Package 'RClimChange'

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Type Package

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

Version 2.0.1

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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 62275b51aa00781a5e9dae734d72c4b02ceab13b

GithubRepo RClimChange

GithubUsername hllauca

GithubRef HEAD

GithubSHA1 62275b51aa00781a5e9dae734d72c4b02ceab13b

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 from "https://ds.nccs.nasa.gov/thredds/catalog/AMES/NEX/GDDP-CMIP6/catalog.html". If NULL, all 35 models will be downloaded.
scenario	Choose the scenario to be downloaded ('historical','ssp245', or 'ssp585). More information in "https://www.nccs.nasa.gov/sites/default/files/NEX-GDDP-CMIP6-Tech_Note.pdf".
variable	Choose the variable to be downloaded ('pr':precipitation,'tas': mean air temperature ,'tasmin': minimum air temperature, or 'tasmax': maximum air temperature).
years	Choose data years to be downloaded (from 1950 to 2014 for the 'historical' scenario, and from 2015 to 2100 for 'ssp245' and 'ssp585' scenarios).
roi	Region of interest coordinates for subsetting data. Please insert c(xmin, xmax, ymin, ymax). If NULL, data with the original extension 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) for the region of interest.

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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