

Package: PEcAn.MAAT (via r-universe)

November 4, 2024

Type Package

Title PEcAn Package for Integration of the MAAT Model

Version 1.7.3.9000

Description This module provides functions to wrap the MAAT model into the PEcAn workflows.

Imports PEcAn.data.atmosphere, PEcAn.logger, PEcAn.remote, PEcAn.settings, PEcAn.utils, lubridate (>= 1.6.0), ncd4 (>= 1.15), XML

Suggests knitr, rmarkdown, testthat (>= 1.0.2)

SystemRequirements MAAT

OS_type unix

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VignetteBuilder knitr, rmarkdown

LazyLoad yes

LazyData FALSE

Encoding UTF-8

RoxygenNote 7.3.2

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

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

RemoteRef HEAD

RemoteSha caad7b3f8386df43eaf44f9316459f66ffc69b0b

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convert.samples.MAAT *Convert samples for MAAT*

Description

convert parameters and parameter names from PEcAn database default units/names with MAAT

Usage

```
convert.samples.MAAT(trait.samples, runid)
```

Arguments

trait.samples a matrix or dataframe of samples from the trait distribution
runid optional parameter for debugging

Details

Performs model specific unit conversions on a a list of trait values, such as those provided to write.config

Value

matrix or dataframe with values transformed

Author(s)

Shawn Serbin, Anthony Walker

met2model.MAAT *Create MAAT met driver files*

Description

met2model wrapper for MAAT

Usage

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

```
    leap_year = TRUE,  
    ...  
)
```

Arguments

in.path	location on disk where inputs (CF met drivers) are stored
in.prefix	prefix of input and output files
outfolder	location on disk where MAAT met 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
leap_year	Enforce Leap-years? If set to TRUE, will require leap years to have 366 days. If set to false, will require all years to have 365 days. Default = TRUE.
...	additional arguments, currently ignored

Author(s)

Shawn P. Serbin

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

Description

Function to convert MAAT model output to standard netCDF format

Usage

```
model2netcdf.MAAT(  
  rundir,  
  outdir,  
  sitelat = -999,  
  sitelon = -999,  
  start_date = NULL,  
  end_date = NULL  
)
```

Arguments

rundir	Location of MAAT model run (i.e. MAAT project) directory with all required model run inputs. This is needed to identify model runs with and without met drivers and control the model output conversion process
outdir	Location of MAAT 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

Author(s)

Shawn Serbin, Anthony Walker, Alexey Shiklomanov

write.config.MAAT *Writes a MAAT config file.*

Description

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

Usage

```
write.config.MAAT(defaults = NULL, 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

Value

configuration file for MAAT for given run

Author(s)

Shawn Serbin, Anthony Walker, Rob Kooper, Chris Black

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