Title	NARCliM climate projections
Alternative title(s)	Australian regional climate projections
Abstract	**What is NARCliM?** The New South Wales and Australian Regional Climate Modelling (NARCliM) project develops high-resolution regional climate projections that cover NSW and South-eastern Australia at a higher resolution and the Australasian continent and beyond at a lower resolution (named the NARCliM and CORDEX domains, respectively). Computer modelled climate projections are the best information we have available on our future climate. NARCliM has been designed to help government, industry and community in NSW and Australia plan for our future with robust regional and local scale data. The NARCliM project uses currently available global climate models (GCM) and greenhouse gas (GHG) emissions scenarios from the latest Coupled Model Intercomparison Project (CMIP) used in the IPCC reports and applies regional dynamical downscaling using the latest Weather Research and Forecasting model (WRF). NARCliM generates critical climate indices for a broad range of applications and climate change adaptation and risk analysis. The NARCliM project is led by the NSW Government with support from the ACT, South Australian, Victorian, and Western Australian governments, National Computational Infrastructure, Murdoch University and the University of New South Wales. **NARCliM releases** NARCliM2.0 was released in August 2024. It is the most detailed regional climate projections available in Australia to date at 4km for South-eastern Australia and 20km scale for Australasia. We recommend using NARCliM2.0 as it is the most current generation, benefitting from several design and technical enhancements. NARCliM2.0 simulates the climate using five CMIP6 GCMs and two RCMs with continuous data from 1950 to 2100. The current release includes two GHG scenarios - SSP1-2.6 and SSP3-7.0, with a third scenario, SSP2-4.5, available in 2025. NARCliM2.0 has been designed to WCRP-CORDEX standards and provides users with state-of-the-art climate projections for Australia. NARCliM1.0 was released in 2014. It contains simulations from four CMIP3 GCMs and three regional climate models (RCM) using WRF3.3 for one future GHG scenario (SRES A2). Time periods included are 1990 to 2009, 2020 to 2039 and 2060 to 2079, with a grid resolution of 10km for South-eastern Australia (NARCliM domain) nested within a 50km grid for Australasia (CORDEX domain). NARCliM1.0 data has been used for a range of NSW climate adaptation and impact studies and climate change visualisations. An enhanced set of climate projections (NARCliM1.5) were released in 2020. NARCliM1.5 contains simulations from three CMIP5 GCMs and two RCMs and two GHG scenarios (RCP4.5 and RCP8.5). The simulated time period is continuous from 1951 to 2100. NARCliM1.5 has the same grid resolution as NARCliM1.0 – a 10km grid nested within a 50km grid, and is useful for analysis of climate extremes, impact thresholds and stress testing. Each generation of NARCliM is based on best available climate modelling and scenarios at the time of release. Consequently, there are expected differences between projections/results of the modelling but there are mostly similarities in trends (across NSW and over time). For more information on NARCliM generations, please visit the AdaptNSW website (https://www.climatechange.environment.nsw.gov.au/narclim/using-narclim-data/narclim-generations-and-parameters). **Model output** NARCliM climate projections data will be available on the NSW Climate Data Portal (https://www.climatechange.environment.nsw.gov.au/climate-data-portal), when the Portal is released in late 2024. The data is also currently available at the National Computational Infrastructure at ANU (https://nci.org.au/). The Climate Data Portal will provide users access to NARCliM's most frequently used "core variables" at daily and monthly frequencies. Additionally, the Interactive climate change projections map (https://www.climatechange.environment.nsw.gov.au/projections-map) on AdaptNSW website provide translated climate data to a broad audience of users. For more information, contact us through the NARCliM Mailbox, narclim@environment.nsw.gov.au.
Resource locator	
Data Quality	Name: Data Quality Statement

Statement	Protocol: WWW:DOWNLOAD-1.0-http--download Description: Data quality statement for NARCliM model output Function: download
Terms and Conditions for NARCliM data	Name: Terms and Conditions for NARCliM data Protocol: WWW:DOWNLOAD-1.0-http--download Description: Please read: covers the requirement of how to acknowledge and cite NARCliM in publications, data disclaimer, license and privacy. Written work of any form, based in whole or in part on data provided by the NSW Government must acknowledge the data has been provided by the Government of New South Wales, Australia and must include the acknowledgements applicable to the data. Function: download

Unique resource identifier

Code	e4cd084b-6e2a-40d5-a6c9-3bceb1778ec6

Presentation form	Model digital
Edition	Version 2.0
Dataset language	English

Metadata standard

Name	ISO 19115
Edition	2016
Dataset URI	https://www.planningportal.nsw.gov.au/opendata/dataset/e4cd084b-6e2a-40d5-a6c9-3bceb1778ec6
Purpose	Decision making on impacts and risks from and adaptation to climate change
Status	Completed
Spatial representation type	None

Spatial reference system

Code identifying the spatial reference system	4283

Additional information source	**NARCliM output** The NARCliM models generate data for more than 100 variables. The most commonly used variables are provided on the Climate Data Portal in multiple formats. These include: • 2-metre temperature (hourly) • Daily maximum 2-metre temperature • Daily minimum 2-metre temperature • Precipitation

- Surface pressure
- 2-metre specific humidity (hourly)
- 10-metre wind speed (hourly)
- Surface evaporation
- Soil moisture
- Radiation (upward and downward longwave, upward and downward short wave)
- Forest fire danger index (FFDI)
- Areal potential evapotranspiration (APET)

For daily mean variables:

- Mean is average within daily values time: point values 1hour
- Max is maximum within daily values time: point values 1 hour
- Min is minimum within daily values time: point values 1 hour.
- Meantstep is average within daily values time: point values 300 second
- Maxtstep is maximum within daily values time: point values 300 second
- Mintstep is minimum within daily values time: point values 300 second

For monthly mean variables:

- Mean is average within monthly values time: point values 1hour
- Max is maximum within monthly values time: point values 1 hour
- Maxmean is mean of daily maximum within daily values: point value 1 hour
- Min is minimum within monthly values time: point values 1 hour
- Minmean is mean of daily minimum within daily values: point value 1 hour
- Meantstep is average within monthly values time: point values 300 second
- Maxtstep is maximum within monthly values time: point values 300 second
- Mintstep is minimum within monthly values time: point values 300 second

Data licensing

Data disclaimer

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For all enquires, feedback and complaints relating to NARCliM data, please contact: narclim@environment.nsw.gov.au

Topic category	climatologyMeteorologyAtmosphere

Keyword set

keyword value	CLIMATE-AND-WEATHER CLIMATE-AND-WEATHER-Climate-change
Originating controlled vocabulary	
Title	ANZLIC Search Words
Reference date	2008-05-16

Geographic location

NSW Place Name	South-eastern Australia

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	1951-01-01
End position	N/A

Dataset reference date

Resource maintenance

Maintenance and update frequency	As needed
Contact info	
Contact position	Data Broker
Organisation name	NSW Department of Climate Change, Energy, the Environment and Water
Full postal address	NSW Australia data.broker@environment.nsw.gov.au
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

Constraint set

Use constraints	This data is provided under a Creative Commons Attribution 4.0 licence http://creativecommons.org/licenses/by/4.0. Attribute 'NSW Department of Climate Change, Energy, the Environment and Water' in publications using this data.
Limitations on public access	

Scope	dataset

DQ Completeness Commission

Effective date	2020-03-09
Explanation	Excess datum in the dataset are projections of southern Queensland, eastern South Australia and all of Victoria. NARCliM Domain Grid Type: rotated pole Grid north pole: (141.38N, 60.31E) Grid corner (rotated coordinates): (174.42, -10.38) (-158.476, 5.724) Grid corner (regular coordinates): (133.7271, -39.7919) (168.1256, -22.4710)

DQ Completeness Omission

Effective date	2020-03-09
Explanation	All data has been provided except for the variables 'snow amount' and 'sea surface temperature' at monthly, daily and 3-hourly timesteps. These variables can be derived at these temporal frequencies based on the raw model output developed for the project.

DQ Absolute External Positional Accuracy

Effective date	2020-03-09
Explanation	Resolution is 10 km for the NARCliM domain and 50 km for the CORDEX domain.

Responsible party

Contact position	Data Broker
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Telephone number	131555
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Responsible party role	pointOfContact

Metadata point of contact

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Responsible party role	pointOfContact

Metadata date

2024-10-18T00:41:03.432693

Metadata language