Package 'RClimChange'

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Type Package

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

Version 3.2.2

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

LazyData true

RoxygenNote 7.1.2

R topics documented:

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

Description

Download daily GCM 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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