Package 'ISRaD'

October 11, 2018

Title What the Package Does (one line, title case)

Version 0.0.1.0000

Description What the package does (one paragraph).

Depends R (>= 3.3.0)

Imports openxlsx, devtools, stringi, data.tree, dplyr, tidyr, RCurl, ggplot2, shiny, assertthat, rcrossref

License GPL-2

Encoding UTF-8

LazyData true

RoxygenNote 6.1.0

Author First Last [aut, cre]

Maintainer First Last <first.last@example.com>

RemoteType local

RemoteUrl /Users/greymonroe/github/ISRaD

RemoteSha NA

RemoteBranch dev

RemoteUsername International-Soil-Radiocarbon-Database

RemoteRepo ISRaD

R topics documented:

checkTempletFiles *Check ISRaD Templet files*

Description

Check that the Templet information file and the templet file match appropreately.

Usage

```
checkTempletFiles(outfile = "")
```

Arguments

outfile	file to dump the output report. Defaults to an empty string that will print to standard output.

Value

returns NULL

Examples

```
## Not run:
checkTempletFiles()

## End(Not run)
```

compile *Compile ISRaD data product*

Description

Construct data products to the International Soil Radiocarbon Database.

Usage

```
compile(dataset_directory, write_report = FALSE, write_out = FALSE,
  return_type = c("none", "list", "flat")[1], checkdoi = F)
```

Arguments

dataset_directory	string defining directory where compeleted and QC passed soilcarbon datasets are stored
write_report	boolean flag to write a log file of the compilation (FALSE will dump output to console). File will be in the specified in the dataset_directory at "database/ISRaD_log.txt". If there is a file already there of this name it will be overwritten.
write_out	boolean flag to write the compiled database file as csv in dataset_directory (FALSE will not generate ouput file but will return)

return_type	a string that defines return object. Default is "none". Acceptable values are "flat" or "list" depending on the format you want to have the database returned in.
checkdoi	set to F if you do not want the QAQC check to validate doi numbers

---

ISRaD.extra *ISRaD.extra*

Description

fills in transformed data, or empty NA values where possible, and adds geospatial data to soilcarbon database object

Usage

```
ISRaD.extra(database = ISRaD_data, geodata_directory)
```

Arguments

database	soilcarbon dataset object
geodata_directory	directory where geospatial data is found

ISRaD.extra.geospatial.climate *ISRaD.extra.geospatial.climate*

Description

variables that are added

New columns: BIO1 = Annual Mean Temperature BIO2 = Mean Diurnal Range (Mean of monthly (max temp - min temp)) BIO3 = Isothermality (BIO2/BIO7) (* 100) BIO4 = Temperature Seasonality (standard deviation *100) BIO5 = Max Temperature of Warmest Month BIO6 = Min Temperature of Coldest Month BIO7 = Temperature Annual Range (BIO5-BIO6) BIO8 = Mean Temperature of Wettest Quarter BIO9 = Mean Temperature of Driest Quarter BIO10 = Mean Temperature of Warmest Quarter BIO11 = Mean Temperature of Coldest Quarter BIO12 = Annual Precipitation BIO13 = Precipitation of Wettest Month BIO14 = Precipitation of Driest Month BIO15 = Precipitation Seasonality (Coefficient of Variation) BIO16 = Precipitation of Wettest Quarter BIO17 = Precipitation of Driest Quarter BIO18 = Precipitation of Warmest Quarter BIO19 = Precipitation of Coldest Quarter

Usage

```
ISRaD.extra.geospatial.climate(database = ISRaD_data, geodata_directory = "~/Dropbox/Data/geospati
```

Arguments

database	ISRaD dataset object. Default is raw ISRaD_data object that comes with the package
geodata_directory	directory where geospatial climate datasets are found.

Details

extracts values from various geospatial climate datasets and adds to ISRaD_data object to create ISRaD_data_extra.

Value

An ISRaD_data object with additional rows containing values from geospatial datasets. See description for details.

Author(s)

J. Grey Monroe, Alison Hoyt

References

http://www.worldclim.org/

ISRaD.shiny *ISRaD.shiny*

Description

generate reports of ISRaD data

Usage

```
ISRaD.shiny()
```

QAQC *QAQC*

Description

Check the imported soil carbon dataset for formatting and entry errors

Usage

```
QAQC(file, writeQCreport = F, outfile = "", summaryStats = T,
  dataReport = F, checkdoi = T)
```

Arguments

file	directory to data file
writeQCreport	if TRUE, a text report of the QC output will be written to the outfile. Default is FALSE
outfile	filename of the output file if writeQCreport=TRUE. Default is NULL, and the outfile will be written to the directory where the dataset is stored, and named by the dataset being checked.
summaryStats	prints summary statistics. Default is TRUE
dataReport	prints list structure of database. Default is FALSE
checkdoi	set to F if you do not want the QAQC check to validate doi numbers

read_Treat2016 *Read in data for Treat 2016.*

Description

Currently doesn't work and is under development

Usage

```
read_Treat2016(dowloadDir = "temp")
```

Arguments

dowloadDir

read_YujiHe2016 *Read He 2016*

Description

Read in the data from Yuji He's 2016 Science paper as a raw csv file

Usage

```
read_YujiHe2016(Yujie_file = "~/Dropbox/ISRaD_data/Compilations/Yujie/raw/Yujie_dataset2.csv")
```

Arguments

Yujie_file	The raw csv data

Value

ISRaD complient file structure with only columns that overlap with orginal data

reports *reports*

Description

generate reports of ISRaD data

Usage

```
reports(database = ISRaD_data, report)
```

Arguments

database	ISRaD data object. Default is ISRaD_data which comes with the package.
report	Parameter to define which type of report you want. Options are, "entry_stats", "flattened", "fraction"...

Index