

Package ‘RClimChange’

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Type Package

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

Version 3.3.0

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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 7.2.3

RemoteType github

RemoteHost api.github.com

RemoteRepo RClimChange

RemoteUsername hllauca

RemoteRef HEAD

RemoteSha 153d7500fbdf15292ad34dc8bd2214ef72ff540b

GithubRepo RClimChange

GithubUsername hllauca

GithubRef HEAD

GithubSHA1 153d7500fbdf15292ad34dc8bd2214ef72ff540b

NeedsCompilation no

R topics documented:

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nex_download	<i>Download daily GCM data from NCCS THREDDDS NEX-GDDP-CMIP6 (https://www.nccs.nasa.gov/services/data-collections/land-based-products/nex-gddp-cmip6)</i>
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Description

Download daily GCM data from NCCS THREDDDS NEX-GDDP-CMIP6 (<https://www.nccs.nasa.gov/services/data-collections/land-based-products/nex-gddp-cmip6>)

Usage

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

Arguments

location	Select the location for data downloading.
model	Model name. If NULL, all available models will be selected.
scenario	CMIP6 scenario ('historical', 'ssp126', 'ssp245', 'ssp370', or 'ssp585').
variable	Variable ('hurs', 'huss', 'pr', 'rlds', 'rsds', 'sfcWind', 'tas', 'tasmax', or 'tasmin').
years	Data years (1950 - 2014 for 'historical' and 2015 - 2100 for 'ssp126', 'ssp245', 'ssp370' and 'ssp585').
roi	Extension for sub-setting gridded data (west, east, south, north). If NULL, original extension is considered.
version	Select file version. Use NULL for first version, or 'v1.1' and 'v1.2'. Please read technical notes in NEX website.
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 flux from BCC-CSM2-MR model
# historical period
```

```
nex_download(location=getwd(),
              model='BCC-CSM2-MR',
              scenario='historical',
              variable='pr',
              years=1990:1992,
              version='v1.1',
              roi=c(-86,-66,-20,2),
              method='curl')

# ssp585 scenario
nex_download(location=getwd(),
              model='BCC-CSM2-MR',
              scenario='ssp585',
              variable='pr',
              years=2050:2052,
              version='v1.1',
              roi=c(-86,-66,-20,2),
              method='curl')
```

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