Package: PEcAn.SIBCASA (via r-universe)

September 18, 2024

Type Package

Title PEcAn Package for Integration of the SiBCASA Model

Version 0.0.1.9000

Description This module provides functions to link (SiBCASA) to PEcAn.
It is a work in progress and is not yet fully functional.

Imports ncdf4, PEcAn.logger, PEcAn.utils (>= 1.4.8)

Suggests testthat (>= 3.0.0), withr

SystemRequirements SiBCASA

OS_type unix

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LazyData TRUE

Encoding UTF-8

RoxygenNote 7.3.2

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

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

RemoteRef HEAD

RemoteSha f22a7c4bbc532e4551f7bc9624cef649da317ac1

Contents

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met2model.SIBCASA   *Write SIBCASA met files*

Description

Converts a met CF file to a sibcasa specific met file. The input files are calld <in.path>/<in.prefix>.YYYY.cf

Usage

```
met2model.SIBCASA(in.path, in.prefix, outfolder, overwrite = FALSE)
```

Arguments

in.path	path on disk where CF file lives
in.prefix	prefix for each file
outfolder	location where model specific output is written
overwrite	logical: Replace output if it already exists?

Value

OK if everything was succesful.

Author(s)

Tony Gardella

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model2netcdf.SIBCASA   *Convert SIBCASA output into the NACP Intercomparison format
(ALMA using netCDF)*

Description

Convert SIBCASA output into the NACP Intercomparison format (ALMA using netCDF)

Usage

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

Arguments

outdir	Location of 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)

Tony Gardella

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read_restart.SIBCASA *Read restart template for SDA*

Description

Read restart files from model.

Usage

```
read_restart.SIBCASA(outdir, runid, stop.time, settings, var.names, params)
```

Arguments

outdir	Output directory
runid	Run ID
stop.time	Year that is being read
settings	PEcAn settings object
var.names	Variable names to be extracted
params	Any parameters required for state calculations

Value

Forecast numeric matrix

Author(s)

Alexey Shiklomanov

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sibcasa_output_vars *Output variables for SIBCASA*

Description

TODO: Provide a complete description here of the dataset, including its origin and purpose. The column descriptions below were written by someone looking at the file with no insight into its usage

Usage

```
sibcasa_output_vars
```

Format

data frame with 6 unnamed columns

1 ? (t 0, t 3, etc)

2 short name

3 row number?

4 description

5 units

6 unused

---

write.config.SIBCASA *Writes a SIBCASA 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.SIBCASA(defaults, trait.values, settings, run.id)
```

Arguments

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

Value

configuration file for SIBCASA for given run

Author(s)

Anthony Gardella, Rob Kooper

write_restart.SIBCASA   *Write restart template for SDA*

Description

Write restart files for model

Usage

```
write_restart.SIBCASA(
  outdir,
  runid,
  start.time,
  stop.time,
  settings,
  new.state
)
```

Arguments

outdir	Output directory
runid	Run ID
start.time	Time of current assimilation step
stop.time	Time of next assimilation step
settings	PEcAn settings object
new.state	Analysis state matrix returned by sda.enkf

Author(s)

Alexey Shiklomanov

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