Package ‘wpp2019’

January 31, 2020

Version  1.1-1
Date     2020-01-30
Title    World Population Prospects 2019
Author   United Nations Population Division
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Depends  R (>= 2.14.2)
Imports  data.table
License  file LICENSE
URL      http://population.un.org/wpp
NeedsCompilation no
Repository CRAN
Date/Publication 2020-01-31 06:20:04 UTC

R topics documented:

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wpp2019-package

World Population Prospects 2019

Description


Details

Package: wpp2019
Version: 1.1-1
Date: 2020-1-30
License: CC-BY-3.0-IGO
URL: http://population.un.org/wpp

The package contains the following datasets:

- `tfr, tfr_supplemental, tfrprojMed, tfrproj80u, tfrproj80l, tfrproj95u, tfrproj95l, tfrprojHigh, tfrprojLow`: estimates and projections of total fertility rate, including the projected 80% and 95% probability bounds, as well as low and high half child variants.
- `e0F, e0M, e0X_supplemental, e0Xproj, e0Xproj80u, e0Xproj80l, e0Xproj95u, e0Xproj95l`: sex-specific estimates and projections of life expectancy with X=“F” and “M”, including the projected 80% and 95% probability bounds.
- `pop, popproj, popproj80u, popproj80l, popproj95u, popproj95l, popprojHigh, popprojLow`: historical estimates of total population counts, as well as the median, probability bounds and the high and low variants of population projections.
- `popFT, popMT, popFTproj, popMTproj`: historical estimates and projection medians for sex-specific total population.
- `popF, popM, popXprojMed, popXprojHigh, popXprojLow`: age- and sex-specific population estimates and projections with X=“F” and “M”, including the high and low variants.
- `mxF, mxM`: age- and sex-specific mortality rates
- `migration`: total net migration
- `sexRatio`: sex ratio at birth as a ratio of female to male
- `percentASFR`: distribution of age-specific fertility rates
- `UNlocations`: location dataset

Note

The package **wppExplorer** offers a shiny user interface to explore these datasets, as well as functions for convenient extraction of information from the data, see function `wpp.indicator()` in **wppExplorer**, or [https://rstudio.stat.washington.edu/shiny/wppExplorer/inst/explore/](https://rstudio.stat.washington.edu/shiny/wppExplorer/inst/explore/).
Source

These datasets are based on estimates and projections of United Nations, Department of Economic and Social Affairs, Population Division (2019).

References


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**e0**

*United Nations Time Series of Life Expectancy*

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Description

Datasets containing the United Nations time series of the life expectancy (e0) for all countries of the world as available in 2019.

Usage

data(e0F)
data(e0M)
data(e0F_supplemental)
data(e0M_supplemental)
data(e0Fproj)
data(e0Mproj)
data(e0Fproj80l)
data(e0Fproj80u)
data(e0Mproj80l)
data(e0Mproj80u)
data(e0Fproj95l)
data(e0Fproj95u)
data(e0Mproj95l)
data(e0Mproj95u)

Format

The datasets contain one record per country or region. They contain the following variables:


1950–1955, 1955–1960, ... Life expectancy in various five-year time intervals (i.e., from 1 July in year $t$ to 1 July in year $t+5$ such as the period 1950-1955 refers to the period 1950.5-1955.5 and the mid of the period is 1953.0). The e0*proj datasets start at 2020–2025. The e0*_supplemental datasets start at 1750–1755. Missing data have NA values.

Details

Datasets e0F and e0F_supplemental contain estimates for female historical e0; e0M and e0M_supplemental contain estimates for male historical e0. The *_supplemental datasets contain a subset of countries for which data prior 1950 are available. Datasets e0Mproj and e0Fproj contain projections of male and female e0, respectively. Datasets *80l, *95l are the lower bounds of 80 and 95% probability intervals, *80u, *95u are the corresponding upper bounds.


Source

These datasets are based on estimates and projections of United Nations, Department of Economic and Social Affairs, Population Division (2019).

The pre-1950 datasets were collected by Patrick Gerland.

References


Examples

data(e0M)
head(e0M)

data(e0Fproj)
str(e0Fproj)
Description

Estimates and projections of total net migration.

Usage

data(migration)

Format

Data frame with one row per country. It contains the following variables:


name  Country name.

1950–1955, 1955–1960, ...  Net migration (in thousand) for the specific five-year time period (i.e., from 1 July in year t to 1 July in year t+5 such as the period 1950-1955 refers to the period 1950.5-1955.5 and the mid of the period is 1953.0).

Source

These datasets are based on estimates and projections of United Nations, Department of Economic and Social Affairs, Population Division (2019).

References


Examples

data(migration)

str(migration)
**mx**

*Age-specific Mortality Data*

---

**Description**

Age-specific data on mortality rates for male (mxM) and female (mxF).

**Usage**

```r
data(mxM)
data(mxF)
```

**Format**

Data frames with one row per country and age group. They contain the following variables:

- country_code  Numerical Location Code (3-digit codes following ISO 3166-1 numeric standard)  
- name  Country name.
- age  A character string representing an age interval (given by the starting age of the interval).  
  - 1950–1955, 1955–1960, ... mx for the given five-year time period (i.e., from 1 July in year t to 1 July in year t+5 such as the period 1950-1955 refers to the period 1950.5-1955.5 and the mid of the period is 1953.0).

**Source**

These datasets are based on estimates and projections of United Nations, Department of Economic and Social Affairs, Population Division (2019).

**References**


**Examples**

```r
data(mxF)
head(mxF)
```
Datasets on Age-specific Distribution of Fertility Rates

**Description**

Datasets giving the percentage of fertility rates over ages 15-50.

**Usage**

```r
data(percentASFR)
```

**Format**

A data frame with one row per country and age group. For each country there are seven age groups. It contains columns `country_code`, `name`, `age` and one column per five-year time interval (i.e., from 1 July in year t to 1 July in year t+5 such as the period 1950-1955 refers to the period 1950.5-1955.5 and the mid of the period is 1953.0).

**Source**

This dataset is based on estimates and projections of United Nations, Department of Economic and Social Affairs, Population Division (2019).

**References**


**Examples**

```r
data(percentASFR)
str(percentASFR)
```

Estimates and Projections of Population Counts

**Description**

Datasets with historical population estimates and projections.
Usage

data(pop)
data(popMT)
data(popFT)
data(popM)
data(popF)
data(popproj)
data(popproj80l)
data(popproj80u)
data(popproj95l)
data(popproj95u)
data(popprojHigh)
data(popprojLow)
data(popMTproj)
data(popFTproj)
data(popMprojMed)
data(popFprojMed)
data(popMprojHigh)
data(popFprojHigh)
data(popMprojLow)
data(popFprojLow)

Format

Datasets that start with `popM` or `popF` and do not have “T” in their names, are age-specific and are organized as data frames with one row per country and age group. For each country there are 21 age groups. It contains the following variables:

- `name` Country name.
- `1950`, `1955`, ... Population estimate or projection (in thousand) for the given time.

The remaining datasets, i.e. those that do not have “M” or “F”, or have “T” in their names, contain one row per country.

Details

Dataset `pop` provides estimates of historical total population counts.

Datasets `popMT` and `popFT` provide estimates of total counts of male and female population, respectively.
Datasets `popM` (popF) contain age-specific estimates of the historical population counts for male (female).

Dataset `popproj` provides median projection of total population counts, i.e. aggregated over sex and age. Datasets `popproj80l`, `popproj80u`, `popproj95l`, and `popproj95u` are the lower (l) and upper (u) bounds of the 80 and 95% probability intervals of the total population. Datasets `popprojHigh` and `popprojLow` contain the upper and lower variant of total population defined as ± 1/2 child.

Datasets `popMTproj` and `popFTproj` provide median projection of total counts of male and female population, respectively.

Datasets `popXprojMed`, `popXprojHigh` and `popXprojLow` contain median, high and low variants of age-specific projections, respectively, with X=M for male and X=F for female.

All values are in thousands.

**Source**

These datasets are based on estimates and projections of United Nations, Department of Economic and Social Affairs, Population Division (2019).

**References**


**Examples**

```r
data(popM)
str(popM)
```

---

<table>
<thead>
<tr>
<th>sexRatio</th>
<th>Sex Ratio at Birth</th>
</tr>
</thead>
</table>

**Description**

Estimates and projections of the sex ratio at birth derived as the number of male divided by the number of female.

**Usage**

```r
data(sexRatio)
```

**Format**

A data frame with one record per country. It contains columns `country_code`, `name`, and one column per five-year time interval (i.e., from 1 July in year t to 1 July in year t+5 such as the period 1950-1955 refers to the period 1950.5-1955.5 and the mid of the period is 1953.0).

**Source**

This dataset is based on estimates and projections of United Nations, Department of Economic and Social Affairs, Population Division (2019).
References


Examples

```r
data(sexRatio)
str(sexRatio)
```

---

**tfr** United Nations Time Series of Total Fertility Rate

---

Description

Datasets containing the United Nations time series of the total fertility rate (TFR) for all countries of the world as available in 2019.

Usage

```r
data(tfr)
data(tfr_supplemental)
data(tfrprojMed)
data(tfrproj80l)
data(tfrproj80u)
data(tfrproj95l)
data(tfrproj95u)
data(tfrprojHigh)
data(tfrprojLow)
```

Format

The datasets contain one record per country or region. It contains the following variables:

- **name** Name of country or region (following ISO 3166 official short names in English - see [https://www.iso.org/obp/ui/#search/code/](https://www.iso.org/obp/ui/#search/code/) and United Nations Multilingual Terminology Database - see [https://unterm.un.org/unterm](https://unterm.un.org/unterm)).
- **1950-1955, 1955-1960,...** TFR in various five-year time intervals (i.e., from 1 July in year $t$ to 1 July in year $t+5$ such as the period 1950-1955 refers to the period 1950.5-1955.5 and the mid of the period is 1953.0). The tfrproj* datasets start at 2020-2025. The tfr_supplemental datasets start at 1740-1745. Missing data have NA values.
Dataset tfr contains estimates of the historical TFR starting at 1950; tfr_supplemental contains a subset of countries for which data prior 1950 are available. Datasets tfrprojMed contain the median projections. Datasets tfrproj80l, tfrproj80u, tfrproj95l, and tfrproj95u are the lower (l) and upper (u) bounds of the 80 and 95% probability intervals, respectively. Datasets tfrprojHigh and tfrprojLow contain high and low variants, respectively, defined as +/-1/2 child.


Source

These datasets are based on estimates and projections of United Nations, Department of Economic and Social Affairs, Population Division (2019).

The pre-1950 dataset was collected by Patrick Gerland.

References


Examples

data(tfr)
head(tfr)

data(tfrprojMed)
str(tfrprojMed)

---

**UNlocations**

**United Nations Table of Locations**

**Description**

United Nations table of locations, including regions, for statistical purposes as available in 2019.
Usage

data(UNlocations)

Format

A data frame with one observations per country or region. It contains the following variables:


reg_code  Code of the regions.

reg_name  Name of the regions.

area_code  Area code.

area_name  Area names, such as Africa, Asia, Europe Latin America and the Caribbean, Northern America, Oceania, World.

location_type  Code giving the type of the observation: 0=World, 2=Major Area, 3=Region, 4=Country/Area, 5=Development group, 12=Special groupings. Other numbers are allowed and they can be used for aggregation, see below.

agcode_1500000, agcode_1501000, agcode_1502000, agcode_1503000, agcode_1517000, agcode_1518000, agcode_1524000, agcode_1636000, agcode_1637000, agcode_1829000, agcode_1830000, agcode_1832000, agcode_1833000, agcode_1835000, agcode_901000, agcode_902000, agcode_917000, agcode_918000, agcode_921000, agcode_927000, agcode_934000, agcode_941000, agcode_947000, agcode_948000  
Optional columns that can be used for aggregations. To aggregate a region with country_code=x, get the value of its location_type, say y. Then look for the column agcode_y and locate all records with agcode_y=x that have location_type=4, see Example below.

Source

Data provided by the United Nations Population Division.

The designations employed in this dataset do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

Examples

data(UNlocations)

# Find high income countries in Africa (based on World Bank groups)
grouprec <- subset(UNlocations, name == "High-income countries")
# grouprec$location_type is 1503000, thus look for column agcode_1503000
subset(UNlocations, agcode_1503000 == grouprec$country_code &
      location_type == 4 & area_name == "Africa")
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