Package ‘PublicWorksFinanceIT’

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Title Soil Defense Investments in Italy: Data Retrieval, Analysis, Visualization

Version 0.2.0

Description Facilitates the retrieval and analysis of financial data related to public works in Italy, focusing on soil defense investments. It extracts data from 'OpenCoesione', 'OpenBDAP', and the 'ReNDiS' database, eliminating the need for direct access to these platforms. The package boasts a user-friendly design, featuring real time updates and a set of functions tailored for data retrieval and visualization. See the webpages for further information <http://www.rendis.isprambiente.it/rendisweb/>, <https://opencoesione.gov.it/en/>, and <https://bdap-opendata.rgs.mef.gov.it/>.

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geo_OBDAP    Dataset Localization OBDAP Public Works

Description

Dataset containing the geographical localization information for each public work, identified by its CUP, sourced from the OpenBDAP repository.

Usage

data("geo_OBDAP")

Format

A data frame with 642055 observations on the following 7 variables.

CUP  a character vector
COD_REGION  a character vector
DEN_REGION  a character vector
COD_PROVINCE  a character vector
DEN_PROVINCE  a character vector
COD_MUNICIPALITY  a character vector
DEN_MUNICIPALITY  a character vector

Details

Used in the get_data_OBDAP function to associate locations to projects.

Source

https://openbdap.rgs.mef.gov.it/
get_codes

Examples

```
data(geo_OBDAP)
```

get_codes

**Download ISTAT codes for italian regions, provinces and municipalities.**

Description

get_codes allows to retrieve codes for regions, provinces, and municipality, filtering for the type of codes needed.

Usage

```
get_codes(type)
```

Arguments

type character. The argument can be set to region, province, or municipality according to which codes are needed.

Value

a data.frame object

Author(s)

Lorena Ricciotti

Examples

```
data <- get_codes("region")
```

get_data_OBDAP

**Retrieve financial data on public works from the OpenBDAP data base.**

Description

get_data_OBDAP function retrieves data from one or more Italian regions using ISTAT region codes. It allows filtering based on: municipality code, and the project’s starting and/or ending dates. Additionally, it provides geospatial references.
get_data_OBDAP

Usage

get_data_OBDAP(
  cod_reg,
  cod_prov = NULL,
  cod_mun = NULL,
  start = NULL,
  end = NULL,
  geo_ref = NULL,
  soil_defense = FALSE,
  verbose = TRUE
)

Arguments

cod_reg character vector. The ISTAT regional code is used to specify one or more regions of interest when retrieving data. (See get_codes function)
cod_prov character vector. The ISTAT province code is used to specify one or more provinces of interest when retrieving data. (See get_codes function)
cod_mun character vector. The ISTAT municipal code is used to specify one or more municipalities of interest when retrieving data. (See get_codes function)
start character (format YYYY-mm-dd). Effective starting date of design refers to the specific phase of a public project that marks the beginning of its design process. This date can be of interest for filtering and analyzing relevant data.
end character (format YYYY-mm-dd). Effective ending date of design refers to the specific phase of a public project that marks the conclusion of its design process. This date can be of interest for filtering and analyzing relevant data.
geo_ref character. The georeference data can be specified using the geo_ref argument. If set to A, the function returns shape polygons of each municipality. If set to C, it retrieves the coordinates of the centroids of each municipality.
soil_defense logical. By default set to FALSE. If only soil defense data are of interest set the argument to TRUE.
verbose Logic value (TRUE or FALSE). Toggle warnings and messages. If ’verbose = TRUE’ (default) the function prints on the screen some messages describing the progress of the tasks. If ’verbose = FALSE’ any message about the progression is suppressed.

Value

Object of class data.frame showing 22 variables. Descriptive Variables:

- Local Project Code (character)
- CUP (character)
- Intervention (character)

Financial Variables:

- State Funding (numeric)
• EU Funding (numeric)
• Local Authorities Funding (numeric)
• Private Funding (numeric)
• Other Funding (numeric)

Geographical References:
• DEN_REGION (character)
• DEN_PROVINCE (character)
• DEN_MUNICIPALITY (character)
• COD_REGION (character)
• COD_PROVINCE (character)
• COD_MUNICIPALITY (character)
• geom (character)

Legislative process main steps:
• Executive Design Starting Date (character)
• Executive Design Ending Date (character)
• Works Execution Starting Date (character)
• Works Execution Ending Date (character)
• Conclusion Starting Date (character)
• Conclusion Ending Date (character)
• Operability (character)

Author(s)

Lorena Ricciotti

References

Open BDAP

Examples

data <- get_data_OBDAP("14")
# Retrieve data for one region filtering for soil defense interventions.
get_data_region_OC

Retrieve data from the OpenCoesione data base per region.

Description

The get_data_region_OC function retrieves data from one or more Italian regions using associated region codes. It offers filtering options based on project start/end dates, province, and municipality codes. Additionally, it provides geospatial references.

Usage

get_data_region_OC(
  cod_reg,
  cod_prov = NULL,
  cod_mun = NULL,
  start = NULL,
  end = NULL,
  geo_ref = NULL,
  soil_defense = FALSE,
  verbose = TRUE
)

Arguments

cod_reg character. Vector specifying one or more region of interest. To get information about the codes associated to each region use the function get_info_OC

cod_prov character. The ISTAT province code is used to filter data based on one or more specific provinces of interest.(See get_codes function)

cod_mun character. The ISTAT municipality code is used to filter data based on one or more specific provinces of interest.(See get_codes function)

start (format YYYY-mm-dd). Effective starting date of the project. This date can be of interest for filtering and analyzing relevant data.

end (format YYYY-mm-dd). Effective ending date of the project. This date can be of interest for filtering and analyzing relevant data.

geo_ref character, The georeference data can be specified using the geo_ref argument. If set to A, the function returns shape polygons of each municipality. If set to C, it retrieves the coordinates of the centroids of each municipality.

soil_defense Logical. By default set to FALSE. If only soil defense data are of interest set the argument to TRUE.

verbose Logic value (TRUE or FALSE). Toggle warnings and messages. If ‘verbose = TRUE’ (default) the function prints on the screen some messages describing the progress of the tasks. If ‘verbose = FALSE’ any message about the progression is suppressed.
Value

Object of classe data.frame showing 42 variables: Descriptive Variables:

- Local Project Code (character)
- CUP (character)
- Intervention (character)

Financial Variables:

- EU Funding (numeric)
- FESR EU Funding (numeric)
- FSE EU Funding (numeric)
- FEASR EU Funding (numeric)
- FEAMP EU Funding (numeric)
- IOG EU Funding (numeric)
- Fondo di Rotazione ITA (numeric)
- FSC ITA Funding (numeric)
- PAC ITA Funding (numeric)
- Completamenti ITA Funding (numeric)
- Other Measures ITA Funding (numeric)
- Region Funding (numeric)
- Province Funding (numeric)
- Municipality Funding (numeric)
- Released Resources (numeric)
- Other Public Funding (numeric)
- Foreign State Funding (numeric)
- Private Funding (numeric)
- Total Public Funding (numeric)
- Total Funding (numeric)

Geographical References:

- DEN_REGION (character)
- DEN_PROVINCE (character)
- DEN_MUNICIPALITY (character)
- COD_REGION (character)
- COD_PROVINCE (character)
- COD_MUNICIPALITY (character)
- geom (character)

Legislative process main steps:
get_data_RENDIS

- Feasibility Study Starting Date (character)
- Feasibility Study Ending Date (character)
- Preliminary Design Starting Date (character)
- Preliminary Design Ending Date (character)
- Definitive Design Starting Date (character)
- Definitive Design Ending Date (character)
- Executive Design Starting Date (character)
- Executive Design Ending Date (character)
- Effective Design Starting Date (character)
- Effective Design Ending Date (character)
- Works Execution Starting Date (character)
- Works Execution Ending Date (character)
- Conclusion Starting Date (character)
- Conclusion Ending Date (character)

Author(s)

Lorena Ricciotti

References

Open Coesione

Examples

dati_VDA <- get_data_region_OC("VDA", cod_mun = "007002")
# #Retrieving data for the municipality with code 007002 in the Valle d’Aosta region.

get_data_RENDIS

Retrieve data from the ReNDiS database on soil defense public works.

Description

The get_data_RENDIS function enables the retrieval of data from one or more region or type of intervention using associated codes. It allows filtering based on: municipality code, and the project’s starting and/or ending dates. Additionally, it provides geospatial references.
Usage

get_data_RENDIS(
  cod_reg,
  cod_prov = NULL,
  cod_mun = NULL,
  start = NULL,
  end = NULL,
  type = NULL,
  geo_ref = NULL
)

Arguments

cod_reg character. The ISTAT regional code is used to filter data based on one or more specific regions of interest. (See get_codes function)

cod_prov character. The ISTAT province code is used to specify one or more provinces of interest within the region(s) of interest. (See get_codes function)

cod_mun character. The ISTAT municipality code is used to specify one or more municipalities of interest within the region(s) of interest. (See get_codes function)

start character (format YYYY-mm-dd). Effective starting date of design refers to the specific phase of a public project that marks the beginning of its design process. This date can be of interest for filtering and analyzing relevant data.

date_end character (format YYYY-mm-dd). Effective ending date of design refers to the specific phase of a public project that marks the conclusion of its design process. This date can be of interest for filtering and analyzing relevant data.

type character. a character string on which type of intervention data needs to be retrieved. To get information about type see get_type_RENDIS function.

geo_ref character. The georeference data can be specified using the geo_ref argument. If set to A, the function returns shape polygons of each municipality. If set to C, it retrieves the coordinates of the centroids of each municipality.

Value

Object of class tbl_df, tbl, data.frame showing 25 variables. Descriptive Variables:

- CUP (character)
- Intervention (character)
- Type (character)

Financial Variable:

- Finance (numeric)

Geographical References:

- DEN_REGION (character)
- DEN_PROVINCE (character)
get_data_RENDIS

- DEN_MUNICIPALITY (character)
- COD_REGION (character)
- COD_PROVINCE (character)
- COD_MUNICIPALITY (character)
- geom (character)

Legislative process main steps:

- Feasibility Study Starting Date (character)
- Feasibility Study Ending Date (character)
- Preliminary Design Starting Date (character)
- Preliminary Design Ending Date (character)
- Definitive Design Starting Date (character)
- Definitive Design Ending Date (character)
- Executive Design Starting Date (character)
- Executive Design Ending Date (character)
- Works Execution Starting Date (character)
- Works Execution Ending Date (character)
- Conclusion Starting Date (character)
- Conclusion Ending Date (character)
- Intervention Closed (character)
- Operability (character)

Author(s)

Lorena Ricciotti

References

ReNDiS

Examples

data_12 <- get_data_RENDIS("12", cod_prov = c("258", "059"), geo_ref = "C")
#Data for the Lazio region filtering for Rome and Latina provinces with point georeferences.
get_data_theme_OC

Retrieve Data from OpenCoesione Database by Theme’s Project

Description

The get_data_theme_OC function allows users to fetch data from the OpenCoesione database based on specific themes related to projects.

Usage

get_data_theme_OC(
  themes,
  cod_reg = NULL,
  cod_prov = NULL,
  cod_mun = NULL,
  start = NULL,
  end = NULL,
  geo_ref = NULL,
  soil_defense = FALSE,
  verbose = TRUE
)

Arguments

themes character. Vector specifying one or more theme of interest. To get information about the codes associated to each theme use the function get_info_OC.

cod_reg character. The ISTAT regional code is used to filter data based on one or more specific regions of interest. (See get_codes function)

cod_prov character. The ISTAT province code is used to filter data based on one or more specific provinces of interest. (See get_codes function)

cod_mun character. The ISTAT municipality code is used to specify one or more municipalities of interest within the region(s) of interest. (See get_codes function)

start character (format YYYY-mm-dd). Effective starting date of the project. This date can be of interest for filtering and analyzing relevant data.

end character (format YYYY-mm-dd). Effective ending date of the project. This date can be of interest for filtering and analyzing relevant data.

geo_ref character. The georeference data can be specified using the geo_ref argument. If set to A, the function returns shape polygons of each municipality. If set to C, it retrieves the coordinates of the centroids of each municipality.

soil_defense Logical, default set to FALSE. If only soil defense data are of interest set the argument to TRUE.

verbose Logic value (TRUE or FALSE). Toggle warnings and messages. If ‘verbose = TRUE’ (default) the function prints on the screen some messages describing the progress of the tasks. If ‘verbose = FALSE’ any message about the progression is suppressed.
Value

Object of classe data.frame showing 42 variables: Descriptive Variables:

- Local Project Code (character)
- CUP (character)
- Intervention (character)

Financial Variable:

- EU Funding (numeric)
- FESR EU Funding (numeric)
- FSE EU Funding (numeric)
- FEASR EU Funding (numeric)
- FEAMP EU Funding (numeric)
- IOG EU Funding (numeric)
- Fondo di Rotazione ITA (numeric)
- FSC ITA Funding (numeric)
- PAC ITA Funding (numeric)
- Completamenti ITA Funding (numeric)
- Other Measures ITA Funding (numeric)
- Region Funding (numeric)
- Province Funding (numeric)
- Municipality Funding (numeric)
- Released Resources (logic)
- Other Public Funding (numeric)
- Foreign State Funding (numeric)
- Private Funding (numeric)
- Total Public Funding (numeric)
- Total Funding (numeric)

Geographical References:

- DEN_MUNICIPALITY (character)
- DEN_REGION (character)
- DEN_PROVINCE (character)
- COD_REGION (character)
- COD_PROVINCE (character)
- COD_MUNICIPALITY (character)
- geom (character)

Legislative process main steps:
get_info_OC

- Feasibility Study Starting Date (integer)
- Feasibility Study Ending Date (integer)
- Preliminary Design Starting Date (integer)
- Preliminary Design Ending Date (integer)
- Definitive Design Starting Date (integer)
- Definitive Design Ending Date (integer)
- Executive Design Starting Date (integer)
- Executive Design Ending Date (integer)
- Works Execution Starting Date (integer)
- Works Execution Ending Date (integer)
- Conclusion Starting Date (character)
- Conclusion Ending Date (character)

Author(s)
Lorena Ricciotti

References
Open Coesione

Examples

data <- get_data_theme_OC("AMBIENTE", start = "2022-01-01", end = "2022-12-31")

get_info_OC

Retrieve information about regional and theme codes for the Open Coesione dataset.

Description
The get_info_OC function allows to get information regarding the codes to use to retrieve data from the Open Coesione database.

Usage

get_info_OC(info)

Arguments

| info   | character. The argument can be set to "region" if the data to be downloaded are based on regional codes, or it can be set to "theme" if the data to be downloaded are based on project's theme. |
Details

The information obtained can be used in the functions get_data_OC or get_theme_OC

Value

Return a vector of characters. Regions:

- VDA => Valle d’Aosta
- PIE => Piemonte
- LOM => Lombardia
- TN_BZ => Trentino Alto Adige (Bolzano)
- VEN => Veneto
- FVG => Friuli di Venezia Giulia
- LIG => Liguria
- EMR => Emilia Romagna
- TOS => Toscana
- UMB => Umbria
- MAR => Marche
- LAZ => Lazio
- ABR => Abruzzo
- CAM => Campania
- MOL => Molise
- PUG => Puglia
- CAL => Calabria
- BAS => Basilicata
- SIC => Sicilia
- SAR => Sardegna
- NAZ => National Level
- EST => Estero (Abroad)

Themes:

- RICERCA_INNOVAZIONE => Research and Innovation
- RETI_SERVIZI_DIGITALI => Digital Services
- COMPETITIVITA_IMPRESE => Firms Competition
- ENERGIA => Energy
- AMBIENTE => Environment
- CULTURA_TURISMO => Culture and Tourism
- TRASPORTI => Transports
- OCCUPAZIONE => Employment
- INCLUSIONE_SOCIALE_SALUTE => Social Inclusion and Health
- ISTRUZIONE_FORMAZIONE => Education
- CAPACITA_AMMINISTRATIVA => Administrative Capacity
get_type_RENDIS

Author(s)
Lorena Ricciotti

References
Open Coesione

Examples
get_info_OC("region")

---

get_type_RENDIS    Retrieve information about soil defense type of the ReNDiS database

Description
The get_type_RENDIS function returns the list of type of interventions for soil defense contained in the ReNDiS database.

Usage
get_type_RENDIS()

Value
Return an object of class data.frame
Types:
• Frana => Landslide
• Non definito => Not defined
• Alluvione => Flooding
• Misto => Mixed
• Valanga => Avalanche
• Incendio => Wildfire
• Costiero => Coastal

Author(s)
Lorena Ricciotti

References
ReNDiS
merge_data

Examples

get_type_RENDIS()

merge_data

Merging the three financial datasets

Description

Function to merge the three financial datasets from the three different platforms to obtain a complete
dataset to have a comprehensive overview of the investments.

Usage

merge_data(data_RENDIS, data_OBDAP, data_OC)

Arguments

data_RENDIS  Dataset of class 'data.frame'. Specify the dataset obtained from the ReNDiS
database by the get_data_RENDIS function.
data_OBDAP    Dataset of class 'data.frame'. Specify the dataset obtained from the OpenBDAP
database by the get_data_OBDAP function.
data_OC       Dataset of class 'data.frame'. Specify the dataset obtained from the OpenCoe-
sione database by the get_data_region_OC or get_data_theme_OC function.

Value

Object of class data.frame showing 28 variables:
Descriptive Variables:
  • CUP (character)
  • Intervention (character)
  • Source (character)

Financial Variables:
  • State Funding (numeric)
  • EU Funding (numeric)
  • Local Authorities Funding (numeric)
  • Private Funding (numeric)
  • Other Funding (numeric)
  • Finance (numeric)

Geographical References:
  • DEN_REGION (character)
OBDAPpoint

- DEN_PROVINCE (character)
- DEN_MUNICIPALITY (character)
- COD_REGION (character)
- COD_PROVINCE (character)
- COD_MUNICIPALITY (character)
- geom (character)

Legislative process main steps:

- Feasibility Study Starting Date (character)
- Feasibility Study Ending Date (character)
- Preliminary Design Starting Date (character)
- Preliminary Design Ending Date (character)
- Definitive Design Starting Date (character)
- Definitive Design Ending Date (character)
- Executive Design Starting Date (character)
- Executive Design Ending Date (character)
- Works Execution Starting Date (character)
- Works Execution Ending Date (character)
- Conclusion Starting Date (character)
- Conclusion Ending Date (character)

Author(s)

Lorena Ricciotti

Examples

data(OCpoint)
data(OBDAPpoint)
data(RENDISpoint)
data_all <- merge_data(RENDISpoint, OBDAPpoint, OCpoint)

---

<table>
<thead>
<tr>
<th>OBDAPpoint</th>
<th>Soil Defense Public Work for the Molise.</th>
</tr>
</thead>
</table>

Description

Dataset collecting data about soil defense public works in the Molise region retrieved from the Open BDAP repository. Data are georeferenced with point coordinates.
Usage

```
data("OBDAPpoint")
```

Format

A data frame with 722 observations on the following 22 variables.

- `LocalProjectCode`  a character vector
- `CUP`  a character vector
- `Intervention`  a character vector
- `EffectiveDesignStartingDate`  a character vector
- `EffectiveDesignEndingDate`  a character vector
- `WorksExecutionStartingDate`  a character vector
- `WorksExecutionEndingDate`  a character vector
- `ConclusionStartingDate`  a character vector
- `ConclusionEndingDate`  a character vector
- `Operability`  a character vector
- `StateFunding`  a numeric vector
- `EuFunding`  a numeric vector
- `LocalAuthoritiesFunding`  a numeric vector
- `PrivateFunding`  a numeric vector
- `OtherFunding`  a numeric vector
- `COD_MUNICIPALITY`  a character vector
- `COD_PROVINCE`  a character vector
- `COD_REGION`  a character vector
- `DEN_MUNICIPALITY`  a character vector
- `DEN_PROVINCE`  a character vector
- `DEN_REGION`  a character vector
- `geom`  a character vector

Details

Dataset is obtained using the `get_data_OBDAP` function.

Source

`https://openbdap.rgs.mef.gov.it/`

Examples

```
data(OBDAPpoint)
```
**OCpoint**  

*Soil Defense Public works for the Umbria Region*

**Description**
Dataset collecting data about soil defense public works in the Umbria region retrieved from the Open Coesione repository. Data are georeferenced with point coordinates.

**Usage**
```r
data("OCpoint")
```

**Format**
A data frame with 82 observations on the following 44 variables.

- `LocalProjectCode`  a character vector
- `CUP`  a character vector
- `Intervention`  a character vector
- `COD_REGION`  a character vector
- `DEN_REGION`  a character vector
- `COD_PROVINCE`  a character vector
- `DEN_PROVINCE`  a character vector
- `COD_MUNICIPALITY`  a character vector
- `DEN_MUNICIPALITY`  a character vector
- `EuFunding`  a numeric vector
- `FESR_EuFunding`  a numeric vector
- `FSE_EuFunding`  a numeric vector
- `FEASR_EuFunding`  a numeric vector
- `FEAMP_EuFunding`  a numeric vector
- `IOG_EuFunding`  a numeric vector
- `FondoDiRotazioneITA`  a numeric vector
- `FSC_FundingITA`  a numeric vector
- `PAC_FundingITA`  a numeric vector
- `CompletamentiFunding_ITA`  a numeric vector
- `OtherMeasuresFundingITA`  a numeric vector
- `RegionFunding`  a numeric vector
- `ProvinceFunding`  a numeric vector
- `MunicipalityFunding`  a numeric vector
- `ReleasedResources`  a logical vector
OtherPublicFunding a numeric vector
ForeignStateFunding a logical vector
PrivateFunding a numeric vector
TotalPublicFunding a numeric vector
TotalFunding a numeric vector
FeasibilityStudyStartingDate a character vector
FeasibilityStudyEndingDate a character vector
PreliminaryDesignStartingDate a character vector
PreliminaryDesignEndingDate a character vector
DefinitiveDesignStartingDate a character vector
DefinitiveDesignEndingDate a character vector
ExecutiveDesignStartingDate a character vector
ExecutiveDesignEndingDate a character vector
EffectiveDesignStartingDate a character vector
EffectiveDesignEndingDate a character vector
WorksExecutionStartingDate a character vector
WorksExecutionEndingDate a character vector
ConclusionStartingDate a character vector
ConclusionEndingDate a character vector
geom a character vector

Details

Dataset is obtained using the get_data_region_OC function.

Source

https://opencoesione.gov.it/it/

Examples

data(OCpoint)
**plot_funds_bar**

Repartition of Financial Funds Allocation: Investment Amounts Barplot

**Description**

The `plot_funds_bar` function creates a barplot to visually represent the distribution of financial funds allocation across different investment channels.

**Usage**

```r
plot_funds_bar(data, var_col)
```

**Arguments**

- `data` Dataset of class 'data.frame'. Specify the dataset from which to take information.
- `var_col` integer value. Specify the number of the columns associated with the variable to visualize.

**Value**

An object of class `gg` and `ggplot` representing the barplot.

**Author(s)**

Lorena Ricciotti

**Examples**

```r
data(OCpoint)
plot_funds_bar(OCpoint, var_col = c(10:15))
#Barplot visualizing the total amount allocated by each fund.
```

---

**plot_funds_map**

Visual representation by mapping municipalities’ polygons and color-coding them according to financial expenditures.

**Description**

The `plot_funds_map` function is designed for visualizing areal data within a region. It generates an informative map where each municipality is represented with a unique color determined by its corresponding financing amount.
Usage

plot_funds_map(data, var)

Arguments

data dataset of class 'data.frame'. Specify the dataset from which to take information. The dataset must contain the geometry of the polygons of each municipality.

var character. Specify the name of the variable to visualize.

Value

Return ggplot object representing an interactive map.

Author(s)

Lorena Ricciotti

Examples

#Retrieve data with the polygons of the municipalities
RENDISarea <- get_data_RENDIS("12", geo_ref = "A")
plot_funds_map(RENDISarea, var = "Finance")

#Plotting the map for Lazio region to visualize the total public expenditure divided by municipality.

plot_funds_points Visualization of point data.

Description

The plot_funds_points function is designed for visualizing maps of centroids for municipalities using point data. The map colors are determined by the financing amount, and the radius of each point is proportional to the corresponding financing amount.

Usage

plot_funds_points(data, var)

Arguments

data Dataset of class 'data.frame’ containing the information about the coordinates of municipalities. Data can be retrieved from all the retrieval functions using the geo_ref = "C" argument.

var character. Specify the variable to visualize.
Value

Return a leaflet object representing an interactive map of centroids of municipalities.

Author(s)

Lorena Ricciotti

Examples

data(RENDISpoint)
plot_funds_points(RENDISpoint, var = "Finance")
#Plotting the points of each municipality of the Basilicata region using the leaflet function.

<table>
<thead>
<tr>
<th>RENDISpoint</th>
<th>Soil Defense Public Works for the Basilicata Region.</th>
</tr>
</thead>
</table>

Description

Dataset collecting data about soil defense public works in the Basilicata region retrieved from the ReNDiS repository. Data are georeferenced with point coordinates.

Usage

data("RENDISpoint")

Format

A data frame with 210 observations on the following 27 variables.

- CUP: a character vector
- Intervention: a character vector
- Type: a character vector
- Finance: a numeric vector
- DEN_MUNICIPALITY: a character vector
- DEN_REGION: a character vector
- COD_REGION: a character vector
- COD_MUNICIPALITY: a character vector
- COD_PROVINCE: a character vector
- DEN_PROVINCE: a character vector
- FeasibilityStudyStartingDate: a character vector
- FeasibilityStudyEndingDate: a character vector
- PreliminaryDesignStartingDate: a character vector
- PreliminaryDesignEndingDate: a character vector
DefinitiveDesignStartingDate a character vector
DefinitiveDesignEndingDate a character vector
ExecutiveDesignStartingDate a character vector
ExecutiveDesignEndingDate a character vector
EffectiveDesignStartingDate a character vector
EffectiveDesignEndingDate a character vector
WorksExecutionStartingDate a character vector
WorksExecutionEndingDate a character vector
ConclusionStartingDate a character vector
ConclusionEndingDate a character vector
InterventionClosed a character vector
Operability a character vector
geom a character vector

Details
Dataset is obtained using the get_data_RENDIS function.

Source
http://www.rendis.isprambiente.it/rendisweb/

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