

LMD CMA FACT SHEET No. 004a

Cropping, Soil & Recharge Monitoring – DustWatch Component

Background – Within the LMD CMA project –“Cropping, Soil and Recharge Monitoring”, there is a component called DustWatch which reports to the CMA Board and the funding bodies on the status of wind erosion in the LMD CMA area.

DustWatch is an Australia-wide network of volunteer observers who make simple observations (similar to those used by the Bureau of Meteorology) about the timing and characteristics of dust storms. Observations by “DustWatchers” are combined with data from satellite imagery (**Fig 1**), meteorological records (**Fig 2**), field measurements of dust concentrations, ground cover and dry aggregation, roadside survey and models to better understand wind erosion.

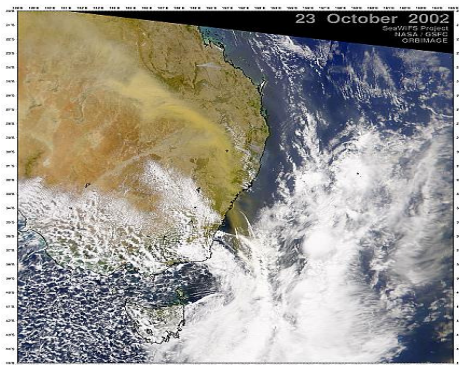


Fig 1. Satellite image of dust storm

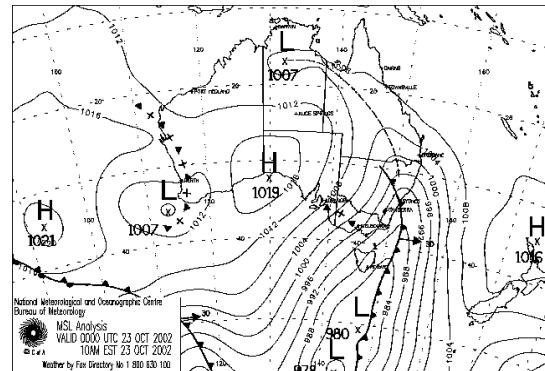


Fig 2. Synoptic chart of weather conditions

The images above, show two of the various methods that DustWatch uses. Reports are produced that explain why erosion differs from year to year, for example, in 2002/03 at Buronga the dust concentration was twice that of 2003/04.

Climate plays a large role in the wind erosion and dust levels in the Mallee, however land management also plays a significant role. DustWatch aims to document how improved land management practices reduce wind erosion. To do this, local information is needed to complement remotely assessed or modelled erosion and dust levels.

DustWatch utilises the local knowledge and skills of DustWatchers to achieve a higher level of reporting and understanding of the severity and extent of wind erosion in Australia. It is important that information is gained from the local community, as often there are localised effects that are not reported and it provides the opportunity to pinpoint the start location of local dust events.

It is also critical that land managers have their say on what is going on in their catchment. DustWatch gives the community a voice on land management issues and a role in the development of Best Management Practices (BMP).

Information gained through DustWatch will be used to target financial incentives for improved land management in the catchment. Monitoring of soil erosion will show progress by the community towards achieving the LMD Catchment Blueprint Targets.

Best Management Practices

LMD CMA is providing funding to support community groups and agencies to develop and refine BMP's. Workshops and training are being conducted involving the farming and grazing community in awareness and uptake of Best Management Practices.

Conservation farming techniques are being promoted in dryland cropping areas through a participatory research model. There is collection of information about landuse and land management practices from the roadside erosion surveys, Mallee Sustainable Farming (MSF) Project and South West Land Management Group (SWLMG) monitoring sites, will be used to measure uptake of on-farm Best Management Practices and thus progress towards achieving LMD Salinity and Vegetation Catchment Targets.

Paddock to Catchment – key points:

- DustWatch reports on the extent and severity of wind erosion across the Catchment;
- data on extent and severity of wind erosion is being gathered across the Catchment from 259 sites involved with the roadside erosion survey and up to 100 sites from the MSF Project and SWLMG;
- data gathered from all sites will be used to test the accuracy of modelling and remote sensing methods that will objectively report the extent and severity of erosion over the entire Catchment;
- information gathered will be used to assist in the development of Best Management Practices to reduce wind erosion and meet the Vegetation Catchment Targets contained in the LMD Catchment Blueprint;
- this project will document the increase in number of dryland land managers using Best Management Practices. It will also allow the LMD CMA to target projects to encourage landholders to participate in MSF Projects. Historic erosion and dust storm data from MSF projects, Bureau of Meteorology and Dept of Natural Resources (DNR) projects will be collated to form baseline information from which progress can be monitored.

Support organisations The Department of Natural Resources and Department of Primary Industries
Source of Funds National Action Plan, National Landcare Program, Griffith University Brisbane and The Desert Knowledge CRC Alice Springs
Project Duration This is a three-year project, which will run from 2004/05 until 2006/07

For additional information, please contact:

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Lower Murray Darling CMA

Respect for our communities
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NOTE – This document was current at time of production, please check latest details with LMD CMA.

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