Package: worldpa (via r-universe)

August 31, 2024

Type Package

Title An Interface to the World Database on Protected Areas (WDPA)

Version 2.1.0

Date 2021-02-13

Description This package is an interface to the World Database on
Protected Areas <https://www.protectedplanet.net> and its API
<https://api.protectedplanet.net>. User can download
terrestrial and marine protected areas for the world countries
(one country at the time).

URL https://github.com/frbcesab/worldpa

BugReports https://github.com/frbcesab/worldpa/issues

License GPL-3 + file LICENSE

Encoding UTF-8

LazyData true

NeedsCompilation no

Depends R (>= 3.3.0)

Imports geojsonsf, httr, jsonlite, sf

Suggests knitr, maps, pkgdown, rmarkdown, testthat (>= 2.1.0)

Roxygen list(markdown = TRUE)

RoxygenNote 7.1.1

VignetteBuilder knitr

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

RemoteUrl https://github.com/FRBCesab/worldpa

RemoteRef HEAD

RemoteSha 29d88a5f6f543f64a5433a5f8c1dde9e0ad1de08

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get_countries   *Get World Countries Listed by the UNEP-WCMC*

Description

This function gets the list of world countries listed by the UNEP-WCMC using the Protected Planet API <https://api.protectedplanet.net/>.

Usage

```
get_countries(sleep = 0, key = "WDPA_KEY")
```

Arguments

sleep	a numeric specifying the time interval (in seconds) to suspend between each API request.
key	a character providing the WDPA token name stored in the `.Renviron` file. Default is `WDPA_KEY`.

Value

A data frame with the following information (columns) for each World countries (rows):

region_name the name of the region

region_iso2 the ISO-2 code of the region

country_name the name of the country

country_iso3 the ISO-3 code of the country

pas_count the number of protected areas per country

See Also

wdpa_countries, get_wdpa

Examples

```
## Not run:
## List World Countries ----
countries <- worldpa::get_countries(sleep = 0.25)
head(countries)

##   region_name region_iso2 country_name country_iso3 pas_count
## 1      Africa          AF      Algeria          DZA        78
## 2      Africa          AF       Angola          AGO        14
## 3      Africa          AF        Benin          BEN        64
## 4      Africa          AF     Botswana          BWA        22
## 5      Africa          AF Burkina Faso          BFA       112
## 6      Africa          AF      Burundi          BDI        21

## End(Not run)
```

---

get_token   *Check Protected Planet API Token*

Description

This function checks if the user has stored a valid Protected Planet API token in the R environment file (`.Renviron`).

Usage

```
get_token(key = "WDPA_KEY")
```

Arguments

key   a character providing the WDPA token name stored in the `.Renviron` file. Default is `WDPA_KEY`.

Details

Before using this package for the first time, the user must follow these steps:

- Fill in the form available at: <https://api.protectedplanet.net/request> to obtain a personal API token;

- Store the token in the `.Renviron` file under the key `WDPA_KEY`. User can use the function `usethis::edit_r_environ` to open this file;

- Restart R.

Value

A vector of length one with the value of the API token.

Examples

```
## Not run:
## Check if Protected Planet API token is stored ----
worldpa::get_token()

## End(Not run)
```

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get_wdpa   *Download Protected Areas by Country*

Description

This function downloads protected areas for one country using the WDPA API.

Usage

```
get_wdpa(isocode, path = "wdpa", key = "WDPA_KEY")
```

Arguments

isocode	a character specifying the ISO-3 code of the country
path	the path (directory) to save spatial dataset (`.gpkg`). Default is: wdpa/.
key	a character providing the WDPA token name stored in the `.Renviron` file. Default is `WDPA_KEY`.

Value

A `sf` object (**GEOMETRY**) of protected areas defined in the EPSG 4326 with the following 19 attributes:

wdpa_id the ID of the protected area on the WDPA database

pa_name the name of the protected area on the WDPA database

original_name the original name of the protected area

country_iso3 the ISO-3 code of the country

country the name of the country

owner_type the owner of the protected area

is_marine a boolean: `TRUE` for marine and `FALSE` for terrestrial protected area

designation the designation of the protected area

iucn_category the IUCN category

no_take_status the no take status

reported_area the (reported) area of the protected area

reported_marine_area the (reported) area of the marine part of the protected area

no_take_area the (reported) area of the no take part of the protected area

legal_status the legal status of the protected area

management_authority the management authority

governance the type of gouvernance

management_plan the URL of the management plan

protected_planet the URL of the protected area page on the Protected Planet website

legal_status_updated the date of the last update of the legal status

Spatial data are also written on the hard drive in the folder path as a **geopackage**. Filename is structured as **XXX_protectedareas.gpkg** (where XXX is the ISO-3 code of the country). If the path folder does not exist it will created relatively to the current directory.

Note

Note that some geometries are **POINTS** not (**MULTIPOLYGONS**).

See Also

```
wdpa_countries, get_countries
```

Examples

```
## Not run:
## Get the ISO-3 code of Georgia ----
data("wdpa_countries", package = "worldpa")
wdpa_countries[grep("Georgia", wdpa_countries$"country_name"), 3:4]

##                                  country_name country_iso3
## 133                                   Georgia          GEO
## 235 South Georgia and the South Sandwich Islands       SGS

## Download Protected Areas for Georgia ----
worldpa::get_wdpa(isocode = "GEO", path = file.path("data", "wdpa"))

## End(Not run)
```

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wdpa_countries *World Countries Listed in the UNEP-WCMC Regions*

Description

This dataset contains information about countries listed in the Protected Planet project (https://www.protectedplanet.net). This dataset has been built using the Protected Planet API the 2021/02/12. For a more up-to-date version, please use the function get_countries.

Usage

```
wdpa_countries
```

Format

A data frame with 248 rows (countries) and the following 5 columns:

region_name the name of the region

region_iso2 the ISO-2 code of the region

country_name the name of the country

country_iso3 the ISO-3 code of the country

pas_count the number of protected areas per country

Source

https://www.protectedplanet.net/c/unep-regions

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