Package 'geogenr'

January 9, 2024

Type Package

Title Generator from American Community Survey Geodatabases

Version 2.0.1

Description The American Community Survey (ACS) <https://www.census.gov/programs-surveys/acs> offers geodatabases with geographic information and associated data of interest to researchers in the area. The goal of this package is to generate objects that allow us to access and consult the information available in various formats, such as in 'GeoPackage' format or in multidimensional 'ROLAP' (Relational On-Line Analytical Processing) star format.

License MIT + file LICENSE

URL https://josesamos.github.io/geogenr/, https://github.com/josesamos/geogenr

BugReports https://github.com/josesamos/geogenr/issues

Depends R (>= 2.10)

Imports dplyr, geomultistar, httr, readr, rolap, sf, stats, stringr, tibble, tidyr, tidyselect, utils

Suggests DBI, dbplyr, DiagrammeR, DiagrammeRsvg, dm, knitr, pander, rmarkdown, RSQLite, snakecase, testthat (>= 3.0.0)

VignetteBuilder knitr

Config/testthat/edition 3

Encoding UTF-8

Language en-GB

LazyData true

RoxygenNote 7.2.3

NeedsCompilation no

Author Jose Samos [aut, cre] (<https://orcid.org/0000-0002-4457-3439>), Universidad de Granada [cph]

Maintainer Jose Samos <jsamos@ugr.es>

Repository CRAN

Date/Publication 2024-01-09 01:20:03 UTC

R topics documented:

`acs_5yr` `acs_5yr` *S3 class*

Description

An `acs_5yr` object is created from a given local dir. This dir will contain the geodatabase files that we download.

Usage

```
acs_5yr(dir = "")
```

Arguments

dir	A string.

Value

An acs_5yr object.

See Also

Other data download functions: download_selected_files(), get_area_file_names(), get_area_groups(), get_area_years(), get_areas(), get_selected_file_names(), get_too_heavy_file_names(), select_area_files(), unzip_files()

Examples

```
dir <- system.file("extdata/acs_5yr", package = "geogenr")
ac <- acs_5yr(dir = dir)
```

---

acs_5yr_md *Titles and Years of Selected Demographic and Economic Data*

Description

Available selected Demographic and Economic Data from the American Community Survey (ACS) 5-year estimates data titles and years.

Usage

```
acs_5yr_md
```

Format

A vector list.

Source

https://www.census.gov/geographies/mapping-files/time-series/geo/tiger-data.2021.html#list-tab-1656998034

anrc_2021_x01 *"Alaska Native Regional Corporation", 2021, "X01 Age And Sex"*

Description

Topic selected for the area and years indicated: "Alaska Native Regional Corporation", 2021.

Usage

```
anrc_2021_x01
```

Format

An acs_5yr_topic object.

Examples

```
# Defined by:
dir <- tempdir()
source_dir <- system.file("extdata/acs_5yr", package = "geogenr")
files <- list.files(source_dir, "*.zip", full.names = TRUE)
file.copy(from = files, to = dir, overwrite = TRUE)
ac <- acs_5yr(dir)

files <- ac |>
  unzip_files()

anrc_2021_x01 <- ac |>
  as_acs_5yr_topic("Alaska Native Regional Corporation",
                   2021,
                   "X01 Age And Sex")
```

as_acs_5yr_geo *Get an* acs_5yr_geo *object*

Description

Once we have selected the topics that interest us and, possibly also the reports or subreports, we obtain an acs_5yr_geo object with which we can represent or export the geographic layer along with the data of interest more easily.

Usage

```
as_acs_5yr_geo(act)

## S3 method for class 'acs_5yr_topic'
as_acs_5yr_geo(act)
```

Arguments

act	An acs_5yr_topic object.

Value

An acs_5yr_geo object.

See Also

Other data exploitation and export functions: as_GeoPackage(), as_flat_table(), as_geomultistar(), as_star_database(), get_metadata(), set_metadata()

Examples

```
act <- anrc_2021_x01 |>
  select_report(report = "B01002-Median Age By Sex")

geo <- act |>
  as_acs_5yr_geo()
```

---

as_acs_5yr_topic *As ACS census topic (report group)*

Description

Gets an ACS census topic object (report group) for the given years of the Demographic and Economic Areas that are downloaded and unzipped, available to be queried.

Usage

```
as_acs_5yr_topic(ac, area, years, topic)

## S3 method for class 'acs_5yr'
as_acs_5yr_topic(ac, area, years = NULL, topic = NULL)
```

Arguments

ac	An acs_5yr object.
area	A string, area name.
years	A vector, year number.
topic	A vector, topic name.

Details

If no year is indicated, all available years are taken. If no topic is given, the first one that appears in the files is taken.

Value

An acs_5yr_topic object.

See Also

Other data selection functions: get_available_area_topics(), get_available_area_years(), get_available_areas(), get_geo_attribute_names(), get_geo_layer.acs_5yr_geo(), get_names_of_other_topic get_report_names(), get_subreport_names(), get_topic_name(), select_report(), select_subreport(), select_topic()

Examples

```
dir <- tempdir()
source_dir <- system.file("extdata/acs_5yr", package = "geogenr")
files <- list.files(source_dir, "*.zip", full.names = TRUE)
file.copy(from = files, to = dir, overwrite = TRUE)
ac <- acs_5yr(dir)

files <- ac |>
  unzip_files()

anrc_2021_x01 <- ac |>
  as_acs_5yr_topic("Alaska Native Regional Corporation",
                   2021,
                   "X01 Age And Sex")

anrc_2021_2022_x01_x07 <- ac |>
  as_acs_5yr_topic("Alaska Native Regional Corporation",
                   topic = c("X01 Age And Sex", "X07 Migration"))
```

---

as_flat_table *As* rolap::flat_table *object*

Description

Obtain an rolap::flat_table object to be able to modify the data or integrate it with other data.

Usage

```
as_flat_table(act, attributes)

## S3 method for class 'acs_5yr_topic'
as_flat_table(act, attributes = NULL)
```

Arguments

act	An acs_5yr_topic object.
attributes	A string vector.

Details

We can indicate the attributes of the geographic layer to include in the export. Otherwise, the default attributes are included (not area, perimeter or location attributes).

Value

A flat_table object.

See Also

Other data exploitation and export functions: as_GeoPackage(), as_acs_5yr_geo(), as_geomultistar(), as_star_database(), get_metadata(), set_metadata()

Examples

```
ft <- anrc_2021_x01 |>
  as_flat_table()
```

---

as_geomultistar *As* geomultistar::geomultistar *object*

Description

Obtain an geomultistar::geomultistar object to be able to enrich multidimensional queries with geographic data.

Usage

```
as_geomultistar(act, attributes)

## S3 method for class 'acs_5yr_topic'
as_geomultistar(act, attributes = NULL)
```

Arguments

act	An acs_5yr_topic object.
attributes	A string vector.

Details

We can indicate the attributes of the geographic layer to include in the export. Otherwise, the default attributes are included (not area, perimeter or location attributes).

Value

A `geomultistar` object.

See Also

Other data exploitation and export functions: `as_GeoPackage()`, `as_acs_5yr_geo()`, `as_flat_table()`, `as_star_database()`, `get_metadata()`, `set_metadata()`

Examples

```
gms <- anrc_2021_x01 |>
  as_geomultistar()
```

---

as_GeoPackage *Save as* GeoPackage

Description

Save the data layer (geographic information layer), the metadata layer and the data source description layer in a file in `GeoPackage` format to be able to work with other tools.

Usage

```
as_GeoPackage(geo, dir, name)

## S3 method for class 'acs_5yr_geo'
as_GeoPackage(geo, dir = NULL, name = NULL)
```

Arguments

`geo`	An `acs_5yr_geo` object.
`dir`	A string.
`name`	A string, file name.

Details

The `GeoPackage` format only allows defining a maximum of 1998 columns. If the number of variables and columns in the geographic layer exceeds this number, it cannot be saved in this format.

Value

A string, file name.

See Also

Other data exploitation and export functions: as_acs_5yr_geo(), as_flat_table(), as_geomultistar(), as_star_database(), get_metadata(), set_metadata()

Examples

```
act <- anrc_2021_x01 |>
  select_report(report = "B01002-Median Age By Sex")

geo <- act |>
  as_acs_5yr_geo()

dir <- tempdir()
file <- geo |>
  as_GeoPackage(dir)
```

---

as_star_database *As* rolap::star_database *object*

Description

Obtain an rolap::star_database object to be able to export it to a RDBMS and make queries with other tools.

Usage

```
as_star_database(act, attributes)

## S3 method for class 'acs_5yr_topic'
as_star_database(act, attributes = NULL)
```

Arguments

act	An acs_5yr_topic object.
attributes	A string vector.

Details

We can indicate the attributes of the geographic layer to include in the export. Otherwise, the default attributes are included (not area, perimeter or location attributes).

Value

A star_database object.

See Also

Other data exploitation and export functions: as_GeoPackage(), as_acs_5yr_geo(), as_flat_table(), as_geomultistar(), get_metadata(), set_metadata()

Examples

```
st <- anrc_2021_x01 |>
  as_star_database()
```

---

download_selected_files

Download selected files

Description

Download the files that have been selected and have not been downloaded yet, unzip them (if desired) and, if everything went well and is indicated in the parameter, delete the downloaded files.

Usage

```
download_selected_files(ac, subdir = NULL, unzip = TRUE, delete_zip = FALSE)
```

Arguments

ac	An acs_5yr object.
subdir	NULL/'year'/'area', output subdir.
unzip	A boolean, unzip files.
delete_zip	A boolean, delete zip files if correctly unzipped.

Details

In the subdir parameter, the values NULL, 'year' or 'area' can be indicated. With NULL it does not create any subdirs, with 'year' it creates them by years of downloaded files and with 'area' it creates them by areas.

Value

A vector, files correctly obtained.

See Also

Other data download functions: acs_5yr(), get_area_file_names(), get_area_groups(), get_area_years(), get_areas(), get_selected_file_names(), get_too_heavy_file_names(), select_area_files(), unzip_files()

Examples

```
dir <- system.file("extdata/acs_5yr", package = "geogenr")
ac <- acs_5yr(dir)

ac <- ac |>
  select_area_files("Alaska Native Regional Corporation", 2020:2021)

files <- ac |>
  download_selected_files(unzip = FALSE)
```

---

get_areas *Get area names of a group*

Description

Gets the names of the Demographic and Economic Areas of a group or set of groups.

Usage

```
get_areas(ac, group)

## S3 method for class 'acs_5yr'
get_areas(ac, group = NULL)
```

Arguments

ac	An acs_5yr object.
group	A string, area group name.

Details

If no group is indicated, all available areas are obtained.

Value

A vector, area names.

See Also

Other data download functions: acs_5yr(), download_selected_files(), get_area_file_names(), get_area_groups(), get_area_years(), get_selected_file_names(), get_too_heavy_file_names(), select_area_files(), unzip_files()

Examples

```
dir <- system.file("extdata/acs_5yr", package = "geogenr")
ac <- acs_5yr(dir)

areas <- ac |>
  get_areas(group = "Statistical Areas")
```

---

get_area_file_names *Get area file names*

Description

Get area url file names for the given years. If no year is indicated, all available ones are obtained.

Usage

```
get_area_file_names(ac, area, years)

## S3 method for class 'acs_5yr'
get_area_file_names(ac, area, years = NULL)
```

Arguments

ac	An acs_5yr object.
area	A string, area name.
years	A vector, year number.

Value

A vector, file urls.

See Also

Other data download functions: acs_5yr(), download_selected_files(), get_area_groups(), get_area_years(), get_areas(), get_selected_file_names(), get_too_heavy_file_names(), select_area_files(), unzip_files()

Examples

```
dir <- system.file("extdata/acs_5yr", package = "geogenr")
ac <- acs_5yr(dir)

url <- ac |>
  get_area_file_names("State", 2019:2021)

url <- ac |>
  get_area_file_names("State")
```

`get_area_groups` *Get area groups*

Description

Gets the names of the Demographic and Economic Area Groups where data is available.

Usage

```
get_area_groups(ac)

## S3 method for class 'acs_5yr'
get_area_groups(ac)
```

Arguments

ac	An acs_5yr object.

Value

A vector, area group names.

See Also

Other data download functions: acs_5yr(), download_selected_files(), get_area_file_names(), get_area_years(), get_areas(), get_selected_file_names(), get_too_heavy_file_names(), select_area_files(), unzip_files()

Examples

```
dir <- system.file("extdata/acs_5yr", package = "geogenr")
ac <- acs_5yr(dir)

groups <- ac |>
  get_area_groups()
```

`get_area_years` *Get available area years*

Description

Get the years for which data has been found to be available for an area.

Usage

```
get_area_years(ac, area)

## S3 method for class 'acs_5yr'
get_area_years(ac, area)
```

Arguments

`ac`	An `acs_5yr` object.
`area`	A string, area name.

Value

A vector, area years.

See Also

Other data download functions: `acs_5yr()`, `download_selected_files()`, `get_area_file_names()`, `get_area_groups()`, `get_areas()`, `get_selected_file_names()`, `get_too_heavy_file_names()`, `select_area_files()`, `unzip_files()`

Examples

```
dir <- system.file("extdata/acs_5yr", package = "geogenr")
ac <- acs_5yr(dir)

years <- ac |>
  get_area_years(area = "State")
```

`get_available_areas` *Get available area names*

Description

Gets the names of the Demographic and Economic Areas that are downloaded and unzipped, available to be queried.

Usage

```
get_available_areas(ac)

## S3 method for class 'acs_5yr'
get_available_areas(ac)
```

Arguments

ac	An acs_5yr object.

Value

A vector, area names.

See Also

Other data selection functions: as_acs_5yr_topic(), get_available_area_topics(), get_available_area_years(), get_geo_attribute_names(), get_geo_layer.acs_5yr_geo(), get_names_of_other_topics(), get_report_names(), get_subreport_names(), get_topic_name(), select_report(), select_subreport(), select_topic()

Examples

```
dir <- tempdir()
source_dir <- system.file("extdata/acs_5yr", package = "geogenr")
files <- list.files(source_dir, "*.zip", full.names = TRUE)
file.copy(from = files, to = dir, overwrite = TRUE)
ac <- acs_5yr(dir)

files <- ac |>
  unzip_files()

areas <- ac |>
  get_available_areas()
```

`get_available_area_topics` *Get available area topics (report groups)*

Description

Gets the topics (report groups) for the given years of the Demographic and Economic Areas that are downloaded and unzipped, available to be queried.

Usage

```
get_available_area_topics(ac, area, years)

## S3 method for class 'acs_5yr'
get_available_area_topics(ac, area, years = NULL)
```

Arguments

`ac`	An `acs_5yr` object.
`area`	A string, area name.
`years`	A vector, year number.

Value

A vector, available report groups.

See Also

Other data selection functions: `as_acs_5yr_topic()`, `get_available_area_years()`, `get_available_areas()`, `get_geo_attribute_names()`, `get_geo_layer.acs_5yr_geo()`, `get_names_of_other_topics()`, `get_report_names()`, `get_subreport_names()`, `get_topic_name()`, `select_report()`, `select_subreport()`, `select_topic()`

Examples

```
dir <- tempdir()
source_dir <- system.file("extdata/acs_5yr", package = "geogenr")
files <- list.files(source_dir, "*.zip", full.names = TRUE)
file.copy(from = files, to = dir, overwrite = TRUE)
ac <- acs_5yr(dir)

files <- ac |>
  unzip_files()

topics <- ac |>
  get_available_area_topics("Alaska Native Regional Corporation",
                            2021)
```

```
topics <- ac |>
  get_available_area_topics("Alaska Native Regional Corporation")
```

`get_available_area_years` *Get available area years*

Description

Gets the years of the Demographic and Economic Areas that are downloaded and unzipped, available to be queried.

Usage

```
get_available_area_years(ac, area)

## S3 method for class 'acs_5yr'
get_available_area_years(ac, area)
```

Arguments

`ac`	An `acs_5yr` object.
`area`	A string, area name.

Value

A vector, area years.

See Also

Other data selection functions: `as_acs_5yr_topic()`, `get_available_area_topics()`, `get_available_areas()`, `get_geo_attribute_names()`, `get_geo_layer.acs_5yr_geo()`, `get_names_of_other_topics()`, `get_report_names()`, `get_subreport_names()`, `get_topic_name()`, `select_report()`, `select_subreport()`, `select_topic()`

Examples

```
dir <- tempdir()
source_dir <- system.file("extdata/acs_5yr", package = "geogenr")
files <- list.files(source_dir, "*.zip", full.names = TRUE)
file.copy(from = files, to = dir, overwrite = TRUE)
ac <- acs_5yr(dir)

files <- ac |>
  unzip_files()
```

```
years <- ac |>
  get_available_area_years(area = "Alaska Native Regional Corporation")
```

`get_code_from_area_name` *Get code from area name*

Description

Obtain the code that appears in the name of the file associated with the area.

Usage

```
get_code_from_area_name(ac, area)

## S3 method for class 'acs_5yr'
get_code_from_area_name(ac, area)
```

Arguments

`ac`	An `acs_5yr` object.
`area`	A string, area name.

Value

A vector, area code.

See Also

Other information functions: `get_name_from_area_code()`

Examples

```
dir <- system.file("extdata/acs_5yr", package = "geogenr")
ac <- acs_5yr(dir)

code <- ac |>
  get_code_from_area_name(area = "State")
```

get_geo_attribute_names *Get geographical attributes*

Description

Get the names of the geographic layer attributes (except for the geometry field).

Usage

```
get_geo_attribute_names(act)

## S3 method for class 'acs_5yr_topic'
get_geo_attribute_names(act)
```

Arguments

act	An acs_5yr_topic object.

Value

A vector, geographical attribute names.

See Also

Other data selection functions: as_acs_5yr_topic(), get_available_area_topics(), get_available_area_years(), get_available_areas(), get_geo_layer.acs_5yr_geo(), get_names_of_other_topics(), get_report_names(), get_subreport_names(), get_topic_name(), select_report(), select_subreport(), select_topic()

Examples

```
names <- anrc_2021_x01 |>
  get_geo_attribute_names()
```

get_geo_layer.acs_5yr_geo *Get geographic layer*

Description

Get the geographic layer.

Usage

```
## S3 method for class 'acs_5yr_geo'
get_geo_layer(glc)

get_geo_layer(glc)

## S3 method for class 'acs_5yr_topic'
get_geo_layer(glc)
```

Arguments

glc	An acs_5yr_topic or acs_5yr_geo object.

Value

A sf object.

See Also

Other data selection functions: as_acs_5yr_topic(), get_available_area_topics(), get_available_area_years(), get_available_areas(), get_geo_attribute_names(), get_names_of_other_topics(), get_report_names(), get_subreport_names(), get_topic_name(), select_report(), select_subreport(), select_topic()

Examples

```
layer <- anrc_2021_x01 |>
  get_geo_layer()
```

---

get_metadata *Get the metadata layer*

Description

The metadata layer includes the names and description through various fields of the variables contained in the reports.

Usage

```
get_metadata(geo)

## S3 method for class 'acs_5yr_geo'
get_metadata(geo)
```

Arguments

geo	An acs_5yr_geo object.

Details

The way to select the variables we want to work with is to filter this layer and subsequently set it as the object's metadata layer using the `set_metadata()` function.

Value

A `tibble` object.

See Also

Other data exploitation and export functions: `as_GeoPackage()`, `as_acs_5yr_geo()`, `as_flat_table()`, `as_geomultistar()`, `as_star_database()`, `set_metadata()`

Examples

```
act <- anrc_2021_x01 |>
  select_report(report = "B01002-Median Age By Sex")

geo <- act |>
  as_acs_5yr_geo()

metadata <- geo |>
  get_metadata()
```

---

get_names_of_other_topics

Get names of other topics (report groups)

Description

The area that we have downloaded has a set of defined topics, we have selected one of them, this function shows us the rest of the available topics in the area.

Usage

```
get_names_of_other_topics(act)

## S3 method for class 'acs_5yr_topic'
get_names_of_other_topics(act)
```

Arguments

`act`	An `acs_5yr_topic` object.

Value

A vector, available topics.

See Also

Other data selection functions: as_acs_5yr_topic(), get_available_area_topics(), get_available_area_years(), get_available_areas(), get_geo_attribute_names(), get_geo_layer.acs_5yr_geo(), get_report_names(), get_subreport_names(), get_topic_name(), select_report(), select_subreport(), select_topic()

Examples

```
topics <- anrc_2021_x01 |>
  get_names_of_other_topics()
```

---

get_name_from_area_code

Get name from area code

Description

Get the name of the area from the code that appears in the name of the area files.

Usage

```
get_name_from_area_code(ac, area)

## S3 method for class 'acs_5yr'
get_name_from_area_code(ac, area)
```

Arguments

ac	An acs_5yr object.
area	A string, area name.

Value

A vector, area code.

See Also

Other information functions: get_code_from_area_name()

Examples

```
dir <- system.file("extdata/acs_5yr", package = "geogenr")
ac <- acs_5yr(dir)

name <- ac |>
  get_name_from_area_code(area = "METDIV")
```

get_report_names *Get report names*

Description

Each topic includes several reports. Once a topic has been selected, using this function we obtain the name of the available reports. The report code is included with the name. Each report can contain multiple subreports.

Usage

```
get_report_names(act)

## S3 method for class 'acs_5yr_topic'
get_report_names(act)
```

Arguments

act	An acs_5yr_topic object.

Value

A vector, report names.

See Also

Other data selection functions: as_acs_5yr_topic(), get_available_area_topics(), get_available_area_years(), get_available_areas(), get_geo_attribute_names(), get_geo_layer.acs_5yr_geo(), get_names_of_other_topic get_subreport_names(), get_topic_name(), select_report(), select_subreport(), select_topic()

Examples

```
reports <- anrc_2021_x01 |>
  get_report_names()
```

get_selected_file_names *Get selected file names*

Description

Gets the names of the files selected to be downloaded.

Usage

```
get_selected_file_names(ac)

## S3 method for class 'acs_5yr'
get_selected_file_names(ac)
```

Arguments

ac	An acs_5yr object.

Value

A vector, file names.

See Also

Other data download functions: acs_5yr(), download_selected_files(), get_area_file_names(), get_area_groups(), get_area_years(), get_areas(), get_too_heavy_file_names(), select_area_files(), unzip_files()

Examples

```
dir <- system.file("extdata/acs_5yr", package = "geogenr")
ac <- acs_5yr(dir)

groups <- ac |>
  get_selected_file_names()
```

---

get_subreport_names *Get subreport names*

Description

Each topic includes several reports and subreports. Once a topic has been selected, using this function we obtain the name of the available subreports of a report. If no report is indicated, all subreports of the topic are obtained.

Usage

```
get_subreport_names(act, report)

## S3 method for class 'acs_5yr_topic'
get_subreport_names(act, report = NULL)
```

Arguments

act	An acs_5yr_topic object.
report	A string, report name.

Value

A vector, subreport names.

See Also

Other data selection functions: as_acs_5yr_topic(), get_available_area_topics(), get_available_area_years(), get_available_areas(), get_geo_attribute_names(), get_geo_layer.acs_5yr_geo(), get_names_of_other_topic get_report_names(), get_topic_name(), select_report(), select_subreport(), select_topic()

Examples

```
reports <- anrc_2021_x01 |>
  get_subreport_names(report = "B01002-Median Age By Sex")
```

---

get_too_heavy_file_names

Get too heavy file names

Description

Gets the names of the files that are too heavy to be download with the available function. We have downloaded them directly with the web browser.

Usage

```
get_too_heavy_file_names(ac)

## S3 method for class 'acs_5yr'
get_too_heavy_file_names(ac)
```

Arguments

ac	An acs_5yr object.

Value

A vector, too heavy file names.

See Also

Other data download functions: acs_5yr(), download_selected_files(), get_area_file_names(), get_area_groups(), get_area_years(), get_areas(), get_selected_file_names(), select_area_files(), unzip_files()

Examples

```
dir <- system.file("extdata/acs_5yr", package = "geogenr")
ac <- acs_5yr(dir)

groups <- ac |>
  get_too_heavy_file_names()
```

`get_topic_name` *Get topic name (report groups)*

Description

Get the selected topic by which this object has been defined.

Usage

```
get_topic_name(act)

## S3 method for class 'acs_5yr_topic'
get_topic_name(act)
```

Arguments

act	An acs_5yr_topic object.

Details

A topic is made up of a set of reports.

Value

A vector, topic name.

See Also

Other data selection functions: as_acs_5yr_topic(), get_available_area_topics(), get_available_area_years(), get_available_areas(), get_geo_attribute_names(), get_geo_layer.acs_5yr_geo(), get_names_of_other_topic
get_report_names(), get_subreport_names(), select_report(), select_subreport(), select_topic()

Examples

```
topic <- anrc_2021_x01 |>
  get_topic_name()
```

`select_area_files` *Select area files*

Description

Select area files for the given years. If no year is indicated, all available ones are selected.

Usage

```
select_area_files(ac, area, years)

## S3 method for class 'acs_5yr'
select_area_files(ac, area, years = NULL)
```

Arguments

`ac`	An `acs_5yr` object.
`area`	A string, area name.
`years`	A vector, year number.

Value

An `acs_5yr` object.

See Also

Other data download functions: `acs_5yr()`, `download_selected_files()`, `get_area_file_names()`, `get_area_groups()`, `get_area_years()`, `get_areas()`, `get_selected_file_names()`, `get_too_heavy_file_names()`, `unzip_files()`

Examples

```
dir <- system.file("extdata/acs_5yr", package = "geogenr")
ac <- acs_5yr(dir)

ac <- ac |>
  select_area_files("State", 2019:2021)

ac <- ac |>
  select_area_files("State")
```

select_report *Select report*

Description

Select the reports whose names are indicated. We reduce the available reports and variables to those of the selected reports.

Usage

```
select_report(act, report)

## S3 method for class 'acs_5yr_topic'
select_report(act, report = NULL)
```

Arguments

act	An acs_5yr_topic object.
report	A string vector, report names.

Value

An acs_5yr_topic object.

See Also

Other data selection functions: as_acs_5yr_topic(), get_available_area_topics(), get_available_area_years(), get_available_areas(), get_geo_attribute_names(), get_geo_layer.acs_5yr_geo(), get_names_of_other_topic get_report_names(), get_subreport_names(), get_topic_name(), select_subreport(), select_topic()

Examples

```
act <- anrc_2021_x01 |>
  select_report(report = "B01002-Median Age By Sex")
```

select_subreport *Select subreport*

Description

Select the subreports whose names are indicated. We reduce the available subreports and variables to those of the selected subreports.

Usage

```
select_subreport(act, subreport)

## S3 method for class 'acs_5yr_topic'
select_subreport(act, subreport = NULL)
```

Arguments

act	An acs_5yr_topic object.
subreport	A string vector, subreport names.

Value

A vector, topic name.

See Also

Other data selection functions: as_acs_5yr_topic(), get_available_area_topics(), get_available_area_years(), get_available_areas(), get_geo_attribute_names(), get_geo_layer.acs_5yr_geo(), get_names_of_other_topic get_report_names(), get_subreport_names(), get_topic_name(), select_report(), select_topic()

Examples

```
act2 <- anrc_2021_x01 |>
  select_subreport(
    c(
      "B01002-B-Median Age By Sex (Black Or African American Alone)",
      "B01002-C-Median Age By Sex (American Indian And Alaska Native Alone)"
    )
  )
```

---

select_topic *Select topic (report group)*

Description

Select a topic. If no topic is given, the first one that appears in the area is taken.

Usage

```
select_topic(act, topic)

## S3 method for class 'acs_5yr_topic'
select_topic(act, topic = NULL)
```

Arguments

act	An acs_5yr_topic object.
topic	A string, topic name.

Value

An acs_5yr_topic object.

See Also

Other data selection functions: as_acs_5yr_topic(), get_available_area_topics(), get_available_area_years(), get_available_areas(), get_geo_attribute_names(), get_geo_layer.acs_5yr_geo(), get_names_of_other_topic get_report_names(), get_subreport_names(), get_topic_name(), select_report(), select_subreport()

Examples

```
dir <- tempdir()
source_dir <- system.file("extdata/acs_5yr", package = "geogenr")
files <- list.files(source_dir, "*.zip", full.names = TRUE)
file.copy(from = files, to = dir, overwrite = TRUE)
ac <- acs_5yr(dir)

files <- ac |>
  unzip_files()

act <- ac |>
  as_acs_5yr_topic("Alaska Native Regional Corporation",
                   2021,
                   "X01 Age And Sex")

act <- act |>
  select_topic(topic = "X03 Hispanic Or Latino Origin")
```

---

set_metadata *Set metadata layer*

Description

The metadata layer includes the names and description through various fields of the variables contained in the reports.

Usage

```
set_metadata(geo, metadata)

## S3 method for class 'acs_5yr_geo'
set_metadata(geo, metadata)
```

Arguments

geo	An acs_5yr_geo object.
metadata	A tibble object.

Details

When we set the metadata layer, after filtering it, the data layer is also filtered keeping only the variables from the metadata layer.

Value

A sf object.

See Also

Other data exploitation and export functions: as_GeoPackage(), as_acs_5yr_geo(), as_flat_table(), as_geomultistar(), as_star_database(), get_metadata()

Examples

```
act <- anrc_2021_x01 |>
  select_report(report = "B01002-Median Age By Sex")

geo <- act |>
  as_acs_5yr_geo()

metadata <- geo |>
  get_metadata()

metadata <- dplyr::filter(metadata, item2 == "Female")

geo2 <- geo |>
  set_metadata(metadata)
```

---

unzip_files *Unzip files*

Description

Unzip files that are not already unzipped in the object and, if everything went well and is indicated in the parameter, delete the unzipped files.

Usage

```
unzip_files(ac, subdir = NULL, delete_zip = FALSE)
```

Arguments

ac	An acs_5yr object.
subdir	NULL/'year'/'area', output subdir.
delete_zip	A boolean, delete zip files if correctly unzipped.

Details

In the subdir parameter, the values NULL, 'year' or 'area' can be indicated. With NULL it does not create any subdirs, with 'year' it creates them by years of files and with 'area' it creates them by areas.

Value

A vector of strings, name of the processed files.

See Also

Other data download functions: acs_5yr(), download_selected_files(), get_area_file_names(), get_area_groups(), get_area_years(), get_areas(), get_selected_file_names(), get_too_heavy_file_names(), select_area_files()

Examples

```
dir <- tempdir()
source_dir <- system.file("extdata/acs_5yr", package = "geogenr")
files <- list.files(source_dir, "*.zip", full.names = TRUE)
file.copy(from = files, to = dir, overwrite = TRUE)
ac <- acs_5yr(dir)

files <- ac |>
  unzip_files()
```

Index