# Package 'RClimChange'

July 6, 2022

**Type** Package

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

**Version** 3.1.1

**Author** Harold Llauca <hllauca@senamhi.gob.pe>

**Maintainer** Harold Llauca <hllauca@senamhi.gob.pe>

**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** d562b53b4f4cd8379389157c947e57af4ea38d8d

**GithubRepo** RClimChange

**GithubUsername** hllauca

**GithubRef** HEAD

**GithubSHA1** d562b53b4f4cd8379389157c947e57af4ea38d8d

**NeedsCompilation** no

## R topics documented:

gcm_download_data *Download CMIP6 daily data from NCCS THREDDS NEX-GDDP-CMIP6.*

## Description

Download CMIP6 daily data from NCCS THREDDS NEX-GDDP-CMIP6.

## 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','ssp126','ssp245', 'ssp370',or 'ssp585). Some models could haven't all scenarios. |
| 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 'ssp126', 'ssp245', 'ssp370' 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')
```

# Index