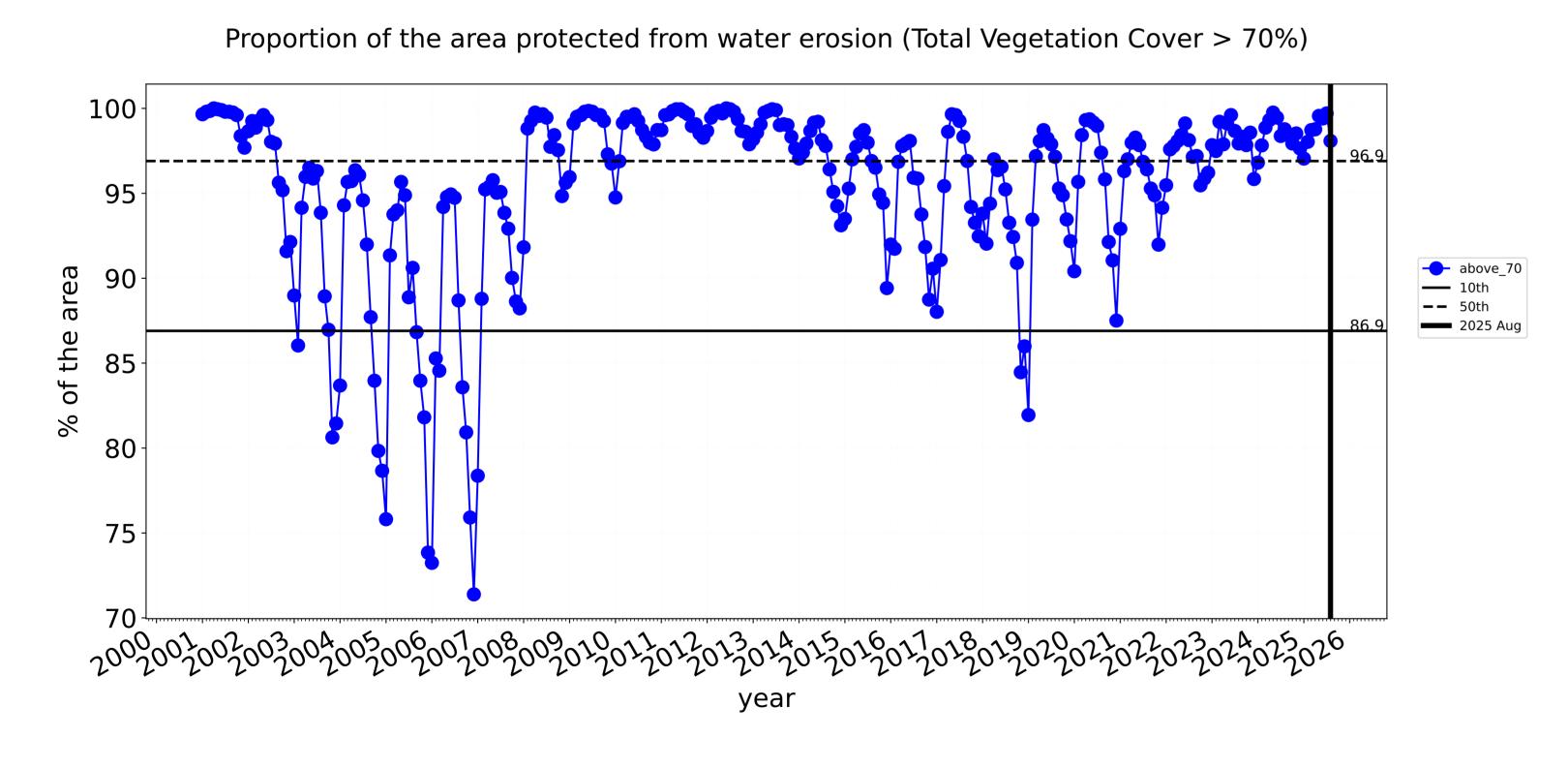


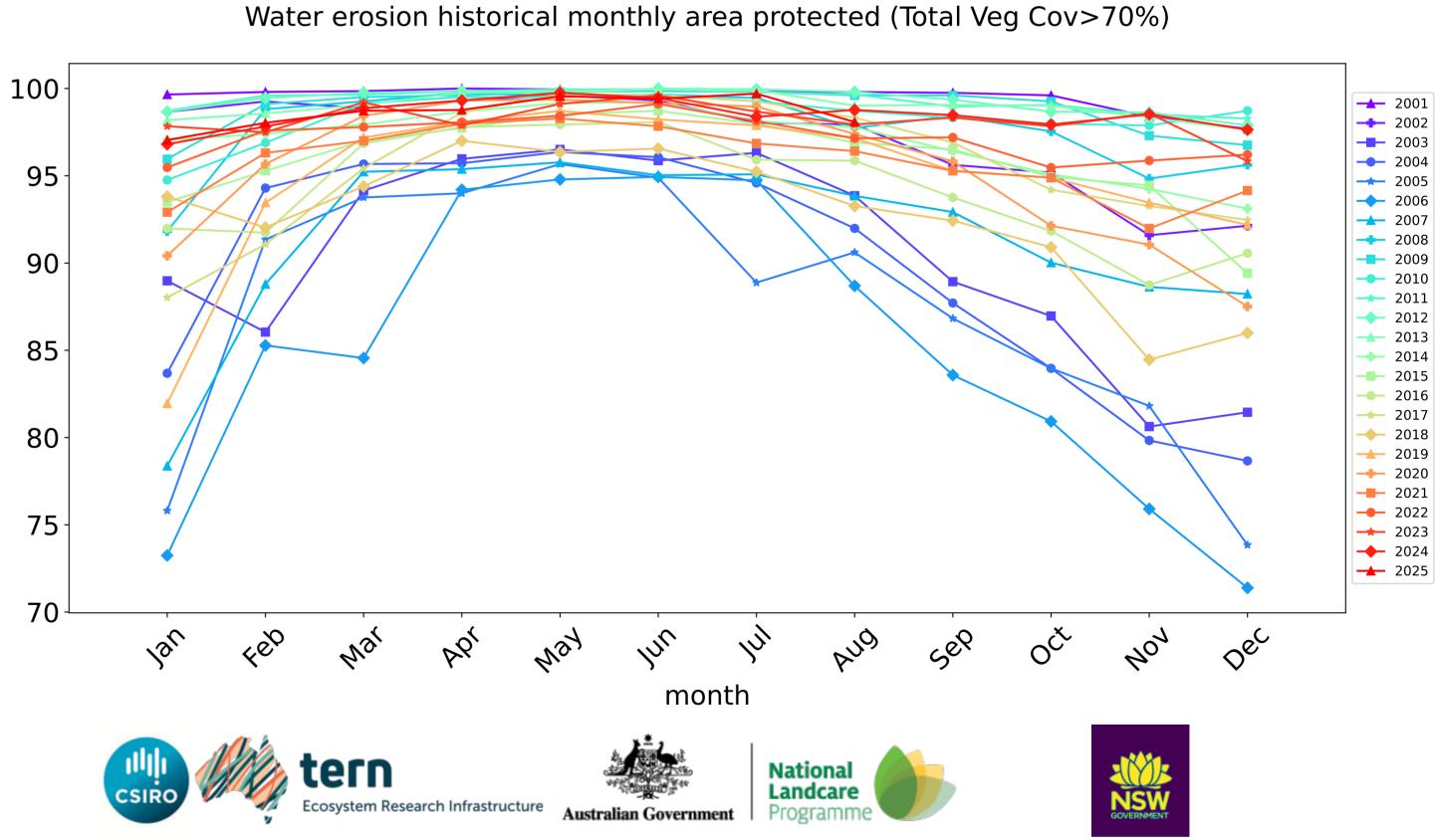






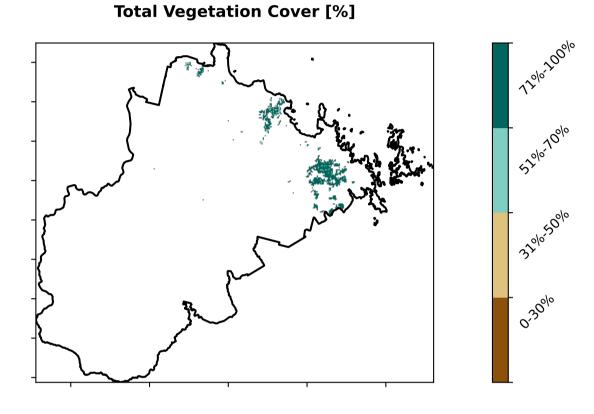




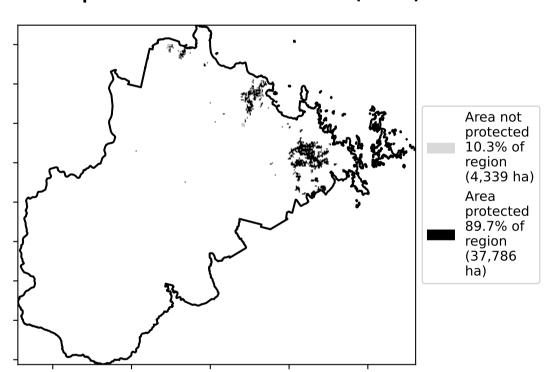


Irrigation

Land use and forest cover Catchment Scale Land Use and Forests of Australia (2018) Derived from 1 Agriculture - Grazing - Irrigated 2 Agriculture - Cropping - Irrigated Catchment Scale Land Use of Australia (2018) and Forests of Australia (2018) 3 Agriculture - Horticulture - Irrigated



% Area protected from water erosion (>70%)

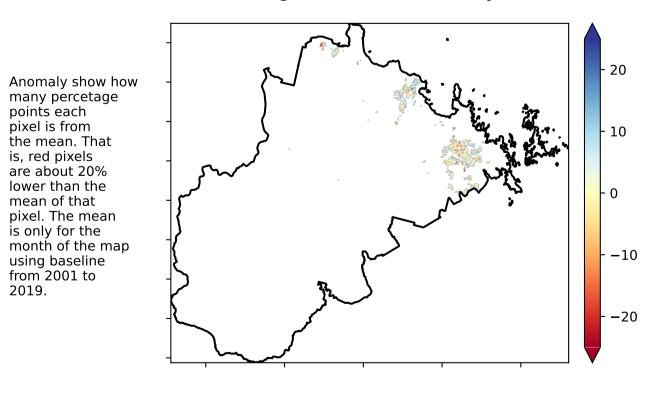


Total Vegetation Cover Anomaly [%]

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

pixel. The mean

using baseline from 2001 to 2019.



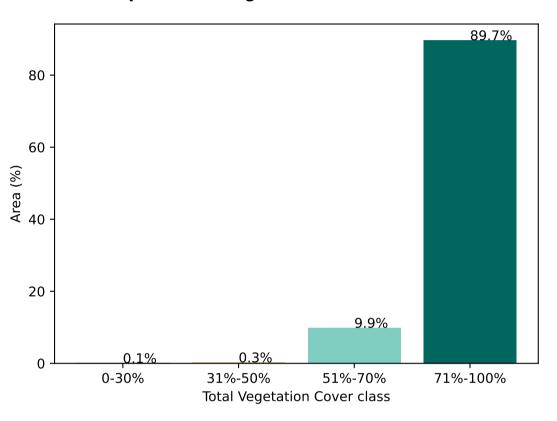
Deciles show where the pixel value lies in the record, from highest to lowest, for that month. That is, red pixels are in the lowest 10% of records for that month of the map using baseline from 2001 to 2019.

70 · 67.8% 60 50 Area (%) 00 00 30.9% 20 10 1.0 1.5 2.0 2.5 0.0 0.5 -0.5

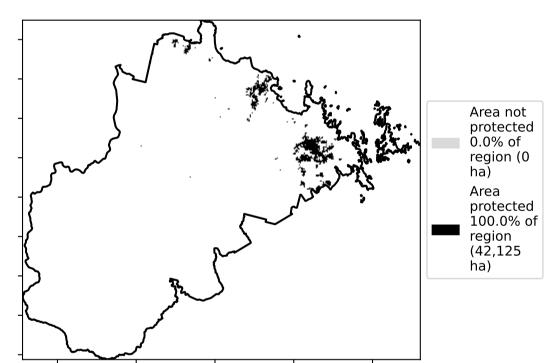
Proportion of each land class in area

Proportion of vegetation cover class in area

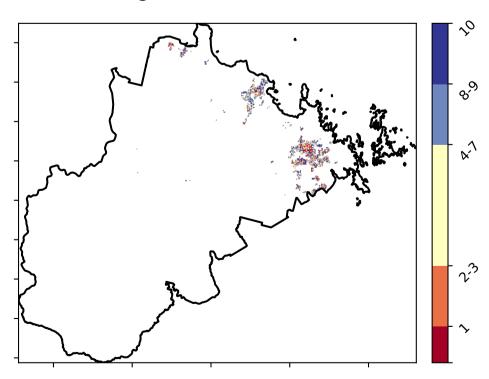
Land use class



% Area protected from wind erosion (>50%)



Total Vegetation Cover Decile [%]



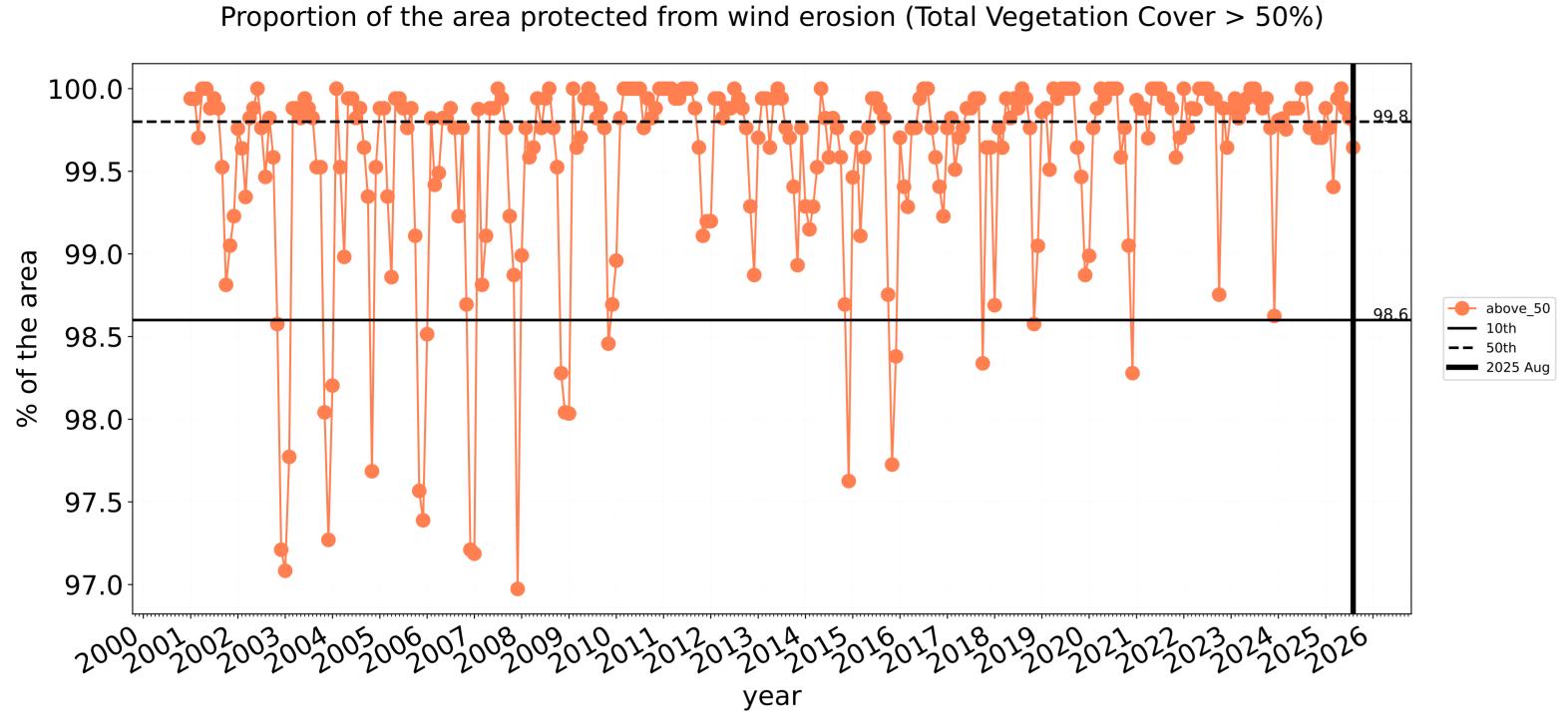


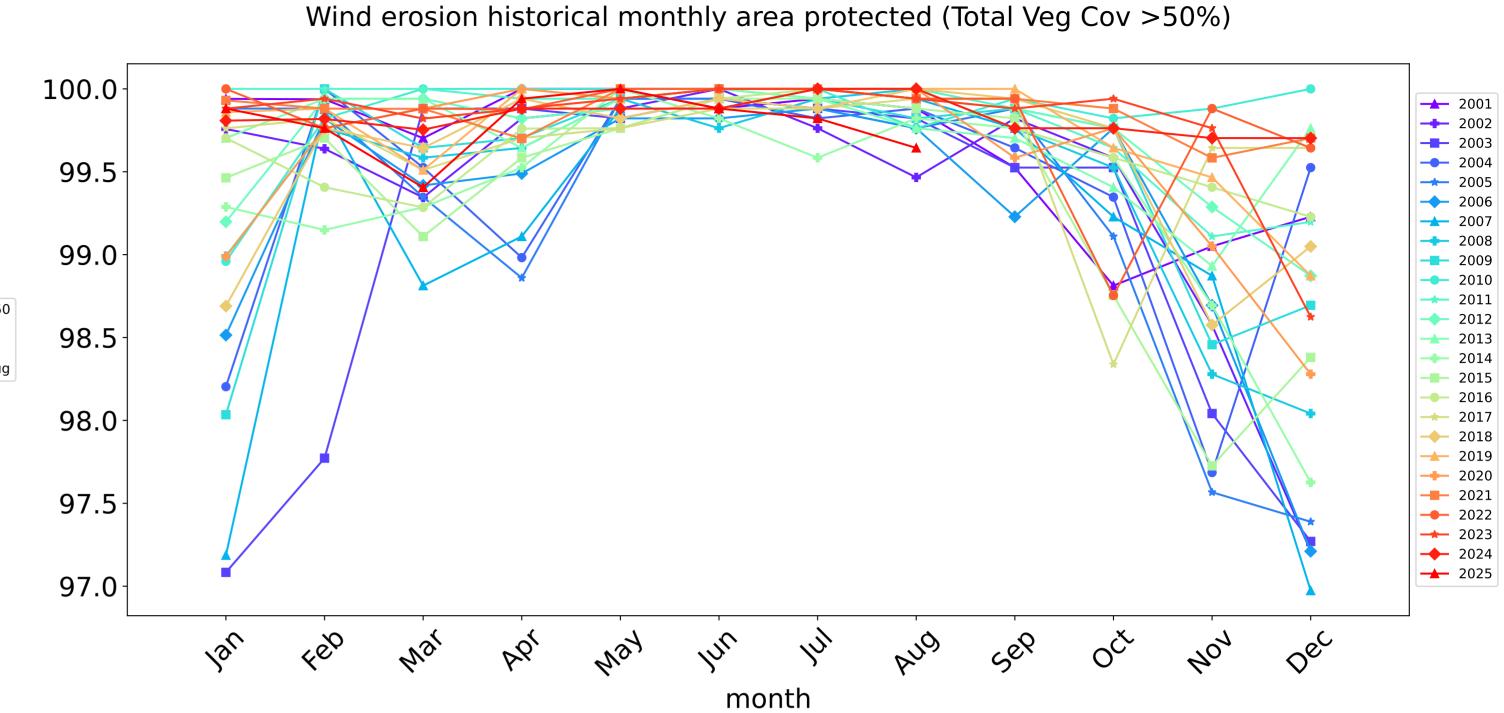


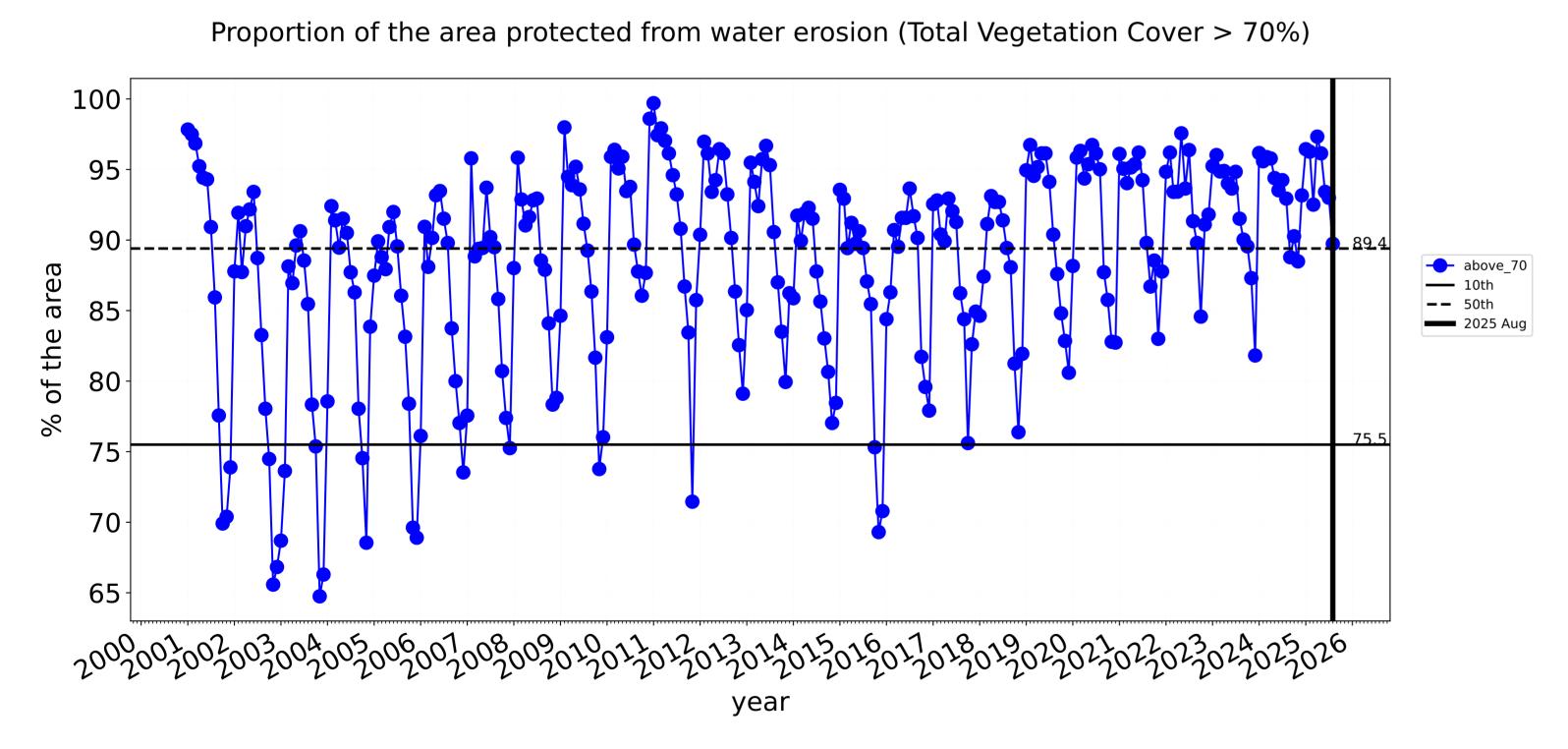


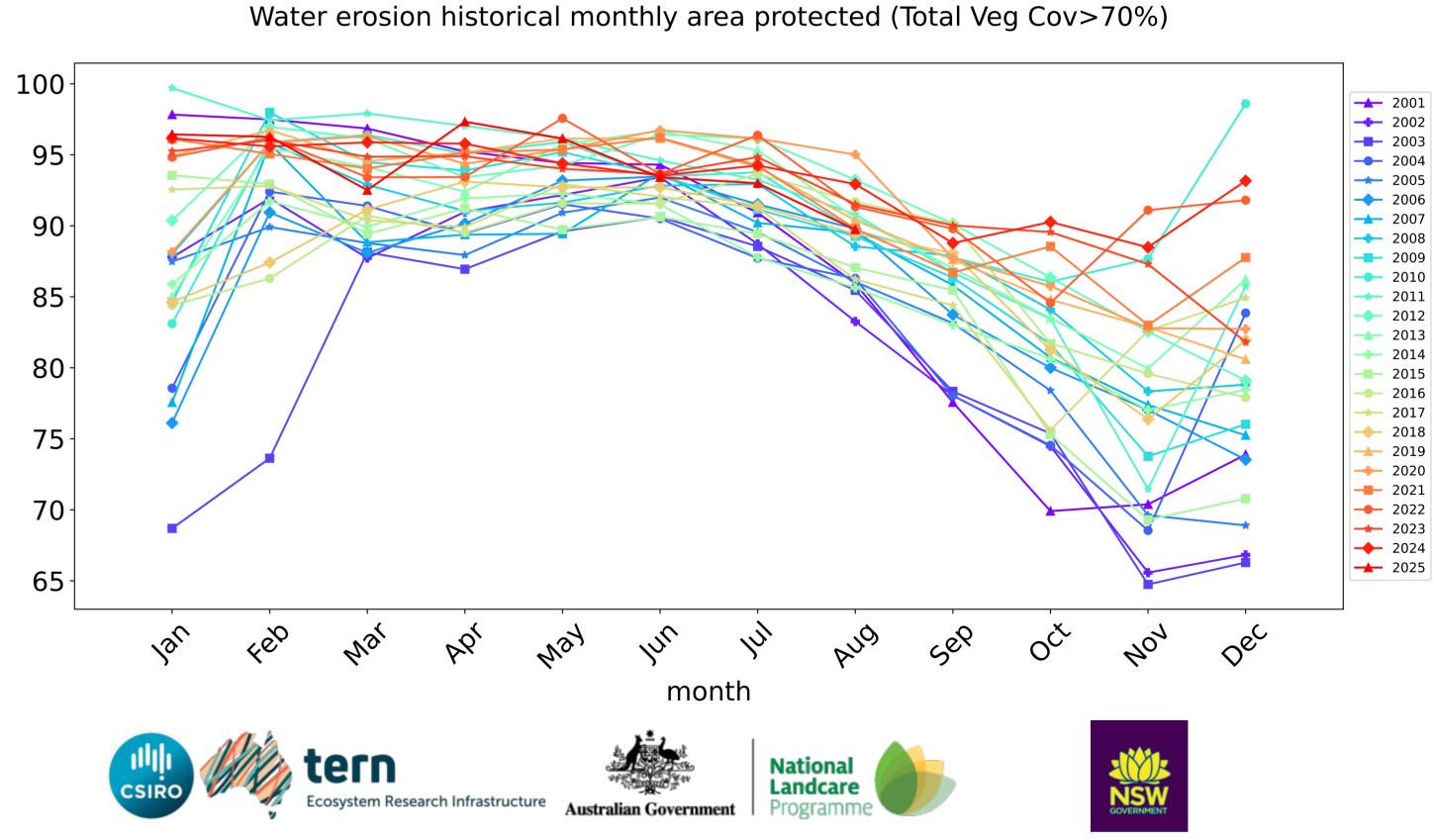


Irrigation timeseries







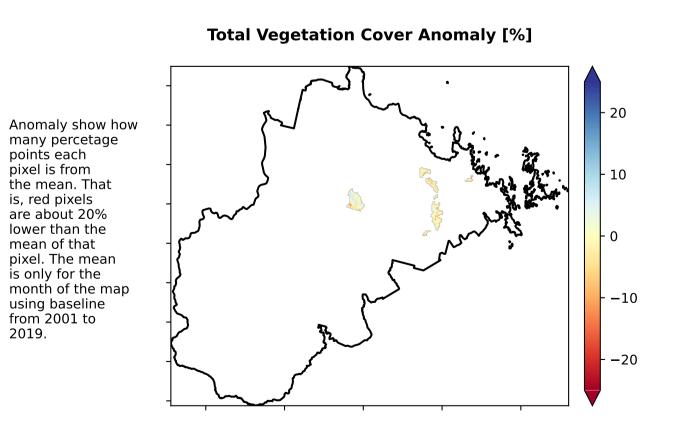


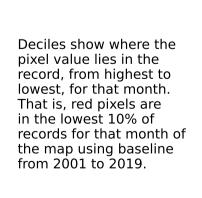
Production native forests and plantation forests

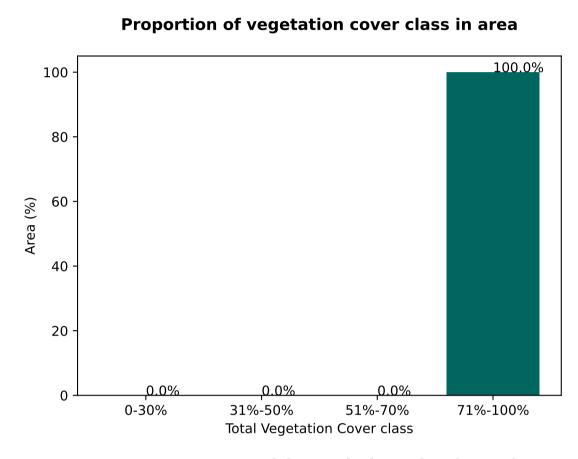
Catchment Scale Land Use and Forests of Australia (2018) Derived from Catchment Scale Land Use of Australia (2018) (2018) and Forests of Australia (2018)

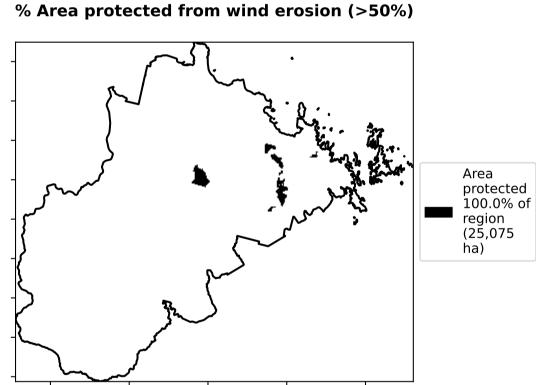
Total Vegetation Cover [%]

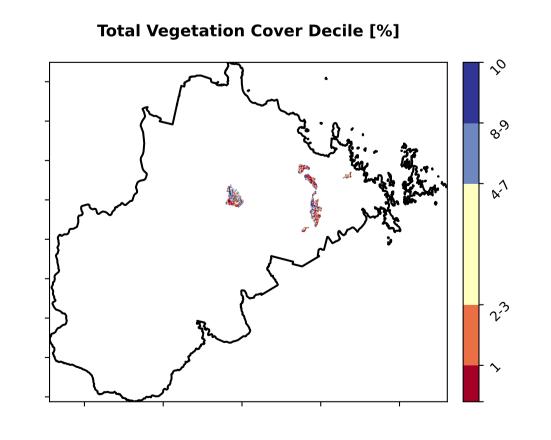
Area protected from water erosion (>70%) Area protected 100.0% of region (25,075 ha)











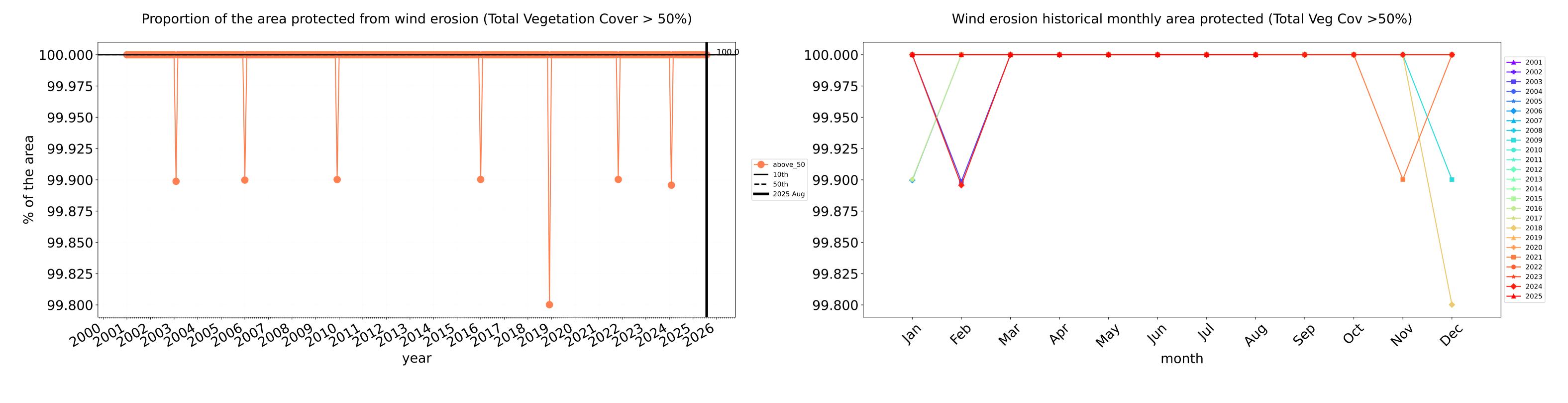


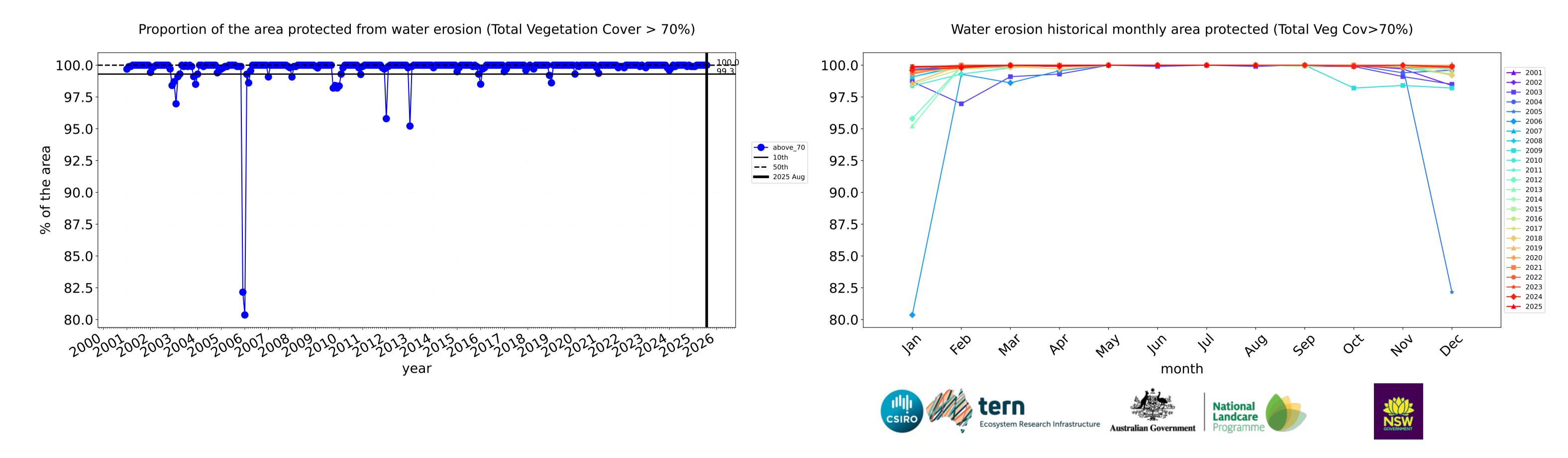






Production native forests and plantation forests timeseries





Whitsunday_(R) (2,357,625 ha and no data 24,251 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	2,357,625	100.0% 2,356,825	99.8% 2,353,575	97.7% 2,302,375	89.6% 2,112,975	48.3% 1,137,825	14.9% 352,400
Conservation and natural environments	170,550	99.8% 170,250	99.4% 169,600	96.9% 165,325	88.6% 151,100	57.2% 97,575	26.2% 44,650
Conservation and natural environments non forest	28,350	99.6% 28,250	98.6% 27,950	92.3% 26,175	65.3% 18,500	9.8% 2,775	1.9% 525
Conservation and natural environments Woodland forest Conservation and	57,250	99.9% 57,200	99.7% 57,100	98.6% 56,425	93.4% 53,475	67.8% 38,825	29.3% 16,800
natural environments Forest (non woodland)	84,950	99.8% 84,800	99.5% 84,550	97.4% 82,725	93.1% 79,125	65.9% 55,975	32.2% 27,325
Agriculture	2,084,875	100.0% 2,084,750	100.0% 2,084,000	98.2% 2,046,575	90.6% 1,888,400	48.2% 1,005,400	14.2% 295,050
Grazing	2,042,450	100.0% 2,042,350	100.0% 2,041,725	98.3% 2,008,475	91.1% 1,860,025	48.7% 995,000	14.3% 291,450
Grazing non forest	1,171,800	100.0% 1,171,700	99.9% 1,171,075	97.4% 1,140,750	86.7% 1,016,225	40.2% 471,175	9.8% 115,125
Grazing Woodland forest	819,800	100.0% 819,800	100.0% 819,800	99.8% 817,850	97.2% 796,900	60.9% 498,900	20.2% 165,700
Grazing - Forest (non woodland)	50,850	100.0% 50,850	100.0% 50,850	98.1% 49,875	92.2% 46,900	49.0% 24,925	20.9% 10,625
Irrigation	42,125	99.9% 42,100	99.6% 41,975	89.7% 37,800	66.6% 28,075	24.3% 10,250	8.5% 3,575
Production native forests and plantation forests	25,075	100.0% 25,075	100.0% 25,075	100.0% 25,075	98.9% 24,800	73.1% 18,325	30.7% 7,700







