Title	DustWatch Database
Abstract	Dust data in an indicator of soil and catchment health. The assumption is that if wind erosion is occurring and dust is being transported away from the site, then the soil is degrading. Dust data is stored in the DustWatch data base. Dust concentration measurements are sourced from the DustWatch Node network described in Leys et al. 2008 (http://www.environment.nsw.gov.au/dustwatch/). The PM10 data are sampled with DustTrak sensors, a portable, battery-operated laser photometer that gives real-time mass concentration within the particle-size range 0.1 to approximately 10 micrometres. The sensors are enclosed in the manufacturer's field enclosure and have been modified to operate remotely and with minimal maintenance. One minute data is averaged to hourly values.

Resource locator

Show on SEED Web Map	Name: Show on SEED Web Map Protocol: WWW:DOWNLOAD-1.0-http--download Description: Display dataset on SEED's map Function: download
Data Quality Statement	Name: Data Quality Statement Protocol: WWW:DOWNLOAD-1.0-http--download Description: Data quality statement for DustWatch Database Function: download
DustWatch Public Webpage	Name: DustWatch Public Webpage Protocol: WWW:DOWNLOAD-1.0-http--download Description: Link to DustWatch page on public website Function: download

Unique resource identifier

Code	2f8c6735-5ba2-4970-a0a7-c5e21f13293a
Presentation form	Map digital
Edition	1.0
Dataset language	English

Metadata standard

Name	ISO 19115
Edition	2016
Dataset URI	https://datasets.seed.nsw.gov.au/dataset/2f8c6735-5ba2-4970-a0a7-c5e21f13293a
Purpose	Provide measurements of dust activity across NSW.
Status	On going

Spatial representation

Type	vector
Geometric Object Type	curve
Geometric Object Count	40

Spatial reference system

Code identifying the spatial reference system	4283

Equivalent scale

1:None

Additional information source

Topic category

Keyword set

keyword value	SOIL-Erosion SOIL
Originating controlled vocabulary	
Title	ANZLIC Search Words
Reference date	2008-05-16

Geographic location

West bounding longitude	135.703125
East bounding longitude	151.083984
North bounding latitude	-36.385913
South bounding latitude	-24.766785

Vertical extent information

Minimum value	-100
Maximum value	2228
Coordinate reference system	
Authority code	urn:ogc:def:cs:EPSG::
Code identifying the coordinate reference system	5711

Temporal extent

Begin position	2005-07-01
End position	N/A

Dataset reference date

Resource maintenance

Maintenance and update frequency	Continual
Contact info	
Contact position	Data Broker
Organisation name	NSW Department of Climate Change, Energy, the Environment and Water
Telephone number	131555
Email address	data.broker@environment.nsw.gov.au
Web address	https://www.nsw.gov.au/departments-and-agencies/dcceew
Responsible party role	pointOfContact

Lineage	Data processing and quality control of the data includes:; * Subtraction of the clean air reading from the PM10 reading.; * Calculation of the mean weighted dust concentration of each reading. Due to the non-standard sample interval of between 15 and 1 minutes, values are weighted to 1 minute values. This is because the 1 minute data is later averaged to hourly readings.; * Checking each record is within the range of the instrument.; * Classifying the aerosol reading as dust, smoke or fog. Automatic scripts within MADD classify the hourly averaged data as follows:; o Fog classification is evoked when relative humidity is > 90%, wind speed is , 10 km/h and temperature is 10 km/h and fires are known to be upwind.; o Dust when conditions are not that of smoke or fog; * A manual checking is then performed on the hourly data to check the automatic classification. ; * No systematic quality control of the BoM AWS data is undertaken.

Limitations on public access

Scope	dataset

DQ Completeness Commission

Effective date	2001-01-01
Explanation	Data completeness varies between sites from 90 to 100%. Data is downloaded daily from each DustWatch node. Dust concentration of material less than 10 microns (PM10) is measured with DustTrak instruments. ;;Modifications to instrument include:; *Heat shield to reduce temperature extremes and keep the instrument within operating specifications.;* Solar panel and battery.; *Modem for communications.;* Data logger to synchronise the reading to on the hour; 15, 30 and 45 minutes past the hour. This is done to synchronise the data with BoM weather data which is generally taken on the hour.; *The data logger turns the system on every 15 minutes and records a one minute reading. If the PM10 reading is greater than 25 micrograms (ug/m3) then the instrument stays on until the reading is less than 25 micrograms (ug/m3).;* A zero-filter (clean air) has been installed and in controlled by the logger and a solenoid value. Before each 15 minute reading a 1 minute clean air sample is taken. This is used later on to calibrate the PM10 readings.;;Quality control of the instrument includes:; *A monthly on-site calibration of the instrument to reset the zero value for clean air.;* Monthly cleaning of the inlet and solar panel and general cleaning of instrument.;* Returning the sensor to the manufacturer every year for routine calibration and maintenance.

DQ Completeness Omission

Effective date	2001-01-01

DQ Conceptual Consistency

Effective date	1900-01-01

DQ Topological Consistency

Effective date	1900-01-01

DQ Absolute External Positional Accuracy

Effective date	1900-01-01
Explanation	Data source are the DustWatch nodes installed with DustTrak instruments. Location of DustWatch nodes was measured with a non-mapping grade GPS; therefore within 10m.

DQ Non Quantitative Attribute Correctness

Effective date	2008-01-01
Explanation	Leys, J. F., McTainsh, G. H., Strong, C. L., Heidenreich, S., and Biesaga, K. (2008). DustWatch: Using community networks to improve wind erosion monitoring in Australia. Earth Surface Process and Landforms, 33, 1912-26.

Responsible party

Contact position	Data Broker
Organisation name	NSW Department of Climate Change, Energy, the Environment and Water
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Email address	data.broker@environment.nsw.gov.au
Web address	https://www.nsw.gov.au/departments-and-agencies/dcceew
Responsible party role	pointOfContact

Metadata point of contact

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Responsible party role	pointOfContact

Metadata date

2024-02-26T12:53:48.980678

Metadata language