**Dust Activity**

**Western Australia:** There was no dust recorded in Western Australia in March 2013.

**South Australia:** In South Australia a trough and associated cold front on 21 March 2013 (Figure 1) caused very strong westerly winds gusting just below 80 km/h. This led to 10 hours of severe haze at the Lameroo station (Figure 2). Minnipa further west received some rain earlier that day and did not record any dust.

**Victoria:** Walpeup also recorded a moderate dust storm on 21 March 2013 with wind speeds just under 50km/h. Loddon Plains registered the same event but only as a moderate haze indicating better cover in the area.

**New South Wales:** Most of the NSW dust records occurred again on 21 March 2013. Euston topped the ranking table of all the DustWatch Nodes in March 2013 with 28 hours recorded for the month. A combination of bare paddocks (Photo 3) and bare areas on dune crests in the northern Mallee are the reason for the high number of dust hours in Euston. The surrounding stations like Kyalite, Hay, Deniliquin, Penarie and Buronga all recorded dust during March 2013, some from local sources but most was dust transported into the stations from the south west. Bourke, Cobar, Condobolin and West Wyalong recorded one or two hours of dust on the same day from local sources. Wind speeds dropped later in the day and the dust slowly drifted east into Wagga Wagga on the morning of 22 March. The dust plume was still intense enough to exceed the recommended maximum daily particulate concentration (as PM10) at the Wagga Wagga Air Quality Monitoring station.

A number of DustWatchers, both from within NSW government and from the public, reported dust on that day, adding to the information provided by the instrumented network. A big “thank you very much” to all the people that took the time to pick up the phone or send an email. This information and the images some of you have provided are a great resource for DustWatch. Photos 1 and 2 on the right are from that day whilst photo 3 was taken during a field trip in April 2013.

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*Figure 1. MSLP chart 21 March 2013*

*Figure 2. Dust near Euston 21 March 2013, Tim Wells, NSW Office of Water.*

*Photo 1. Dust near Euston 21 March 2013, Tim Wells, NSW Office of Water.*

*Photo 2. Dust near Euston 21 March 2013, Mike Case DustWatch.*

*Photo 3. Bare paddock near Euston*
Figure 2. Hours of dust with visibility less than 10 km recorded at each DustWatch Node in March 2013

Mar 2013
- 101 - 200 hours
- 0 - 5 hours

No values () = station not operational
Ground cover

The good rainfalls recorded in south western WA in March 2013 (Figure 4) led to improved cover in the area around and to the south west of our Newdegate DustWatch station (Figure 3). At the same time individual paddocks in these areas have a reduction in cover, most likely due to fallow preparation following the rainfall. To a lesser extend this is also the case in the Eyre Peninsula in the area to the south and east of the Minnipa DustWatch station in Southern Australia.

In New South Wales the area between Dubbo in the north and Griffith in the South west saw some improvement in cover values due to the good falls in the area. In contrast areas to the north of Lameroo and some northern parts of the wheat / sheep belt (around Moree) saw a reduction of cover due to fallow preparation in cropping areas. The rangelands in general remained unchanged with some minor fire scars appearing in northern South Australia.
Rainfall totals

Rainfall in Western Australia in March 2013 was mixed with the southern and central eastern parts receiving good falls (Figure 4). In contrast the south eastern corner had very little rain (< 5mm).

South Australia had a similar, mixed picture with the north west and north east recording very good falls of up to 200mm whereas the south west and south east received very little rain.

Western New South Wales and western Victoria recorded very little rain with most of the inland areas remaining below 25mm for the month (Figure 4).

Figure 4. Rainfall totals for March 2013.

Rainfall deciles

The monthly falls for March were very patchy, which is reflected in the monthly deciles map (Figure 5). The areas along the southern part of the border between South Australia and Western Australia, south eastern SA and western Victoria all had below average rain.

The above average rainfall recorded in some areas in March 2013 (Figure 5) has returned the 3 monthly deciles across large areas of the southern half of Australia to the average rainfall band (Figure 6).

Figure 5. Rainfall deciles for March 2013.

Figure 6. Rainfall deciles for 1 January to 31 March 2013.
Fire numbers throughout the wheat / sheep belt of New South Wales, Victoria and South Australia increased significantly between February and March 2013 (Figure 7). A similar increase can be seen in the cropping areas of southern WA. Fire numbers and associated smoke plumes are expected to increase even further next month with some areas no longer requiring a permit to burn after the 1st April. In contrast, fire numbers in the rangelands of southern Australia have almost completely ceased.

The DustWatch Team

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