

Package ‘CepalStatR’

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Title Access to the 'CEPALSTAT API'

Version 0.9.0

Description Explore metadata and retrieve indicators from the statistical portal of the Economic Commission for Latin America and the Caribbean <<https://statistics.cepal.org/portal/cepalstat/>>. Provides a reproducible interface to access the 'CEPALSTAT API', organize data into tidy formats, and generate both static and interactive visualizations.

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URL <https://github.com/Henry-Osorto/CepalStatR>,
<https://henry-osorto.github.io/CepalStatR/>

BugReports <https://github.com/Henry-Osorto/CepalStatR/issues>

Encoding UTF-8

Depends R (>= 4.1)

Imports base64enc, dplyr, httr2, htmltools, jsonlite, magrittr, reactable, stringr, tidyselect, rlang, collapsibleTree, gridExtra, htmlwidgets

Suggests ggplot2, gt, knitr, rmarkdown, svglite, testthat (>= 3.0.0), vcr, webmockr

VignetteBuilder knitr

Config/testthat/edition 3

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Author Henry Osorto [aut, cre] (ORCID:
<<https://orcid.org/0000-0002-4334-9179>>)

Maintainer Henry Osorto <henry.osorto@unah.edu.hn>

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| | |
|-----------|---------------------------------------|
| call.data | <i>Call Data Indicators CEPALSTAT</i> |
|-----------|---------------------------------------|

Description

Retrieves indicator data from the CEPALSTAT API in JSON format and returns a data frame with values, dimensions, metadata, and optionally footnotes.

Usage

```
call.data(id.indicator, language.en = TRUE, notes = FALSE,
          progress = TRUE, add.indicator.name = TRUE)
```

Arguments

| | |
|--------------------|--|
| id.indicator | A single CEPALSTAT indicator ID. |
| language.en | Logical. If TRUE (default), the output uses English labels. If FALSE, Spanish labels are used when applicable. |
| notes | Logical. If TRUE, footnotes are joined when available. |
| progress | Logical. If TRUE, progress messages are shown. |
| add.indicator.name | Logical. If TRUE, adds indicator ID and indicator name. |

Value

A data frame with indicator values, dimension labels, and metadata.

Examples

```
data <- call.data(id.indicator = 4788)
data <- call.data(id.indicator = 4788, language.en = FALSE)
data <- call.data(id.indicator = 4788, notes = TRUE)
```

| | |
|-----------------|---------------------------------------|
| call.indicators | <i>Call indicators from CEPALSTAT</i> |
|-----------------|---------------------------------------|

Description

Retrieves the thematic tree from the CEPALSTAT API in JSON format and returns a data frame with the hierarchical structure of indicators.

Usage

```
call.indicators(language.en = TRUE, progress = TRUE)
```

Arguments

| | |
|-------------|---|
| language.en | Logical. If TRUE (default), labels are returned in English. If FALSE, labels are returned in Spanish. |
| progress | Logical. If TRUE (default), progress messages are displayed. |

Value

A data frame with the hierarchical thematic structure of CEPALSTAT indicators and the corresponding indicator ID.

Examples

```
data.indicators <- call.indicators()
data.indicators <- call.indicators(language.en = FALSE)
```

| | |
|-----------|---|
| countries | <i>List of countries available in CEPALSTAT</i> |
|-----------|---|

Description

Retrieves the list of countries available in CEPALSTAT using the dimensions endpoint of a reference indicator. This approach avoids downloading full datasets and ensures consistency with the API structure.

Usage

```
countries(language.en = TRUE)
```

Arguments

| | |
|-------------|---|
| language.en | Logical. If TRUE (default), returns country names in English. If FALSE, returns names in Spanish. |
|-------------|---|

Value

A data frame containing the list of countries.

Examples

```
countries()
countries(language.en = FALSE)
```

pyramids

Population pyramids

Description

Creates one or multiple population pyramids for a selected country and years using CEPALSTAT population-by-age-and-sex data.

Usage

```
pyramids(
  country,
  years = 1:31,
  language.en = TRUE,
  color = c("#0C4A61", "#34B0AA"),
  save = FALSE,
  file = NULL,
  format = c("png", "pdf", "svg"),
  height = 5,
  width = 7,
  caption = TRUE,
  progress = TRUE
)
```

Arguments

| | |
|-------------|---|
| country | Character. Name of the country or region to plot. |
| years | Numeric vector of positions between 1 and 31 corresponding to 5-year intervals from 1950 to 2100. |
| language.en | Logical. If TRUE (default), English labels are used. If FALSE, Spanish labels are used. |
| color | Character vector of length 2 with colors for men and women. |
| save | Logical. If TRUE, saves the resulting figure. |
| file | Character. Output filename when save = TRUE. If NULL, the file is saved to a temporary directory using tempdir(). |
| format | Character. Output format when save = TRUE. One of "png" (default), "pdf" or "svg". |

| | |
|----------|---|
| height | Numeric. Height of saved figure. |
| width | Numeric. Width of saved figure. |
| caption | Logical. If TRUE, adds a caption with source information. |
| progress | Logical. If TRUE, progress messages are shown. |

Value

Invisibly returns a grob object created by `gridExtra::arrangeGrob()`.

Examples

```
# Single year
pyramids(country = "Honduras", years = 16)

# Multiple years
pyramids(country = "Honduras", years = c(1, 5, 10, 15))

#' # Save as PNG
pyramids(country = "Honduras",
          years = c(1, 5, 10, 15),
          save = TRUE,
          file = file.path(tempdir(), "pyramids.png"))

# Save as PDF
pyramids(country = "Honduras",
          years = c(1, 5, 10, 15),
          save = TRUE,
          format = "pdf",
          file = file.path(tempdir(), "pyramids.pdf"))

# Save as SVG
pyramids(country = "Honduras",
          years = c(1, 5, 10, 15),
          save = TRUE,
          format = "svg",
          file = file.path(tempdir(), "pyramids.svg"))
```

Description

Creates a ranking chart for a CEPALSTAT indicator belonging to the Sustainable Development Goals (SDG/ODS) dimension, using the latest available data by country.

Usage

```
ranking.sdg(  
  id.indicator,  
  language.en = TRUE,  
  save = FALSE,  
  file = NULL,  
  format = c("png", "pdf", "svg"),  
  height = 5,  
  width = 9,  
  size.title = 10,  
  title = TRUE,  
  caption = TRUE,  
  color = "#0C4A61",  
  color.gc = "#34B0AA",  
  progress = TRUE  
)
```

Arguments

| | |
|--------------|---|
| id.indicator | Numeric or character. Indicator ID. |
| language.en | Logical. If TRUE (default), English labels are used. If FALSE, Spanish labels are used. |
| save | Logical. If TRUE, saves the resulting figure. |
| file | Character. Output filename when save = TRUE. If NULL, the file is saved to a temporary directory using tempdir(). |
| format | Character. Output format when save = TRUE. One of "png" (default), "pdf" or "svg". |
| height | Numeric. Height of saved figure. |
| width | Numeric. Width of saved figure. |
| size.title | Numeric. Title size. |
| title | Logical. If TRUE, displays the chart title. |
| caption | Logical. If TRUE, displays a note indicating the latest available year by country. |
| color | Character. Color for countries in the ranking. |
| color.gc | Character. Color for regional aggregates if present. |
| progress | Logical. If TRUE, shows progress messages during execution. |

Value

Invisibly returns a ggplot object.

Examples

```
ranking.sdg(id.indicator = 3682)  
ranking.sdg(id.indicator = 3682, language.en = FALSE)
```

```
ranking.sdg(id.indicator = 3682,
            save = TRUE,
            file = file.path(tempdir(), "ranking_sdg.png"))

ranking.sdg(id.indicator = 3682,
            save = TRUE,
            format = "pdf",
            file = file.path(tempdir(), "ranking_sdg.pdf"))

ranking.sdg(id.indicator = 3682,
            save = TRUE,
            format = "svg",
            file = file.path(tempdir(), "ranking_sdg.svg"))
```

topic_map

CEPALSTAT thematic map of indicators

Description

Creates an interactive thematic tree of CEPALSTAT indicators using `collapsibleTree`, with the same visual header and footer style as `viewer.indicators()`.

Usage

```
topic_map(language.en = TRUE, progress = TRUE, open.browser = FALSE)
```

Arguments

| | |
|---------------------------|---|
| <code>language.en</code> | Logical. If TRUE (default), English labels are used. If FALSE, Spanish labels are used. |
| <code>progress</code> | Logical. If TRUE, progress messages are shown. |
| <code>open.browser</code> | Logical. If TRUE, the generated HTML is saved to a temporary file and opened in the default web browser. Defaults to FALSE. |

Value

A browsable HTML widget.

Examples

```
topic_map()

topic_map(language.en = FALSE)
```

viewer.indicators *Viewer for CEPALSTAT indicators*

Description

Displays an interactive HTML table for browsing the hierarchical structure of CEPALSTAT indicators using `call.indicators()` as backend.

Usage

```
viewer.indicators(  
  language.en = TRUE,  
  progress = TRUE,  
  show_search = TRUE,  
  striped = TRUE,  
  bordered = FALSE,  
  compact = FALSE,  
  highlight = TRUE,  
  full_width = TRUE,  
  page_size = 15,  
  open.browser = FALSE  
)
```

Arguments

| | |
|---------------------------|---|
| <code>language.en</code> | Logical. If TRUE (default), the viewer uses English labels. If FALSE, Spanish labels are used. |
| <code>progress</code> | Logical. If TRUE, progress messages are shown. |
| <code>show_search</code> | Logical. If TRUE, enables global search in the table. |
| <code>striped</code> | Logical. If TRUE, striped rows are shown. |
| <code>bordered</code> | Logical. If TRUE, table borders are shown. |
| <code>compact</code> | Logical. If TRUE, reduces row padding. |
| <code>highlight</code> | Logical. If TRUE, highlights rows on hover. |
| <code>full_width</code> | Logical. If TRUE, table uses full available width. |
| <code>page_size</code> | Integer. Number of rows to show per page. |
| <code>open.browser</code> | Logical. If TRUE, the generated HTML is saved to a temporary file and opened in the default web browser. Defaults to FALSE. |

Value

A browsable HTML object containing the header and interactive table.

Examples

```
viewer.indicators()  
viewer.indicators(language.en = FALSE)  
viewer.indicators(open.browser = TRUE)
```

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