LGA Strathbogie_(S) (VIC) - Vegetation cover soil protection report Aug 2019

This report provides information about vegetation covering the soil surface for a region during a single month with comparison to previous years. Vegetation cover indicates where soil is likely to be protected from wind and or water (hillslope) erosion. Results are shown for the whole region (polygon) and also separated by land use and tree cover. Different land uses are likely to have different cover patterns and targets. Reporting is most reliable with less than 20% tree cover.

Strathbogie (S)

- Context
 - o Map: Land use and forest cover
 - o Chart: Land use and forest cover area
- Total vegetation cover for this month
 - o Map: vegetation cover classified into 4 classes
 - o Chart: vegetation cover area classified into 4 classes
- Areas protected from erosion for the month
 - o Map: wind erosion protection (>50% cover)
 - o Map: water erosion protection (>70% cover)
- Comparison with previous years
 - o Map: anomaly compare this month to the average cover from the same month in previous years
 - o Map: deciles rank this month against the same month in previous years
- Time series
 - o Wind erosion protection time series: percentage of the area of the region with greater than 50% cover for each month in the archive (orange lines)
 - o Water erosion protection time series: percentage of the area of the region with greater than 70% cover for each month of the archive (blue lines).
 - o Rainfall: millimetres rainfall each month (black lines)
- Time series stacked by year
 - o Wind erosion protection time series: percentage of the area of the region with greater than 50% cover for each month in the archive (orange lines) in case of 5th percentile is less than 80i
 - o Water erosion protection time series: percentage of the area of the region with greater than 70% cover for each month of the archive (blue lines). in case of 5th percentile is less than 80
- 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 pivels greater than 200/ total ele
 - o the percentage area with pixels greater than 80% total clover
 - o the percentage area with pixels greater than 90% total clover
 - o the percentage area with pixels greater than 95% total clover

The following pages repeat the above sequence for each land use and forest cover class. For example

- All agricultural lands, that is grazing, cropping plus Horticulture (depending on what land use is present)
- Grazing lands by forest classes if present
- Cropping lands
- Irrigation lands
- Protected areas by forest classes if present

Explanatory notes:

This report has been generated using MODIS fractional vegetation cover information available in Rangelands and Pasture Productivity (RAPP) map tool. The report is based on an analysis of 500 metre pixels. Pixels with greater than or equal to 50% vegetation cover are generally considered to be protected from or have reduced soil loss by wind erosion, and pixels with greater than or equal to 70% vegetation cover are generally considered to also be protected from or have reduced soil loss from water (hillslope) erosion. Report used baseline from 2001 to 2019 for each month to generate anomalies and deciles. And it used threshold of 1% to create land use forest cover reports. Higher cover thresholds may be required for erosion protection in some regions. This report will be less applicable in areas with sparse forest (20-50% tree cover) or dense forest (> 50% tree cover). Therefore land use classes are divided by tree cover: 1) No forest is when there is less than 20% tree cover 2) Sparse forest, is when there is less than 20 to 50 % tree cover 3) Dense forest is greater than 50% tree 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







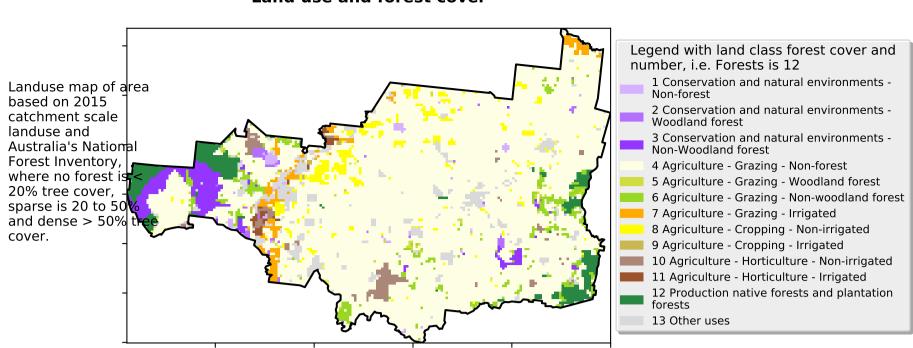




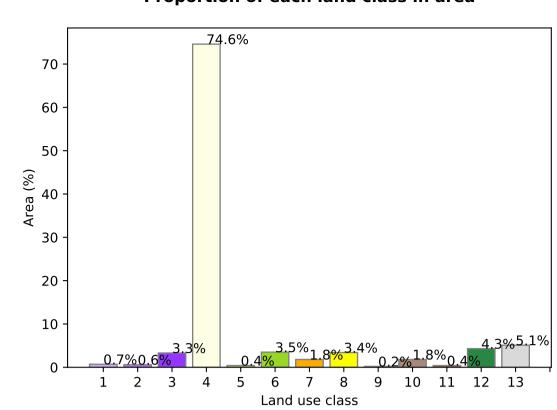


Vegetation Cover Aug 2019

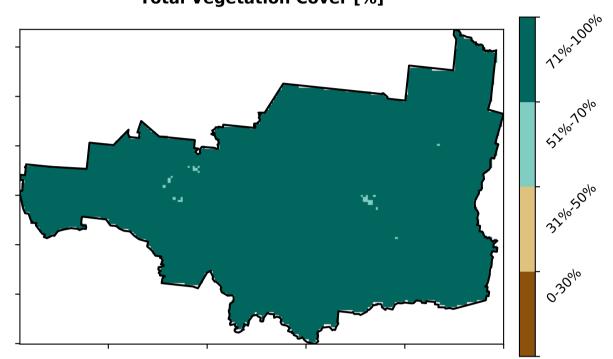
Land use and forest cover



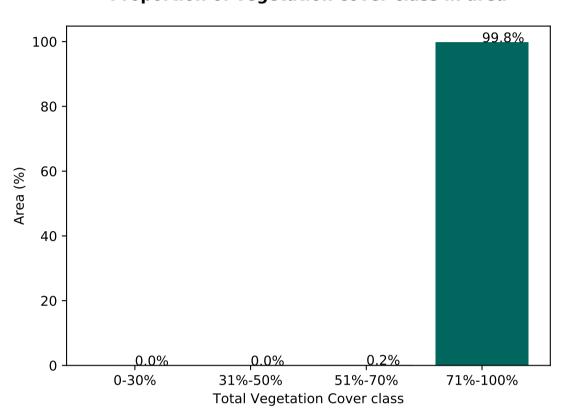
Proportion of each land class in area

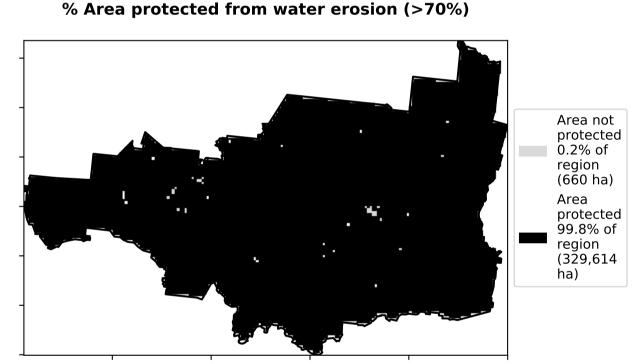


Total Vegetation Cover [%]

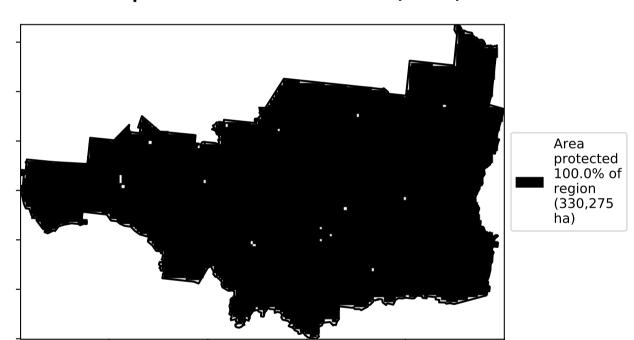


Proportion of vegetation cover class in area

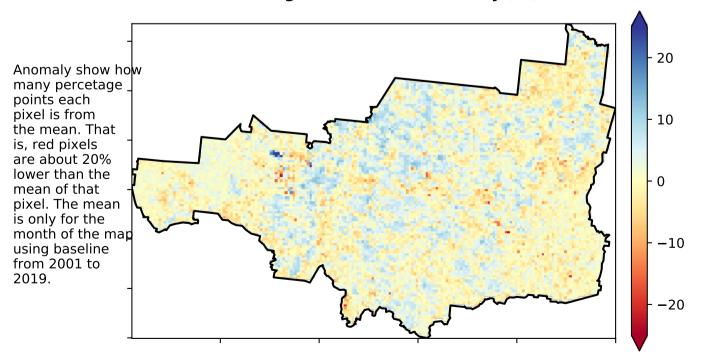




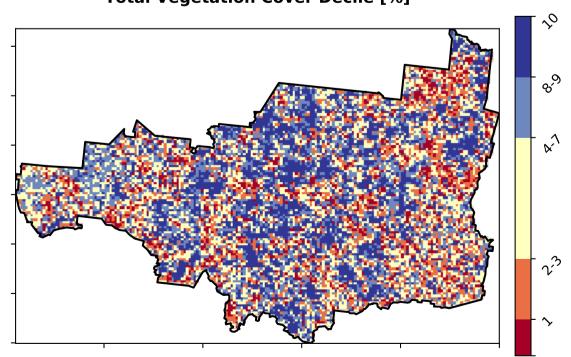
% Area protected from wind erosion (>50%)



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.





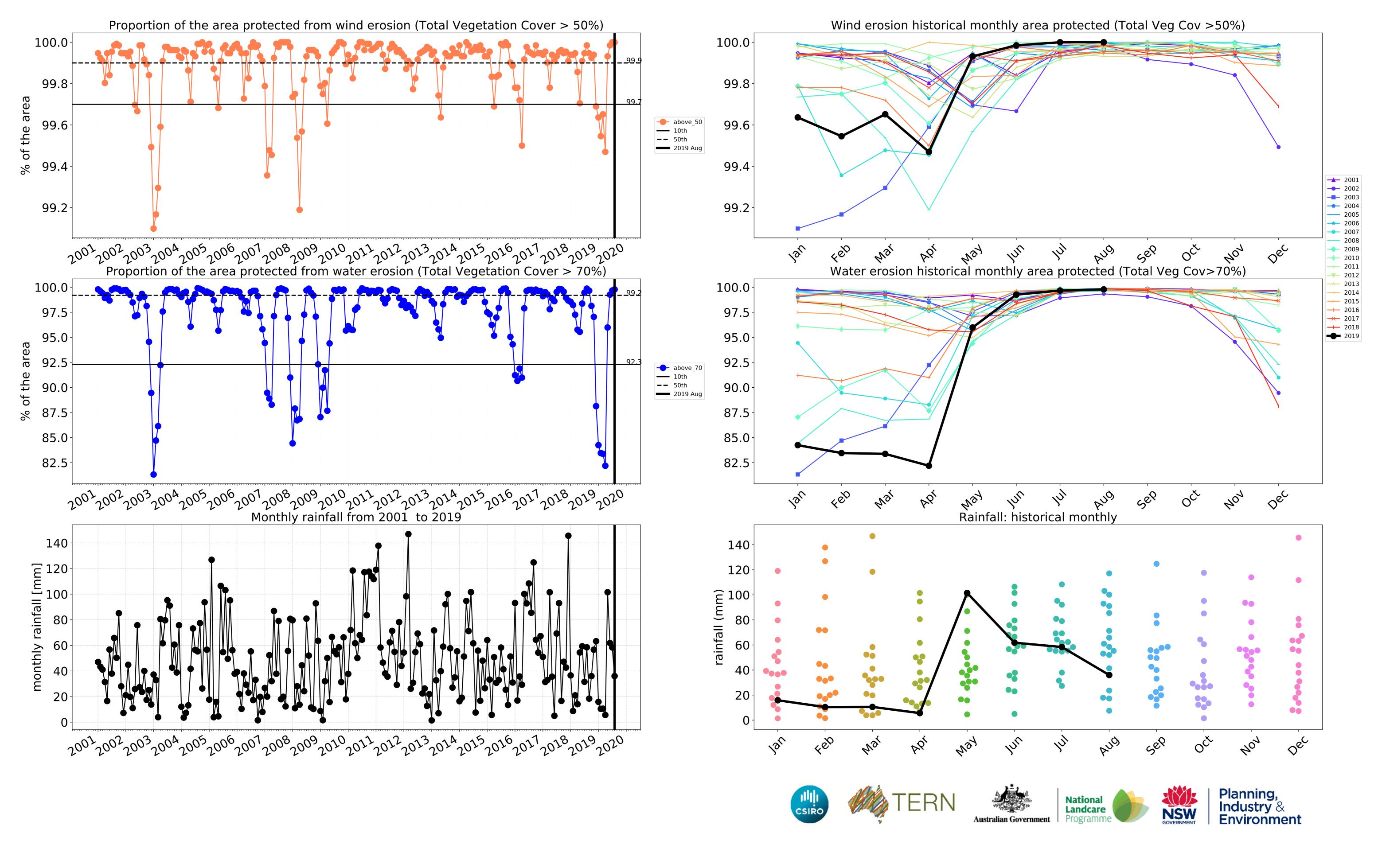


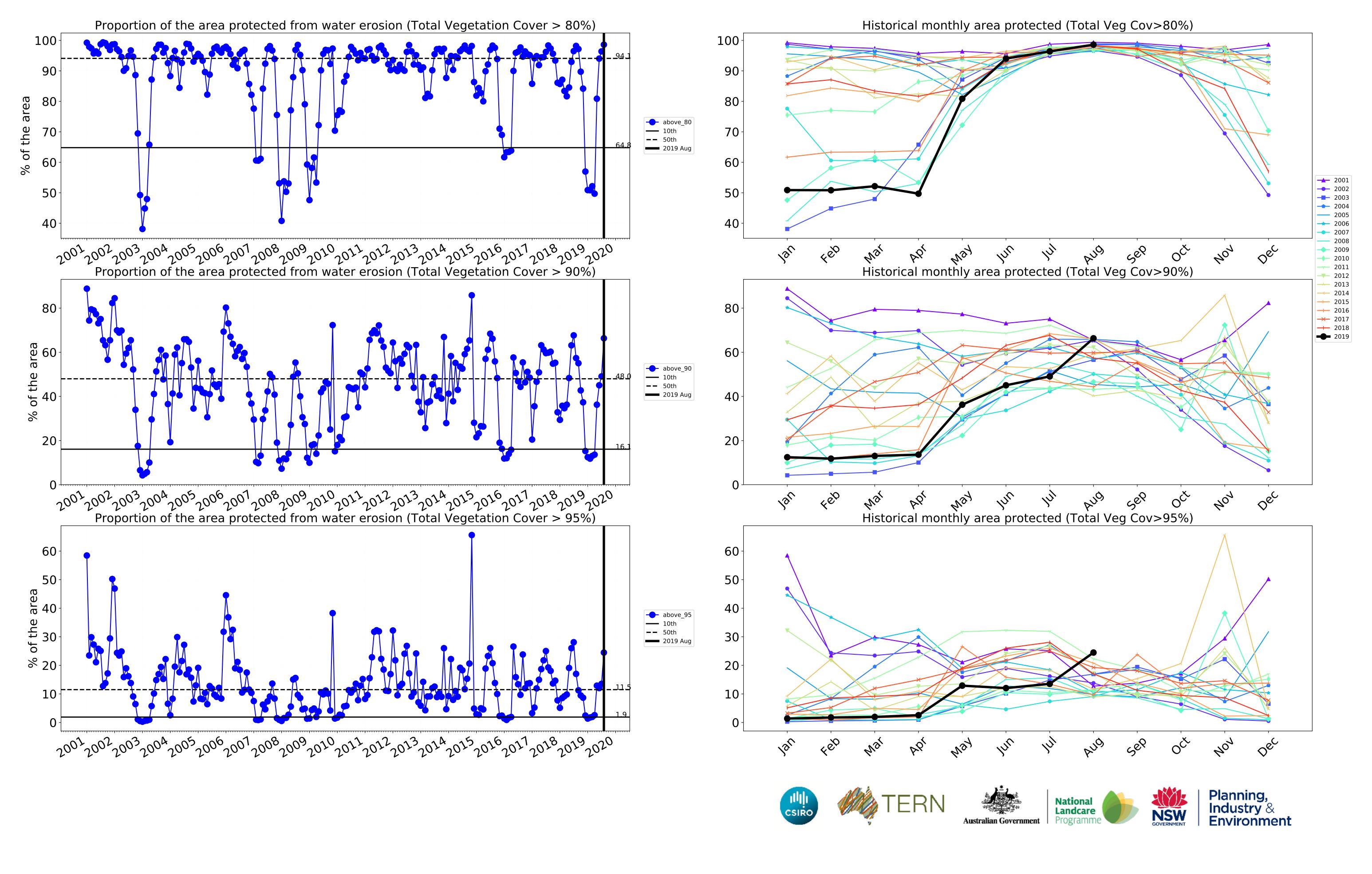












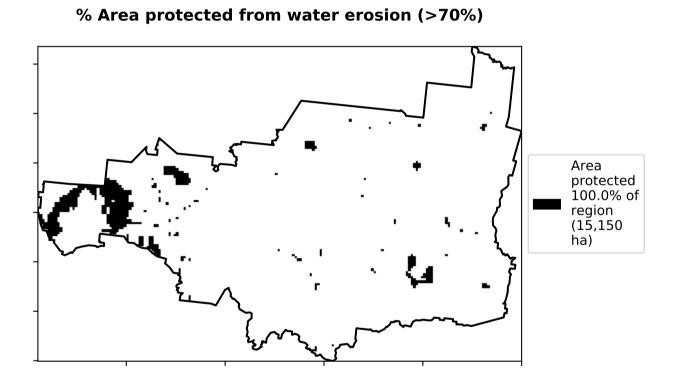
Conservation and natural environments

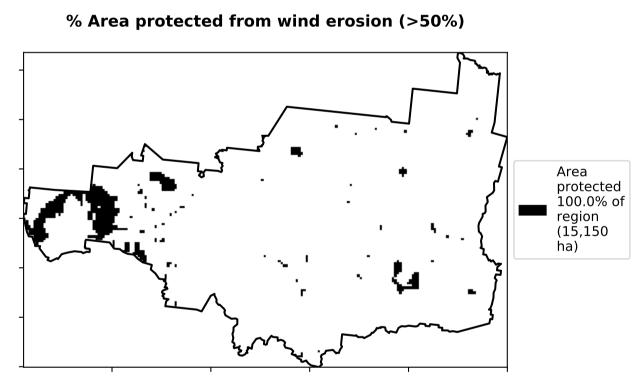
Land use and forest cover Landuse map of area based on 2015 catchment scale landuse and Australia's National Conservation and natural environments - Non-forest Forest Inventory, Conservation and natural environments - Woodland where no forest is 20% tree cover, Conservation and natural environments - Non-woodland forest sparse is 20 to 50 and dense > 50% cover.

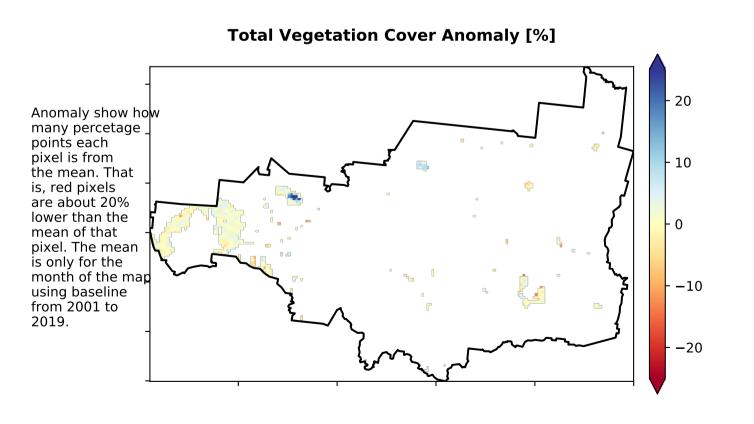
Total Vegetation Cover [%]

100.0% 100 80 Area (%) 60 40 20 -0.0%0.0% 0-30% 31%-50% 51%-70% 71%-100% **Total Vegetation Cover class**

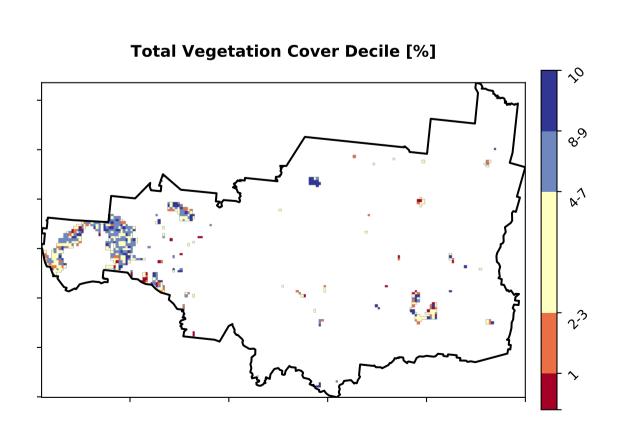
Proportion of vegetation cover class in area







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.







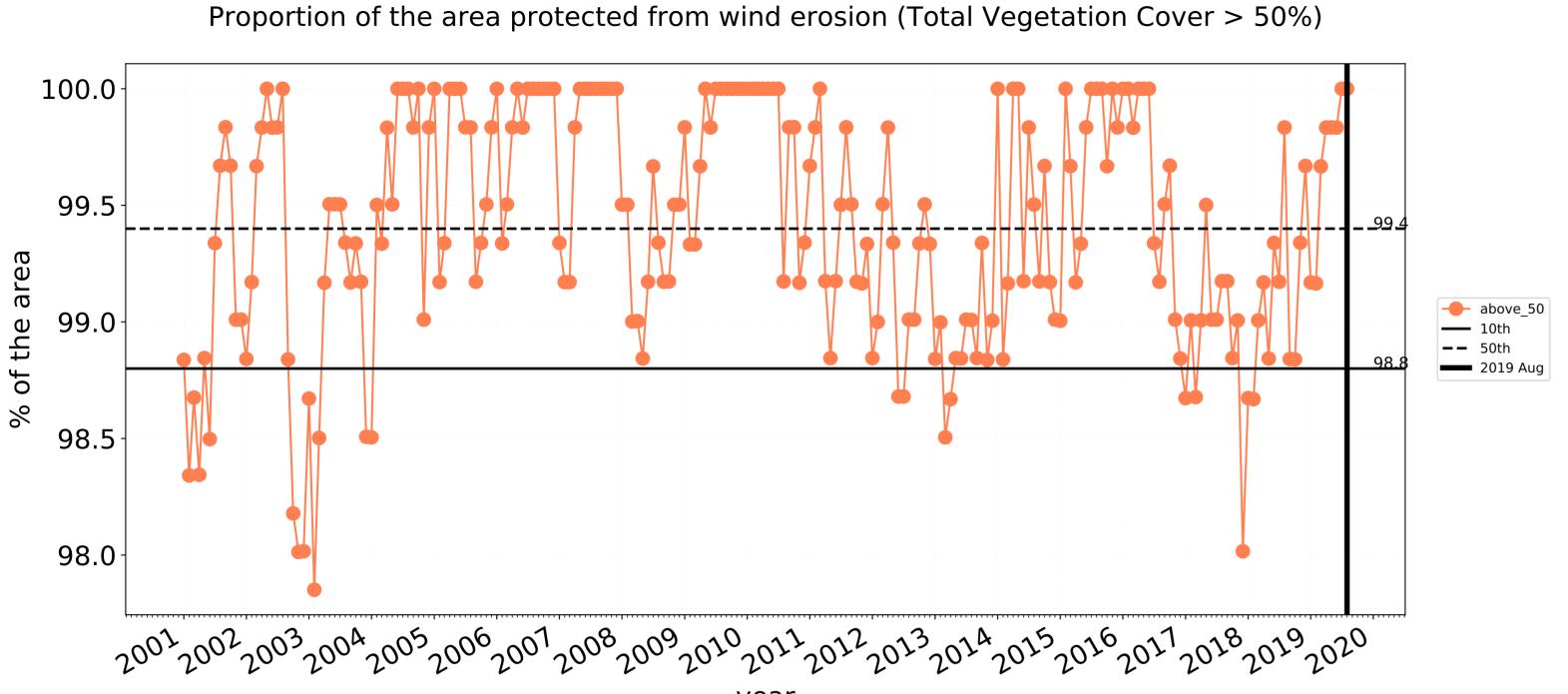


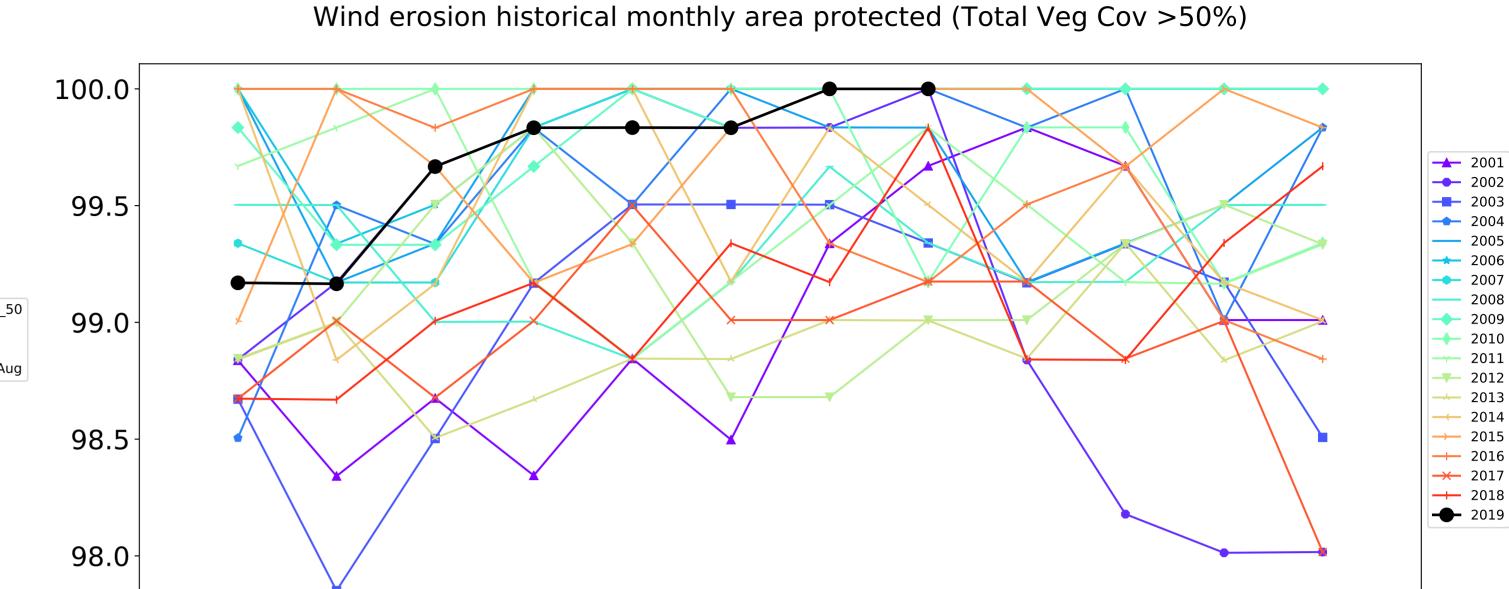




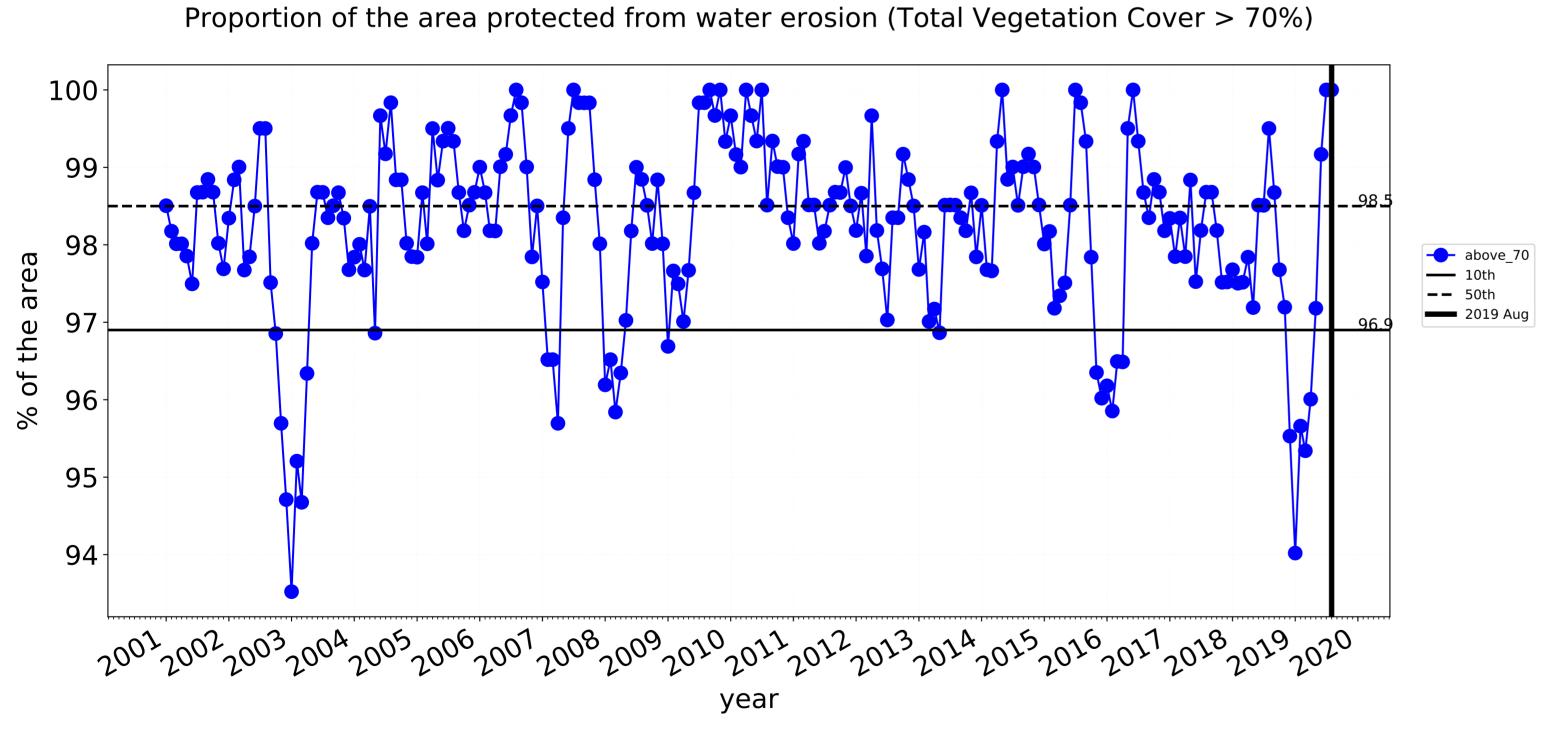


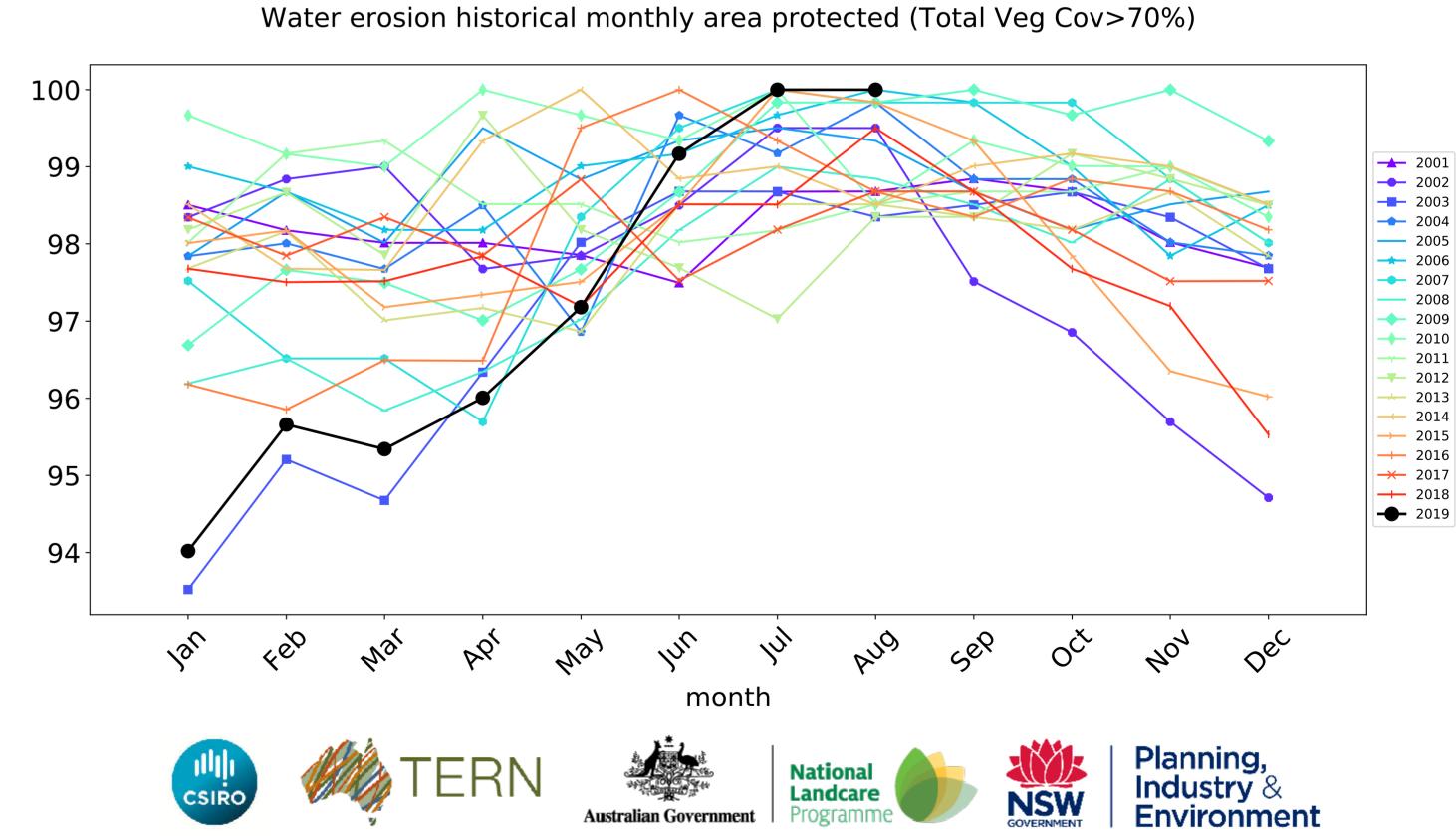
Conservation and natural environments timeseries

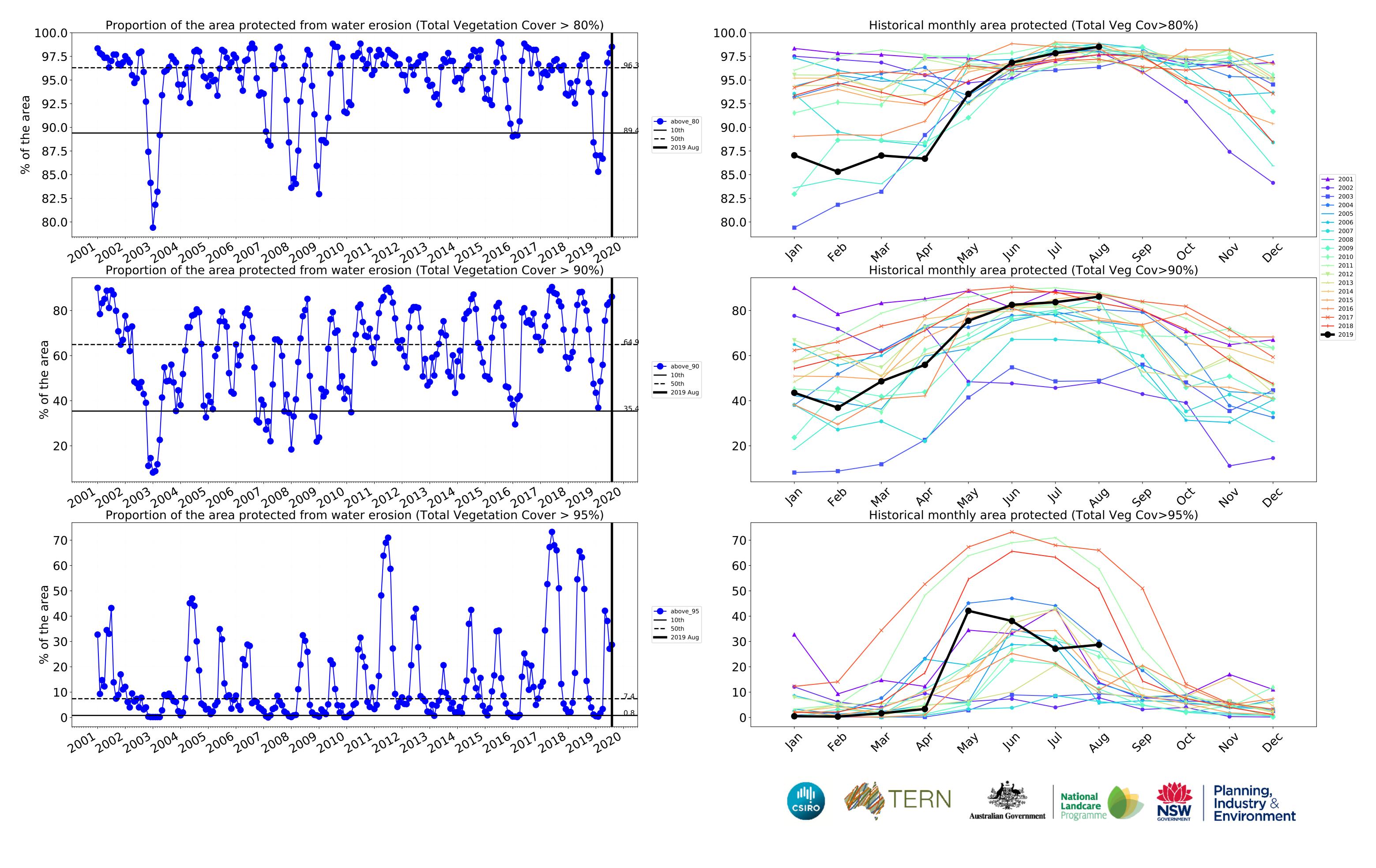




month



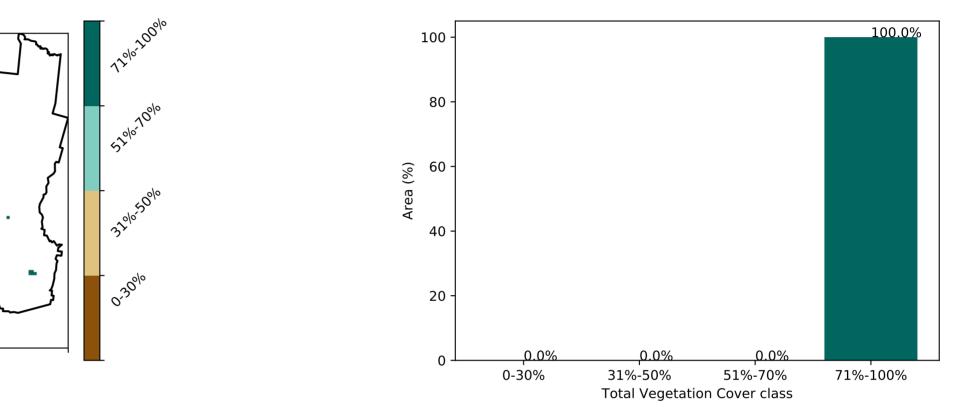


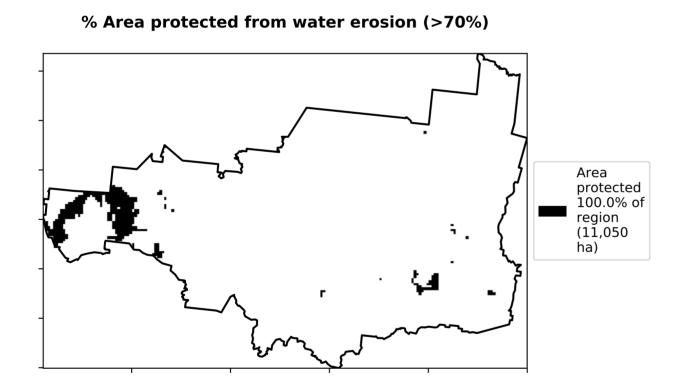


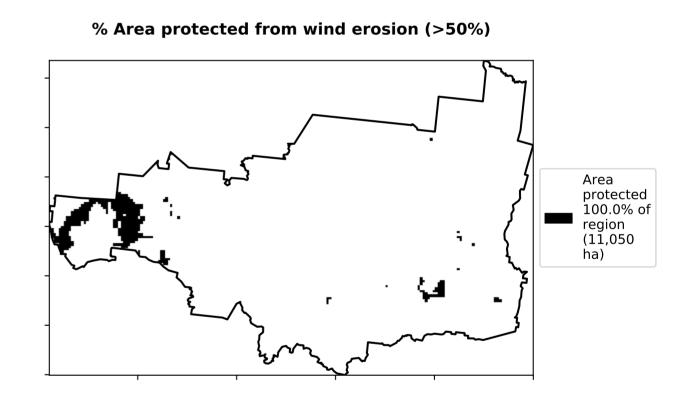
Conservation and natural environments Forest (non woodland)

Land use and forest cover Landuse map of area based on 2015 catchment scale landuse and Australia's National Forest Inventory, where no forest is 20 to 50 and dense > 50% thee cover. Conservation and natural environments - Non-woodland forest

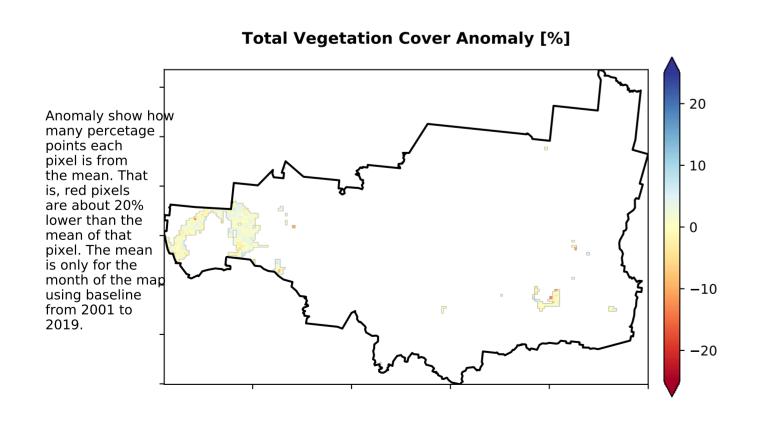
Total Vegetation Cover [%]



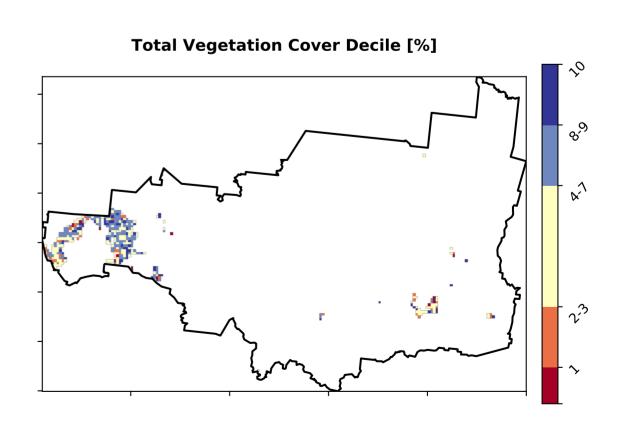




Proportion of vegetation cover class in area



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.





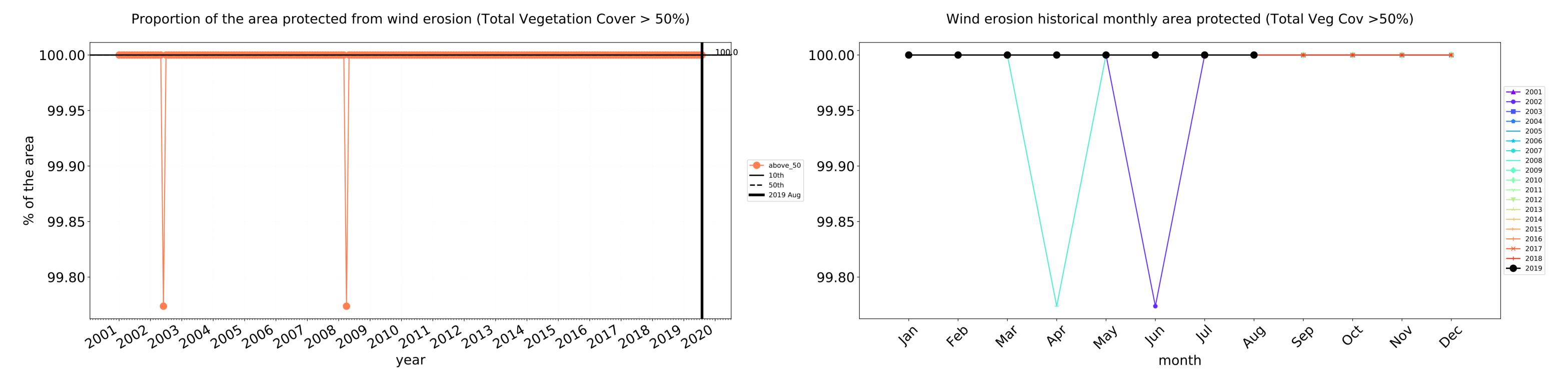


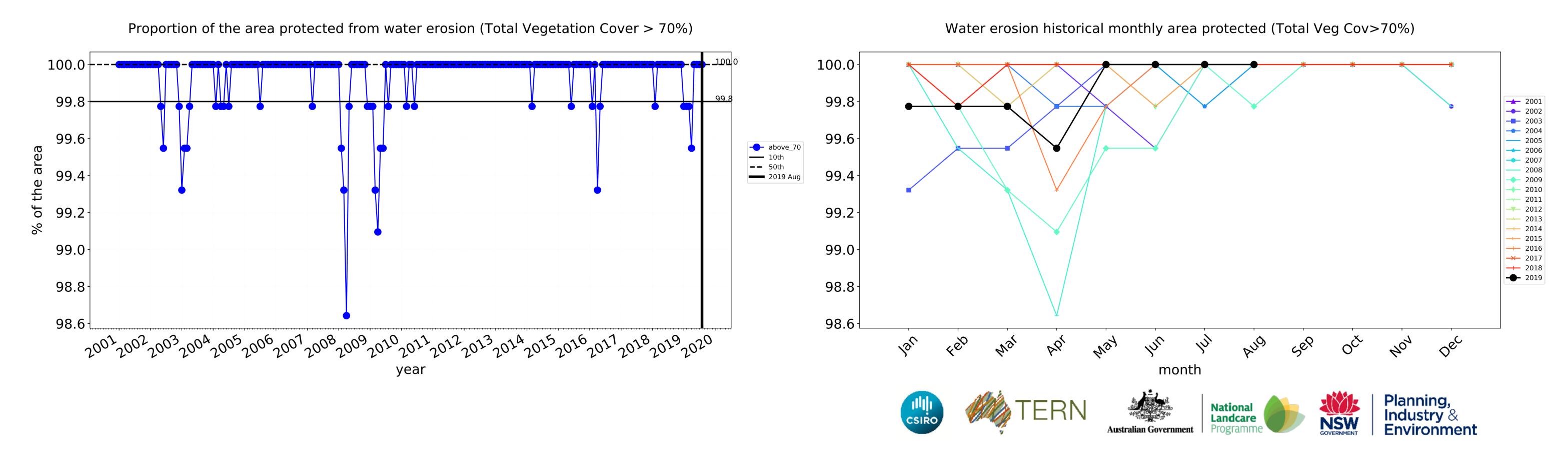


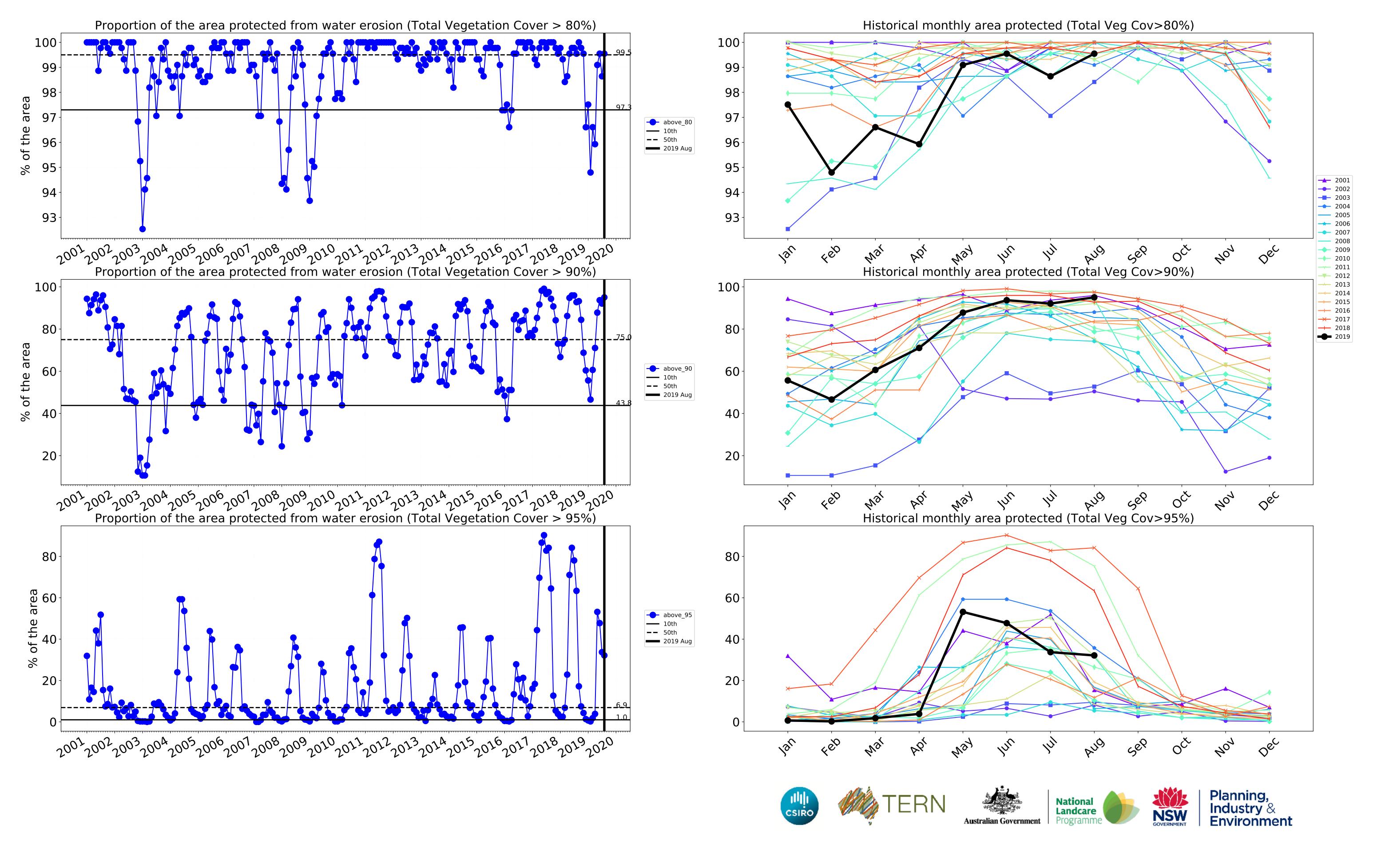






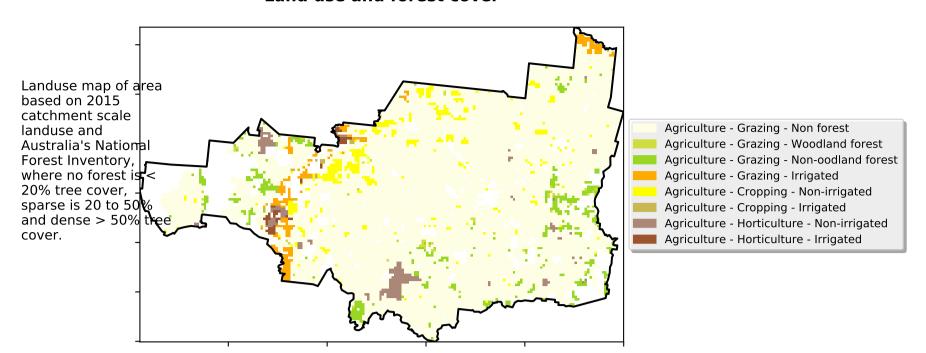




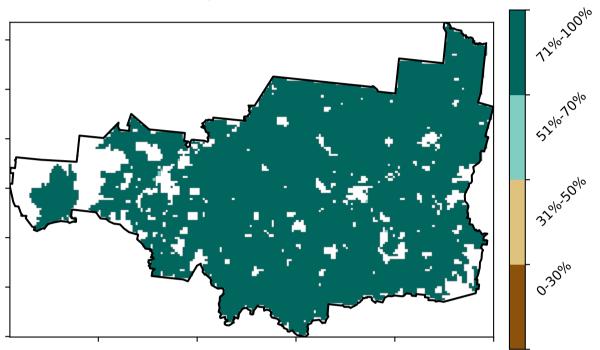


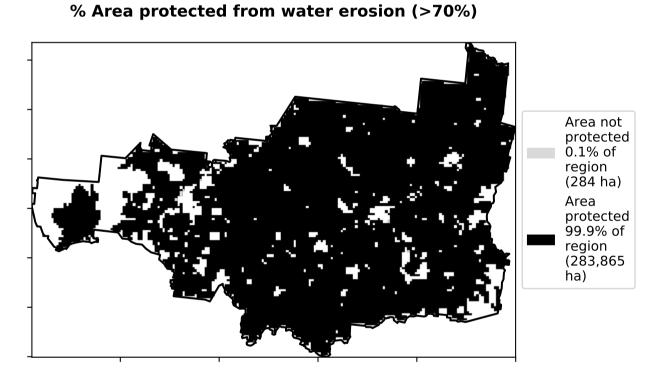
Agriculture

Land use and forest cover

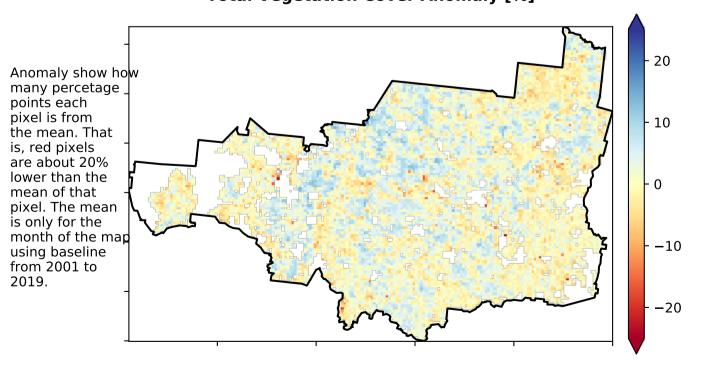


Total Vegetation Cover [%]



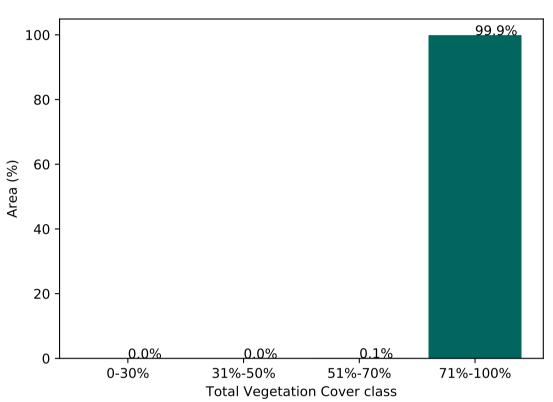


Total Vegetation Cover Anomaly [%]

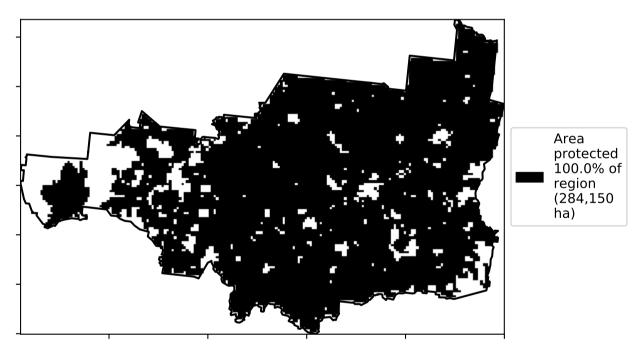


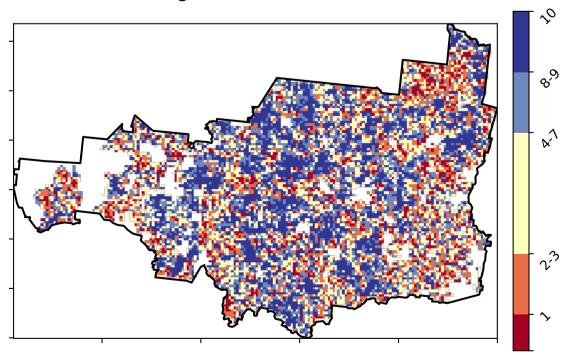
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Proportion of vegetation cover class in area



% Area protected from wind erosion (>50%)









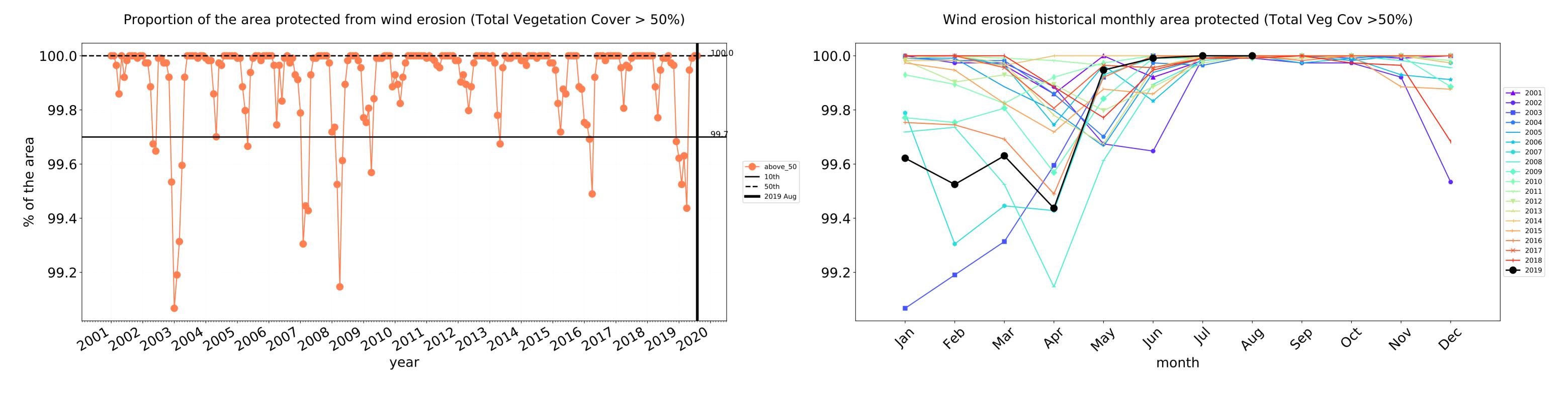


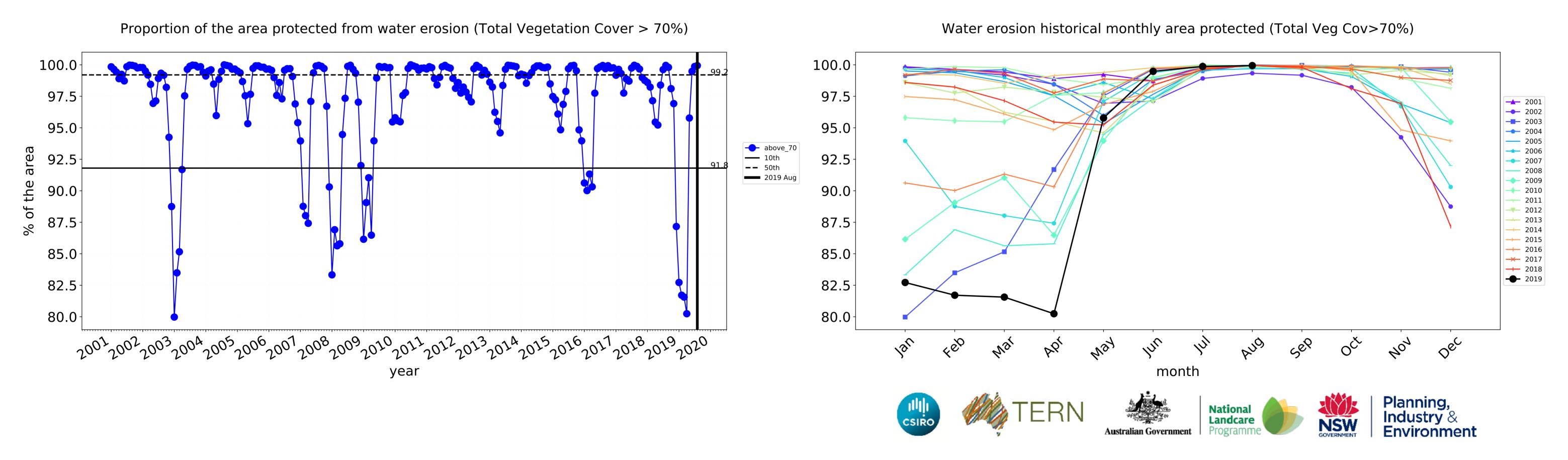


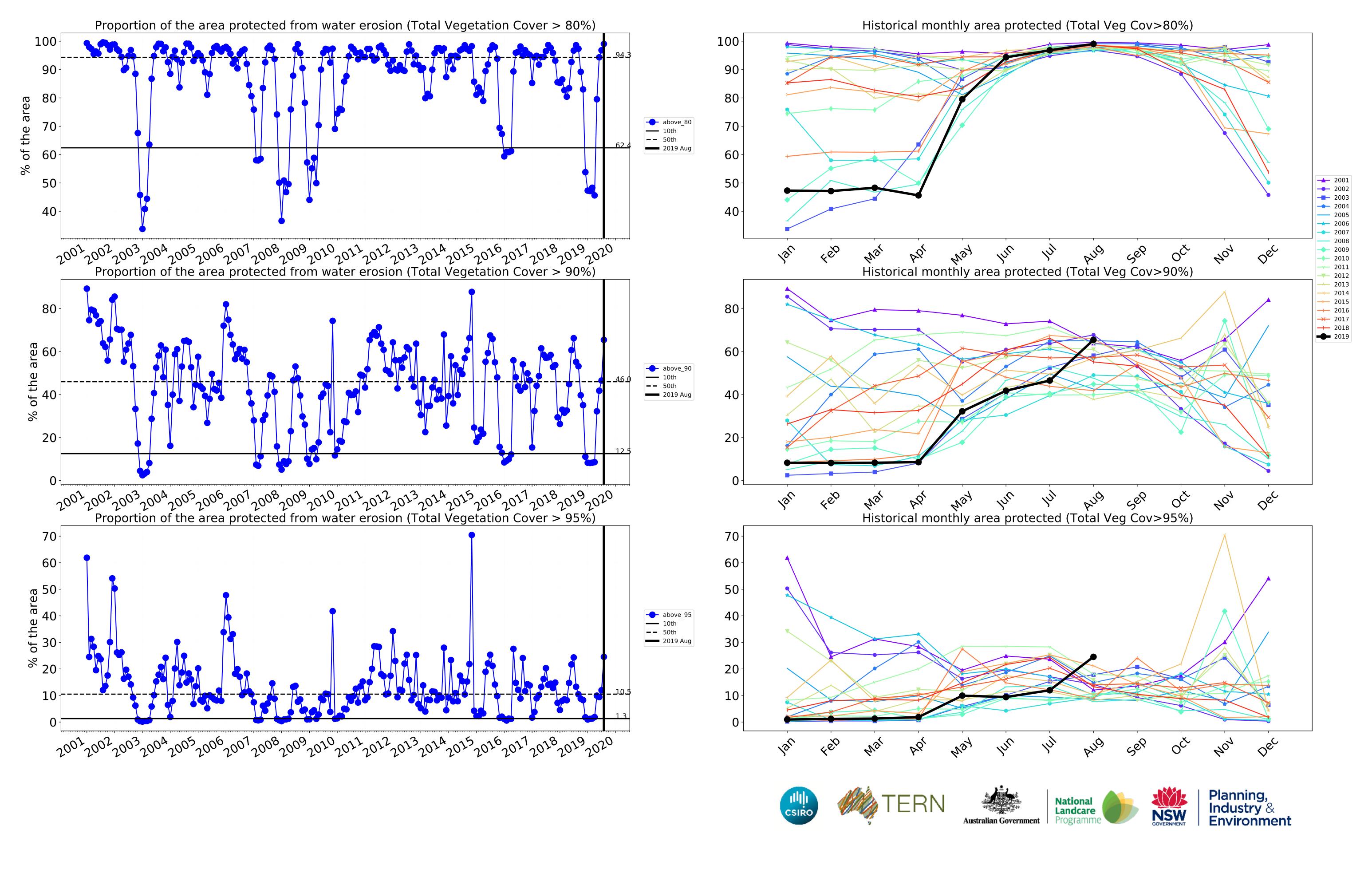




Agriculture timeseries

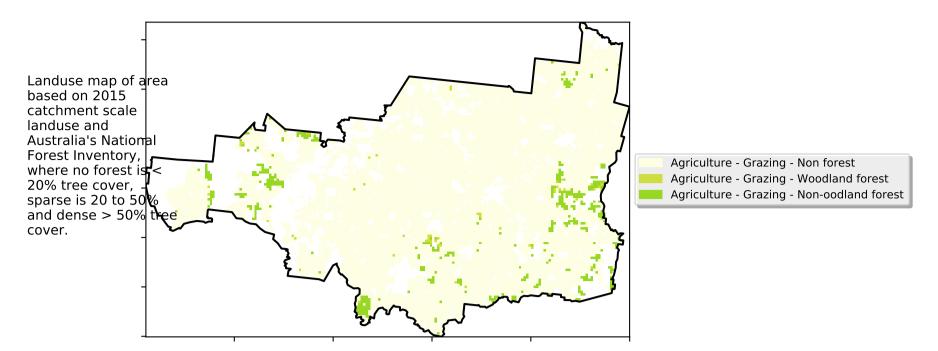




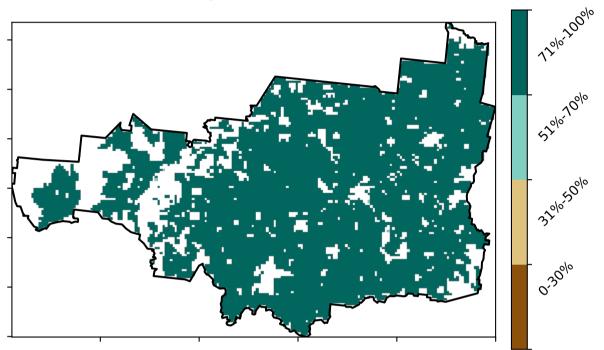


Grazing

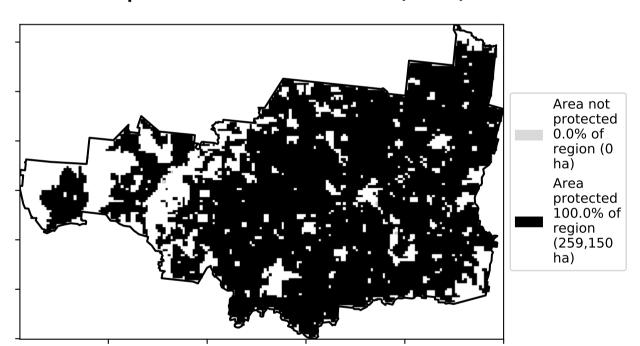
Land use and forest cover



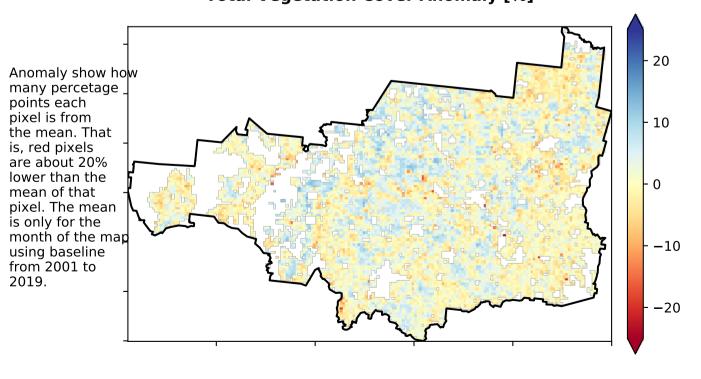
Total Vegetation Cover [%]



% Area protected from water erosion (>70%)

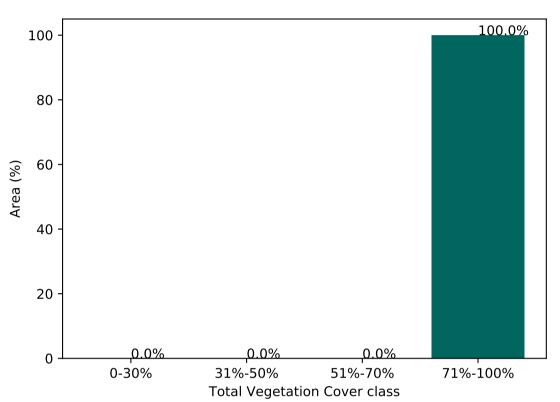


Total Vegetation Cover Anomaly [%]

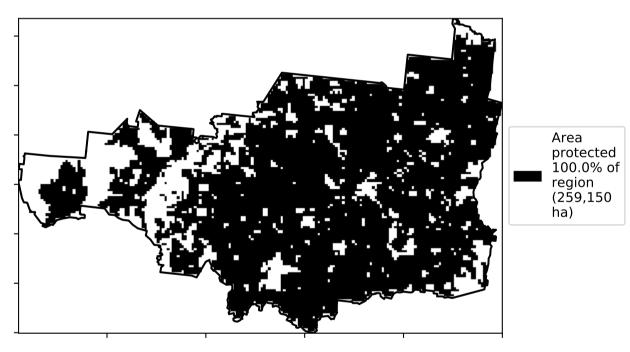


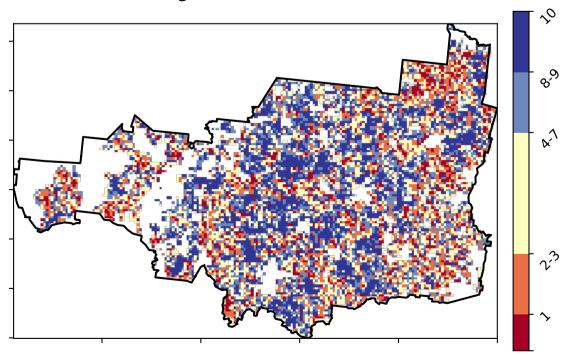
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Proportion of vegetation cover class in area



% Area protected from wind erosion (>50%)









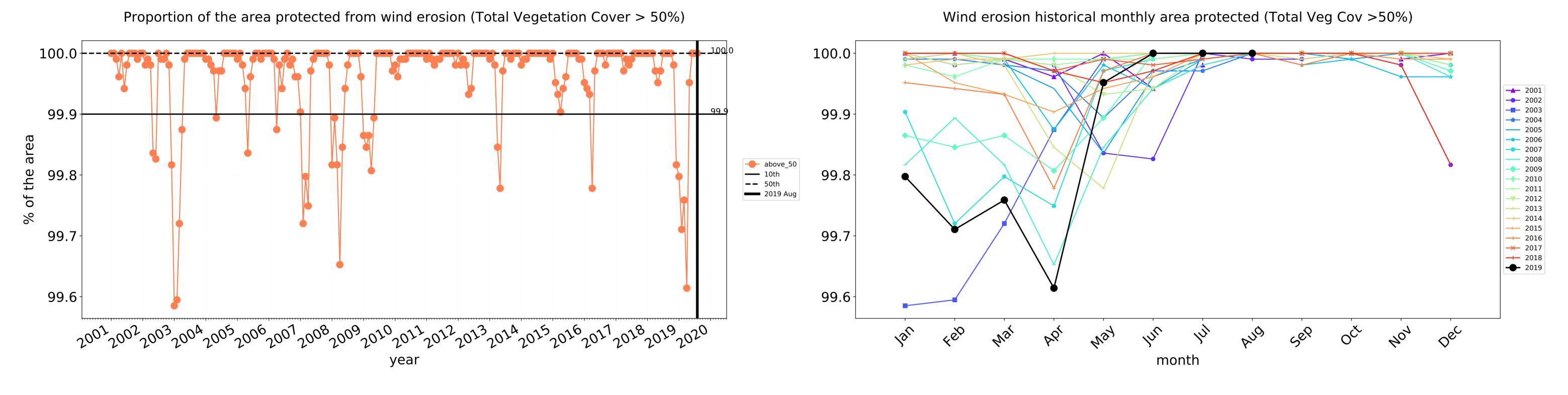


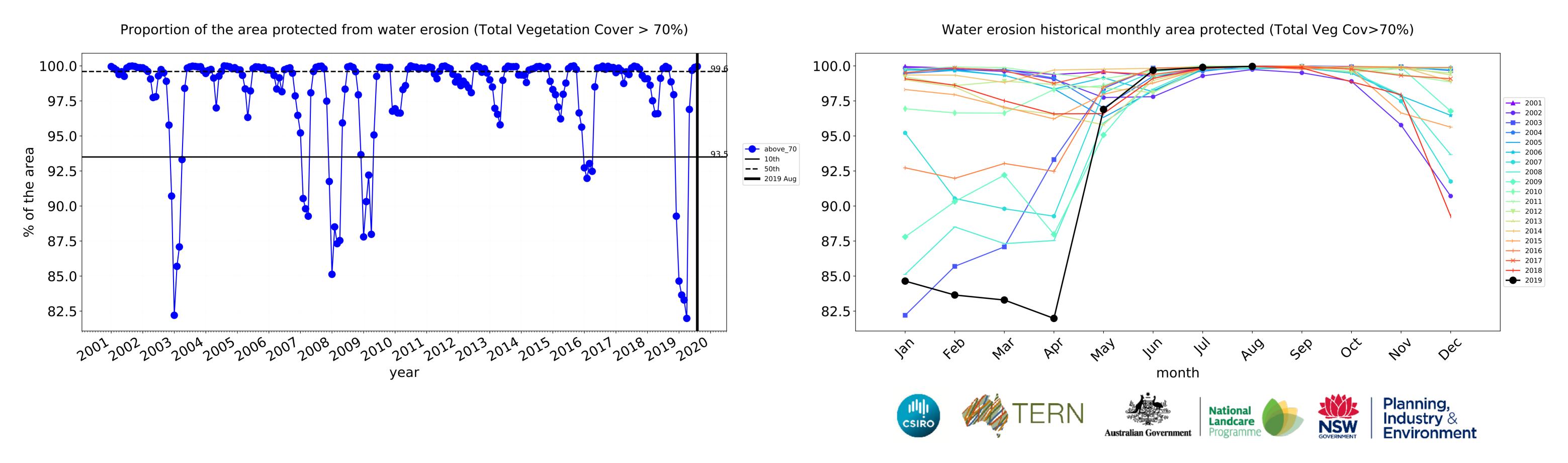


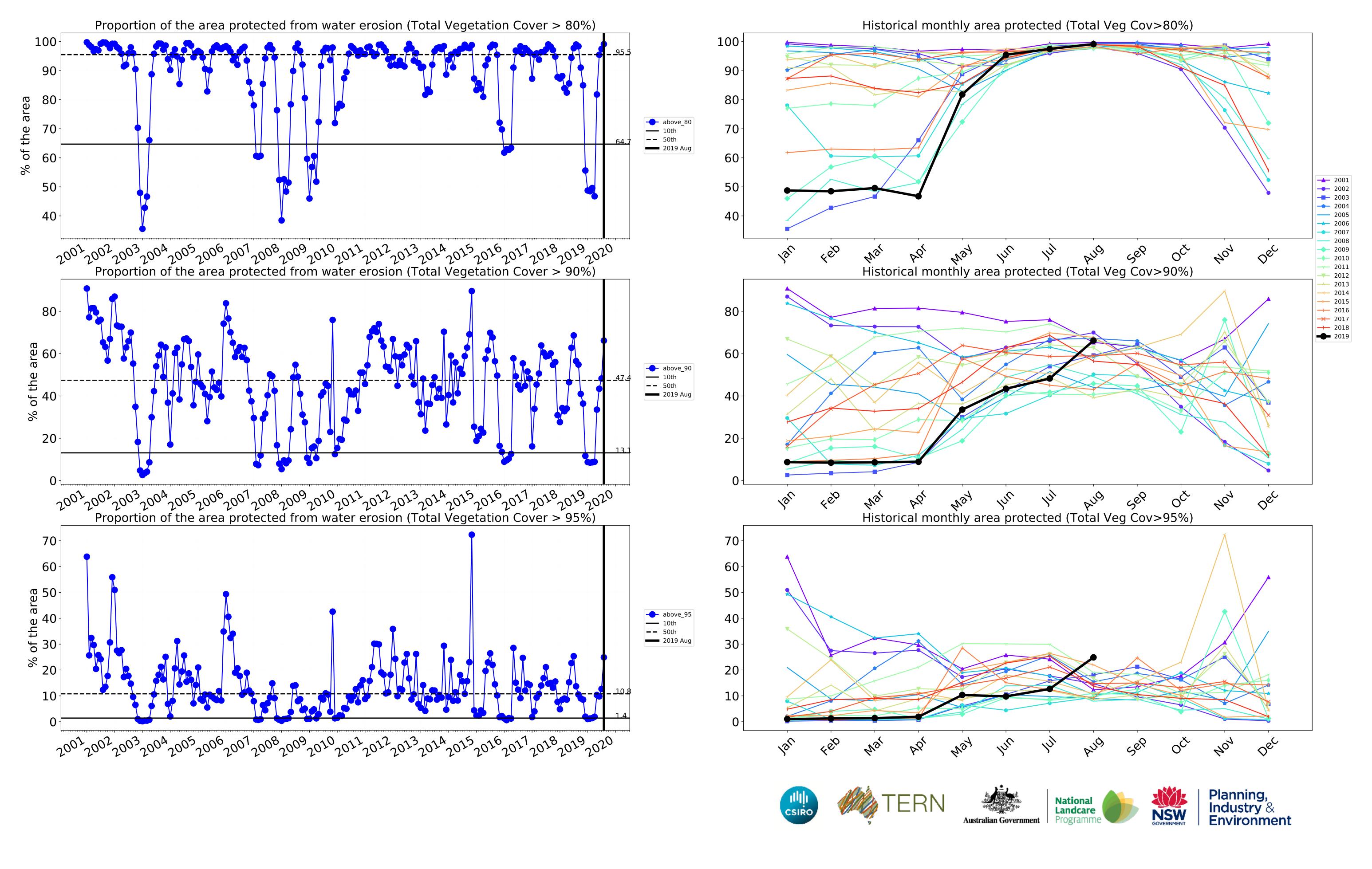




Grazing timeseries

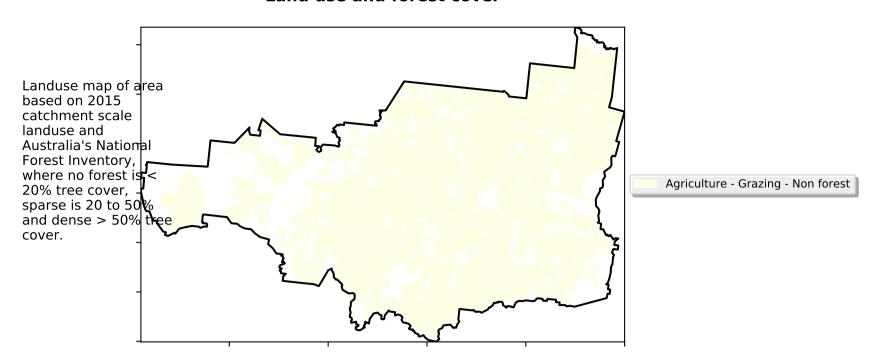




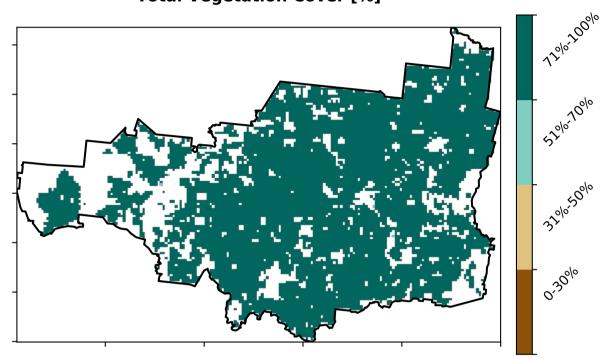


Grazing non forest

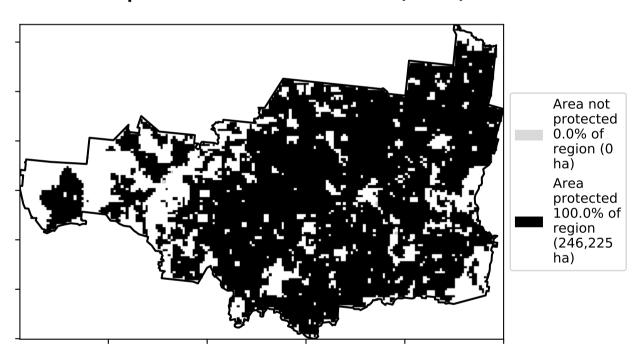
Land use and forest cover



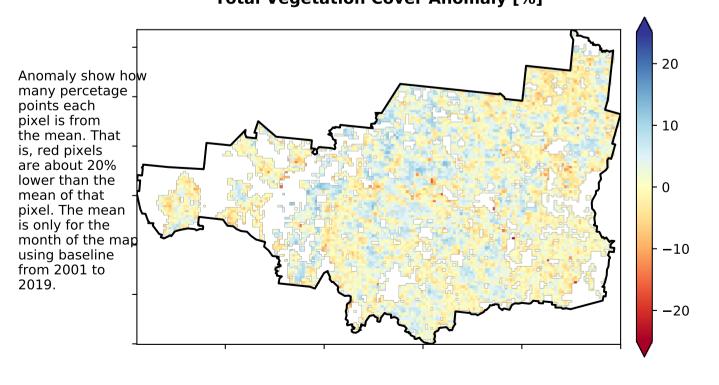
Total Vegetation Cover [%]



% Area protected from water erosion (>70%)

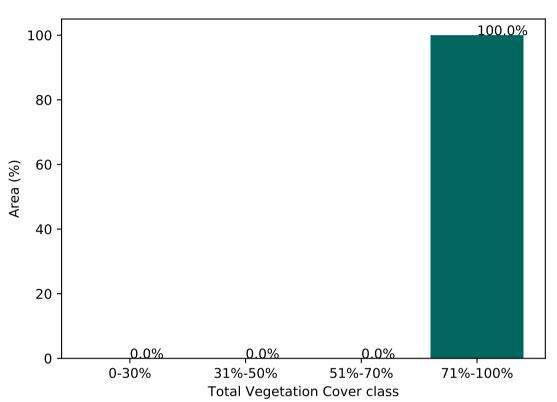


Total Vegetation Cover Anomaly [%]

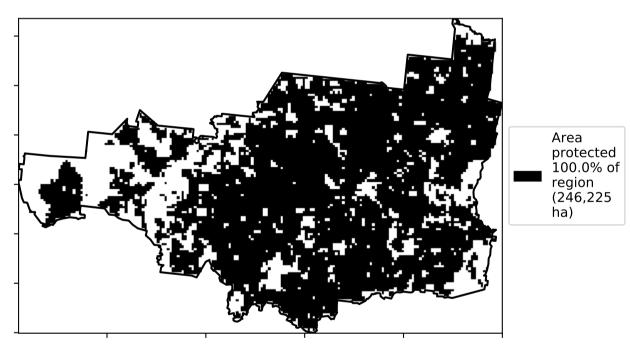


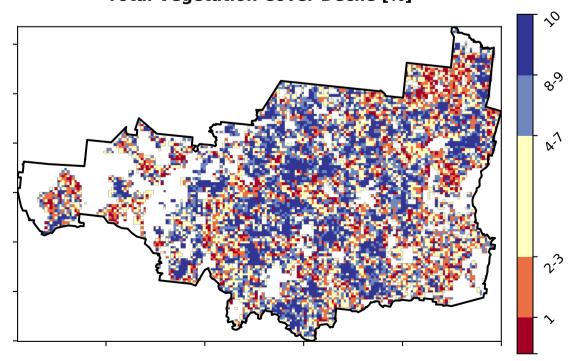
Deciles show where the pixel value lies in the record, from highest to lowest, for that month. That is, red pixels are in the lowest 10% of records for that month of the map using baseline from 2001 to 2019.

Proportion of vegetation cover class in area



% Area protected from wind erosion (>50%)









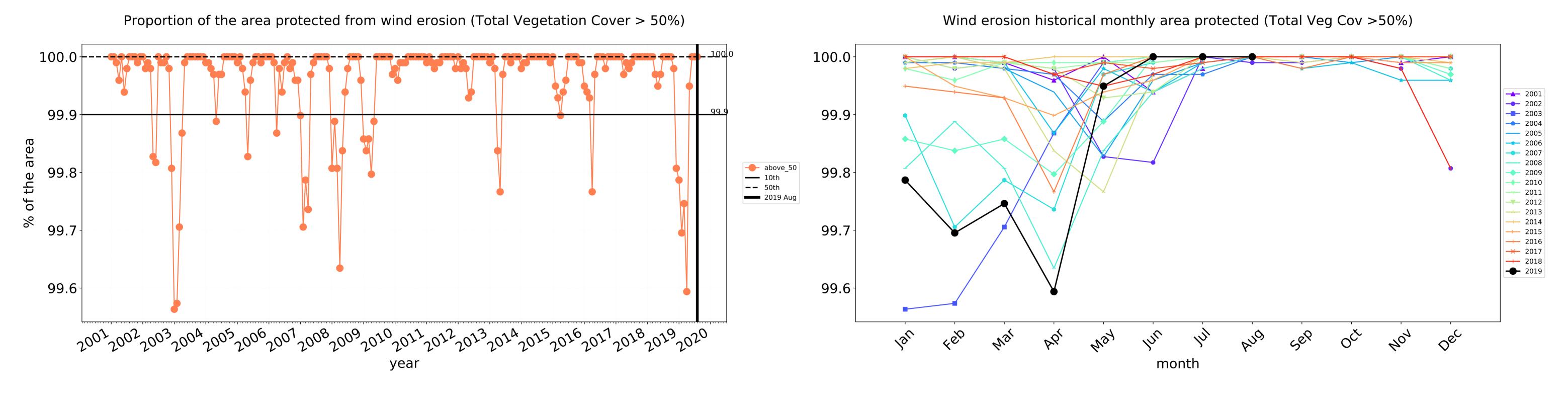


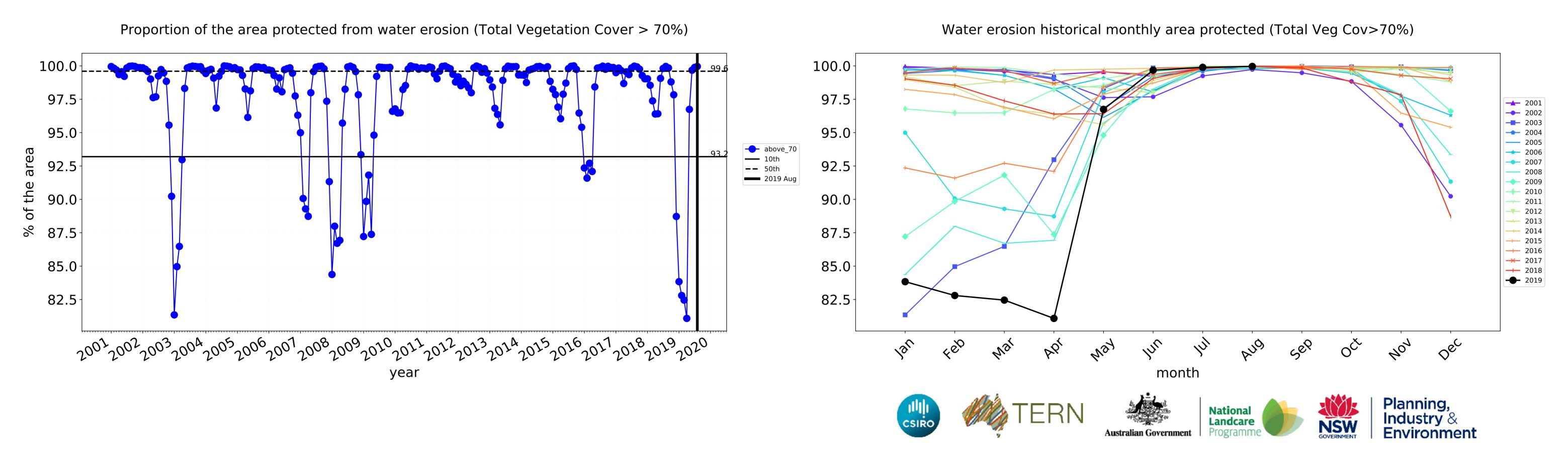


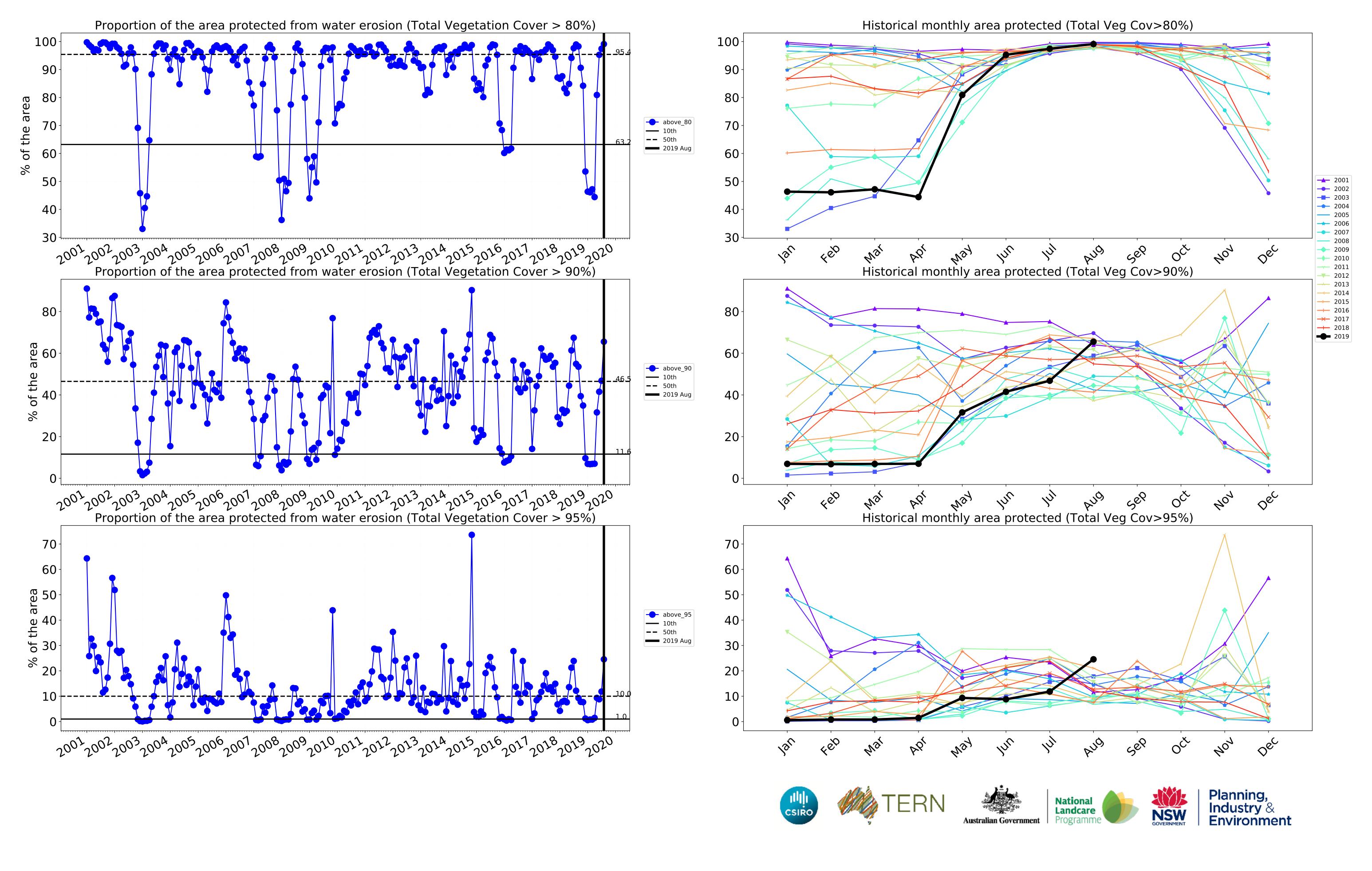




Grazing non forest timeseries





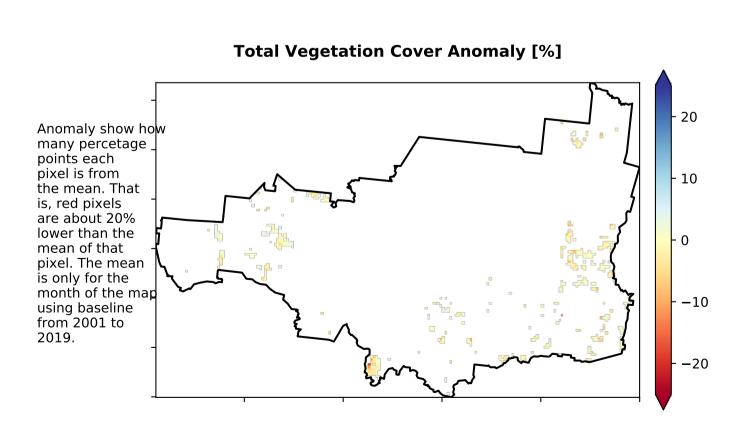


Grazing - Forest (non woodland)

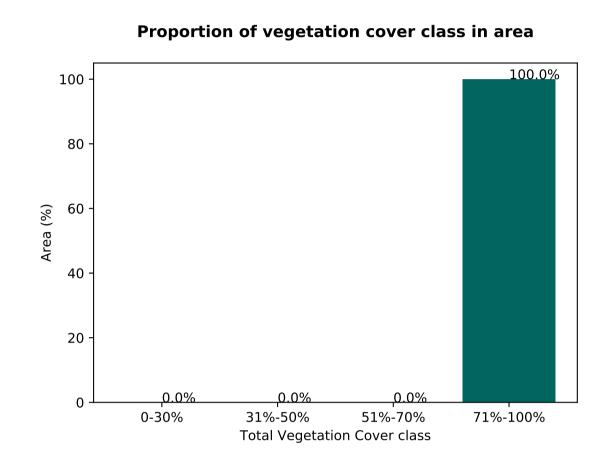
Land use and forest cover Landuse map of area based on 2015 catchment scale landuse and Australia's National Forest Inventory, where no forest is < Agriculture - Grazing - Non-oodland forest 20% tree cover, sparse is 20 to 50 and dense > 50% cover.

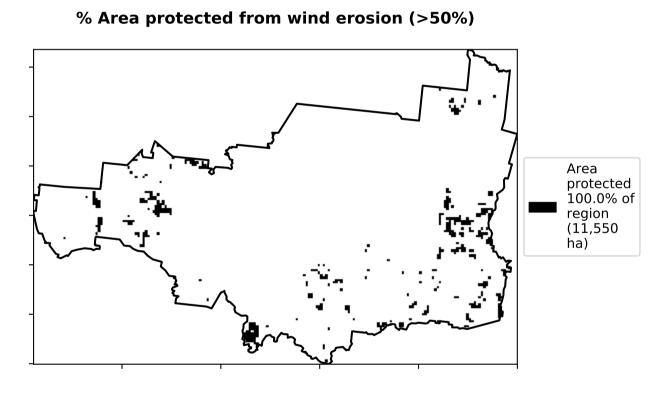
Total Vegetation Cover [%]

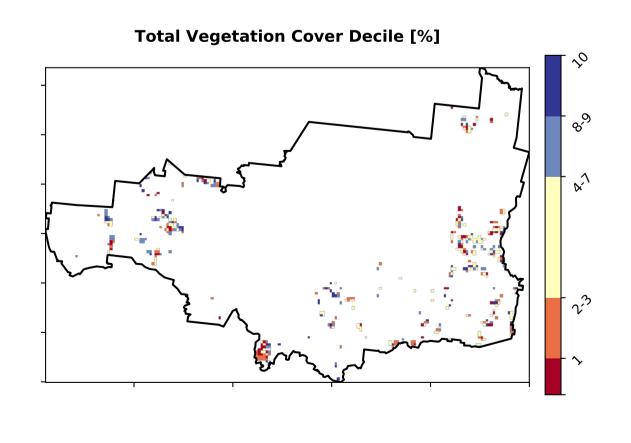
% Area protected from water erosion (>70%) Area protected 100.0% of region (11,550 ha)



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









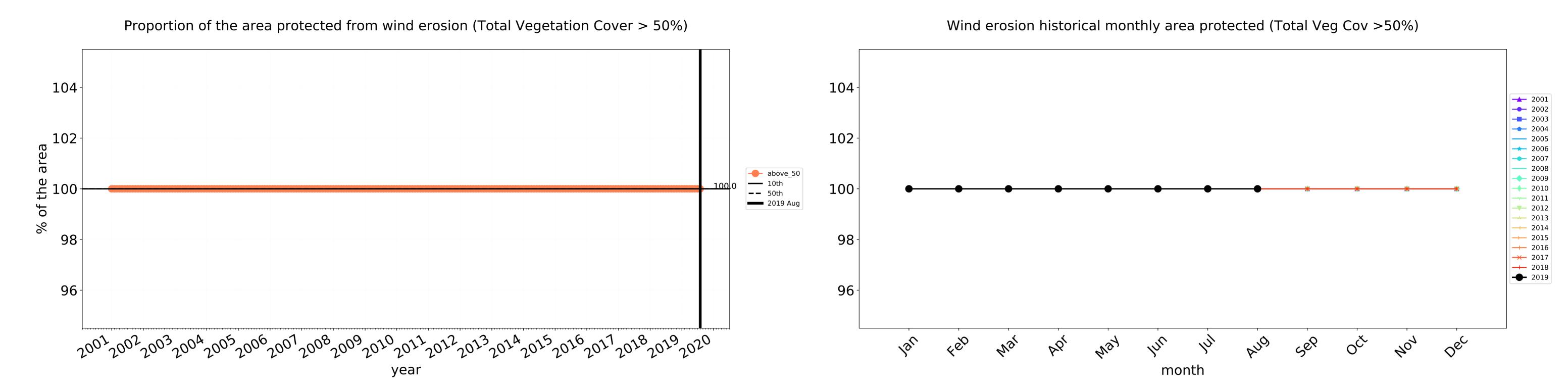


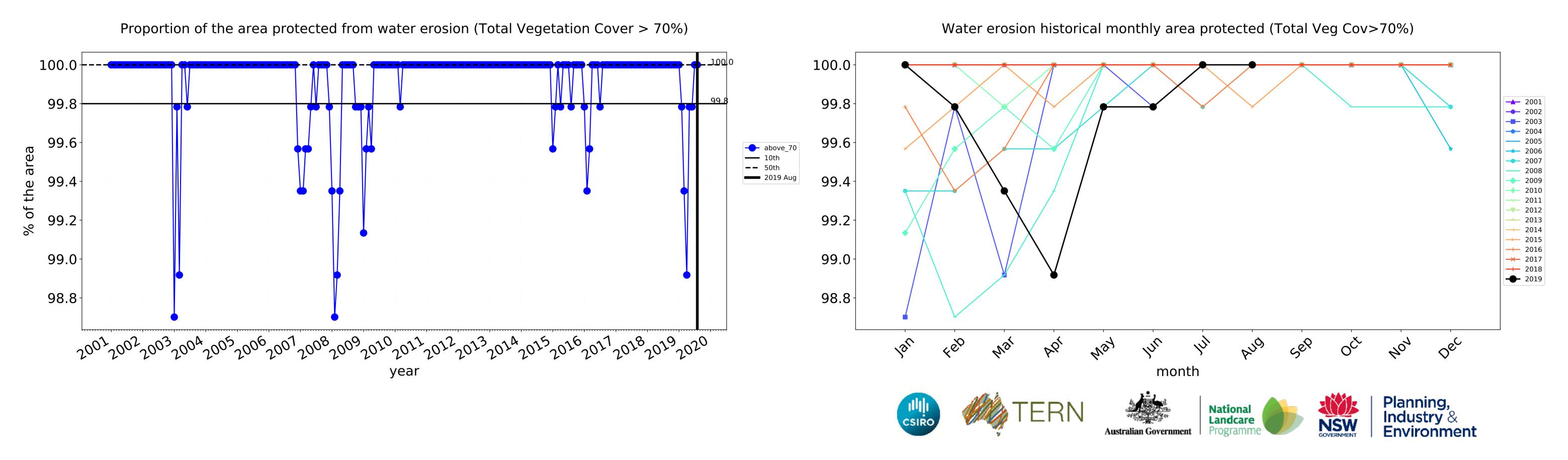


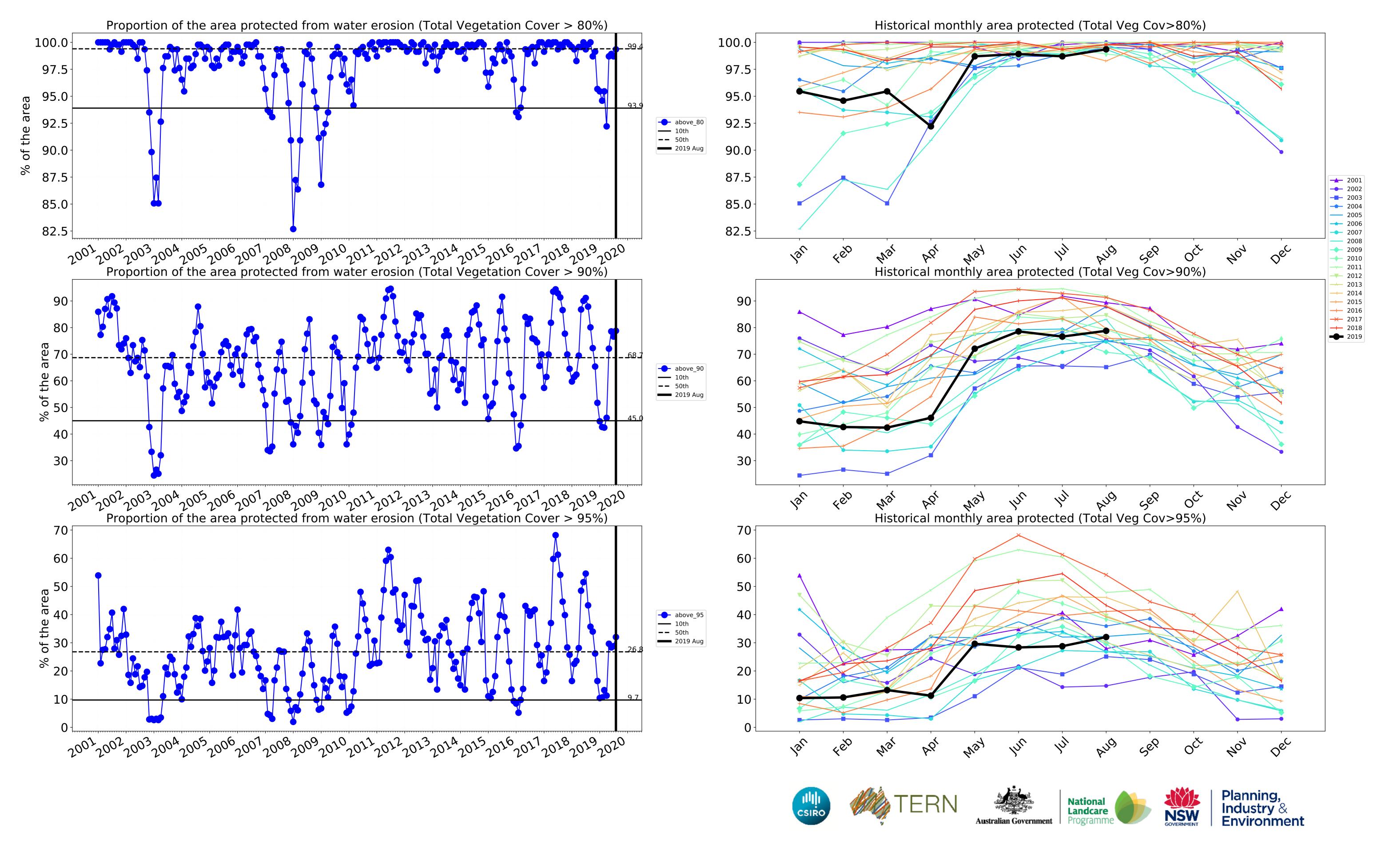






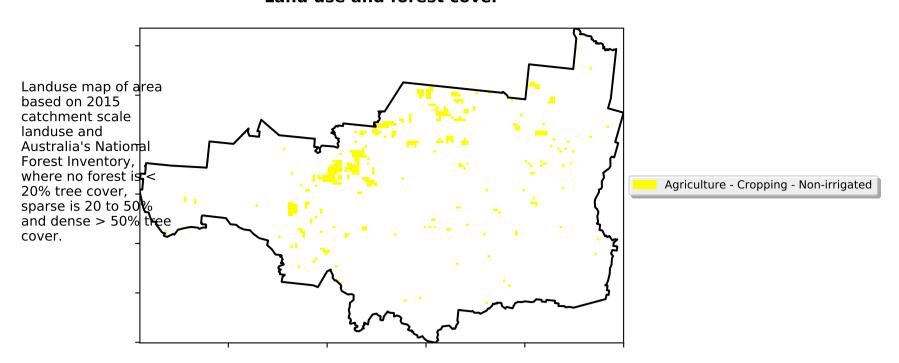




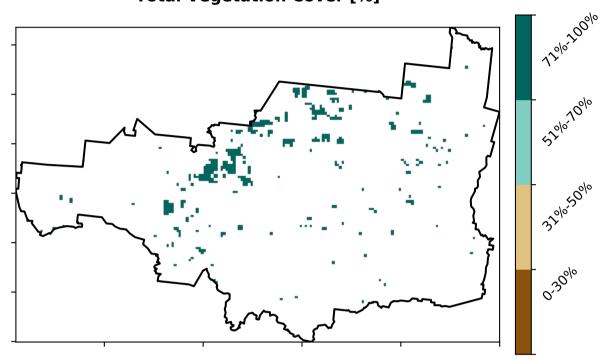


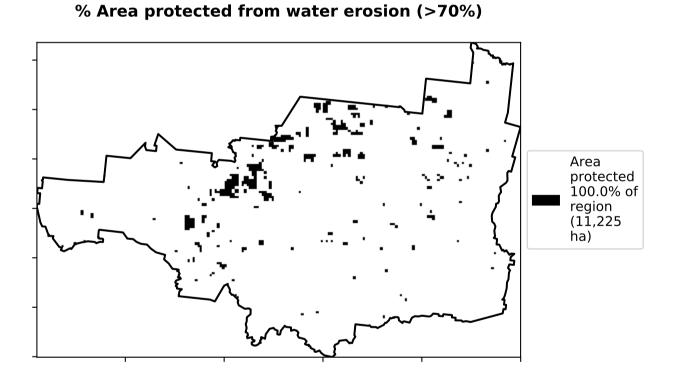
Cropping

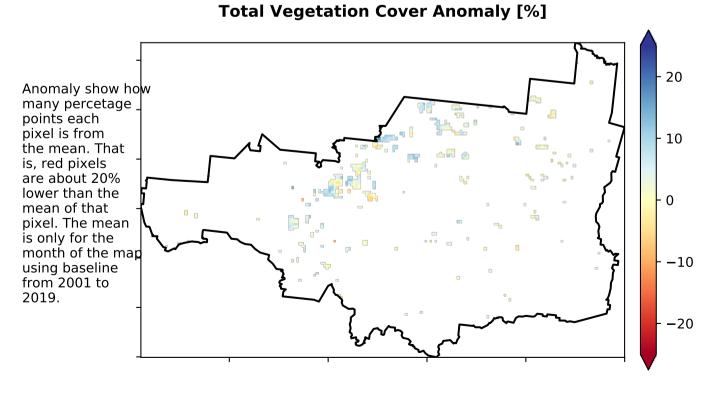
Land use and forest cover



Total Vegetation Cover [%]

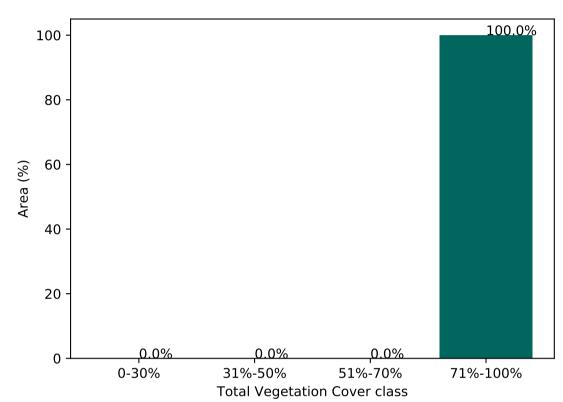




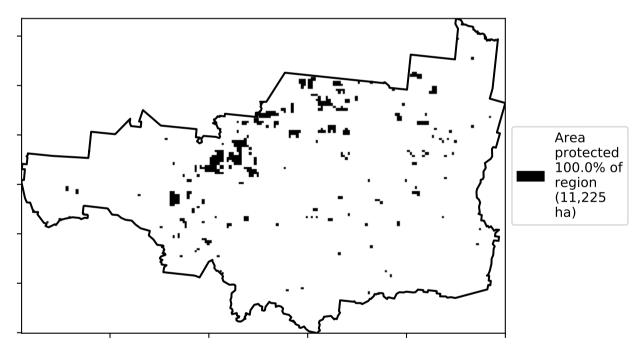


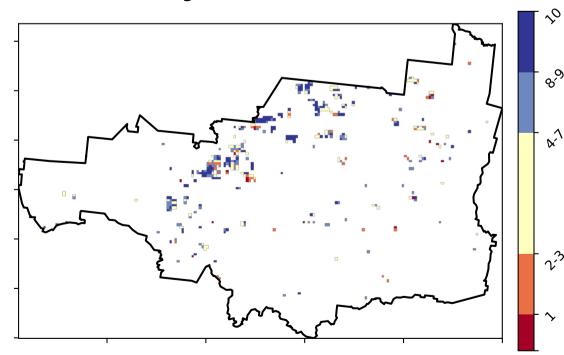
Deciles show where the pixel value lies in the record, from highest to lowest, for that month. That is, red pixels are in the lowest 10% of records for that month of the map using baseline from 2001 to 2019.

Proportion of vegetation cover class in area



% Area protected from wind erosion (>50%)









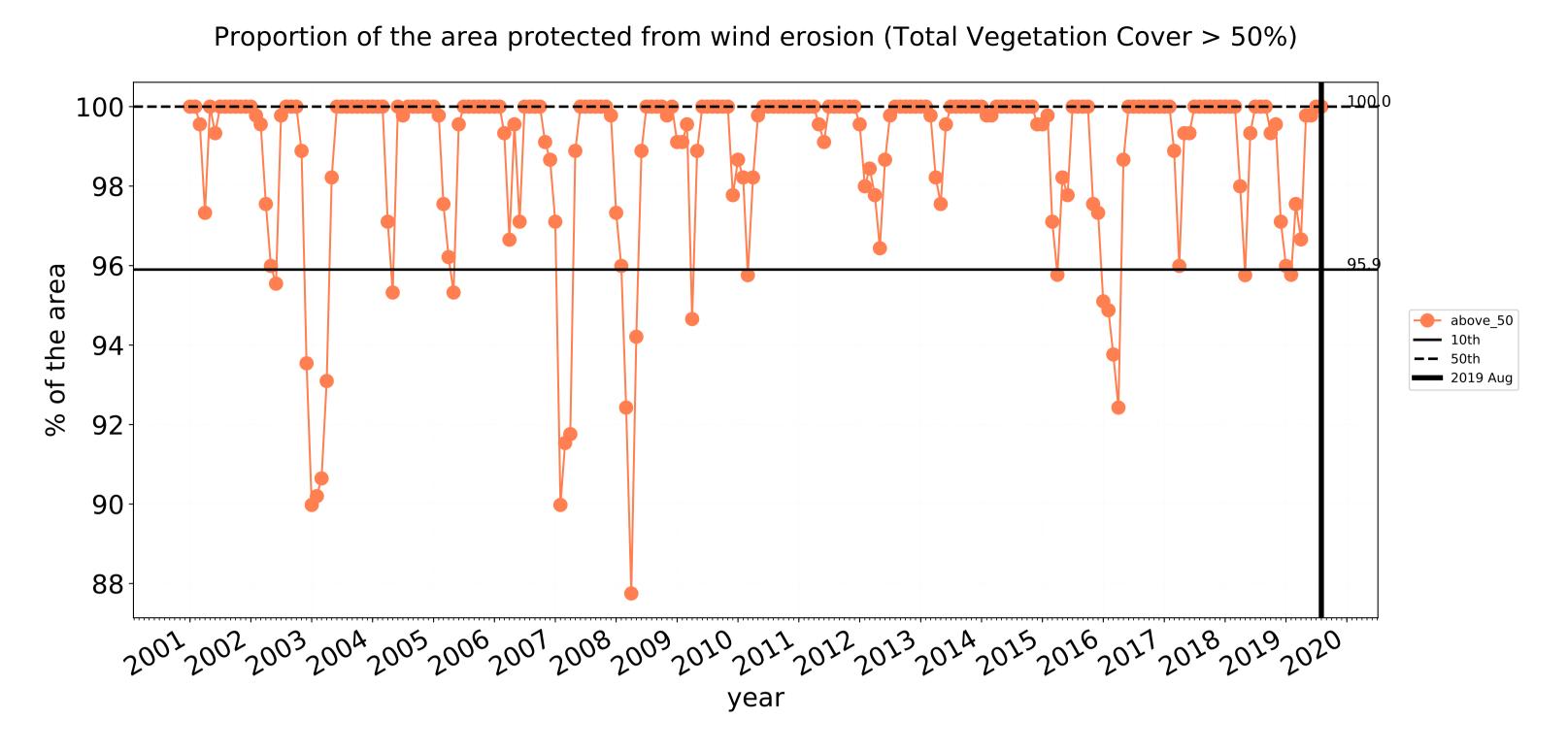


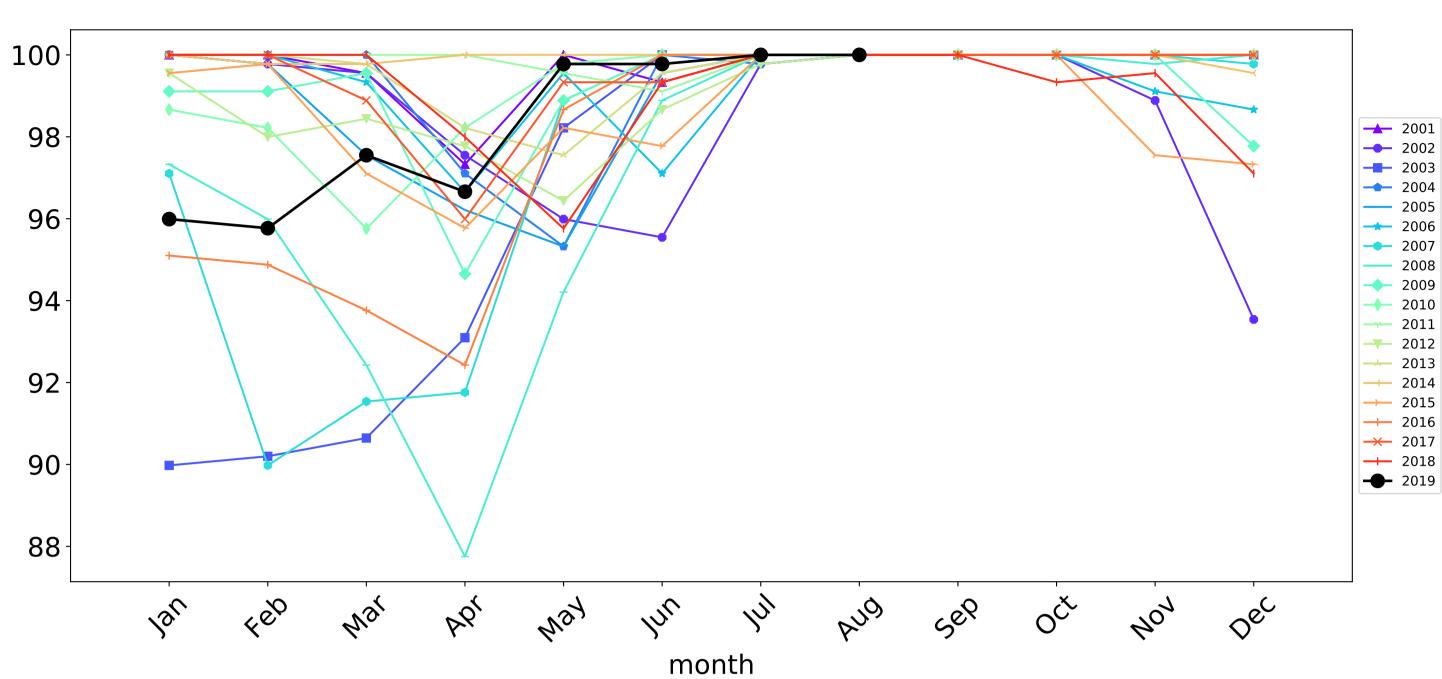




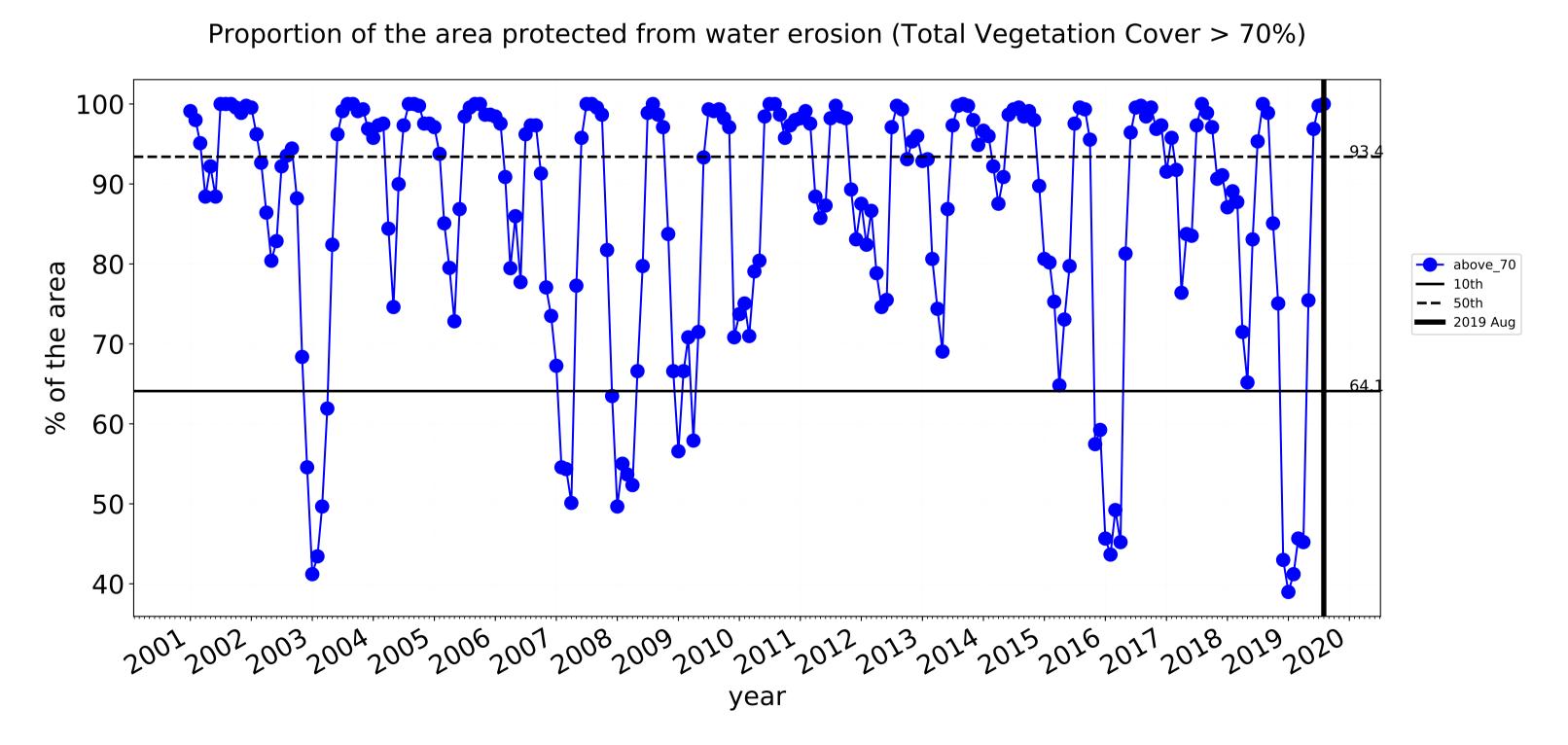


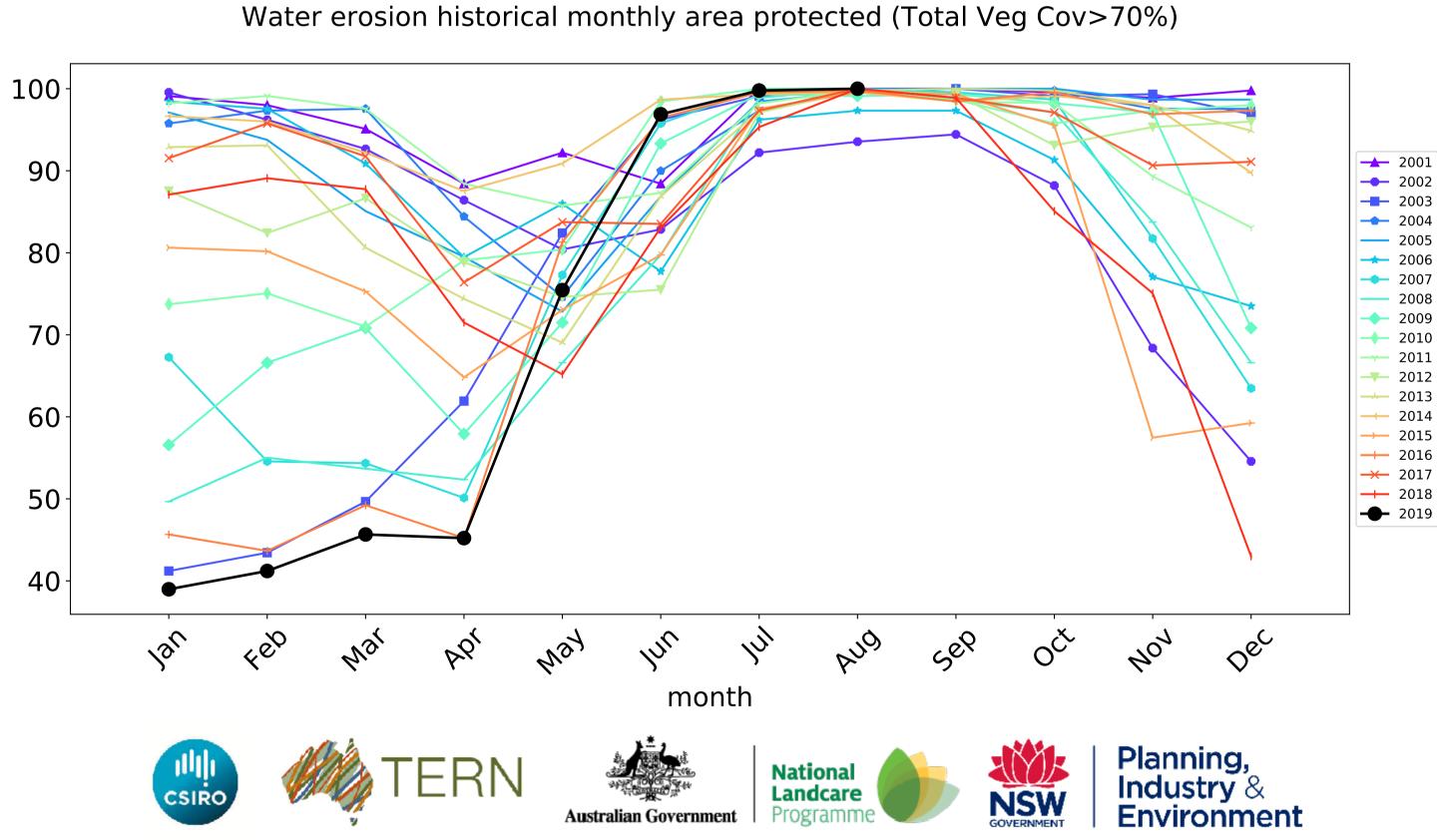
Cropping timeseries

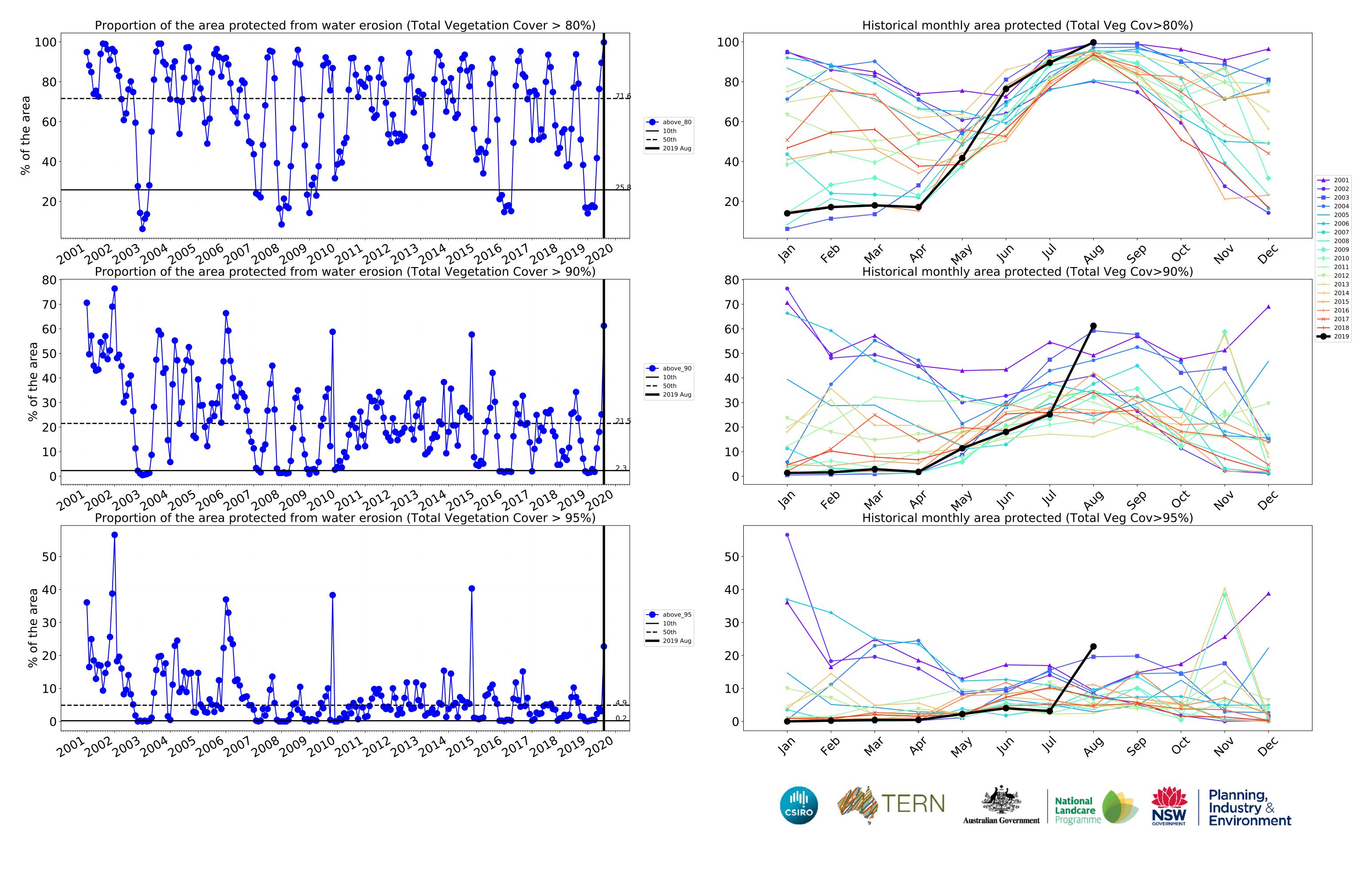




Wind erosion historical monthly area protected (Total Veg Cov >50%)

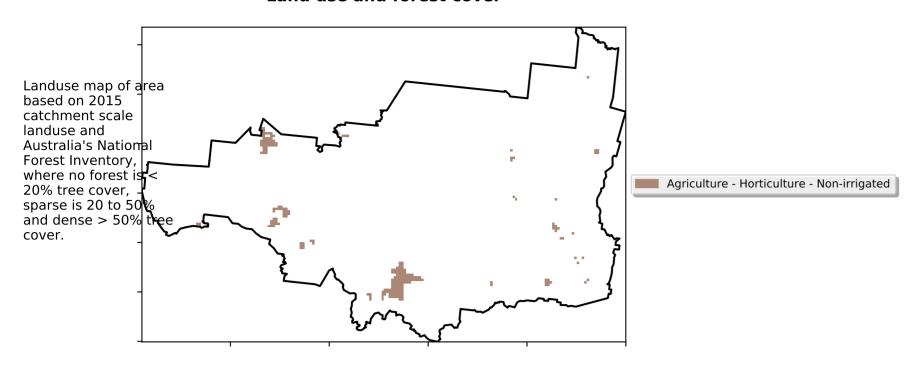




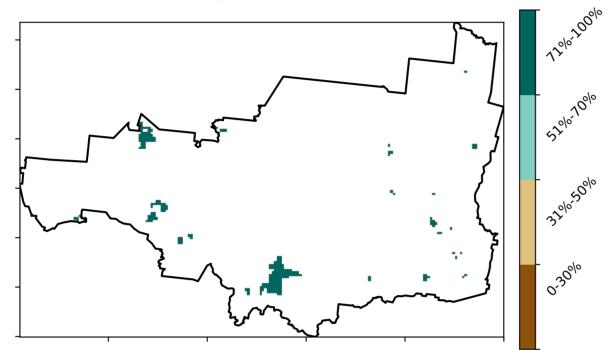


Horticulture

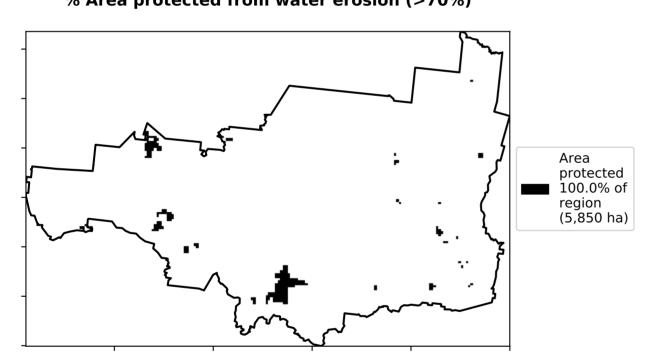
Land use and forest cover



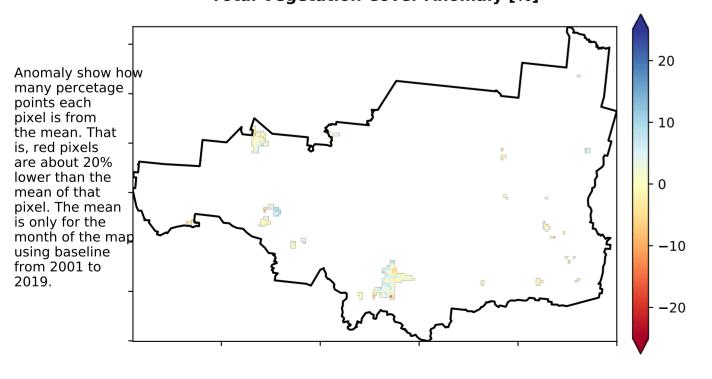
Total Vegetation Cover [%]



% Area protected from water erosion (>70%)

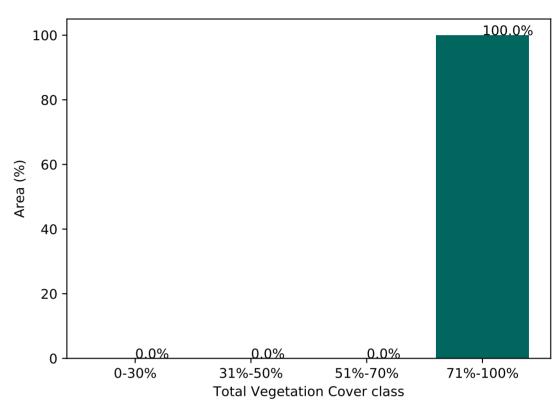


Total Vegetation Cover Anomaly [%]

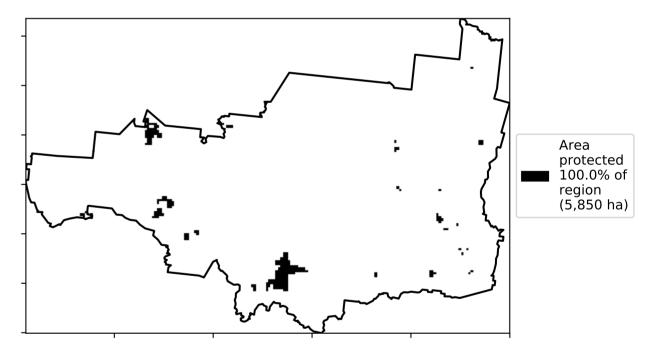


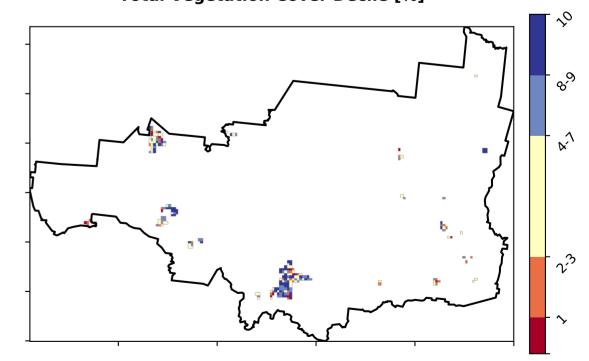
Deciles show where the pixel value lies in the record, from highest to lowest, for that month. That is, red pixels are in the lowest 10% of records for that month of the map using baseline from 2001 to 2019.

Proportion of vegetation cover class in area



% Area protected from wind erosion (>50%)









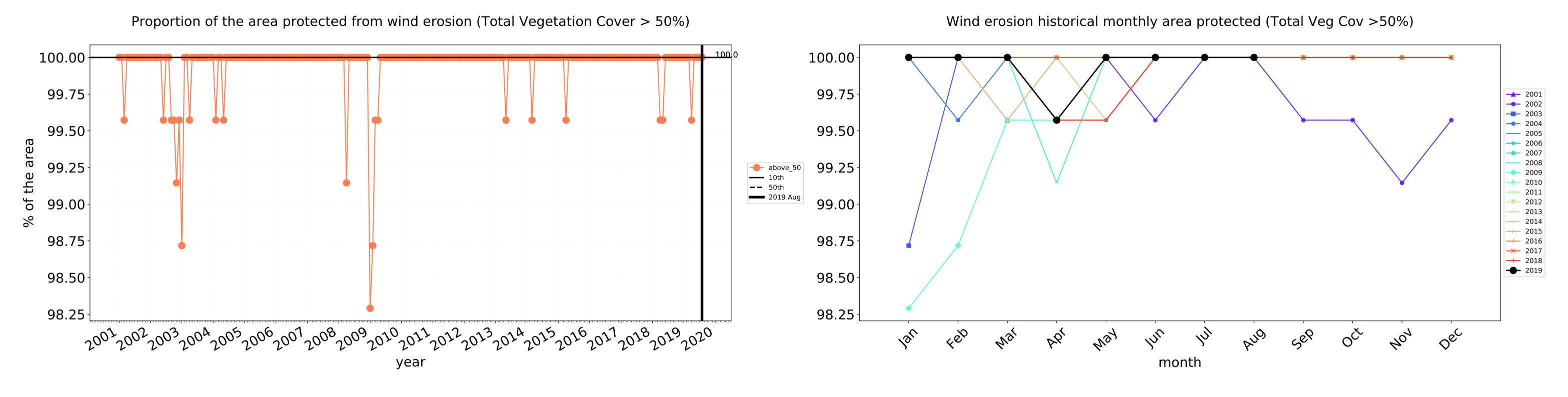


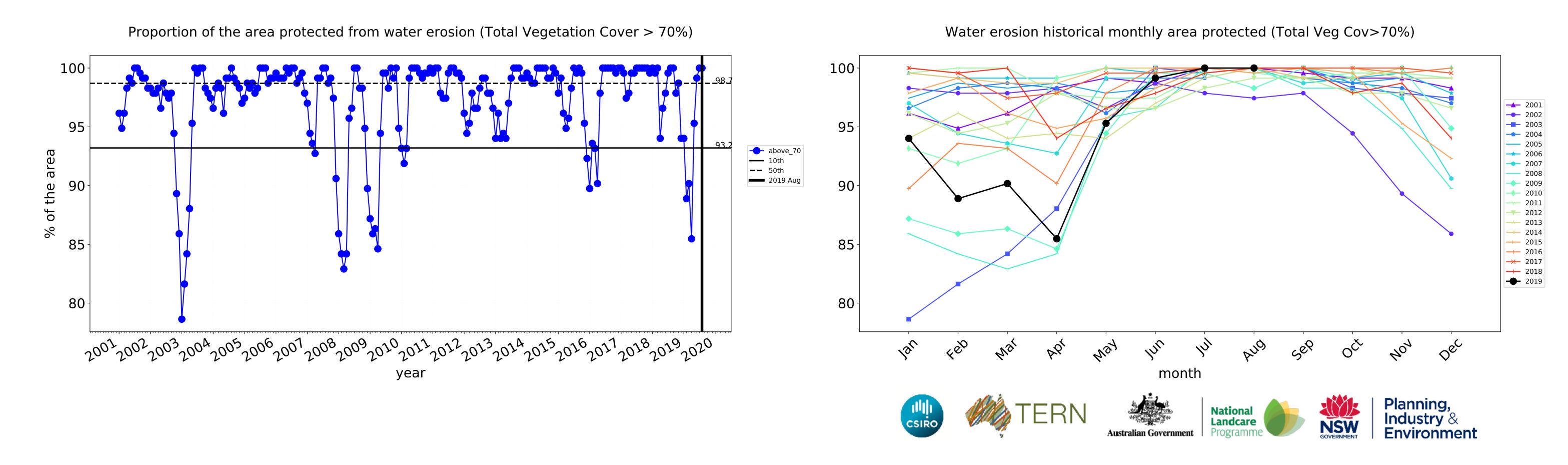


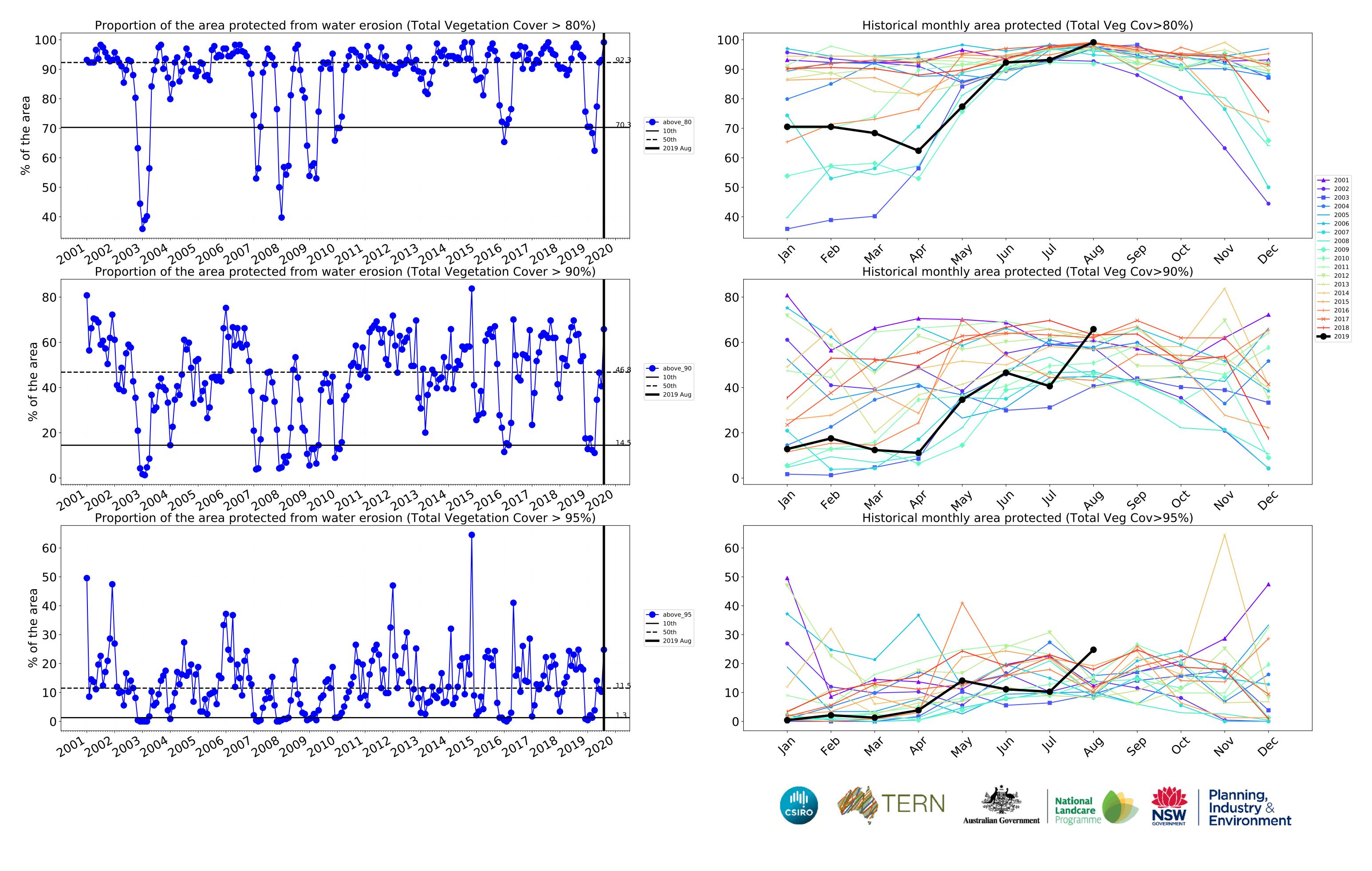




Horticulture timeseries





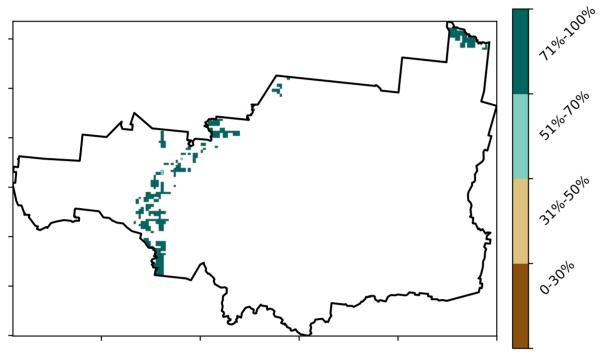


Irrigation

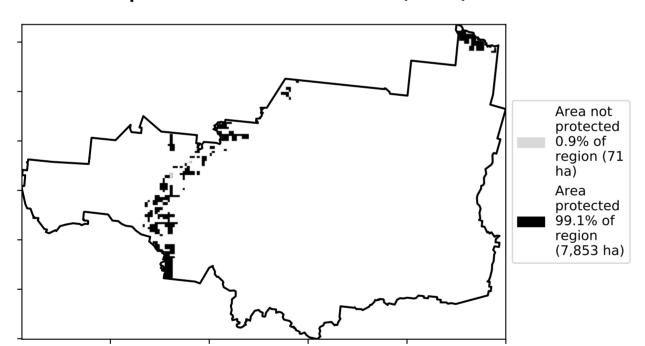
Landuse map of area based on 2015 catchment scale landuse and Australia's National Forest Inventory, Agriculture - Grazing - Irrigated where no forest is < Agriculture - Cropping - Irrigated 20% tree cover, Agriculture - Horticulture - Irrigated sparse is 20 to 50 and dense > 50% cover.

Total Vegetation Cover [%]

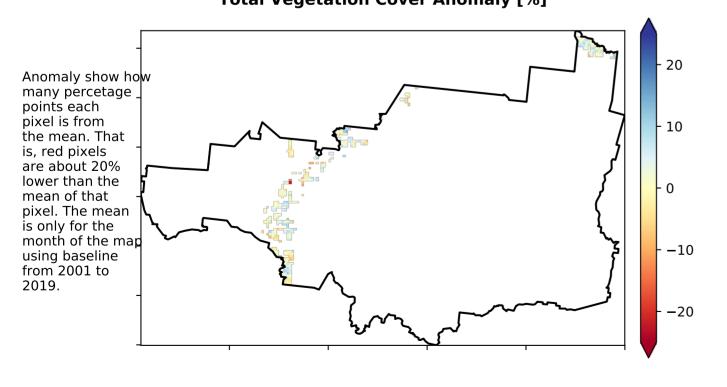
Land use and forest cover



% Area protected from water erosion (>70%)

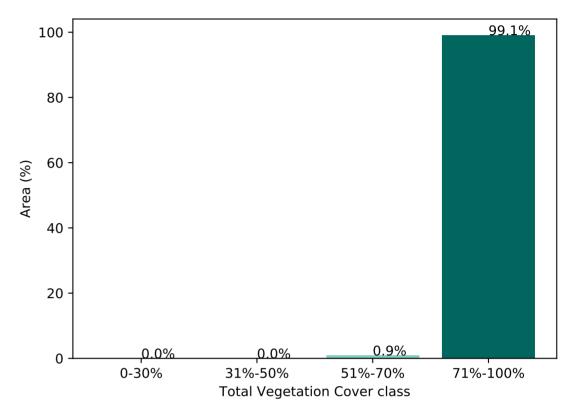


Total Vegetation Cover Anomaly [%]

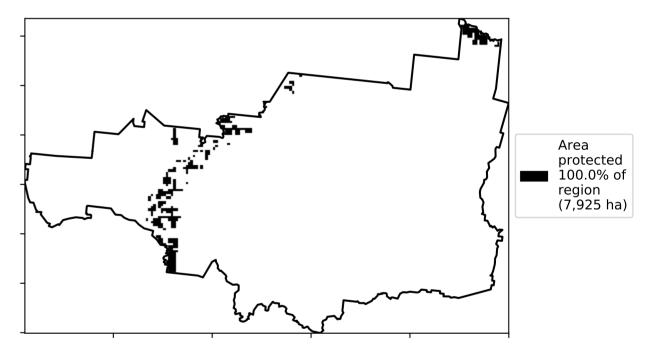


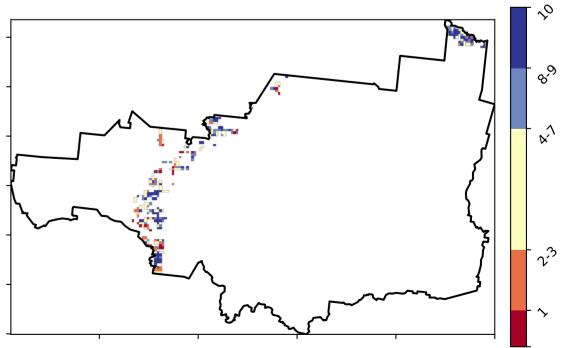
Deciles show where the pixel value lies in the record, from highest to lowest, for that month. That is, red pixels are in the lowest 10% of records for that month of the man using baseling. the map using baseline from 2001 to 2019.

Proportion of vegetation cover class in area



% Area protected from wind erosion (>50%)







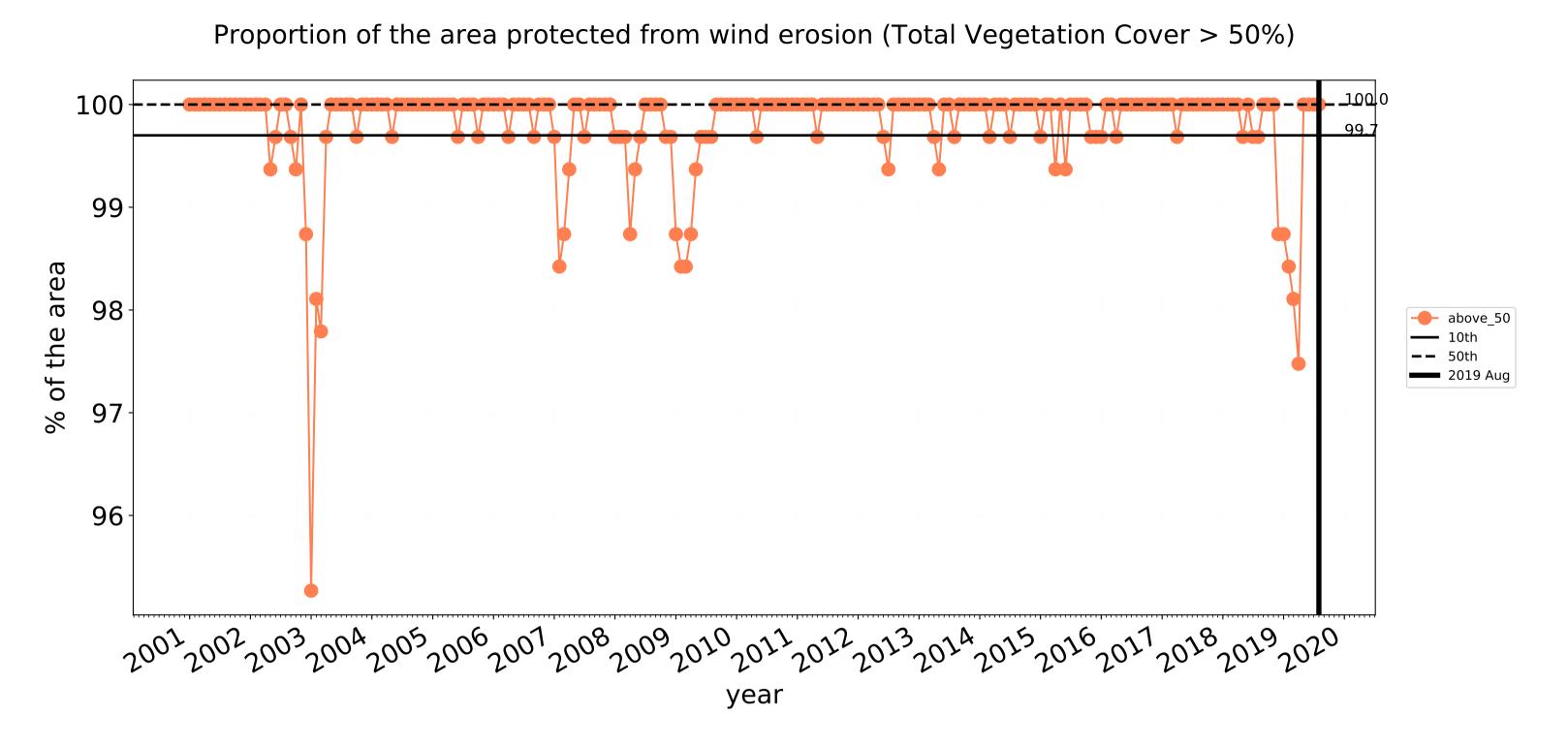


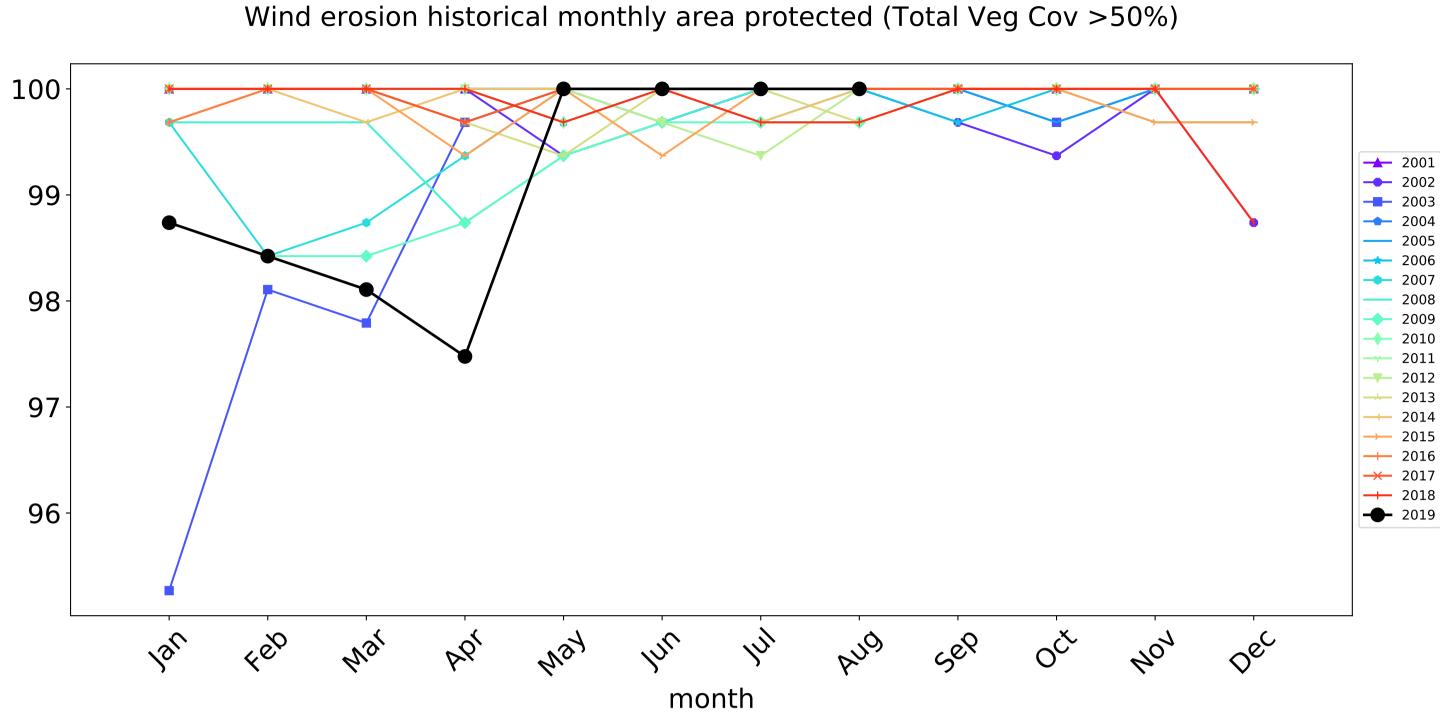


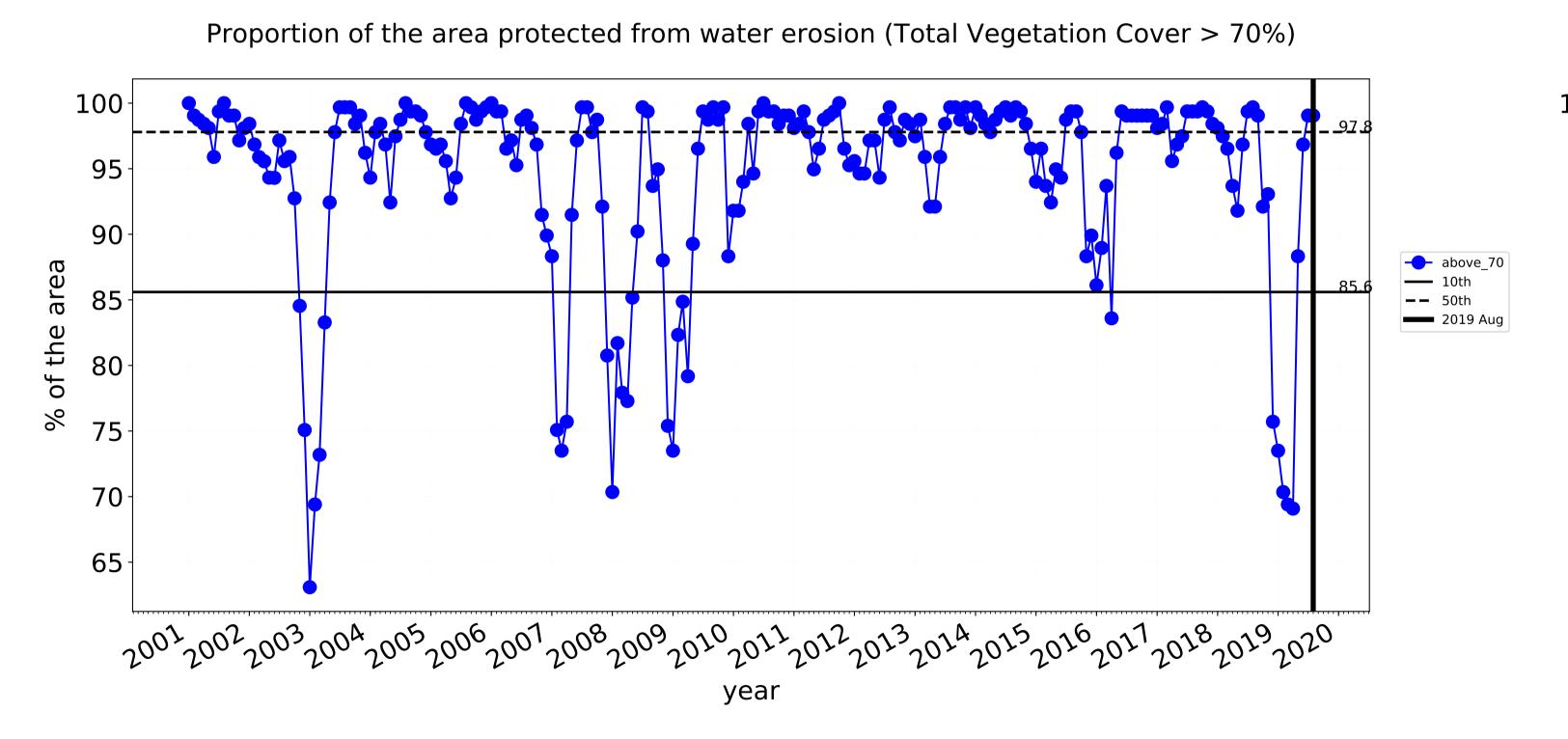


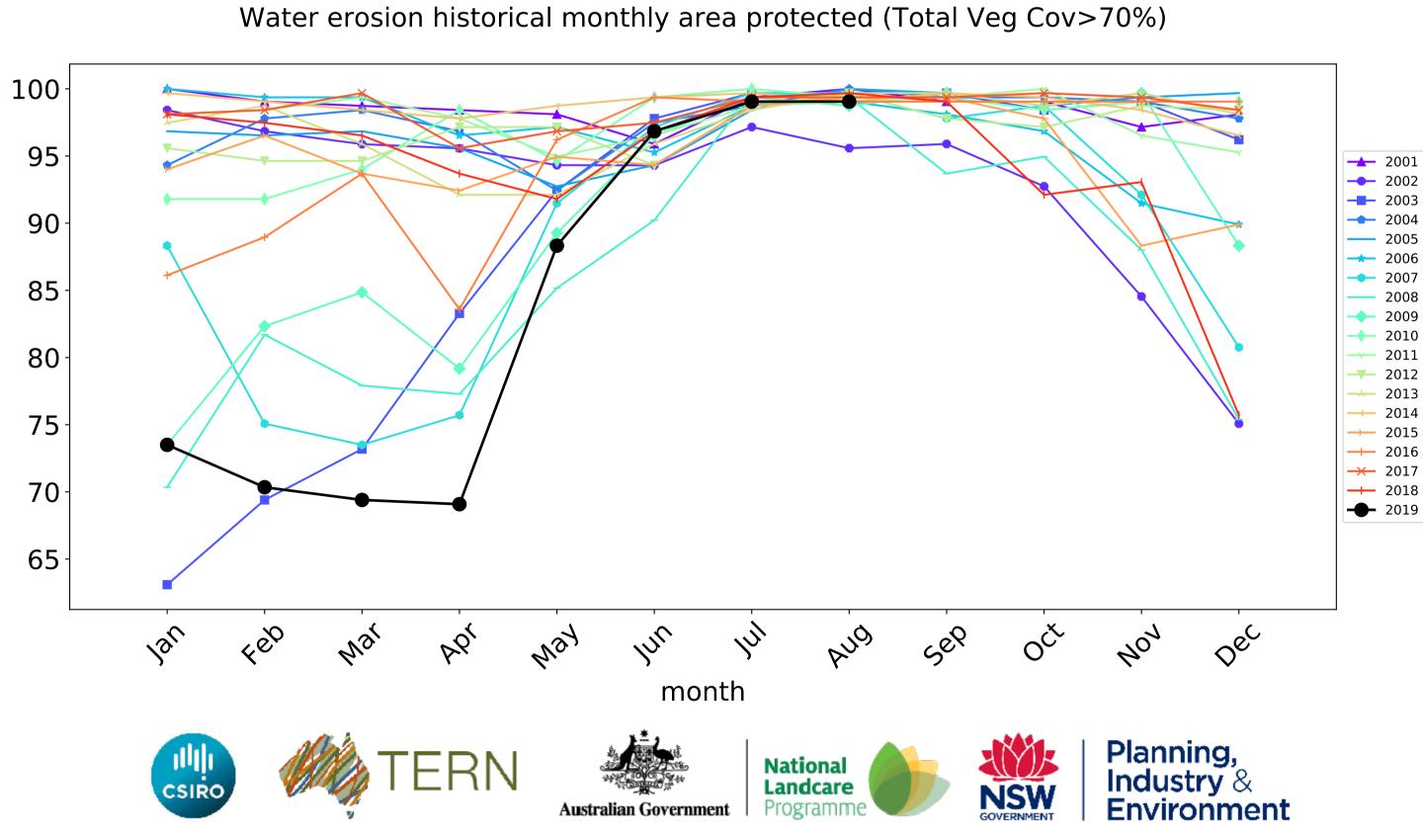


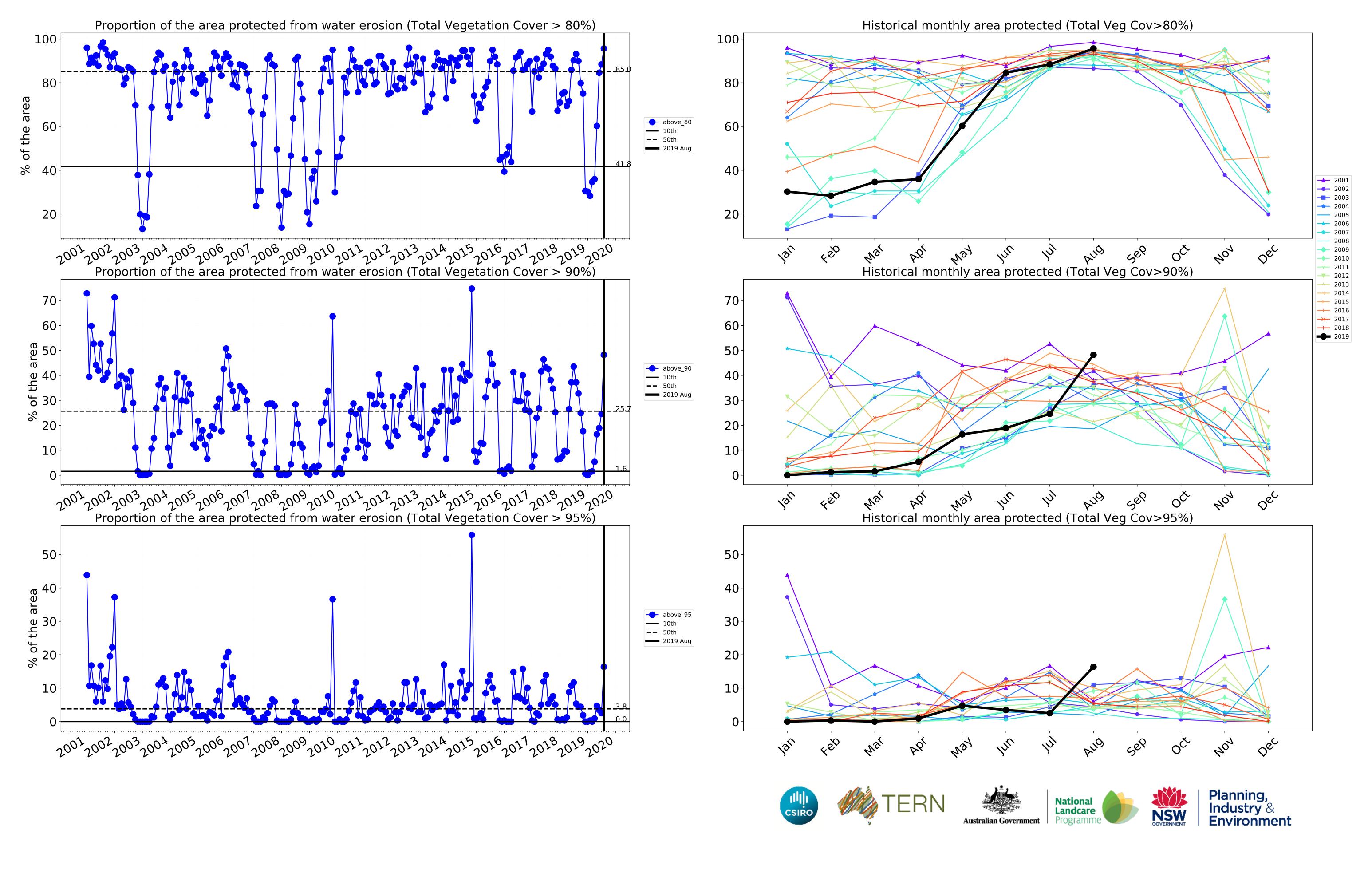










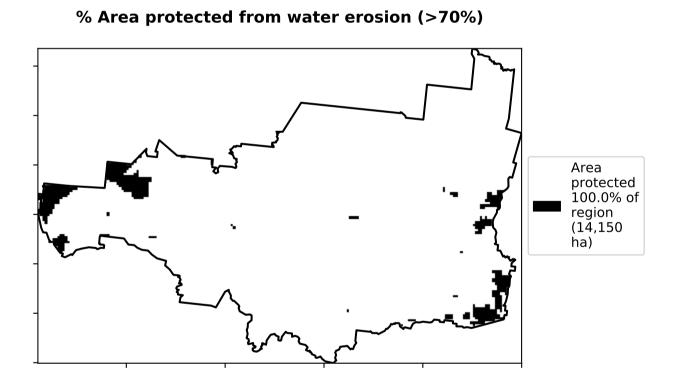


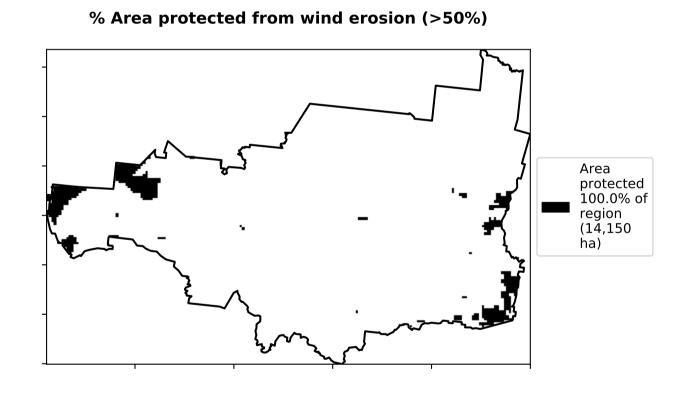
Production native forests and plantation forests

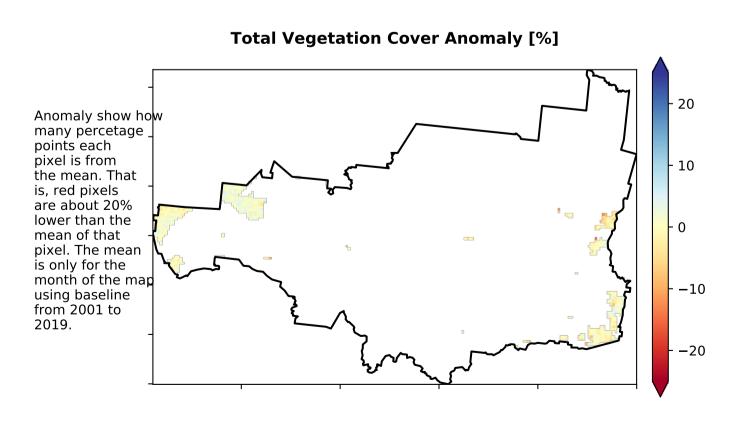
Land use and forest cover Landuse map of area based on 2015 catchment scale landuse and Australia's National Forest Inventory, where no forest is 20% tree cover, 20% tree cover, 20% tree cover.

Total Vegetation Cover [%] Total Vegetation Cover [%] Total Vegetation Cover [%]

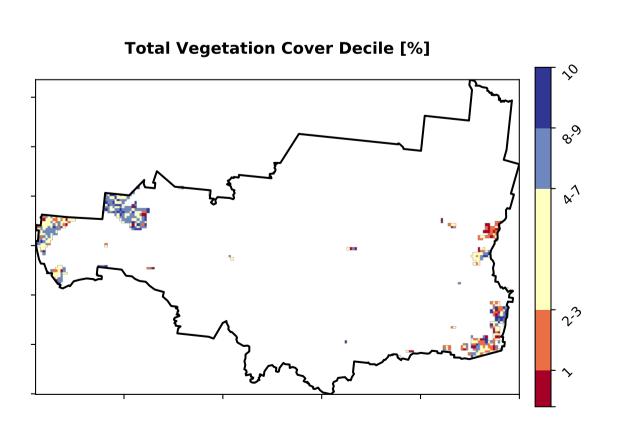
Proportion of vegetation cover class in area 100 - 100.0% 80 - 20 - 20 - 20 - 0.0% 0-30% 31%-50% Total Vegetation Cover class







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







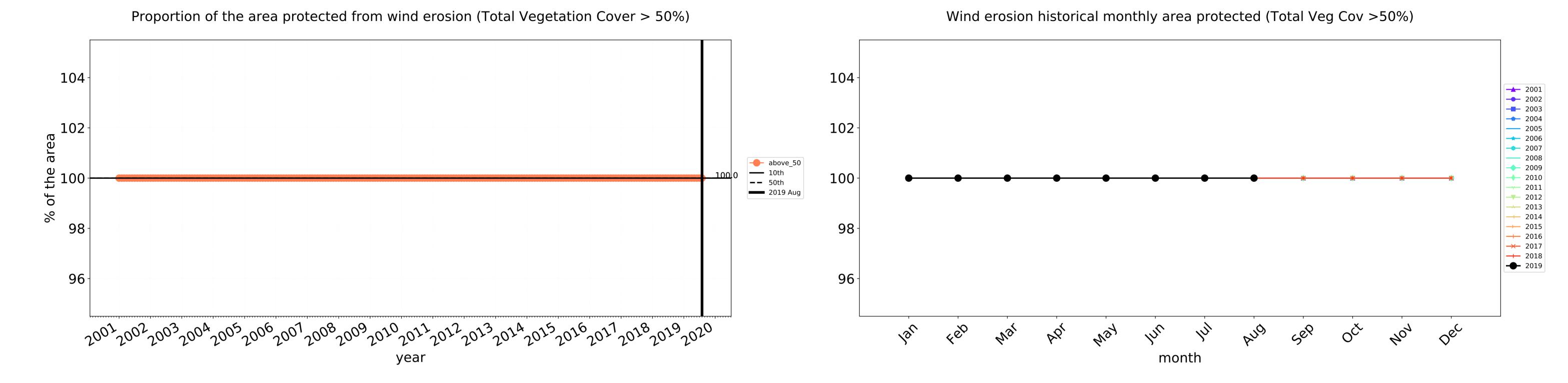


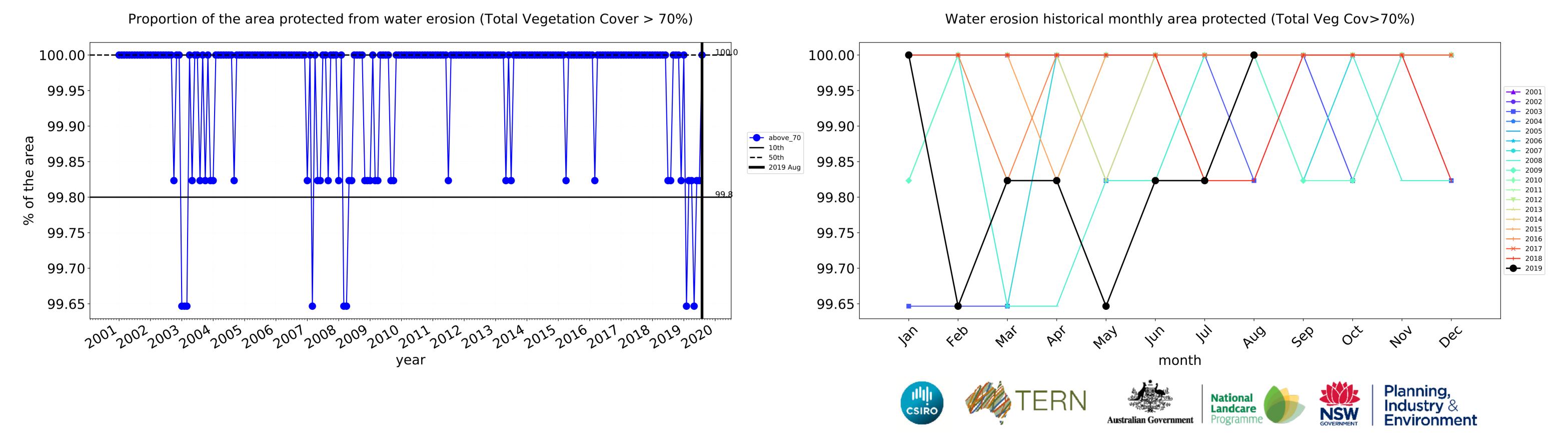


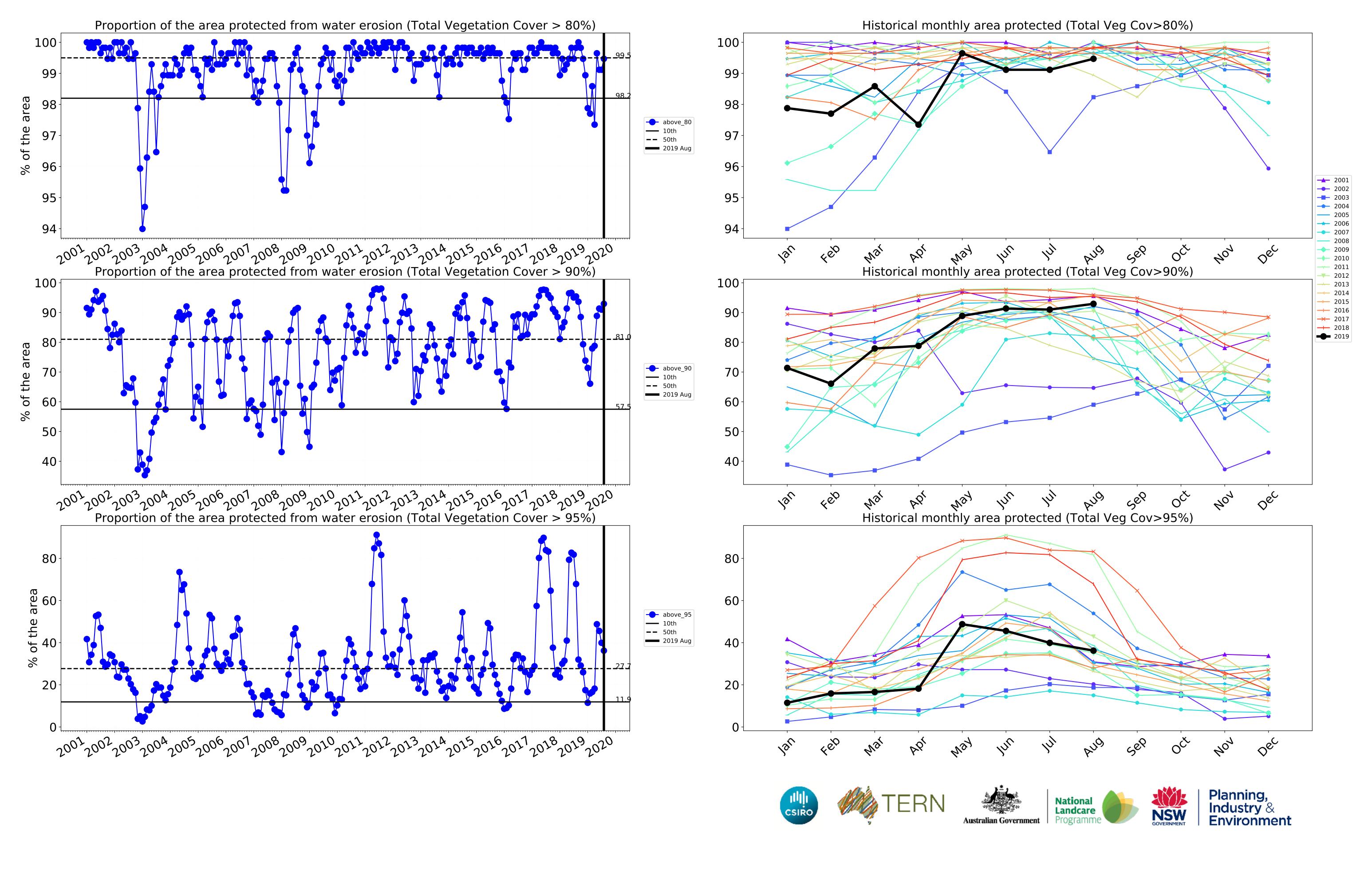




Production native forests and plantation forests timeseries







Strathbogie_(S) (330,275 ha and no data 26 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	330,275	100.0% 330,275	100.0% 330,275	99.8% 329,575	98.6% 325,650	66.3% 219,100	24.5% 80,850
Conservation and natural environments	15,192	100.0% 15,192	100.0% 15,192	100.0% 15,192	98.5% 14,967	86.1% 13,086	28.7% 4,362
Conservation and natural environments Forest (non woodland)	10,899	100.0% 10,899	100.0% 10,899	100.0% 10,899	99.5% 10,849	95.0% 10,356	32.1% 3,501
Agriculture	285,687	100.0% 285,687	100.0% 285,687	99.9% 285,511	99.0% 282,973	65.5% 187,031	24.6% 70,152
Grazing	259,265	100.0% 259,265	100.0% 259,265	100.0% 259,165	99.1% 256,989	66.2% 171,551	24.9% 64,503
Grazing non forest	246,385	100.0% 246,385	100.0% 246,385	100.0% 246,285	99.1% 244,183	65.5% 161,479	24.6% 60,489
Grazing - Forest (non woodland)	11,559	100.0% 11,559	100.0% 11,559	100.0% 11,559	99.4% 11,484	78.8% 9,107	32.0% 3,703
Cropping	11,229	100.0% 11,229	100.0% 11,229	100.0% 11,229	99.8% 11,204	61.2% 6,877	22.7% 2,550
Horticulture	5,944	100.0% 5,944	100.0% 5,944	100.0% 5,944	99.1% 5,894	65.8% 3,912	24.8% 1,473
Irrigation	7,926	100.0% 7,926	100.0% 7,926	99.1% 7,851	95.6% 7,576	48.3% 3,825	16.4% 1,300
Production native forests and plantation forests	14,201	100.0% 14,201	100.0% 14,201	100.0% 14,201	99.5% 14,126	92.9% 13,198	36.2% 5,143











