Package 'hydrospain'

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Title Read and Download Data from Gauging Station in Spanish Rivers

Version 0.0.1

Maintainer Roberto Molowny-Horas <roberto@creaf.uab.es>

Description Simple download of daily and monthly flow data from gauging stations in Spanish rivers. Data sets are retrieved from the web of the Spanish CEDEX.

Language en-US

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Encoding UTF-8

Roxygen list(markdown = TRUE)

RoxygenNote 7.3.2

Imports cli (>= 3.6.3), sf (>= 1.0-17), httr2 (>= 1.0.6)

Suggests testthat (>= 3.0.0)

Config/testthat/edition 3

Depends R (>= 2.10)

URL <https://github.com/emf-creaf/hydrospain>

BugReports <https://github.com/emf-creaf/hydrospain/issues>

NeedsCompilation no

Author Roberto Molowny-Horas [aut, cre, cph]
(<<https://orcid.org/0000-0003-2626-6379>>)

Contents

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hydrospain   *Read data from gauging stations of most largest Spanish rivers*

Description

hydrospain retrieves time series datasets and statistics for several Spanish basins from the Centro de Estudios Hidrológicos (CEX) of the Centro de Estudios y Experimentación de Obras Públicas (CEDEX).

Usage

```
hydrospain(
  file_name = "estaf",
  basin_nam = NULL,
  timeout = 120,
  first_day = 1,
  sf = TRUE,
  verbose = TRUE
)
```

Arguments

file_name	character string with the name of the file to retrieve from the *CEDEX* site, without extension. If not given, the default value is "estaf". More than one name is not allowed.
basin_nam	character with the name of the basins to retrieve table_name names for. Default is to retrieve data for all basins on the *CEDEX* web site.
timeout	positive integer specifying the timeout for some Internet operations, in seconds. Default is 120 seconds. Depending on the bandwidth of your internet connection or on the state of the CEDEX servers you may have to set a timeout value longer than 120.
first_day	numeric or character vector containing the day number(s) that will be set when building the date object.
sf	logical, if TRUE (default), hydrospain returns a sf spatial object. Coordinate system is always EPSG:32630, which corresponds to WGS84 / UTM zone 30N.
verbose	logical, if set to TRUE progress bars are printed on screen.

Details

For a description of the files to retrieve, check "https://ceh.cedex.es/anuarioaforos/demarcaciones.asp" and click on the basin name for which you want to fetch data.

hydrospain will add UTM30 X-Y coordinates to gauging station data. The coordinate reference system of the resulting sf object is, thus, UTM 30N always. There are coordinates in other reference systems in the original CEDEX files tables, although they are retrieved but not used.

Available basin names, as of Nov. 2024, are the following:

basin_nam	CEDEX full basin name
galicia	AUGAS DE GALICIA – XUNTA DE GALICIA
cantabrico	C.H. CANTABRICO

duero	C.H. DUERO
ebro	C.H. EBRO
guadalquivir	C.H. GUADALQUIVIR
guadiana	C.H. GUADIANA
jucar	C.H. JUCAR
mino	C.H. MIÑO-SIL
segura	C.H. SEGURA
tajo	C.H. TAJO

Value

A spatial `sf` object with a WGS84/UTM zone 30N coordinate reference system (EPSG:32630).

Examples

```
## Not run:
# Read afliq.csv data from basin 'cantabrico'.
x <- hydrospain(file_name = "afliq", basin_nam = "cantabrico", verbose = FALSE)

## End(Not run)
```

Index