

Package: geoidep (via r-universe)

September 17, 2024

Type Package

Title Download Geographic Data on Various Topics Provided and Managed by the Spatial Data Infrastructure of Peru

Version 0.1.0

Description Provides R users with easy access to official cartographic data from Peru across a range of topics, including society, transport, environment, agriculture, climate, and more. It also includes data from regional government entities and technical-scientific institutions, all managed by Peru's Spatial Data Infrastructure. For more information, please visit: <<https://www.geoidep.gob.pe/catalogos-de-metadatos>>.

License Apache License (>= 2)

URL <https://geografo.pe/geoidep/>

BugReports <https://github.com/ambarja/geoidep/issues>

LazyData true

Imports httr, sf, archive, cli, tidyr, jsonlite, dplyr

RoxygenNote 7.3.2

Encoding UTF-8

Suggests knitr, rmarkdown, ggplot2, testthat (>= 3.0.0)

VignetteBuilder knitr

Config/testthat/edition 3

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

RemoteUrl <https://github.com/ambarja/geoidep>

RemoteRef HEAD

RemoteSha 307c263b7d64788f2de8c81184f09faed890d089

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get_data_sources	<i>List providers, description, year and link</i>
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Description

This function allows you to list the list of available providers of the geoidep package.

Usage

```
get_data_sources(query = NULL)
```

Arguments

query	A string. Default is NULL. List of available providers. For more details, use the ‘get_providers‘ function.
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Value

A tibble object.

Examples

```
library(geoidep)
get_data_sources()
```

get_departaments	<i>Download INEI departmental boundaries</i>
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Description

This function allows you to download the latest version of the **geometry** and **ubigeos** corresponding to the **official political division** of the department boundaries of Peru. For more information, you can visit the following page <https://ide.inei.gob.pe/>

Usage

```
get_departaments(dsn = NULL, show_progress = TRUE, quiet = TRUE)
```

Arguments

dsn	Character. Output filename. If missing, a temporary file is created.
show_progress	Logical. Suppress bar progress.
quiet	Logical. Suppress info message.

Value

A sf or tibble object.

Examples

```
library(geoidep)
dep <- get_departaments(show_progress = FALSE)
head(dep)
```

get_districts	<i>Download INEI district boundaries</i>
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Description

This function allows you to download the latest version of the **geometry** and **ubigeos** corresponding to the **official political division** of the district boundaries of Peru. For more information, you can visit the following page <https://ide.inei.gob.pe/>

Usage

```
get_districts(dsn = NULL, show_progress = TRUE, quiet = TRUE)
```

Arguments

dsn	Character. Output filename with the *.gpkg format. If missing, a temporary file is created.
show_progress	Logical. Suppress bar progress.
quiet	Logical. Suppress info message.

Value

A sf object.

Examples

```
library(geoidep)
dist <- get_districts(show_progress = FALSE)
head(dist)
```

get_early_warning	<i>Download information on the latest deforestation alerts detected by Geobosque</i>
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Description

This function allows you to download deforestation alert information detected by Geobosque for any polygon located in Peru. For more details, please visit the following website: <https://geobosques.minam.gob.pe>

Usage

```
get_early_warning(region, sf = TRUE, show_progress = TRUE)
```

Arguments

region	A string Specifies the unique geographical code of interest.
sf	Logical. Indicates whether to return the data as an 'sf' object.
show_progress	Logical. If TRUE, shows a progress bar during download.

Value

A tibble or sf object, depending on the value of 'sf'.

Examples

```
library(geoidep)
amazonas <- get_departamentos(show_progress = FALSE) |> subset(NOMBDEP == "AMAZONAS")
warning_point <- get_early_warning(region = amazonas, sf = TRUE, show_progress = FALSE)
head(warning_point)
```

get_forest_loss_data *Download the forest and loss information from Geobosque*

Description

This function allows you to download the **ubigeos** corresponding to the official political division of the district, province or region boundaries of Peru with **forest and loss information**. For more information, you can visit the following website: <https://geobosques.minam.gob.pe>

Usage

```
get_forest_loss_data(layer = NULL, ubigeo = NULL, show_progress = TRUE)
```

Arguments

layer	A string.Specifies one of the following available layers; stock_bosque_perdida_distrito, stock_bosque_perdida_provincia, stock_bosque_perdida_departamento.
ubigeo	A string Specifies the unique geographical code of interest.
show_progress	Logical. Indicates whether to display the progress bar.

Details

Available layers are:

- **stock_bosque_perdida_distrito:** Returns data on forest stock, forest loss, rank loss for a given district.
- **stock_bosque_perdida_provincia:** Returns data on forest stock, forest loss, rank loss for a given province.
- **stock_bosque_perdida_departamento:** Returns data on forest stock, forest loss, rank loss for a given region.

Value

A tibble object.

Examples

```
library(geoidep)
geobosque <- get_forest_loss_data(
  layer = "stock_bosque_perdida_distrito",
  ubigeo = "010101",
  show_progress = FALSE)
head(geobosque)
```

get_midagri_data *Download Geographic Information from MIDAGRI*

Description

This function allows you to download the latest version of MIDAGRI geographic data. For more information you can visit the following page <https://siea.midagri.gob.pe/>.

Usage

```
get_midagri_data(layer = NULL, dsn = NULL, show_progress = TRUE, quiet = TRUE)
```

Arguments

layer	A string. Specifies the layer to download. Available layers are detailed in the 'Details' section.
dsn	Character. The output filename in .shp or .gpkg format. If not provided, a temporary file will be created.
show_progress	Logical. If TRUE, displays a progress bar during the download.
quiet	Logical. If TRUE, suppresses informational messages.

Details

Available layers are:

- **vegetation_cover:** Polygons representing agricultural areas of Peru, produced from high-resolution satellite images (RapidEye and Sentinel-2).
- **agriculture_sector:** Polygons representing the new national register of agricultural statistical sectors for the year 2024.
- **oil_palm_areas:** Polygons representing areas cultivated with oil palm in Peru for the period 2016 to 2020.
- **experimental_stations:** Points representing agricultural experimental stations in Peru.

Value

An 'sf' object containing the downloaded geographic data.

Examples

```
library(geoidep)
library(sf)
# Disable the use of S2 geometry for accurate spatial operations
sf_use_s2(use_s2 = FALSE)

# Retrieve the polygon for Coronel Portillo province
coronel_portillo <- get_provinces(show_progress = FALSE) |>
  subset(NOMBPROV == "CORONEL PORTILLO") |>
```

```
st_transform(crs = 32718)

# Download and extract the oil palm layer for Coronel Portillo
oil_palm <- get_midagri_data(
  layer = "oil_palm_areas",
  show_progress = FALSE
) |>
  st_intersection(coronel_portillo)

# Visualize the oil palm layer
plot(st_geometry(oil_palm))
```

get_providers

List resources and count layers of IDEP

Description

Summary of providers

Usage

```
get_providers(query = NULL)
```

Arguments

query A string. Default is NULL.

Value

A sf or tibble object.

Examples

```
library(geoidep)
get_providers()
```

get_provinces *Download INEI province boundaries*

Description

This function allows you to download the latest version of the **geometry** and **ubigeos** corresponding to the **official political division** of the province boundaries of Peru. For more information, you can visit the following page <https://ide.inei.gob.pe/>

Usage

```
get_provinces(dsn = NULL, show_progress = TRUE, quiet = TRUE)
```

Arguments

dsn	Character. Output filename. If missing, a temporary file is created.
show_progress	Logical. Suppress bar progress.
quiet	Logical. Suppress info message.

Value

A sf or tibble object.

Examples

```
library(geoidep)
prov <- get_provinces(show_progress = FALSE)
head(prov)
```

get_sernanp_data *Download the available data from Sernanp*

Description

This function allows you to download the latest version of data available on the sernanp geoviewer. For more information, you can visit the following web page: <https://geo.sernanp.gob.pe/visorsernanp/>

Usage

```
get_sernanp_data(layer = NULL, dsn = NULL, show_progress = TRUE, quiet = FALSE)
```


Arguments

<code>layer</code>	Select only one from the list of available layers, for more information please use <code>'get_data_sources(provider = "sernanp")'</code> . Defaults to NULL.
<code>dsn</code>	Character. Output filename with the spatial format . If missing, a temporary file is created.
<code>show_progress</code>	Logical. Suppress bar progress.
<code>quiet</code>	Logical. Suppress info message.

Value

A sf object.

Examples

```
library(geoidp)
library(sf)
anp <- get_sernanp_data(layer = "zonificacion_anp" , show_progress = FALSE)
plot(st_geometry(anp))
```

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