

# Package ‘RClimChange’

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**Type** Package

**Title** A package to manipulate Global Climate Models from NCCS THREDDS  
NEX-GDDP-CMIP6

**Version** 2.1.0

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**Description**

This package contain simple tools for downloading and subsetting daily GCM data from CMIP6.

**License** GPL (>= 2)

**Encoding** UTF-8

**Depends** R (>= 3.6),

**Imports** ncdf4, RCurl, tictoc

**RoxygenNote** 7.1.2

**RemoteType** github

**RemoteHost** api.github.com

**RemoteRepo** RClimChange

**RemoteUsername** hllauca

**RemoteRef** HEAD

**RemoteSha** d0018cbee2530b8207841d4438b5246d373dbaf5

**GithubRepo** RClimChange

**GithubUsername** hllauca

**GithubRef** HEAD

**GithubSHA1** d0018cbee2530b8207841d4438b5246d373dbaf5

**NeedsCompilation** no

## R topics documented:

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|                   |   |
|-------------------|---|
| gcm_download_data | <i>Download CMIP6 daily data from NCCS THREDDS NEX-GDDP-CMIP6 (<a href="https://www.nccs.nasa.gov/sites/default/files/NEX-GDDP-CMIP6-Tech_Note.pdf">https://www.nccs.nasa.gov/sites/default/files/NEX-GDDP-CMIP6-Tech_Note.pdf</a>)</i> |
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## Description

Download CMIP6 daily data from NCCS THREDDS NEX-GDDP-CMIP6 ([https://www.nccs.nasa.gov/sites/default/files/GDDP-CMIP6-Tech\\_Note.pdf](https://www.nccs.nasa.gov/sites/default/files/GDDP-CMIP6-Tech_Note.pdf))

## Usage

```
gcm_download_data(
  location,
  model = NULL,
  scenario,
  variable,
  years,
  roi,
  method = "curl"
)
```

## Arguments

|          |   |
|----------|---|
| location | Work directory to store downloaded data.  |
| model    | Model names to download. If NULL, all available models will be selected.  |
| scenario | Choose the scenario to be downloaded ('historical', 'ssp245', or 'ssp585').   |
| variable | Choose the variable to be downloaded ('hurs', 'huss', 'pr', 'rlds', 'rsds', 'sfcWind', 'tas', 'tasmax', or 'tasmin').   |
| years    | Choose data years to be downloaded (1950-2014 for 'historical' and 2015-2100 for 'ssp245' and 'ssp585').  |
| roi      | Vector of coordinates for subsetting data (xmin, xmax, ymin, ymax). If NULL, original extension data will be downloaded.  |
| method   | Method to be used for downloading files. Current download methods are 'internal', 'wininet' (Windows only), 'libcurl', 'wget' and 'curl'. The 'curl' method is recommended for Windows users. |

## Value

CMIP6 daily data (in netCDF format).

## Examples

```
# Load package
require(RClimChange)

# Download daily precipitation (in mm/d) from the BCC-CSM2-MR model; for 1990 and the Peruvian domain
gcm_download_data(location=getwd(),
  model='BCC-CSM2-MR',
  scenario='historical',
```

```
variable='pr',  
years=1990,  
roi=c(-86,-66,-20,2),  
method='curl')
```

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