Title	Climate change in New South Wales - NARCliM2.0
Alternative title(s)	NSW climate change data
Abstract	**Do you want to know more about how climate change may impact New South Wales?** The Department of Climate Change, Energy, the Environment and Water has undertaken research to develop climate change information for the NSW public using climate projections from the NSW and Australian Regional Climate Modelling initiative ('NARCliM2.0'). This climate change information is available on the AdaptNSW Interactive climate change projections map (https://www.climatechange.environment.nsw.gov.au/projections-map) as maps and GIS-ready raster data. The Interactive map currently displays data for changes in mean, maximum and minimum temperature, precipitation, hot days, cold nights, and severe fire weather days. This geospatial data available on the Interactive map are accessible below as links to the downloadable data packs. These data packs and the Interactive map have been designed to enhance awareness of climate change in NSW and provide climate change data and information for decision making to support climate risk assessment and adaptation planning. **What is included in these data packs?** Data packs provide users with 145 GIS-ready raster datasets in GeoTIFF format and layer files (map symbology). The GeoTIFFs display data at 4 km resolution for the entire New South Wales (NSW) region for seven climate variables: • minimum, mean and maximum temperature • rainfall (precipitation) • hot days (35ºC or over) • cold nights (below 2ºC) • severe fire weather days (FFDI over 50) The list of GeoTIFFs include historical baseline and future projections under two emission scenarios, providing modelled outputs on a range of plausible climates: Low emissions scenario (SSP1-2.6) and High emissions scenario (SSP3-7.0) The GeoTIFFs are raster (spatially referenced gridded) data. The data at each 4 km grid cell is calculated as an average from the results of 10 NARCliM2.0 climate models. Temporally, the GeoTIFFs are 20-year climatologies, defined as the "Historical baseline" (the 1990-2009 period represents a '2000' climatology, serving as a reference period for future projections to be compared with), and "Future projections" (seven future periods or climatologies including 2020-2039, 2030-2049, 2040-2059, 2050-2069, 2060-2089, 2070-2089, and 2080-2099). This is an appropriate temporal resolution for understanding plausible climate change trends in the future. The GeoTiFFs are also arranged to provide statistics, including: • Annual means: calculated from 1 January to 31 December for each 20-year period • Seasonal means: calculated for each 20-year period for Summer (December, January, February), Autumn (March, April, May), Winter (Jun, July, August), Spring (September, October, November) Data provided in two ways or flavours: • Absolute values: the projected values for the variable for each period (i.e., degrees Celsius, number of days, mm of rainfall) • Percent change: the difference between the future climatology and the historical baseline, presented as a percentage of the historical baseline Note that a continuous time series of the daily and monthly modelled output can be accessed from the Climate Data Portal https://climatedata.environment.nsw.gov.au/ The data packs also provide, map symbology files (ArcGIS layer files and QGIS layer files) and a "READ ME" file in each data package for more information on the GeoTIFFs. **What is NARCliM?** The New South Wales (NSW) and Australian Regional Climate Modelling ("NARCliM") is a project that was established by the NSW Government to address the need for high-resolution climate change projections for regional decision-making and impact assessments. The NSW Government has released climate projections for over a decade, with latest release (known as NARCliM2.0), being a public commitment under the Climate Change Adaptation Strategy (https://climatechange.environment.nsw.gov.au/about-adaptnsw/nsw-climate-change-adaptation-strategy) and the NSW Climate Change Fund (https://www.energy.nsw.gov.au/nsw-plans-and-progress/government-strategies-and-frameworks/taking-action-climate-change/nsw). See the resource link below to learn

more about NARCliM.

What else do I need to know?

For more information, please review the linked resources below. If you have more questions, please contact us at narclim@environment.nsw.gov.au.

Resource locator

Data Quality Statement	Name: Data Quality Statement Protocol: WWW:DOWNLOAD-1.0-http--download Description: Data quality statement for Climate change in New South Wales (Draft) Function: download
Interactive climate change projections map	Name: Interactive climate change projections map Protocol: WWW:DOWNLOAD-1.0-http--download Description: Interactive climate change projections map for a map view of the data Function: download
Interactive climate change projections map Frequently Asked Questions	Name: Interactive climate change projections map Frequently Asked Questions Protocol: WWW:DOWNLOAD-1.0-http--download Description: Have a question about the Interactive map and its data? Check the FAQs page. Function: download
Learn more about NARCliM	Name: Learn more about NARCliM Protocol: WWW:DOWNLOAD-1.0-http--download Description: Learn more about the NSW and Australian Regional Climate Modelling climate projections at this AdaptNSW webpage. Function: download
NARCliM Terms and Conditions of use	Name: NARCliM Terms and Conditions of use 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
GeoTIFF datapack "Read Me" file	Name: GeoTIFF datapack "Read Me" file Protocol: WWW:DOWNLOAD-1.0-http--download Description: More details about the GeoTIFF data packs.
Average temperature data pack for NSW	Name: Average temperature data pack for NSW Protocol: WWW:DOWNLOAD-1.0-http--download Description: This average temperature data pack for NSW contains information summarised from the latest climate projections of the NSW and Australian Regional Climate Modelling

Project, known as NARCliM2.0. NARCliM is designed to help government, industry and community in NSW and Australia plan for our future with robust regional and local scale data. The data are provided as GeoTIFFs, which are similar to image files but are embedded with georeferenced (longitude, latitude) data. The data at 4-km resolution represent averages of outputs from a combination of 10 climate models. A Geographic Information System (GIS) application is needed to view, use and export the data to other software (e.g. excel) for further analyses. This pack of GeoTIFFs include historical baseline and future projections under two emission scenarios in two formats - absolute values and relative change values. See the enclosed Read Me file for more information.

Function: download

Maximum temperature data pack for NSW

Name: Maximum temperature data pack for NSW

Protocol: WWW:DOWNLOAD-1.0-http--download

Description:

This maximum temperature data pack for NSW contains information summarised from the latest climate projections of the NSW and Australian Regional Climate Modelling Project, known as NARCliM2.0. NARCliM is designed to help government, industry and community in NSW and Australia plan for our future with robust regional and local scale data. The data are provided as GeoTIFFs, which are similar to image files but are embedded with georeferenced (longitude, latitude) data. The data at 4-km resolution represent averages of outputs from a combination of 10 climate models. A Geographic Information System (GIS) application is needed to view, use and export the data to other software (e.g. excel) for further analyses. This pack of GeoTIFFs include historical baseline and future projections under two emission scenarios in two formats - absolute values and relative change values. See the enclosed Read Me file for more information.

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Function: download

Average rainfall data pack for NSW

Name: Average rainfall data pack for NSW

Protocol: WWW:DOWNLOAD-1.0-http--download

Description:

This average rainfall data pack for NSW contains information summarised from the latest climate projections of the NSW and Australian Regional Climate Modelling Project, known as NARCliM2.0. NARCliM is designed to help government, industry and community in NSW and Australia plan for our future with robust regional and local scale data. The data are provided as GeoTIFFs, which are similar to image files but are embedded with georeferenced (longitude, latitude) data. The data at 4-km resolution represent averages of outputs from a combination of 10 climate models. A Geographic Information System (GIS) application is needed to view, use and export the data to other software (e.g. excel) for further analyses. This pack of GeoTIFFs include historical baseline and future projections under two emission scenarios in two formats - absolute values and relative change values. See the enclosed Read Me file for more information.

Function: download

Hot Days (35 deg C or above) data

Name: Hot Days (35 deg C or above) data pack for NSW

Protocol: WWW:DOWNLOAD-1.0-http--download

pack for NSW	Description: This hot days data pack for NSW contains information summarised from the latest climate projections of the NSW and Australian Regional Climate Modelling Project, known as NARCliM2.0. NARCliM is designed to help government, industry and community in NSW and Australia plan for our future with robust regional and local scale data. The data are provided as GeoTIFFs, which are similar to image files but are embedded with georeferenced (longitude, latitude) data. The data at 4-km resolution represent averages of outputs from a combination of 10 climate models. A Geographic Information System (GIS) application is needed to view, use and export the data to other software (e.g. excel) for further analyses. This pack of GeoTIFFs include historical baseline and future projections under two emission scenarios in two formats - absolute values and relative change values. See the enclosed Read Me file for more information. Function: download
Cold nights (below 2 deg C) data pack for NSW	Name: Cold nights (below 2 deg C) data pack for NSW Protocol: WWW:DOWNLOAD-1.0-http--download Description: This cold nights data pack for NSW contains information summarised from the latest climate projections of the NSW and Australian Regional Climate Modelling Project, known as NARCliM2.0. NARCliM is designed to help government, industry and community in NSW and Australia plan for our future with robust regional and local scale data. The data are provided as GeoTIFFs, which are similar to image files but are embedded with georeferenced (longitude, latitude) data. The data at 4-km resolution represent averages of outputs from a combination of 10 climate models. A Geographic Information System (GIS) application is needed to view, use and export the data to other software (e.g. excel) for further analyses. This pack of GeoTIFFs include historical baseline and future projections under two emission scenarios in two formats - absolute values and relative change values. See the enclosed Read Me file for more information. Function: download
Severe fire weather days data pack for NSW	Name: Severe fire weather days data pack for NSW Protocol: WWW:DOWNLOAD-1.0-http--download Description: This severe fire weather days (FFDI over 50) data pack for NSW contains information summarised from the latest climate projections of the NSW and Australian Regional Climate Modelling Project, known as NARCliM2.0. NARCliM is designed to help government, industry and community in NSW and Australia plan for our future with robust regional and local scale data. The data are provided as GeoTIFFs, which are similar to image files but are embedded with georeferenced (longitude, latitude) data. The data at 4-km resolution represent averages of outputs from a combination of 10 climate models. A Geographic Information System (GIS) application is needed to view, use and export the data to other software (e.g. excel) for further analyses. This pack of GeoTIFFs include historical baseline and future projections under two emission scenarios in two formats - absolute values and relative change values. See the enclosed Read Me file for more information. Function: download
NARCliM2.0 Average Mean Temperature Change Web Map Service	Name: NARCliM2.0 Average Mean Temperature Change Web Map Service Protocol: WWW:DOWNLOAD-1.0-http--download Description: Web map service for GeoTIFF data for NARCliM2.0-derived change in average mean temperature (ºC) over the 1990-2009 baseline as found on the NSW Interactive climate change projections map (https://www.climatechange.environment.nsw.gov.au/projections-map) Function: download
NARCliM2.0 Average Min Temperature Change Web Map	Name: NARCliM2.0 Average Min Temperature Change Web Map Service Protocol: WWW:DOWNLOAD-1.0-http--download Description:

Service	Web map service for GeoTIFF data for NARCliM2.0-derived change in average minimum temperature (ºC) over the 1990-2009 baseline as found on the NSW Interactive climate change projections map (https://www.climatechange.environment.nsw.gov.au/projections-map) Function: download
NARCliM2.0 Average Max Temperature Change Web Map Service	Name: NARCliM2.0 Average Max Temperature Change Web Map Service Protocol: WWW:DOWNLOAD-1.0-http--download Description: Web map service for GeoTIFF data for NARCliM2.0-derived change in average maximum temperature (ºC) over the 1990-2009 baseline as found on the NSW Interactive climate change projections map (https://www.climatechange.environment.nsw.gov.au/projections-map) Function: download
NARCliM2.0 Average Rainfall Change Web Map Service	Name: NARCliM2.0 Average Rainfall Change Web Map Service Protocol: WWW:DOWNLOAD-1.0-http--download Description: Web map service for GeoTIFF data for NARCliM2.0-derived change in average rainfall (%) over the 1990-2009 baseline as found on the NSW Interactive climate change projections map (https://www.climatechange.environment.nsw.gov.au/projections-map) Function: download
NARCliM2.0 Change in Hot Days Web Map Service	Name: NARCliM2.0 Change in Hot Days Web Map Service Protocol: WWW:DOWNLOAD-1.0-http--download Description: Web map service for GeoTIFF data for NARCliM2.0-derived change in number of hot days (35°C or above) over the 1990-2009 baseline as found on the NSW Interactive climate change projections map (https://www.climatechange.environment.nsw.gov.au/projections-map) Function: download
NARCliM2.0 Change in Cold Nights Web Map Service	Name: NARCliM2.0 Change in Cold Nights Web Map Service Protocol: WWW:DOWNLOAD-1.0-http--download Description: Web map service for GeoTIFF data for NARCliM2.0-derived change in number of cold nights (below 2°C) over the 1990-2009 baseline as found on the NSW Interactive climate change projections map (https://www.climatechange.environment.nsw.gov.au/projections-map) Function: download
NARCliM2.0 Severe Fire Weather Days Web Map Service	Name: NARCliM2.0 Severe Fire Weather Days Web Map Service Protocol: WWW:DOWNLOAD-1.0-http--download Description: Web map service for GeoTIFF data for NARCliM2.0-derived change in severe fire weather days (FFDI greater than 50) over the 1990-2009 baseline as found on the NSW Interactive climate change projections map (https://www.climatechange.environment.nsw.gov.au/projections-map) Function: download

Unique resource identifier

Code	1396e68d-63a7-4b9b-80c6-7611da690905

Presentation

Map digital

form	
Edition	NARCliM2.0
Dataset language	English
Metadata standard	
Name	ISO 19115
Edition	2016
Dataset URI	https://www.planningportal.nsw.gov.au/opendata/dataset/1396e68d-63a7-4b9b-80c6-7611da690905
Purpose	Decision making on impacts and risks from and adaptation to climate change
Status	Completed
Spatial representation type	grid
Spatial reference system	
Code identifying the spatial reference system	4283
Spatial resolution	4 km
Additional information source	Covers historical baseline period of 1990-2009 and 20 year climatologies for 2 emissions scenarios from 2020-2099.
Topic category	climatologyMeteorologyAtmosphere

Keyword set

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

Geographic location

NSW Place Name	Statewide

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	1990-01-01
End position	N/A

Dataset reference date

Resource maintenance

Maintenance and update frequency	As needed
Contact info	
Contact position	Data Broker
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Web address	https://www.nsw.gov.au/departments-and-agencies/dcceew
Responsible party role	pointOfContact

Lineage

NARCliM2.0 climate projections

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	

Responsible party

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Metadata point of contact

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Web address	https://www.nsw.gov.au/departments-and-agencies/dcceew
Responsible party role	pointOfContact

Metadata date

2024-10-18T00:41:55.351290

Metadata language