Package: PEcAn.GDAY (via r-universe)

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Type Package

Title PEcAn Package for Integration of the GDAY Model

Version 1.7.3.9000

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Description This module provides functions to link the GDAY model to PEcAn.

Depends PEcAn.utils

Imports PEcAn.logger, PEcAn.remote, lubridate (>= 1.6.0), ncdf4 (>= 1.15)

Suggests testthat (>= 1.0.2)

SystemRequirements GDAY

OS_type unix

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LazyLoad yes

LazyData TRUE

Encoding UTF-8

RoxygenNote 7.3.2

Repository https://pecanproject.r-universe.dev

RemoteUrl https://github.com/PecanProject/pecan

RemoteRef HEAD

RemoteSha caad7b3f8386df43eaf44f9316459f66ffc69b0b

Contents

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met2model.GDAY   *met2model.GDAY*

Description

Function to convert NetCDF met files in PEcAn-CF format into GDAY met driver files. This function is an R wrapper to the python script "generate_forcing_data.py" in the inst/ folder. The python script supports arguments to generate sub-daily (30 min) weather data as well as soil temperature from 6 day running mean. These arguments are hard-coded in this function to generate daily GDAY files without soil temperature.

Usage

```
met2model.GDAY(
  in.path,
  in.prefix,
  outfolder,
  start_date,
  end_date,
  overwrite = FALSE,
  verbose = FALSE,
  ...
)
```

Arguments

in.path	location on disk where inputs are stored
in.prefix	prefix of input and output files
outfolder	location on disk where outputs will be stored
start_date	the start date of the data to be downloaded (will only use the year part of the date)
end_date	the end date of the data to be downloaded (will only use the year part of the date)
overwrite	should existing files be overwritten
verbose	should the function be very verbose
...	additional arguments, currently ignored

Details

met2model for GDAY

Value

generates GDAY formatted met file as a side affect, returns file metadata that will be inserted into database

Author(s)

Martin De Kauwe, Tony Gardella

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model2netcdf.GDAY   *Function to convert GDAY model output to standard netCDF format*

Description

Convert GDAY output to netCDF

Usage

```
model2netcdf.GDAY(outdir, sitelat, sitelon, start_date, end_date)
```

Arguments

outdir	Location of GDAY model output
sitelat	Latitude of the site
sitelon	Longitude of the site
start_date	Start time of the simulation
end_date	End time of the simulation

Details

Converts all output contained in a folder to netCDF.

Author(s)

Martin De Kauwe

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write.config.GDAY   *Write GDAY configuration files*

Description

Writes a config file for GDAY

Usage

```
write.config.GDAY(defaults, trait.values, settings, run.id)
```

Arguments

`defaults`	list of defaults to process
`trait.values`	vector of samples for a given trait
`settings`	list of settings from pecan settings file
`run.id`	id of run

Details

Requires a pft xml object, a list of trait values for a single model run, and the name of the file to create

Value

configuration file for GDAY for given run

Author(s)

Martin De Kauwe

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