



Climatological Gridded Data

The Bureau of Meteorology can provide you with monthly and annual average or actual gridded datasets for Australia. These datasets can be ported into a GIS or similar visualization system, and can be used to investigate the data or generate maps. A list of these gridded datasets is shown below.

If you wish to obtain the gridded datasets, we will need to know:

- The type of grid (meteorological element) you require - see table below.
- The period - month or months and/or annual (* annual only).
- The area you need - all Australia, a particular State/s or define a latitude/longitude boundary box.
- The output format or formats you require - see table below.

Note: Prior to requesting spatial data, please ensure that the available file formats are compatible with your GIS software. The Bureau does not provide advice on the use of proprietary software packages.

AVERAGE OR CLIMATOLOGICAL DATA

Grid type	Unit	Averaging Period	Grid resolution (degrees/km)
Rainfall	mm	1961 - 90	0.025 deg/2.5 km (approx.)
Decadal & multi-decadal rainfall	mm	1911 onwards	0.05deg/5 km (approx.)
Rainfall percentages	percent	1961 - 90	0.025 deg/2.5 km (approx.)
Maximum, Minimum & Mean Temperature	°C	1961 - 90	0.025 deg/2.5 km (approx.)
Decadal & multi-decadal temperature	°C	1911 onwards	0.05deg/5 km (approx.)
Apparent indoor temperature	°C	1976 - 2005	0.1 deg/10 km (approx.)
Potential frost days	°C	1976 - 2005	0.05 deg/5 km (approx)
Areal Actual ET	mm	1961 - 90	0.1 deg/10 km (approx.)
Point Potential ET	mm	1961 - 90	0.1 deg/10 km (approx.)
Areal Potential ET	mm	1961 - 90	0.1 deg/10 km (approx.)
Relative Humidity 9am	percent	1976 – 2005	0.1 deg/10 km (approx.)
Relative Humidity 3pm	percent	1976 - 2005	0.1 deg/10 km (approx.)
Sunshine Hours	hours	At least 15 years of records	0.25 deg/25 km (approx.)
Evaporation (Class A Pan)	mm	1975 - 2005	0.25 deg/25 km (approx.)
Rainfall Variability	index	1900 - 2003	0.25 deg/25 km (approx.)
Days of Rain	days	1961 - 90	0.1 deg/10 km (approx.)
Heating Degree Days (Base temp. 12°C or 18°C)	degree days	1961 - 90	0.1 deg/10 km (approx.)
Cooling Degree Days (Base temp. 18°C or 24°C)	degree days	1961 - 90	0.1 deg/10 km (approx.)
Thunder Days	days	1990 - 99*	0.25 deg/25 km (approx.)
Lightning	Flashes/km ² /y	1995 - 2002*	0.5 deg/50 km (approx.)
Tropical Cyclones (TC)	cyclones	1969/70 - 05/06*	2.0 deg/200 km (approx.)
Rainfall Percentiles (1,3, 6, 9 & 12 months)	mm	1900 - 2005	0.25 deg/25 km (approx.)
Temperature Percentiles (1,3, 6, 9 & 12 months)	°C	1950 - 2005	0.25 deg/25 km (approx.)
Solar Exposure	MJ/m ²	1990 - 2008	0.05 deg/5 km (approximately)
Solar Ultraviolet (UV) Index	index	1979 - 2007	1.5 deg/150 km (approx)
Mean Sea Level Pressure (MSLP)	hPa	1979-2000	1.25 deg/125 km(approx.)
Climate classifications (Koppen, temperature/humidity & seasonal rain)	index		

ACTUAL DATA

Grid type	Unit	Period	Grid resolution (degrees/km)
Solar Exposure	MJ	1990 onward	0.05 deg/5 km (approx.)

Grid coverage - all Australia, individual states or any rectangular area within Australia.
Output formats - ASCII row major format and Arc/Info™ grid interchange (.e00) files.
Projection - GDA94
Metadata - Metadata for the grids are provided.
ArcGis - if you use ArcGis and have the Spatial Analyst™ extension, you will be able to import the grids as either ASCII files or Arc/Info™ grid interchange (.e00) files.

Copyright Information

Copyright for any data supplied by the Bureau of Meteorology is held in the Commonwealth of Australia and the purchaser shall give acknowledgement of the source in reference to the data. Please contact us for more information.

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