# Package

June 20, 2019

**Type** Package

**Title** Loads shapefiles of the Brazilian Institute of Geography and Statistics (IBGE)

**Version** 0.02

**Date** 2019-06-13

**URL** https://github.com/ipeaGIT/geobr

**BugReports** https://github.com/ipeaGIT/geobr/issues

**Description** geobr provides easy access to shapefiles of the Brazilian
Institute of Geography and Statistics (IBGE) as 'sf' objects in R.
It includes a wide range of geographic datasets availabe at various geographic scales and for various years.

**License** MIT + file LICENSE

**Encoding** UTF-8

**LazyData** TRUE

**Depends** R (>= 3.4.0)

**Suggests** dplyr,
ggplot2,
mapview,
knitr,
rmarkdown

**Imports** httr,
readr,
sf

**RoxygenNote** 6.1.1

**VignetteBuilder** knitr

## R topics documented:

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`brazil_2010` *Spatial dataset sf with codes for Brazilian municipalities in 2010*

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## Description

Built-in dataset to speed up access to data of the year 2010. To access the data directly, issue the command `data("brazil_2010")`. Map of Brazil at scale 1:250,000, using Geodetic reference system "SIRGAS2000" and CRS(4674). More info at «ftp://geoftp.ibge.gov.br/organizacao_do_territorio/malhas_territoriais and «https://ww2.ibge.gov.br/english/geociencias/geodesia/pmrg/faq.shtm

- `cod_muni`: IBGE code of municipality (7-digit, numeric)
- `name_muni`: Title-case name of municipality (character)
- `cod_micro`: IBGE code of micro region (5-digit, numeric)
- `name_micro`: Title-case name of micro region (character)
- `cod_meso`: IBGE code of meso region (4-digit, numeric)
- `name_meso`: Title-case name of meso region (character)
- `cod_state`: IBGE code of State (2-digit, numeric)
- `name_state`: Title-case name of state (character)
- `abbrev_state`: UPPER CASE abbreviation of state name (2 letters, character)
- `cod_region`: IBGE code of region (1-digit, numeric)
- `name_region`: Title-case name of region (character)
- `geometry`: geometry info in "sfc_GEOMETRY" "sfc"

## Usage

```
data(brazil_2010)
```

## Format

A data frame sf with 5,565 rows and 12 columns

## Details

Spatial dataset sf with codes for Brazilian municipalities, states and regions in 2010

## Note

Last updated 2019-06-17

read_census_tract *Download shape files of census sectors of the Brazilian Population Census*

## Description

Download shape files of census sectors of the Brazilian Population Census

## Usage

```
read_census_tract(CODE, year = NULL, zone = "urban")
```

## Arguments

| | |
|---|---|
| CODE | One can either pass the 7-digit code of a Municipality or the 2-digit code of a State.If CODE="all", all census sectors of the country are loaded. |
| year | the year of the data download (defaults to 2010) |
| zone | "urban" or "rural" for separation in the year 2000 |

## See Also

Other general area functions: read_meso_region, read_micro_region, read_municipality, read_state, read_statistical_grid, read_weighting_area

## Examples

```
## Not run:
# Exemplos
dados <- read_census_tract(year=2010)
dados <- read_census_tract(123,2010)
dados <- read_census_tract("df",2010)
dados <- read_census_tract(1302603,2010)
dados <- read_census_tract(35)
dados <- read_census_tract(14,2010)
dados <- read_census_tract()

# mapa
library(mapview)
mapview(dados)

## End(Not run)
```

| | |
|---|---|
| read_meso_region | *Download shape files of meso region as sf objects. Data at scale 1:250,000, using Geodetic reference system "SIRGAS2000" and CRS(4674)* |

## Description

Download shape files of meso region as sf objects. Data at scale 1:250,000, using Geodetic reference system "SIRGAS2000" and CRS(4674)

## Usage

```
read_meso_region(code_meso, year = NULL)
```

## Arguments

| | |
|---|---|
| code_meso | The 4-digit code of a meso region. If the two-digit code or a two-letter uppercase abbreviation of a state is passed, (e.g. 33 or "RJ") the function will load all meso regions of that state. If code_meso="all", all meso regions of the country are loaded. |
| year | Year of the data (defaults to 2010) |

## See Also

Other general area functions: read_census_tract, read_micro_region, read_municipality, read_state, read_statistical_grid, read_weighting_area

## Examples

```
## Not run:

library(geobr)

# Read specific meso region at a given year
  meso <- read_meso_region(code_meso=3301, year=2018)

# Read all meso regions of a state at a given year
  meso <- read_meso_region(code_meso=12, year=2017)
  meso <- read_meso_region(code_meso="AM", year=2000)

# Read all meso regions of the country at a given year
  meso <- read_meso_region(code_meso="all", year=2010)


## End(Not run)
```

| | |
|---|---|
| read_micro_region | *Download shape files of micro region as sf objects. Data at scale 1:250,000, using Geodetic reference system "SIRGAS2000" and CRS(4674)* |

## Description

Download shape files of micro region as sf objects. Data at scale 1:250,000, using Geodetic reference system "SIRGAS2000" and CRS(4674)

## Usage

```
read_micro_region(code_micro, year = NULL)
```

## Arguments

| | |
|---|---|
| code_micro | 5-digit code of a micro region. If the two-digit code or a two-letter uppercase abbreviation of a state is passed, (e.g. 33 or "RJ") the function will load all micro regions of that state. If code_micro="all", all micro regions of the country are loaded. |
| year | Year of the data (defaults to 2010) |

## See Also

Other general area functions: read_census_tract, read_meso_region, read_municipality, read_state, read_statistical_grid, read_weighting_area

## Examples

```
## Not run:

library(geobr)

# Read an specific micro region a given year
  micro <- read_micro_region(code_micro=11008, year=2018)

# Read micro regions of a state at a given year
  micro <- read_micro_region(code_micro=12, year=2017)
  micro <- read_micro_region(code_meso="AM", year=2000)

# Read all micro regions at a given year
  micro <- read_micro_region(code_micro="all", year=2010)

## End(Not run)
```

`read_municipality` *Download shape files of Brazilian municipalities as sf objects. Data at scale 1:250,000, using Geodetic reference system "SIRGAS2000" and CRS(4674)*

## Description

Download shape files of Brazilian municipalities as sf objects. Data at scale 1:250,000, using Geodetic reference system "SIRGAS2000" and CRS(4674)

## Usage

```
read_municipality(code_muni, year = NULL)
```

## Arguments

| | |
|---|---|
| `code_muni` | The 7-digit code of a municipality. If the two-digit code or a two-letter uppercase abbreviation of a state is passed, (e.g. 33 or "RJ") the function will load all municipalities of that state. If code_muni="all", all municipalities of the country will be loaded. |
| `year` | Year of the data (defaults to 2010) |

## See Also

Other general area functions: `read_census_tract`, `read_meso_region`, `read_micro_region`, `read_state`, `read_statistical_grid`, `read_weighting_area`

## Examples

```
## Not run:

library(geobr)

# Read specific municipality at a given year
  mun <- read_municipality(code_muni=1200179, year=2017)

# Read all municipalities of a state at a given year
  mun <- read_municipality(code_muni=33, year=2010)
  mun <- read_municipality(code_muni="RJ", year=2010)

# Read all municipalities of the country at a given year
  mun <- read_municipality(code_muni="all", year=2018)


## End(Not run)
```

read_state *Download shape files of Brazilian states as sf objects. Data at scale 1:250,000, using Geodetic reference system "SIRGAS2000" and CRS(4674)*

## Description

Download shape files of Brazilian states as sf objects. Data at scale 1:250,000, using Geodetic reference system "SIRGAS2000" and CRS(4674)

## Usage

```
read_state(code_state, year = NULL)
```

## Arguments

| | |
|---|---|
| code_state | The two-digit code of a state or a two-letter uppercase abbreviation (e.g. 33 or "RJ"). If code_state="all", all states will be loaded. |
| year | Year of the data (defaults to 2010) |

## See Also

Other general area functions: read_census_tract, read_meso_region, read_micro_region, read_municipality, read_statistical_grid, read_weighting_area

## Examples

```
## Not run:

library(geobr)

# Read specific state at a given year
  uf <- read_state(code_state=12, year=2017)

# Read specific state at a given year
  uf <- read_state(code_state="SC", year=2000)

# Read all states at a given year
  ufs <- read_state(code_state="all", year=2010)


## End(Not run)
```

## read_statistical_grid *Download shape files of IBGE's statistical grid (200 x 200 meters) as sf objects. Data at scale 1:250,000, using Geodetic reference system "SIRGAS2000" and CRS(4674)*

### Description

Download shape files of IBGE's statistical grid (200 x 200 meters) as sf objects. Data at scale 1:250,000, using Geodetic reference system "SIRGAS2000" and CRS(4674)

### Usage

```
read_statistical_grid(code_grid, year = NULL)
```

### Arguments

| | |
|---|---|
| code_grid | The 7-digit code of a grid quadrant If the two-letter abbreviation of a state is used, the function will load all grid gradrants that intersect with that state. If code_grid="all", the grid of the whole country will be loaded. |
| year | Year of the data (defaults to 2010). The only year available thus far is 2010. |

### See Also

Other general area functions: read_census_tract, read_meso_region, read_micro_region, read_municipality, read_state, read_weighting_area

### Examples

```
## Not run:

library(geobr)

# Read specific municipality at a given year
  grid <- read_statistical_grid(code_grid = 45, year=2010)

# Read all municipalities of a state at a given year
  state_grid <- read_statistical_grid(code_grid = "RJ")


## End(Not run)
```

## read_weighting_area *Download shape files of Census Weighting Areas (área de ponderação) of the Brazilian Population Census*

### Description

Download shape files of Census Weighting Areas (área de ponderação) of the Brazilian Population Census

## Usage

```
read_weighting_area(code_weighting, year = NULL)
```

## Arguments

| | |
|---|---|
| year | the year of the data download (defaults to 2010) |
| CODE | One can either pass the 7-digit code of a Municipality or the 2-digit code of a State. The function will load the shape files of all weighting areas in the specified geography |

## See Also

Other general area functions: read_census_tract, read_meso_region, read_micro_region, read_municipality, read_state, read_statistical_grid

## Examples

```
## Not run:

library(geobr)

dados <- read_weighting_area(year=2010)
dados <- read_weighting_area(3500000,2010)
dados <- read_weighting_area(123,2010)
dados <- read_weighting_area("df",2010)
dados <- read_weighting_area(1302603,2010)
dados <- read_weighting_area(35)
dados <- read_weighting_area(14,2010)
dados <- read_weighting_area("all")

# map it
library(mapview)
mapview(dados)

## End(Not run)
```

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