

Package ‘RClimChange’

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Type Package

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

Version 3.2.1

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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 86020b200d1c2adb6d5ea1464763d1fe2385ecd9

GithubRepo RClimChange

GithubUsername hllauca

GithubRef HEAD

GithubSHA1 86020b200d1c2adb6d5ea1464763d1fe2385ecd9

NeedsCompilation no

R topics documented:

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| | |
|-------------------|--|
| gcm_download_data | <i>Download CMIP6 daily data from NCCS THREDDS NEX-GDDP-CMIP6.</i> |
|-------------------|--|

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')
```

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