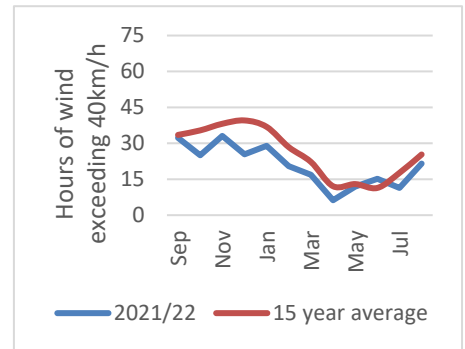


<b>Dust activity</b>	Very little dust in NSW; minor dust in Central Australia
<b>Wind strength</b>	Increasing from July 2022; average for the month
<b>Groundcover</b>	Almost unchanged across all NRM
<b>Rainfall</b>	Much wetter than average for New South Wales

## Dust activity

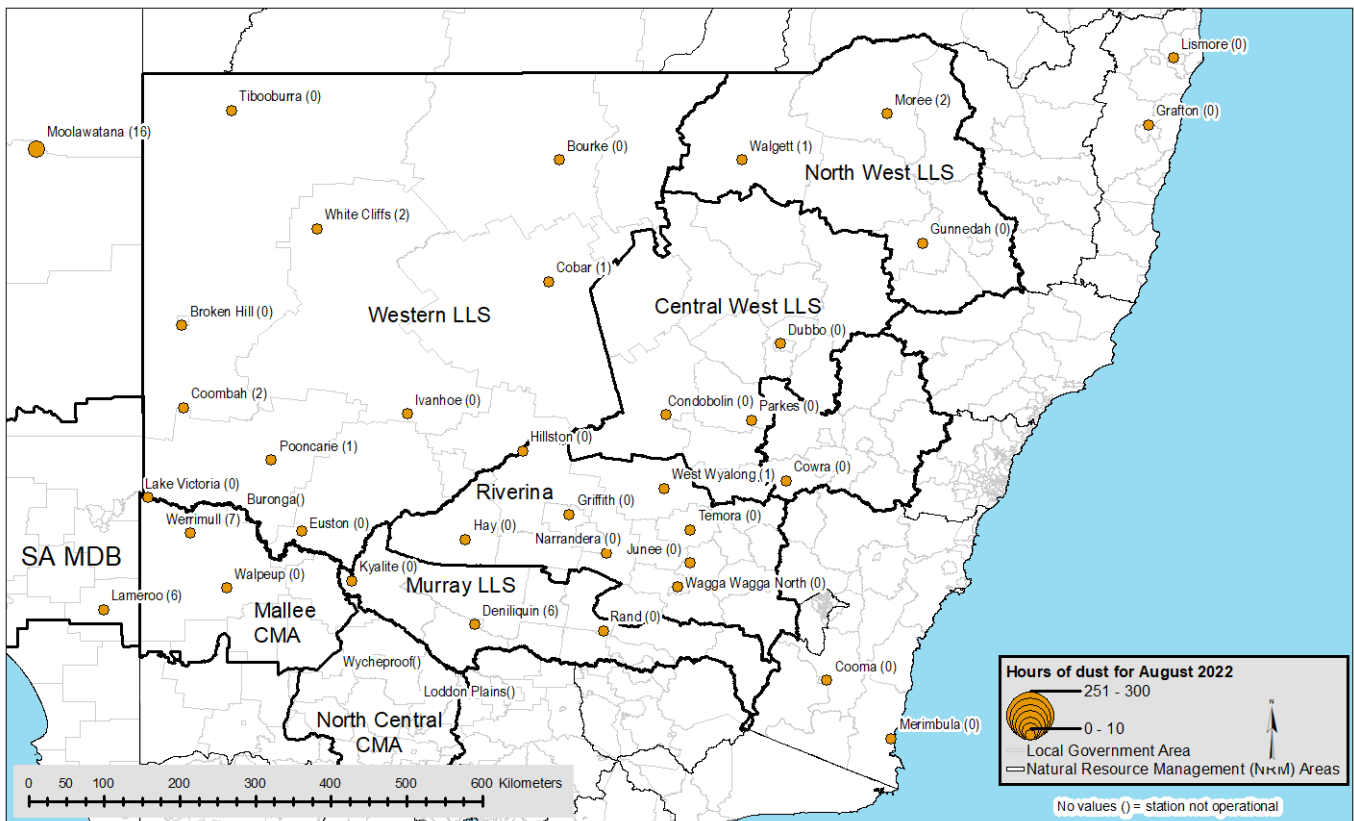
New South Wales was virtually dust free in August 2022, with only Pooncarie and Coombah recording one and two hours, respectively (Figure 2). Slightly more dust occurred in South Australia (16 hours at Moolawatana and 6 hours at Lameroo) and Victoria (7 hours at Werrimull).

Much above average rainfall in August 2022 (Figure 7a) and exceptionally high groundcover levels (Figure 3 and Table 1) prevented any significant dust from occurring.



**Figure 1** Hours of wind exceeding 40km/h – average across all sites

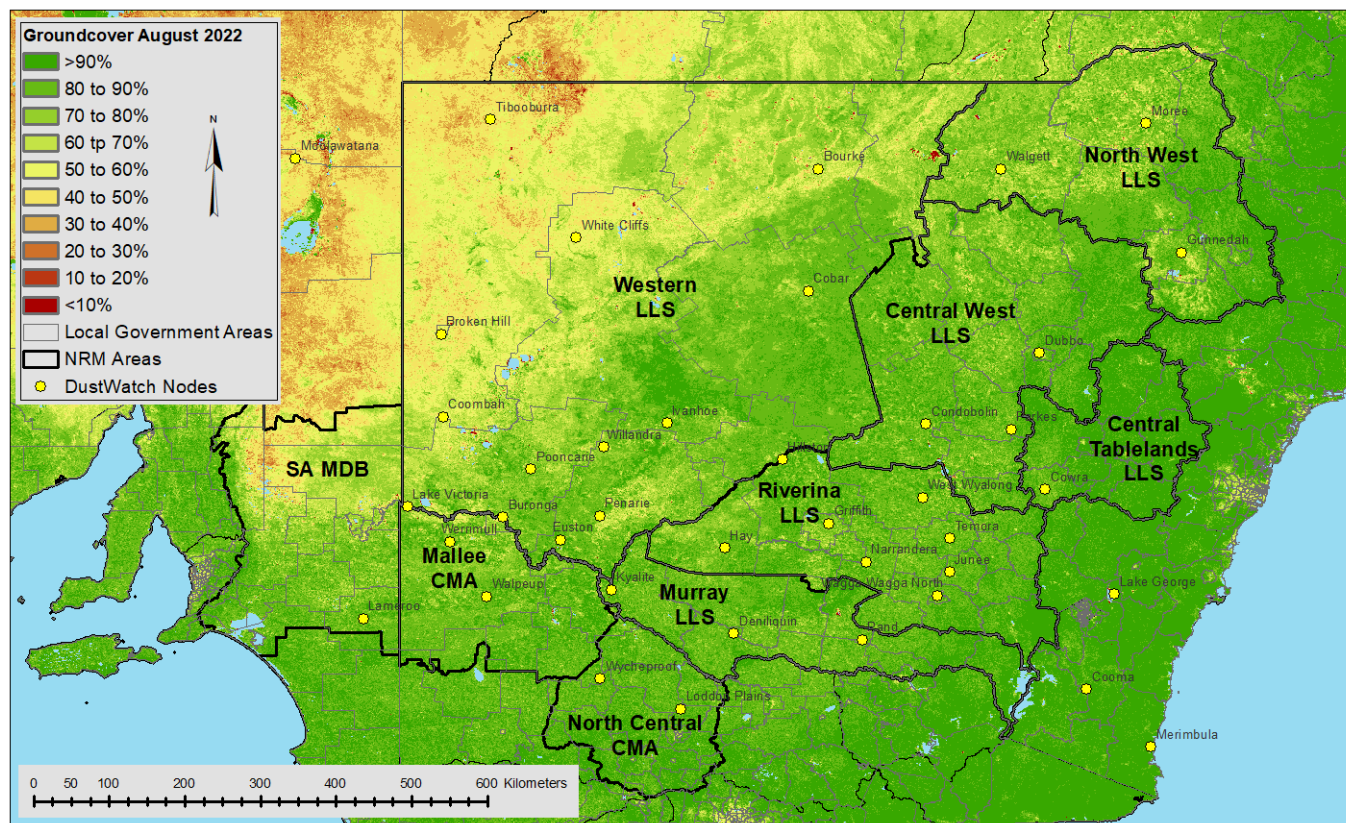
Note: Real time dust measurements from all our monitoring sites are at: Rural air quality network – live data



**Figure 2** Hours of dust activity (number in brackets) at each DustWatch site in August 2022

# Groundcover

The area with > 50% groundcover (green and yellow colours in Figure 3) has been almost unchanged since June 2022. Only the unincorporated areas in the far west of New South Wales between Tibooburra and Broken Hill are showing areas below 50% groundcover (orange and red colours in Figure 3). A small decrease in the area above 50% groundcover is visible in the South Australian Murray Darling Basin and New South Wales Local Land Services Western Region (Table 1).



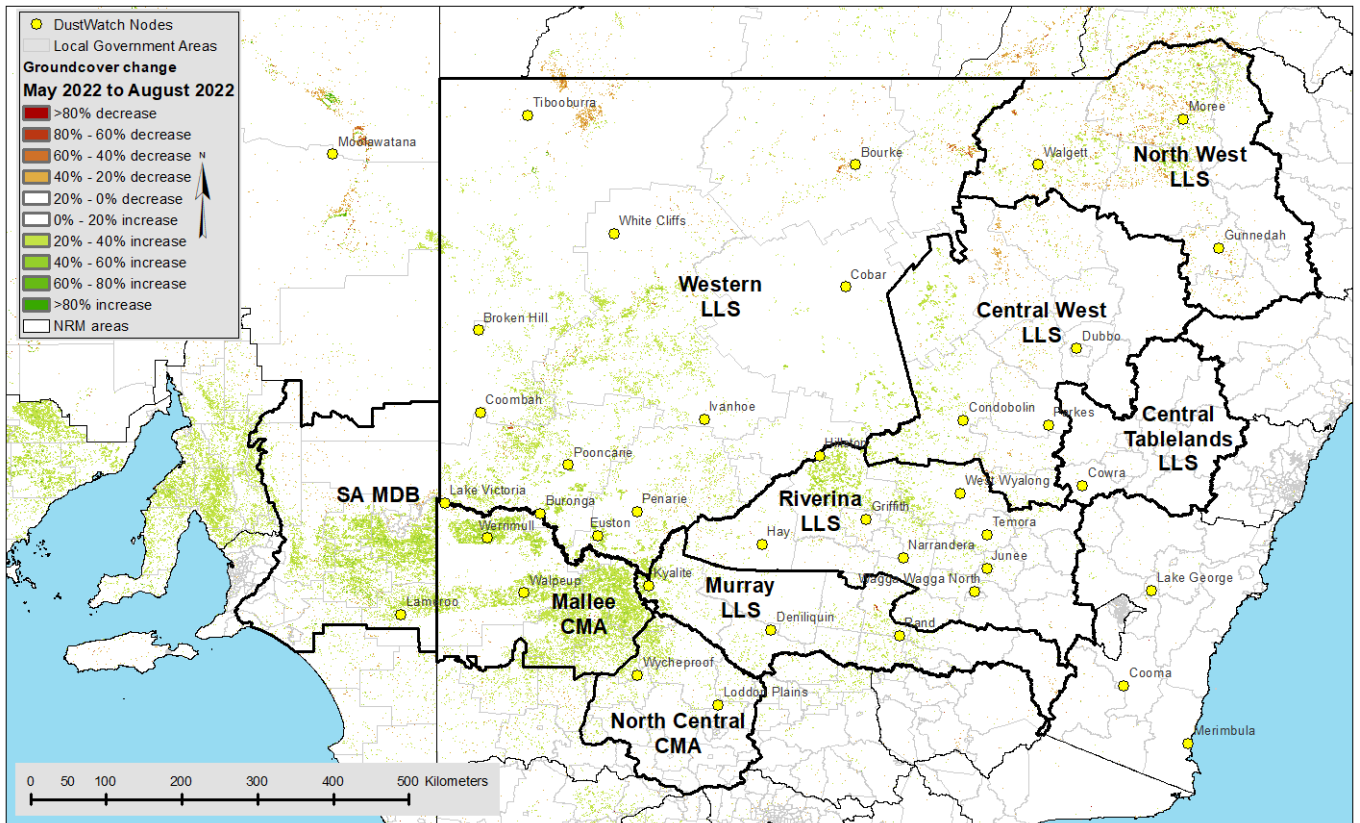
**Figure 3** Groundcover for August 2022 as determined from MODIS by CSIRO

**Table 1** Percentage of each NRM with cover >50% for August 2021 to August 2022

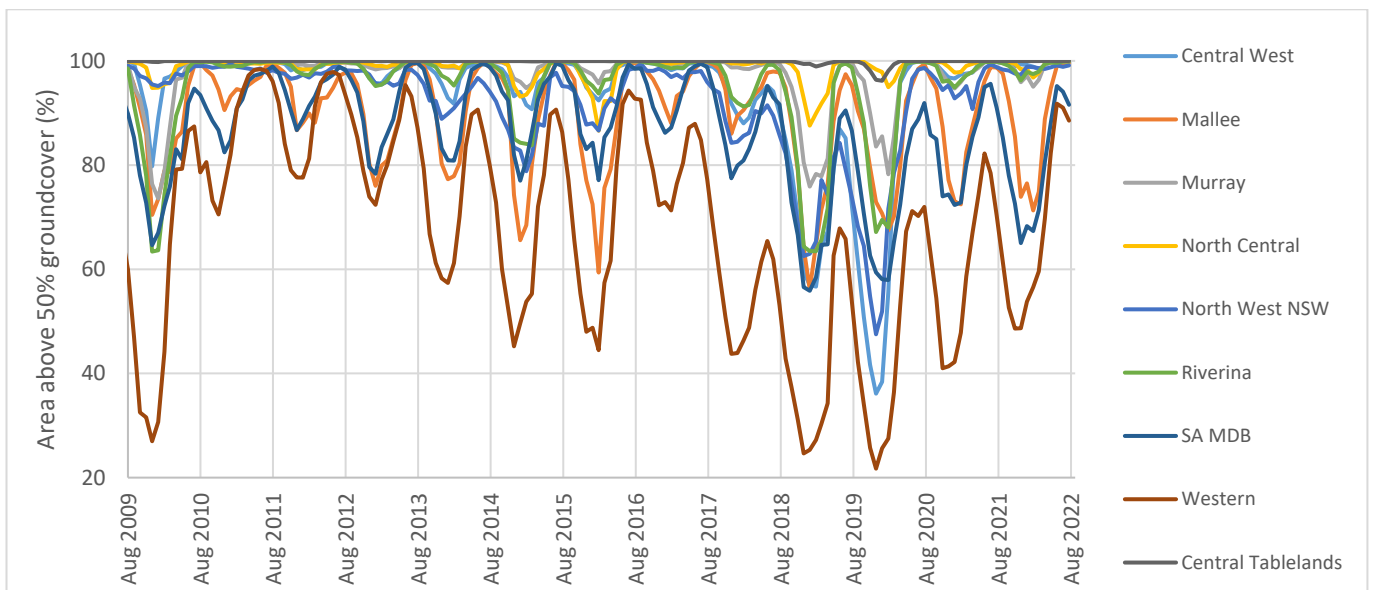
Date	Central West	Mallee	Murray	North Central	North West	Riverina	SA MDB	Western	Central Tablelands
Aug 2021	100	99	100	100	99	100	91	70	100
Sep 2021	100	98	100	100	98	100	85	61	100
Oct 2021	100	92	99	100	98	99	78	53	100
Nov 2021	99	85	98	99	98	98	73	49	100
Dec 2021	99	74	96	98	97	96	65	49	100
Jan 2022	99	76	97	98	99	98	68	54	100
Feb 2022	99	71	95	97	99	97	67	57	100
Mar 2022	98	75	96	98	99	98	71	60	100
Apr 2022	99	89	99	99	98	99	81	70	100
May 2022	100	95	100	100	99	100	88	82	100
Jun 2022	100	99	100	100	99	100	95	92	100
Jul 2022	100	99	100	100	99	100	94	91	100
Aug 2022	100	100	100	100	99	100	92	89	100

# Groundcover change

The groundcover change was substantial between May 2022 and August 2022, with large areas in New South Wales, Victoria and South Australia showing significant groundcover increase (green colours in Figure 4). In contrast, some areas in the Local Land Services North West and Central West region show groundcover reductions (red and orange colours in Figure 4 and Table 1).



**Figure 4** Groundcover difference between May 2022 and August 2022



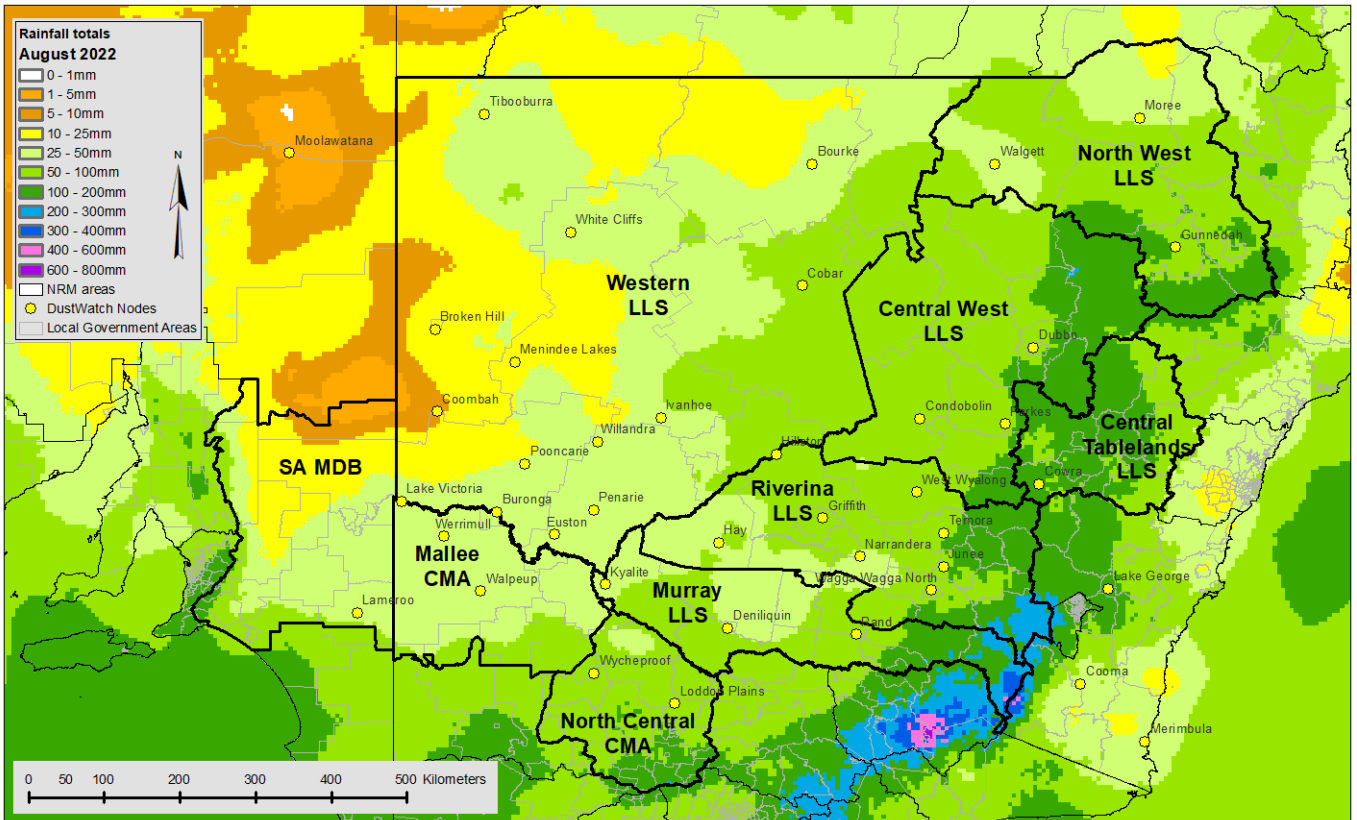
**Figure 5** Area (%) of NRM with more than 50% cover since August 2009

# Rainfall

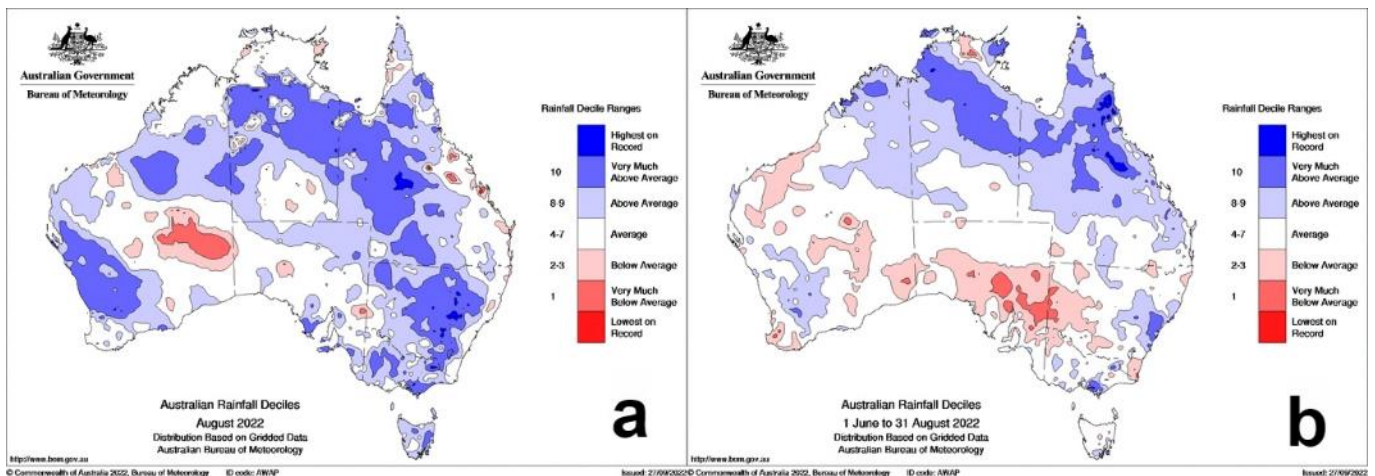
Most of New South Wales received more than 25 mm in August 2022 (Figure 6).

These rainfall amounts are well above average for August, with large areas in Central NSW in the wettest 10% of rainfall records (Figure 7a).

These very wet conditions have offset the below average rainfall seen in June and July 2022 and returned parts of New South Wales back to average rainfall conditions for the past 3 months (Figure 7b).



**Figure 6** Rainfall totals for August 2022 (source: Bureau of Meteorology)

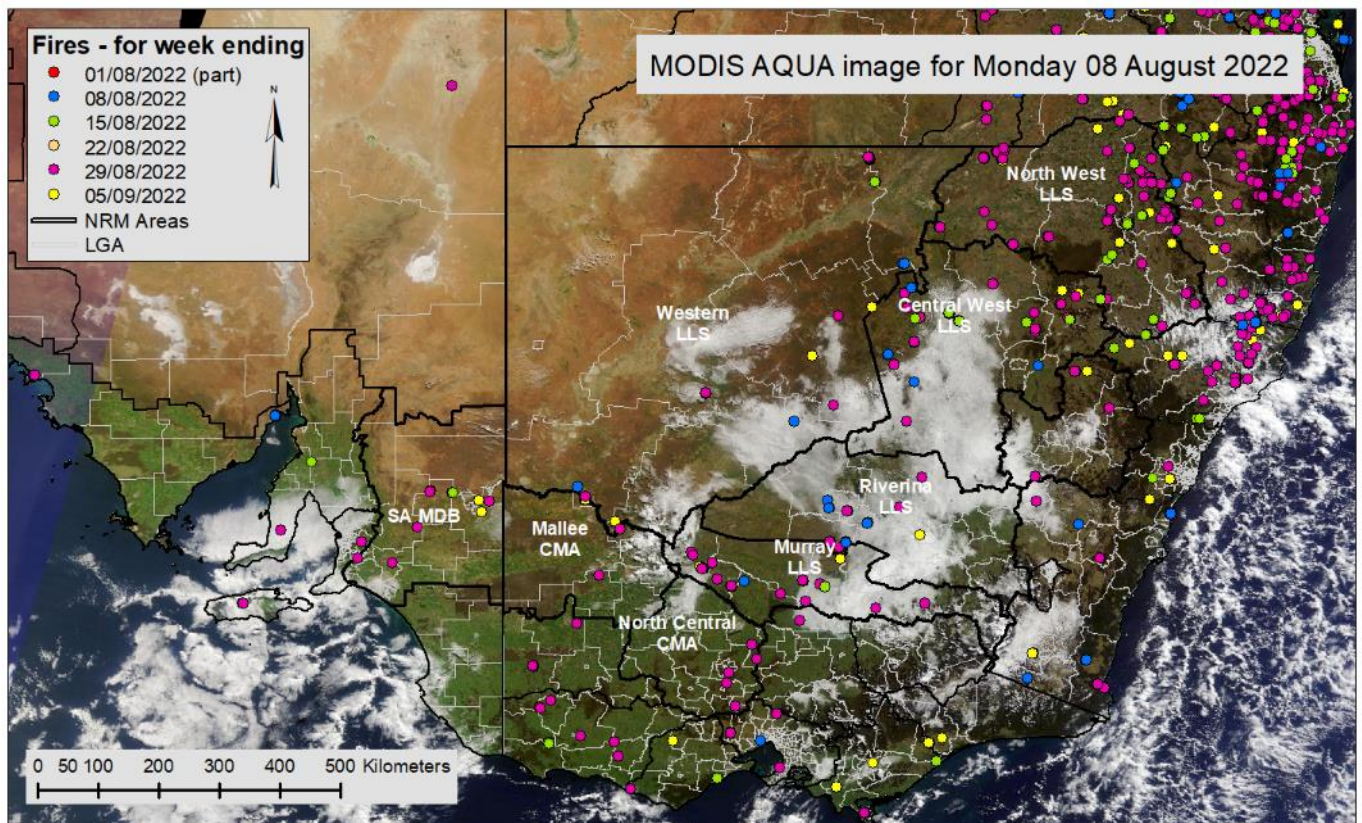


**Figure 7** Rainfall deciles for August 2022 (a) and 1 June 2022 to 31 August 2022 (b)

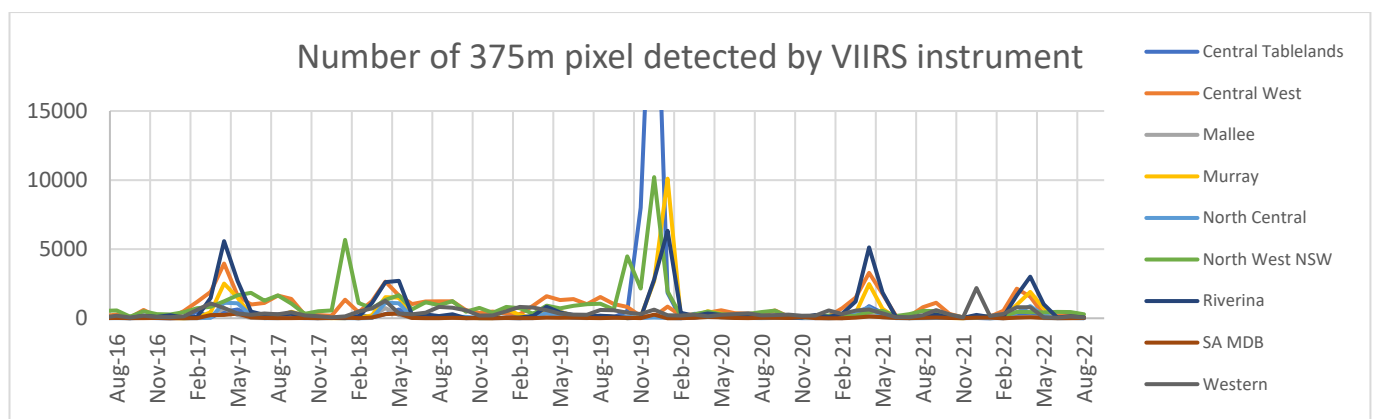
# VIIRS fires and satellite image

Haze from smoke and dust is difficult to separate. We use satellite imagery to manually classify every measurement into dust or smoke. The satellite detected 618 hot spots (375m pixel with temperature anomalies) in August 2022 (Figures 8 and 9), around 1/2 the 1161 hot spots detected in June 2022. Fires occurred mostly in the north eastern Natural Resource Management areas on New South Wales.

**Note: The number of hot spots is not equal to the number of fires.** Large fires have multiple hot spots, thereby increasing the number of detections. Cloud or fog can obscure hot spots, thereby reducing the number of detections.



**Figure 8** Pixels (375m) with active burning fires in August 2022 as determined from VIIRS satellite



**Figure 9** Number of 375m pixels with active burning fires between July 2016 and August 2022

## The DustWatch team

Contact us at [dustwatch@environment.nsw.gov.au](mailto:dustwatch@environment.nsw.gov.au)

Dust data supplied by the Department of Planning and Environment Rural Air Quality network. The MODIS image is courtesy of MODIS Rapid Response Project at NASA/GSFC; the VIIRS fire data is courtesy of the Fire Information for Resource Management System (FIRMS) and the rainfall maps are from the Australian Bureau of Meteorology. This project would not be possible without funding from: The National Landcare Program, Western and Murray Local Land Services (LLS) in NSW; the NSW EPA; the Mallee and North Central CMAs in Victoria and Murray Darling Basin NRM in South Australia; CSIRO, TERN and the Australian National University. We particularly thank our many DustWatch volunteers who provide observations and help maintain the instruments.

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