# Package 'wpp2015'

# April 17, 2025

Version 1.1-3

Date 202	25-04-17
Title Wo	orld Population Prospects 2015
Maintair	ner Hana Sevcikova <hanas@uw.edu></hanas@uw.edu>
Depends	R ( >= 2.14.2), plyr
Descript	ion Provides data from the United Nation's World Population Prospects 2015.
License	GPL (>= 2)
URL ht	tp://esa.un.org/wpp
NeedsCo	ompilation no
N	Population Division, Department of Economic and Social Affairs, United ations [aut], na Sevcikova [cre]
Reposito	ry CRAN
Date/Pul	blication 2025-04-17 21:20:02 UTC
Conte	nts
	wpp2015-package
	e0
	migration
	mx
	percentASFR
	pop
	sexRatio
	tfr
	UNlocations
Indev	10

2 wpp2015-package

wpp2015-package

World Population Prospects 2015

#### **Description**

Data from the United Nations World Population Prospects 2015.

#### **Details**

Package: wpp2015 Version: 1.1-2 Date: 2018-12-21

URL: http://esa.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.
- 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

#### Author(s)

Population Division, Department of Economic and Social Affairs, United Nations

#### Source

These datasets are based on estimates and projections of United Nations, Department of Economic and Social Affairs, Population Division (2015).

#### References

World Population Prospects: The 2015 Revision. (http://esa.un.org/unpd/wpp) Special Tabulations.

United Nations Time Series of Life Expectancy

3

e0

e0

# **Description**

Datasets containing the United Nations time series of the life expectancy (e0) for all countries of the world as available in 2015.

# Usage

```
data(e0F)
data(e0M)

data(e0F_supplemental)
data(e0M_supplemental)

data(e0Fproj)
data(e0Mproj)

data(e0Fproj801)
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:

country Name of country or region (following ISO 3166 official short names in English - see <a href="https://www.iso.org/obp/ui/#search/code/">https://www.iso.org/obp/ui/#search/code/</a> and United Nations Multilingual Terminology Database - see <a href="https://unterm.un.org/unterm2/">https://unterm.un.org/unterm2/</a>).

country\_code Numerical Location Code (3-digit codes following ISO 3166-1 numeric standard) - see https://en.wikipedia.org/wiki/ISO\_3166-1\_numeric.

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). last.observed containing the year of the last observation for each country. The e0\*proj datasets start at 2015–2020. The e0\*\_supplemental datasets start at 1750–1755. Missing data have NA values.

4 migration

#### **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 \*801, \*951 are the lower bounds of 80 and 95% probability intervals, \*80u, \*95u are the corresponding upper bounds.

The historical dataset (e0F\_supplemental.txt and e0M\_supplemental.txt for female and male respectively) for 29 countries or areas covers the period 1750-1950 (including 20 countries with data since at least 1900) is based on a series for 5-year periods from the following sources: (1) University of California at Berkeley (USA), and Max Planck Institute for Demographic Research (Germany). (2012). Human Mortality Database Available at https://www.mortality.org. Data downloaded on 9 Jan. 2012; (2) University of California at Berkeley (USA), Max Planck Institute for Demographic Research (Germany), and Institut National d'Etudes Demographiques (France). Human Life-Table Database (2011). Available at https://www.lifetable.de. Data downloaded on 29 Dec. 2011; (3) Statistics Finland (2006). Statistical Yearbook of Finland 2006; (4) Hungarian Central Statistical Office (2006). Hungary Demographic Yearbook 2005; (5) Japan Ministry of Internal Affairs and Communication (2012). Historical Statistics of Japan. Available at: https://www.stat.go.jp/english/; (6) Andreev E.M. et al. (1998). Demographic History of Russia 1927-1959. Informatika, Moscow.

#### Source

These datasets are based on estimates and projections of United Nations, Department of Economic and Social Affairs, Population Division (2015).

# References

World Population Prospects: The 2015 Revision. (http://esa.un.org/unpd/wpp) Special Tabulations.

#### **Examples**

```
data(e0M)
head(e0M)

data(e0Fproj)
str(e0Fproj)
```

migration

Dataset on Migration

#### **Description**

Estimates and projections of total net migration.

#### Usage

```
data(migration)
```

mx 5

#### **Format**

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

```
country_code Numerical Location Code (3-digit codes following ISO 3166-1 numeric standard) - see https://en.wikipedia.org/wiki/ISO_3166-1_numeric.
```

name Country name.

1990–1995, 1995–2000, 2000–2005, ... 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 (2015).

#### References

World Population Prospects: The 2015 Revision. (http://esa.un.org/unpd/wpp) Special Tabulations.

# **Examples**

```
data(migration)
str(migration)
```

mx

Age-specific Mortality Data

# **Description**

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

#### Usage

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

#### Format

Data frames with one row per country and age group. For each country there are 22 or more age groups (i.e., up to age 100+ or 110+). It contains the following variables:

```
country Country name.
```

```
country_code Numerical Location Code (3-digit codes following ISO 3166-1 numeric standard) - see https://en.wikipedia.org/wiki/ISO_3166-1_numeric.
```

6 percentASFR

age A character string representing an age interval (given by the starting age of the interval). For each country there are 22 values: "0", "1", "5", "10", "15", "20", "25", "30", "35", "40", "45", "50", "55", "60", "65", "70", "75", "80", "85", "90", "95", and "100+" in that order.

1950–1955, 1955–1960, ... Mortality rate 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). Not available data are represented by an empty string.

#### Source

This dataset is based on estimates and projections of United Nations, Department of Economic and Social Affairs, Population Division (2015).

#### References

World Population Prospects: The 2015 Revision. (http://esa.un.org/unpd/wpp) Special Tabulations.

#### **Examples**

```
data(mxF)
str(mxF)
```

percentASFR

Datasets on Age-specific Distribution of Fertility Rates

#### Description

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

#### **Usage**

```
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, country\_code, 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 (2015).

# References

World Population Prospects: The 2015 Revision. (http://esa.un.org/unpd/wpp) Special Tabulations.

pop 7

#### **Examples**

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

pop

Estimates and Projections of Population Counts

#### **Description**

Datasets with historical population estimates and projections.

### Usage

```
data(pop)
data(popM)
data(popF)
data(popproj)
data(popproj801)
data(popproj80u)
data(popproj951)
data(popproj95u)
data(popprojHigh)
data(popprojLow)
data(popMprojMed)
data(popFprojMed)
data(popMprojHigh)
data(popFprojHigh)
data(popMprojLow)
data(popFprojLow)
```

#### **Format**

Datasets that start with popM or popF 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:

country Country name.

country\_code Numerical Location Code (3-digit codes following ISO 3166-1 numeric standard) - see https://en.wikipedia.org/wiki/ISO\_3166-1\_numeric.

age A character string representing an age interval. For each country there are 21 values: "0-4", "5-9", "10-14", "15-19", "20-24", "25-29", "30-34", "35-39", "40-44", "45-49", "50-54", "55-59", "60-64", "65-69", "70-74", "75-79", "80-84", "85-89", "90-94", "95-99", and "100+" in that order.

1950, 1955, ... Population estimate or projection (in thousand) for the given time (mid-year).

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

8 sexRatio

#### **Details**

Dataset pop provides estimates of historical total population counts.

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 popproj801, popproj80u, popproj951, 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 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 (2015).

#### References

World Population Prospects: The 2015 Revision. (http://esa.un.org/unpd/wpp) Special Tabulations.

#### **Examples**

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

sexRatio

Sex Ratio at Birth

#### **Description**

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

#### Usage

```
data(sexRatio)
```

# Format

A data frame with one record per country. It contains columns country, country\_code, 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).

tfr 9

#### Source

This dataset is based on estimates and projections of United Nations, Department of Economic and Social Affairs, Population Division (2015).

#### References

World Population Prospects: The 2015 Revision. (http://esa.un.org/unpd/wpp) Special Tabulations.

#### **Examples**

```
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 2015.

# Usage

```
data(tfr)
data(tfr_supplemental)

data(tfrprojMed)
data(tfrproj801)
data(tfrproj80u)

data(tfrproj951)
data(tfrproj95u)

data(tfrprojHigh)
data(tfrprojLow)
```

#### **Format**

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

```
country Name of country or region (following ISO 3166 official short names in English - see <a href="https://www.iso.org/obp/ui/#search/code/">https://www.iso.org/obp/ui/#search/code/</a> and United Nations Multilingual Terminology Database - see <a href="https://unterm.un.org/unterm2/">https://unterm.un.org/unterm2/</a>).
```

```
country_code Numerical Location Code (3-digit codes following ISO 3166-1 numeric standard) - see https://en.wikipedia.org/wiki/ISO_3166-1_numeric.
```

10 tfr

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). last.observed containing the year of the last observation for each country. The tfrproj\* datasets start at 2015-2020. The tfr\_supplemental datasets start at 1740-1745. Missing data have NA values.

#### **Details**

Dataset tfr contains estimates of the historical TFR starting with 1950; tfr\_supplemental contains a subset of countries for which data prior 1950 are available. Datasets tfrprojMed contain the median projections. Datasets tfrproj801, tfrproj80u, tfrproj951, 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.

The historical dataset is contained in (tfr\_supplemental.txt) for 103 countries or areas covering the period 1740-1950 (including 24 countries with data before 1850), and is based on series for fiveyear periods from the following sources: (1) Max Planck Institute for Demographic Research (Germany) and Vienna Institute of Demography (Austria). (2012). Human Fertility Database (HFD). Available at https://www.humanfertility.org. Data downloaded on 13 May 2012; (2) Festy, P. (1979). La fecondite des pays occidentaux de 1870 a 1970. Paris: Presses universitaires de France; (3) Chesnais, J.C. (1992). The demographic transition: stages, patterns, and economic implications: a longitudinal study of sixty-seven countries covering the period 1720-1984. Oxford; New York: Clarendon Press; (4) Bhat, P.N.M. (1989). "Mortality and fertility in India, 1881-1961: a reassessment." pp. 73-118 in India's historical demography: studies in famine, disease and society, edited by T. Dyson. London and Riverdale, Md: Curzon and Riverdale Co.; (5) Hofsten, E.A.G.v. and H. Lundstrom. (1976). Swedish population history: Main trends from 1750 to 1970. Stockholm: Statistiska centralbyran: LiberForlag; (6) Ajus, F. and M. Lindgren. (2012). Gapminder fertility dataset, 2010 (including documentation for Children per Woman (Total Fertility Rate) for countries and territories, Version 2. The Gapminder Foundation. Sweden, Stockholm. https://www.gapminder.org/data/documentation/gd008/. Data downloaded on 8 April 2012.

#### Source

These datasets are based on estimates and projections of United Nations, Department of Economic and Social Affairs, Population Division (2015).

#### References

World Population Prospects: The 2015 Revision. (http://esa.un.org/unpd/wpp) Special Tabulations.

# Examples

```
data(tfr)
head(tfr)

data(tfrprojMed)
str(tfrprojMed)
```

UNlocations 11

**UNlocations** 

United Nations Table of Locations

#### Description

United Nations table of locations, including regions, for statistical purposes as available in 2015.

# Usage

data(UNlocations)

#### **Format**

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

```
name Name of country or region (following ISO 3166 official short names in English - see <a href="https://www.iso.org/obp/ui/#search/code/">https://www.iso.org/obp/ui/#search/code/</a> and United Nations Multilingual Terminology Database - see <a href="https://unterm.un.org/unterm2/">https://unterm.un.org/unterm2/</a>).
```

country\_code Numerical Location Code (3-digit codes following ISO 3166-1 numeric standard) - see https://en.wikipedia.org/wiki/ISO\_3166-1\_numeric.

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\_1500, agcode\_1501, agcode\_1502, agcode\_1503, agcode\_1517, agcode\_901, agcode\_902, agcode\_921, agcode 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.

#### 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)

# **Index**

* datasets	mxF (mx), 5
e0, 3	mxM, 2
migration, 4	mxM (mx), 5
mx, 5	
percentASFR, 6	percentASFR, 2, 6
pop, 7	pop, 2, 7
sexRatio, 8	popF, 2
tfr, 9	popF (pop), 7
UNlocations, 11	popFprojHigh(pop),7
* package	popFprojLow(pop), 7
wpp2015-package, 2	popFprojMed(pop),7
	popM, 2
e0, 3	popM (pop), 7
$e0$ _supplemental $(e0)$ , 3	popMprojHigh(pop), 7
e0F, 2	popMprojLow(pop), 7
e0F (e0), 3	popMprojMed(pop), 7
e0F_supplemental(e0),3	popproj, 2
e0Fproj(e0),3	popproj(pop),7
e0Fproj801 (e0), 3	popproj801,2
e0Fproj80u(e0),3	popproj801 (pop), <b>7</b>
e0Fproj951 (e0), 3	popproj80u,2
e0Fproj95u(e0),3	popproj80u(pop),7
e0M, 2	popproj951, <u>2</u>
e0M(e0), 3	popproj951(pop),7
e0M_supplemental(e0),3	popproj95u,2
e0Mproj(e0),3	popproj95u(pop),7
e0Mproj801(e0),3	popprojHigh, 2
e0Mproj80u(e0),3	popprojHigh(pop), 7
e0Mproj951(e0),3	popprojLow,2
e0Mproj95u(e0),3	popprojLow(pop),7
e0X_supplemental, 2	popXprojHigh,2
e0Xproj, 2	popXprojLow,2
e0Xproj801, 2	pop $XprojMed, 2$
e0Xproj80u, 2	5
e0Xproj951, 2	sexRatio, 2, 8
e0Xproj95u,2	+fr 2 0
migration 2.4	tfr, 2, 9 tfr_supplemental, 2
migration, 2, 4 mx, 5	tfr_supplemental(tfr),9
	tfr_supplemental(tfr), 9 tfrproj801, 2
mxF, 2	CIT PT OJOUL, Z

INDEX 13

```
tfrproj801(tfr),9
tfrproj80u, 2
tfrproj80u(tfr),9
tfrproj951,2
tfrproj951(tfr), 9
tfrproj95u, 2
tfrproj95u(tfr), 9
tfrprojHigh, 2
tfrprojHigh(tfr), 9
tfrprojLow, 2
tfrprojLow(tfr), 9
tfrprojMed, 2
tfrprojMed(tfr), 9
UNlocations, 2, 11
wpp2015 (wpp2015-package), 2
wpp2015-package, 2
```