SPRING SERIES ON DEMOGRAPHY

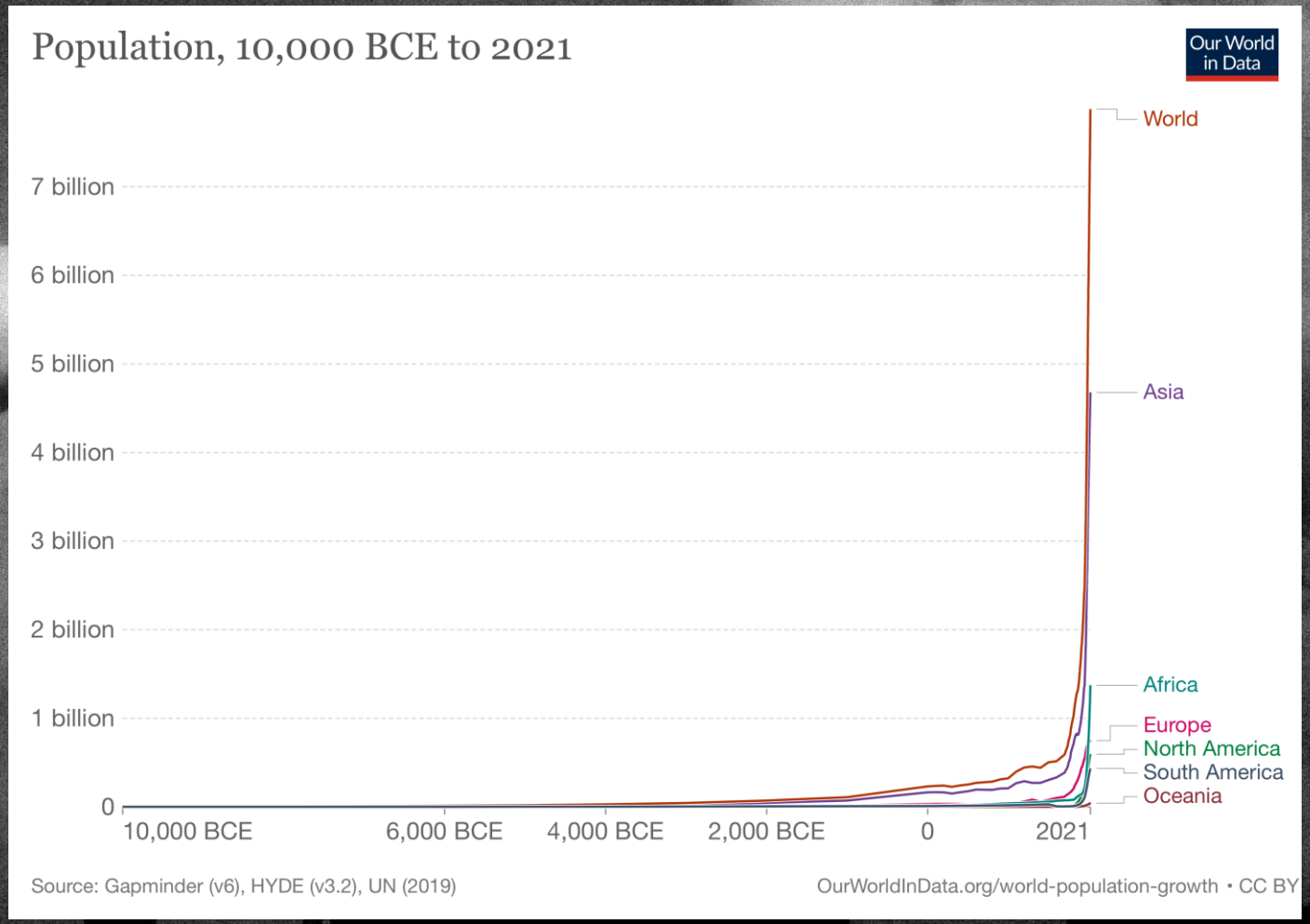
SESSION 4:

GLOBAL SOLUTIONS FOR A SUSTAINABLE FUTURE

JUNE 1, 2022
POPULATION CONNECTION

REVIEW

INDUSTRIALIZATION



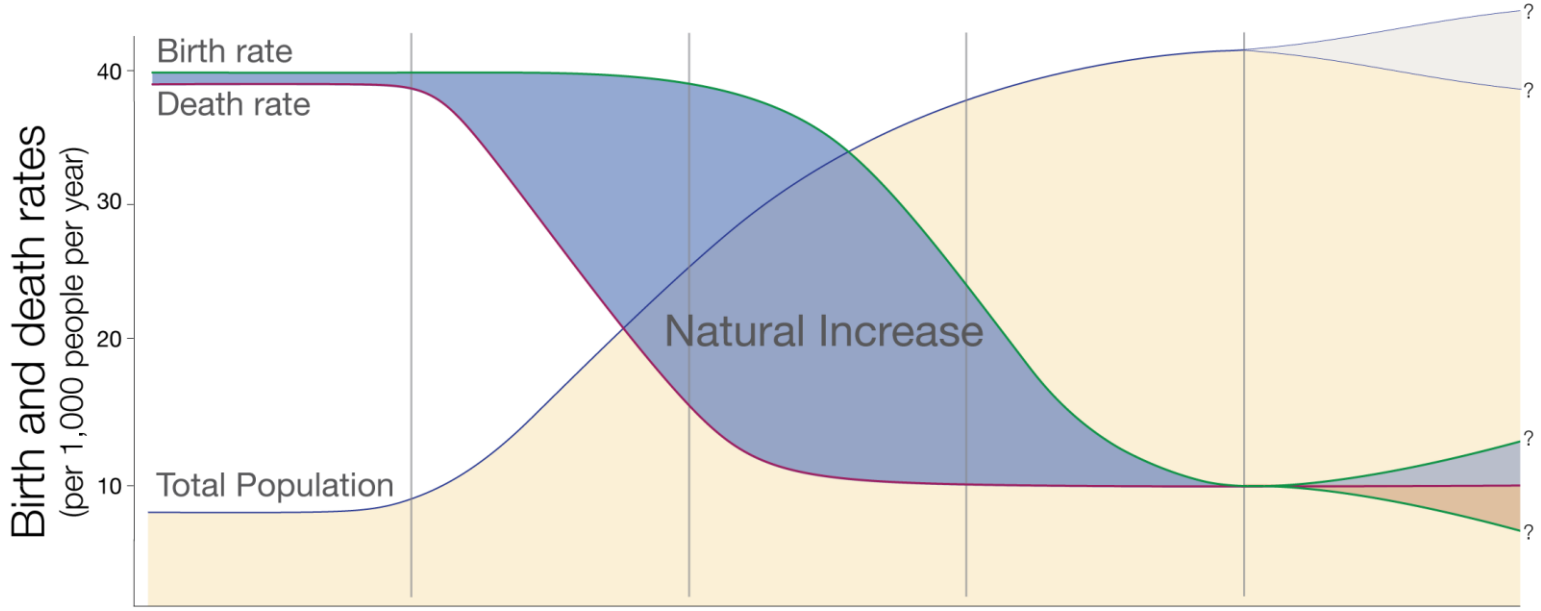
GLOBALIZATION

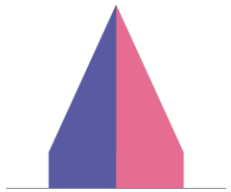
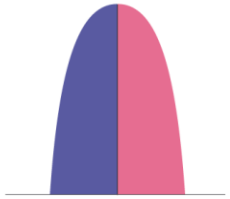
POPULATION

The five stages of the demographic transition

The demographic transition is a model that describes why rapid population growth is a temporary phenomenon.

Our World in Data



	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
Birth rate	High	High	Falling	Low	Yet to be seen (Possibly falling further, possibly rising again)
Death rate	High	Falls rapidly	Falls more slowly	Low	Low
Natural increase	Stable or slow increase	Rapid increase	Increase slows down	Falling and then stable	Little change
Population Pyramid					

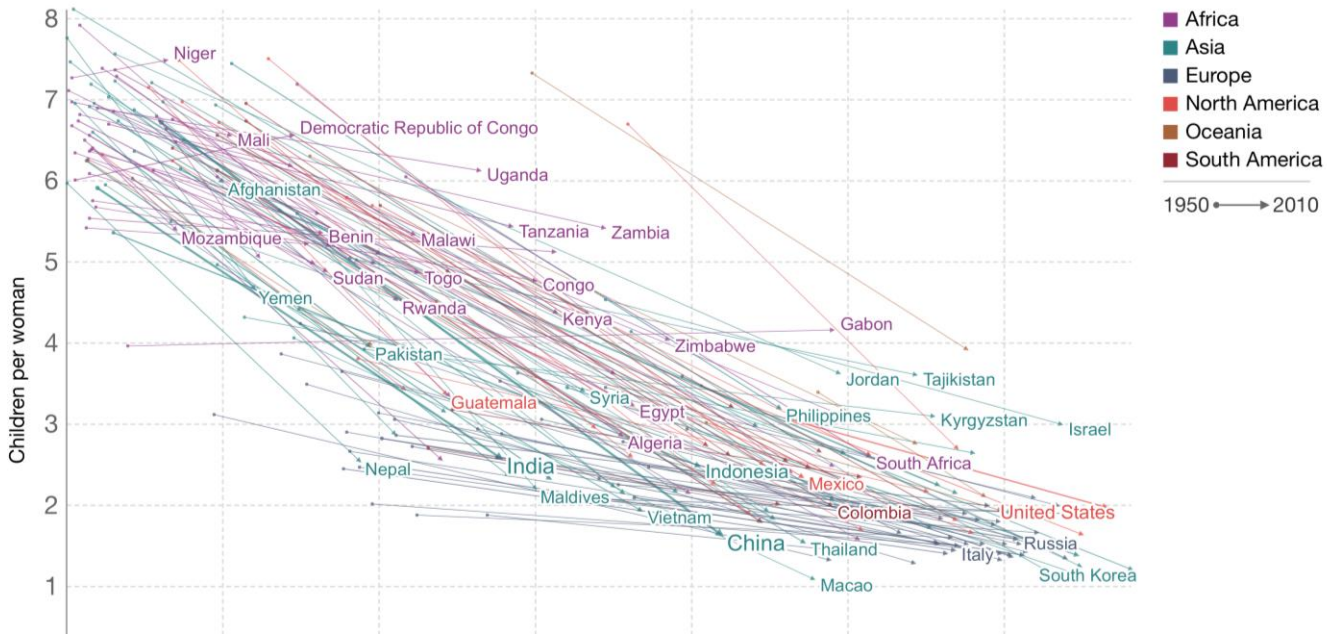
This is a visualization from OurWorldinData.org, where you find data and research on how the world is changing.

Licensed under CC-BY-SA by the author Max Roser.

Women's educational attainment vs. number of children per woman

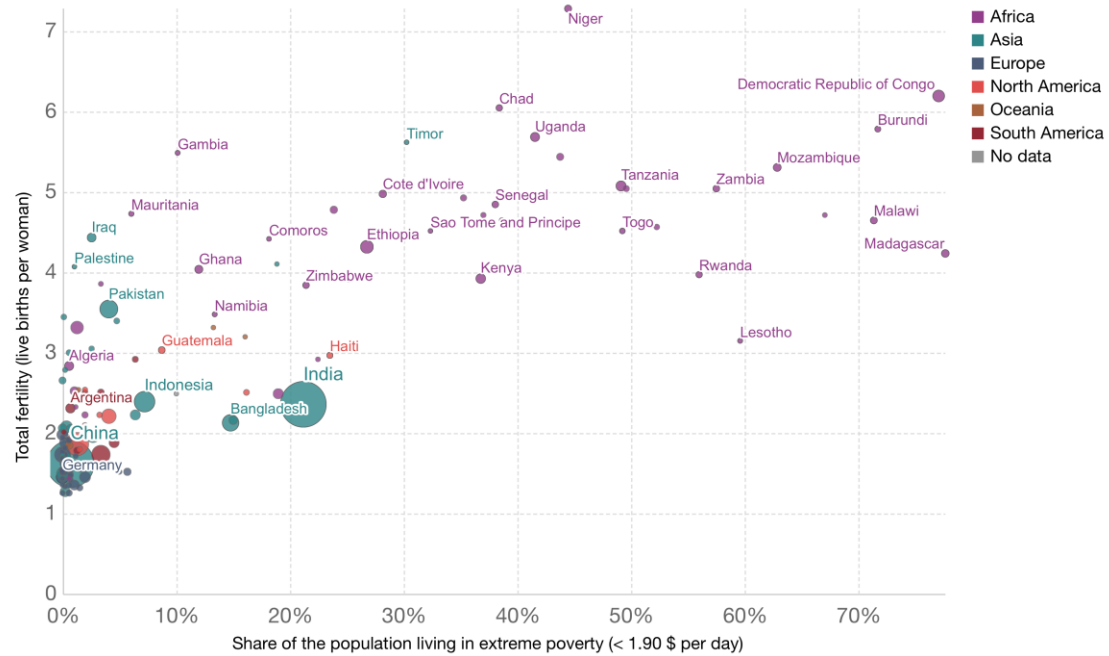
Our World in Data

Shown on the x-axis is the average number of years of schooling of women in the reproductive age (15 to 49 years). On the y-axis you find the 'total fertility rate' – the number of live births per woman in reproductive age.



Fertility rate vs the share living in extreme poverty, 2015

Our World in Data



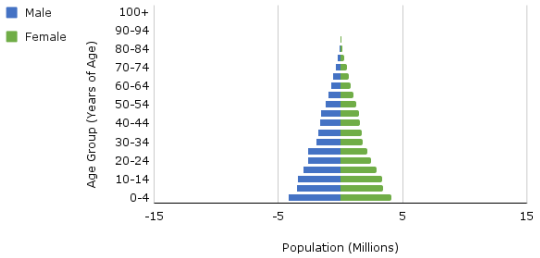
Source: UN Population Division (2017 Revision), World Bank

CC BY

Japan

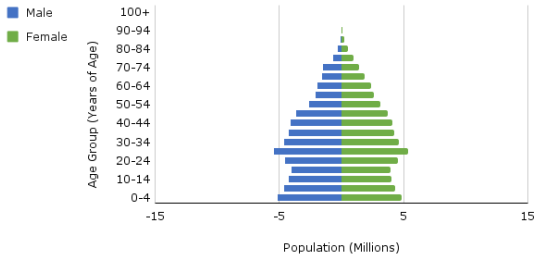
Japan, 1925

Official Statistics of Japan



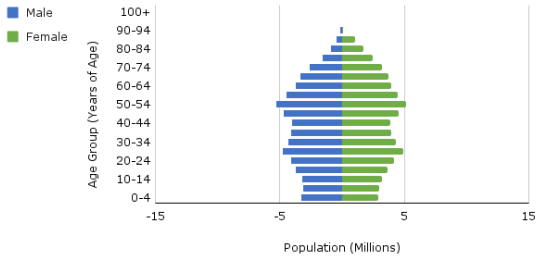
Japan, 1975

Official Statistics of Japan



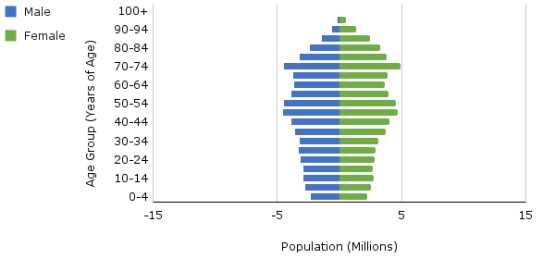
Japan, 2000

US Census Bureau



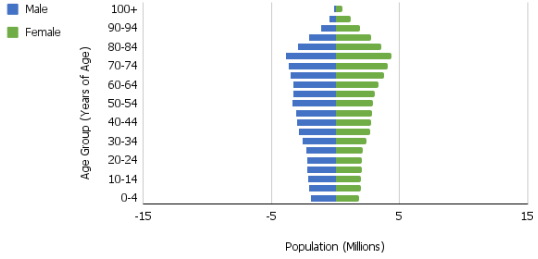
Japan, 2022

US Census Bureau



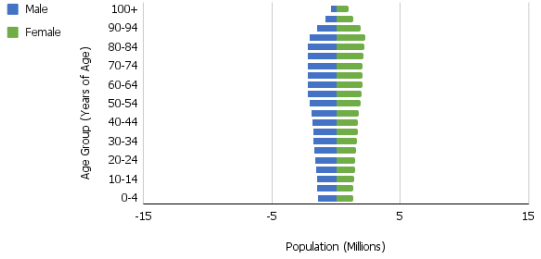
Japan, 2050

US Census Bureau



Japan, 2100

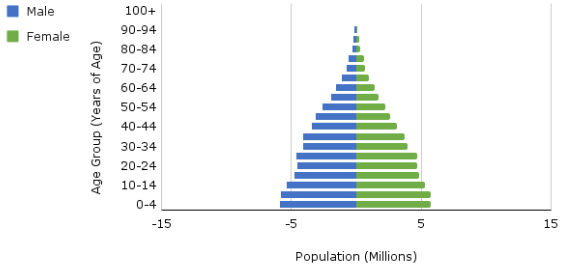
US Census Bureau



United States

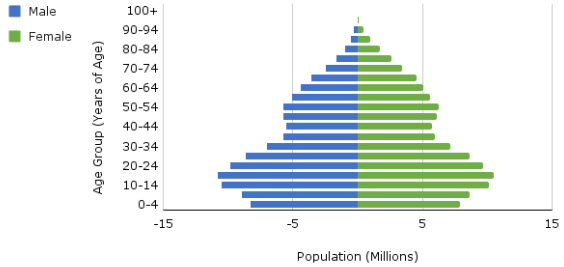
United States, 1920

US Census Bureau



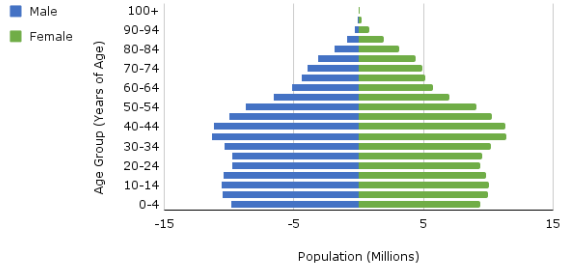
United States, 1975

US Census Bureau



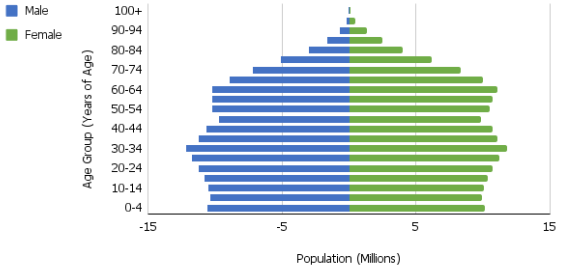
United States, 2000

US Census Bureau



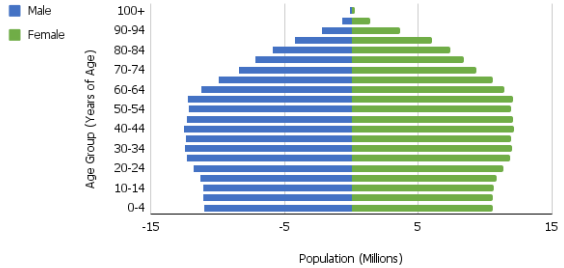
United States, 2022

US Census Bureau



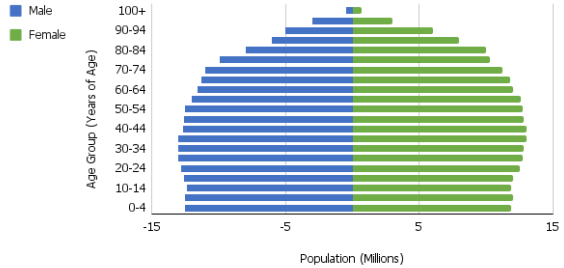
United States, 2050

US Census Bureau



United States, 2100

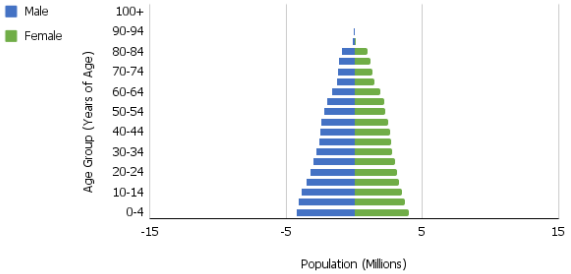
UN Population Division



Bangladesh

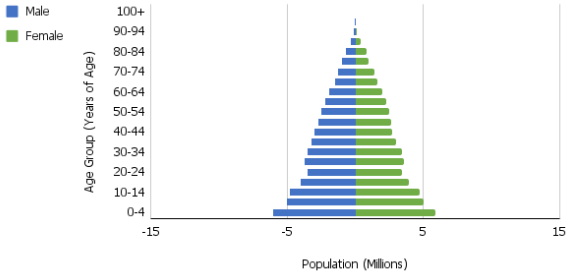
Bangladesh, 1950

UN Population Division



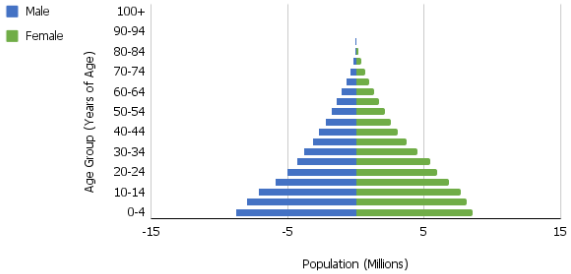
Bangladesh, 1975

UN Population Division



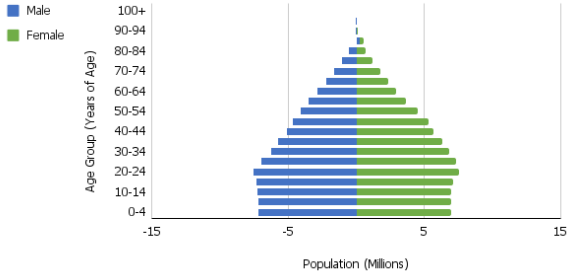
Bangladesh, 2000

US Census Bureau



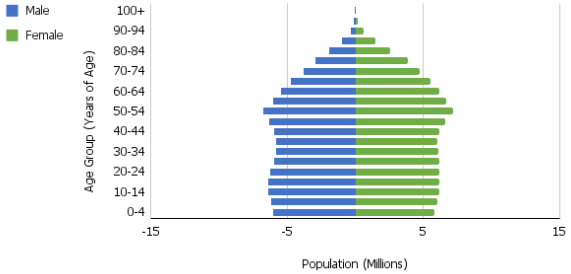
Bangladesh, 2022

US Census Bureau



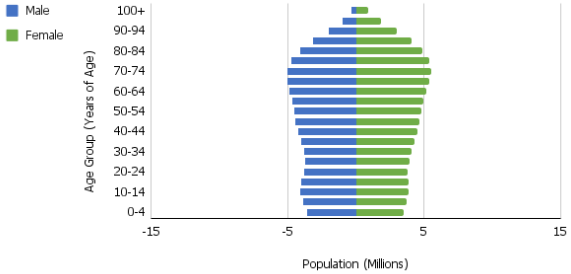
Bangladesh, 2050

US Census Bureau



Bangladesh, 2100

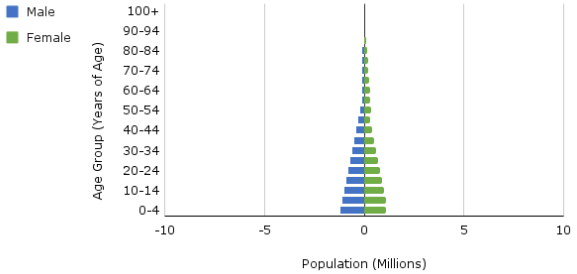
US Census Bureau



Uganda

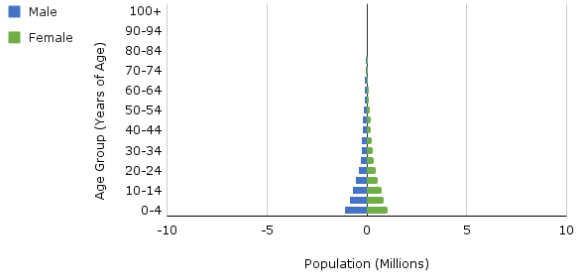
Uganda, 1950

UN Population Division



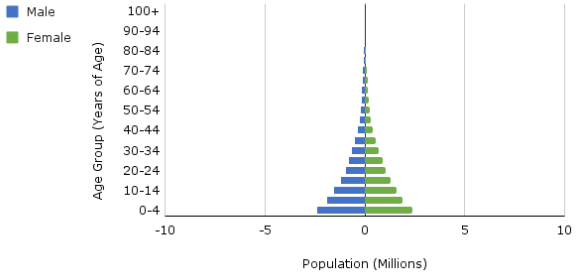
Uganda, 1975

US Census Bureau



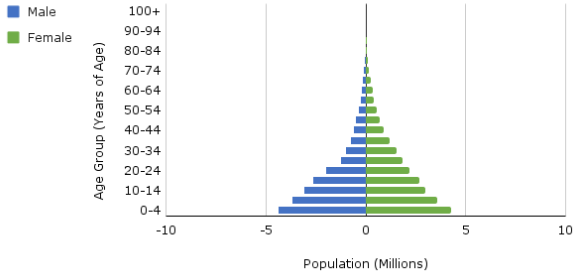
Uganda, 2000

US Census Bureau



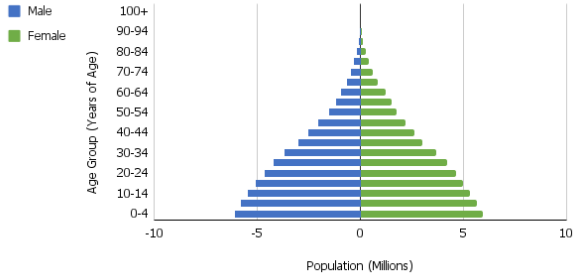
Uganda, 2022

US Census Bureau



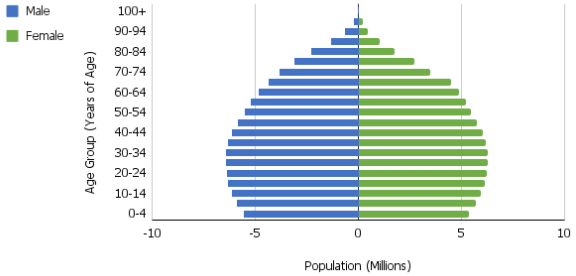
Uganda, 2050

US Census Bureau



Uganda, 2100

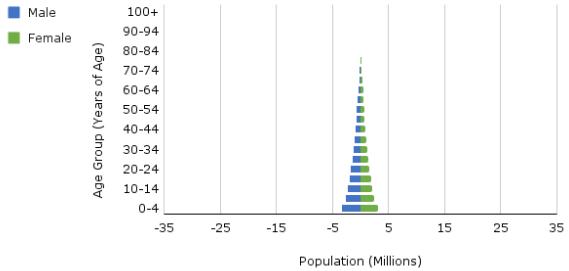
US Census Bureau



Nigeria

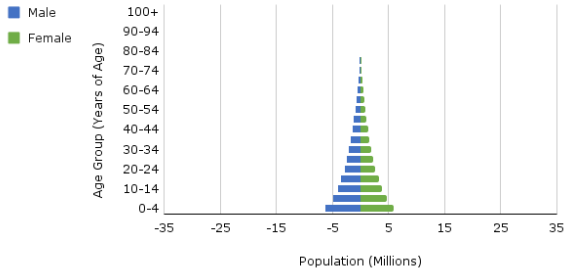
Nigeria, 1950

UNDESA Population Division



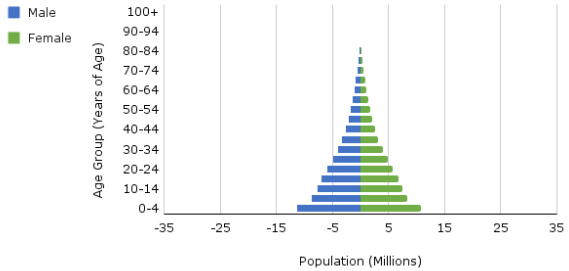
Nigeria, 1975

US Census Bureau



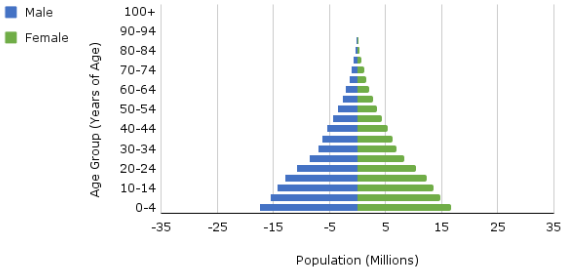
Nigeria, 2000

US Census Bureau



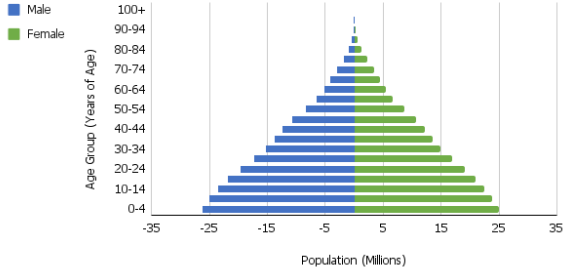
Nigeria, 2022

US Census Bureau



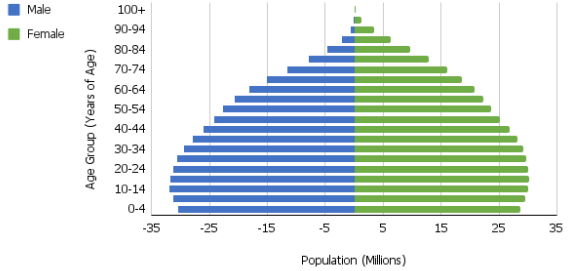
Nigeria, 2050

US Census Bureau

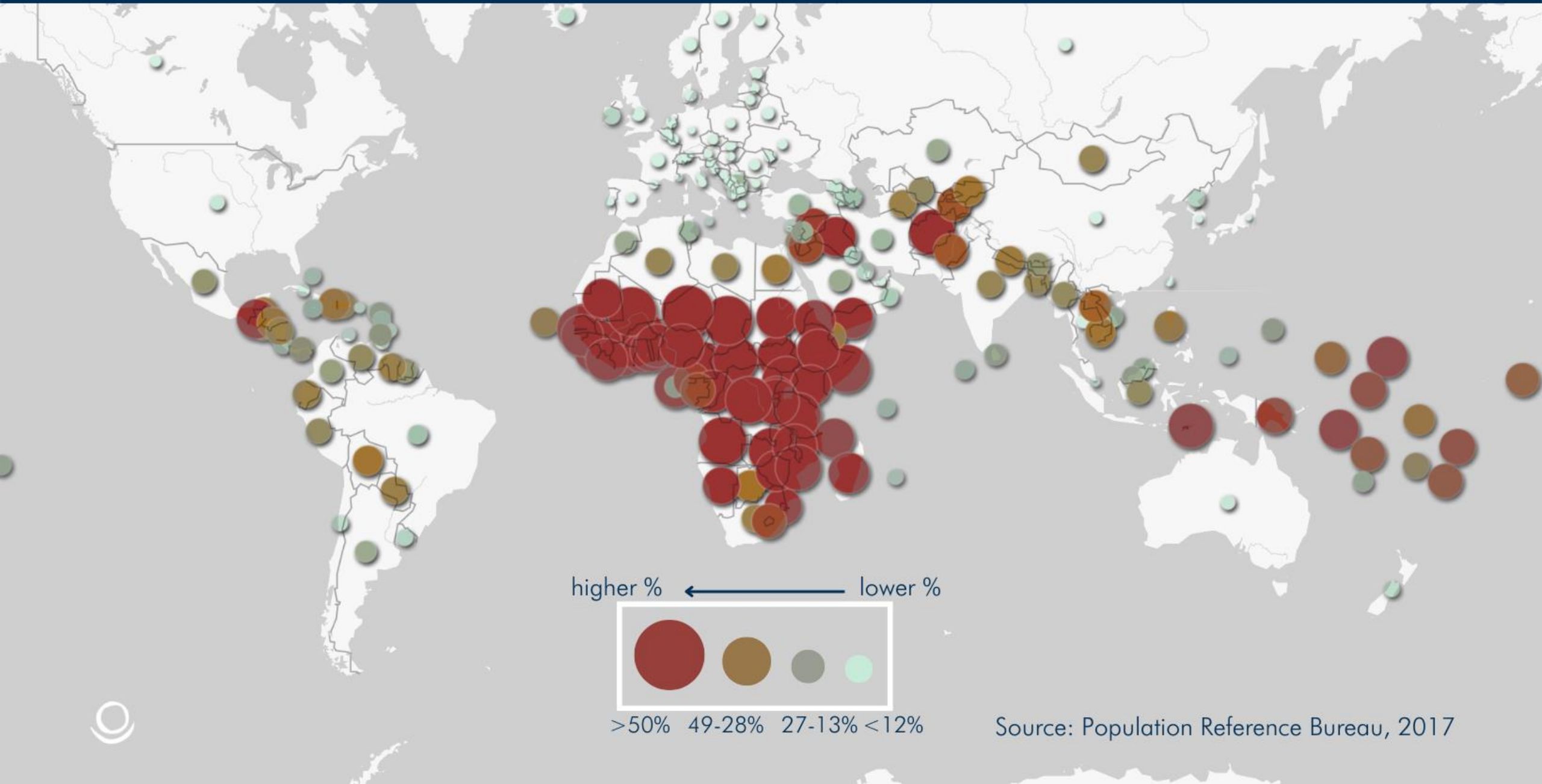


Nigeria, 2100

US Census Bureau

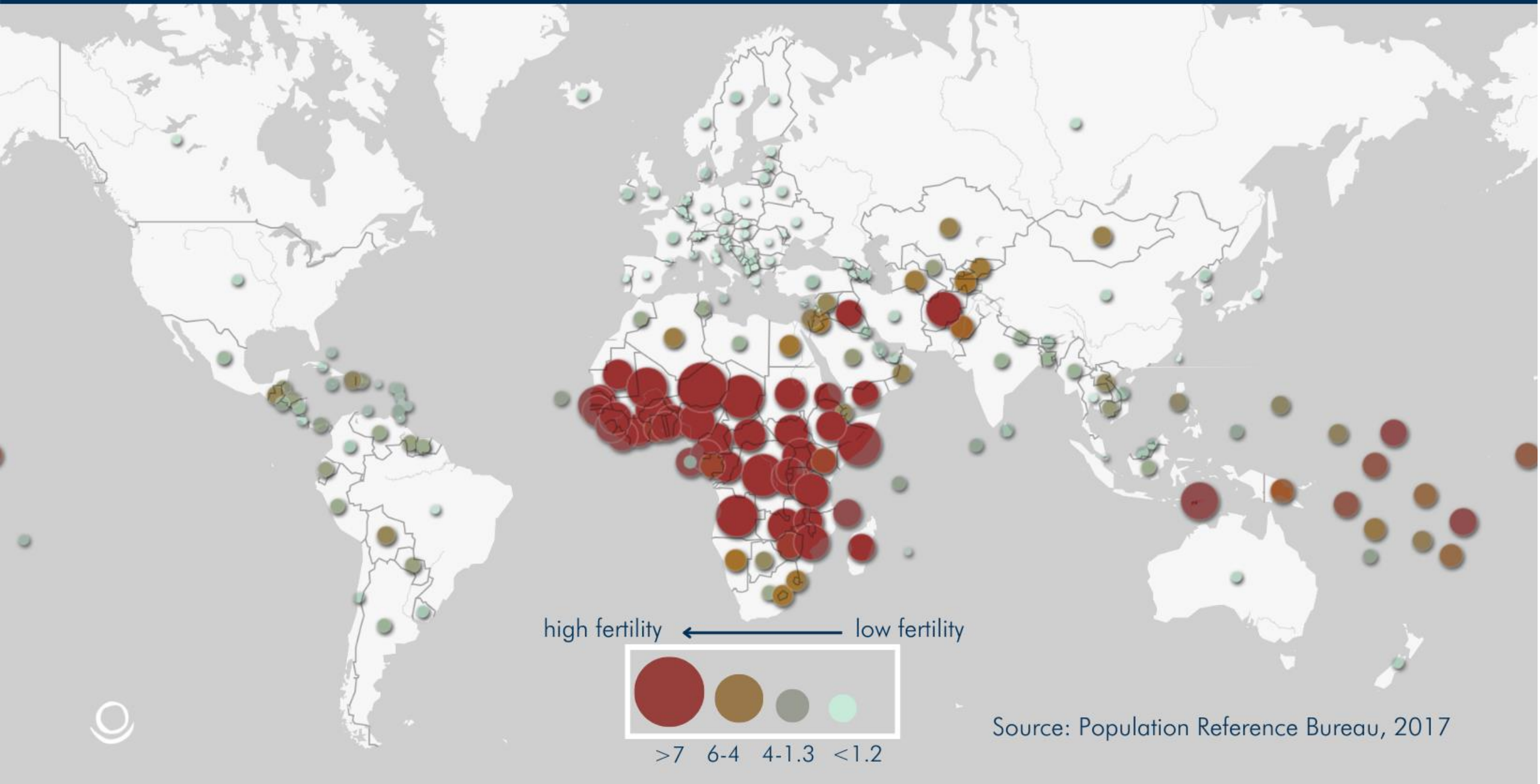


Percent of population under age 15



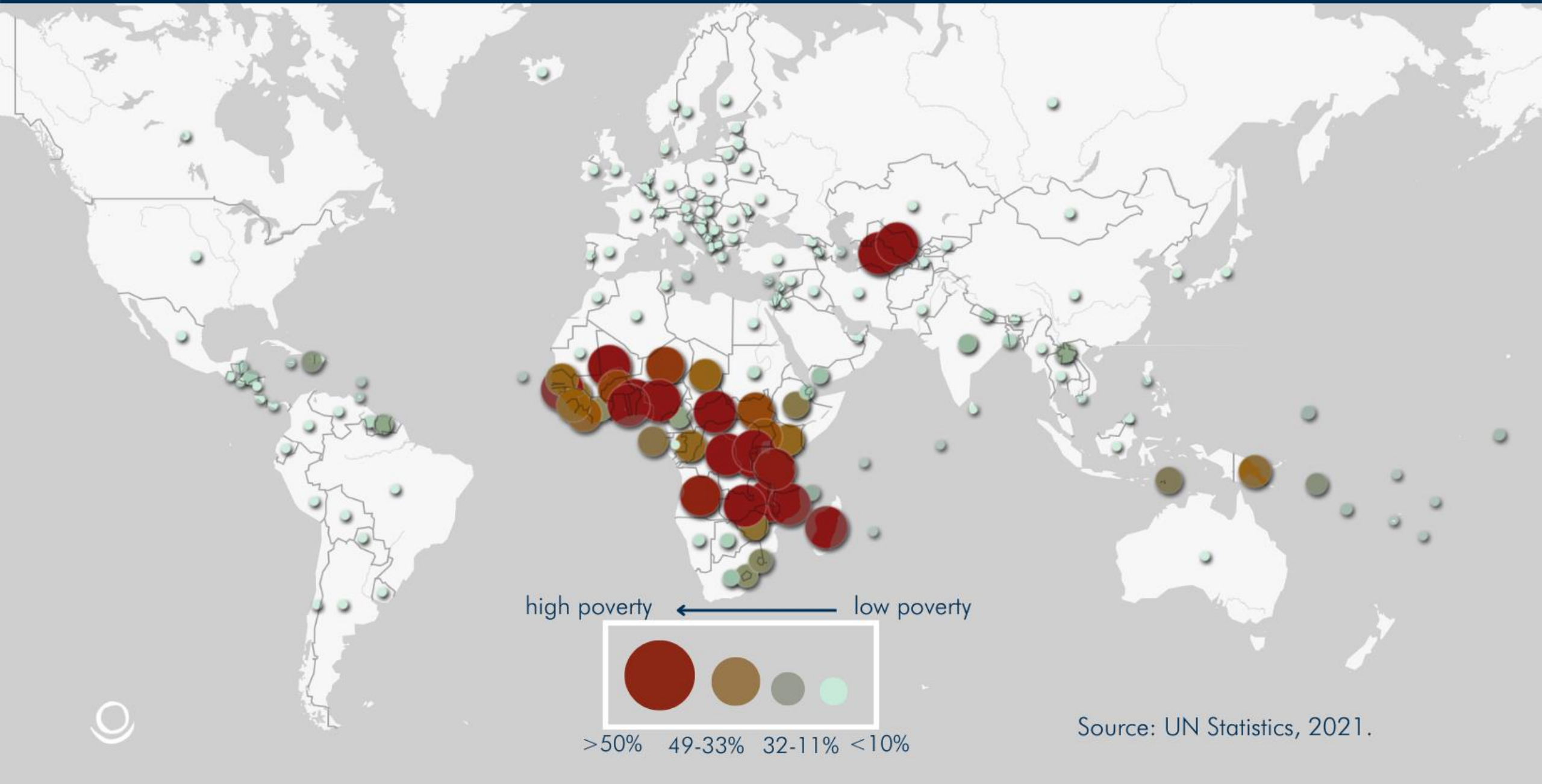
Source: Population Reference Bureau, 2017

Total Fertility Rate (children per woman)



Source: Population Reference Bureau, 2017

Percentage of population living below international poverty line (<$1.25/day)

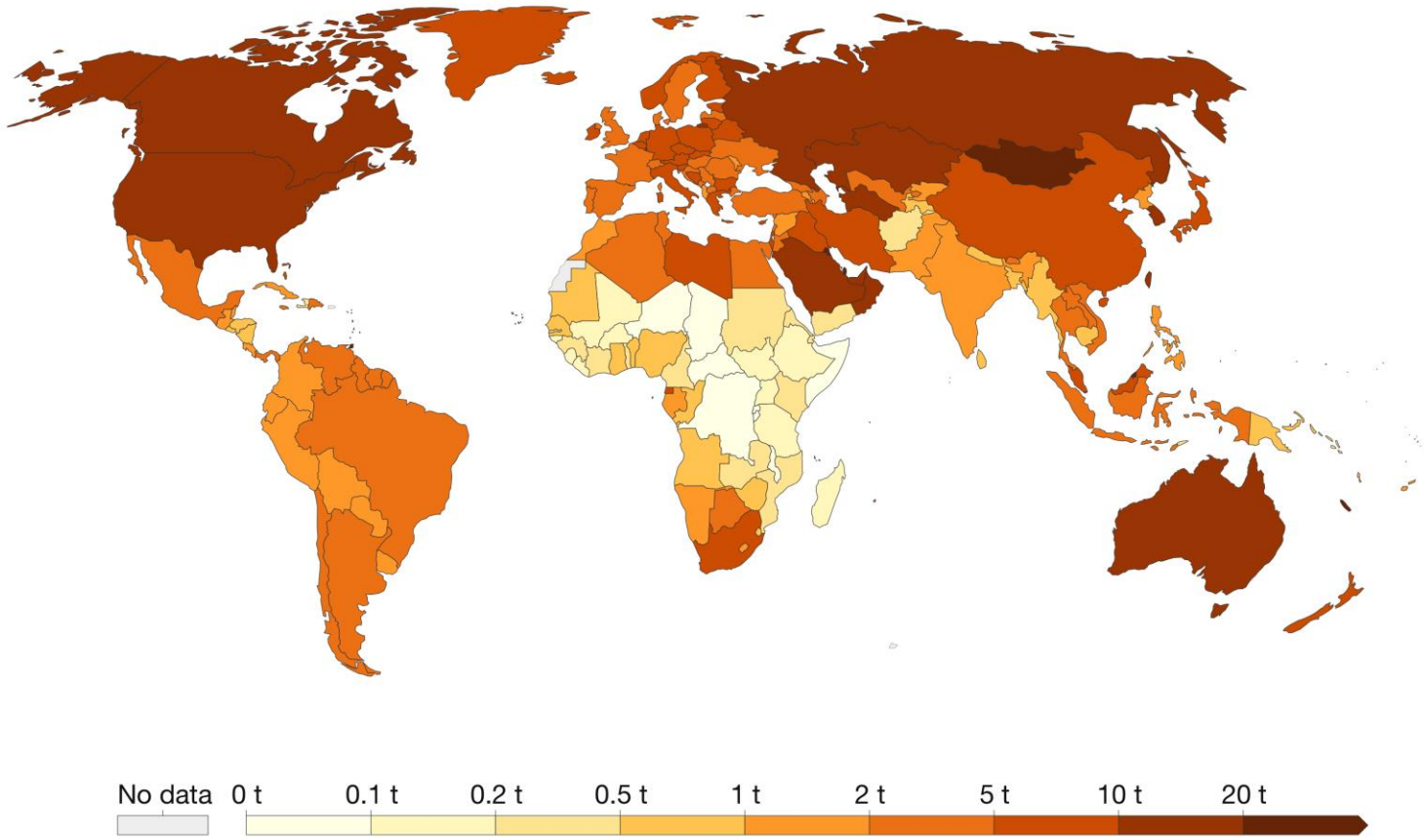


Source: UN Statistics, 2021.

Per capita CO_2 emissions, 2020

Carbon dioxide (CO_2) emissions from the burning of fossil fuels for energy and cement production. Land use change is not included.

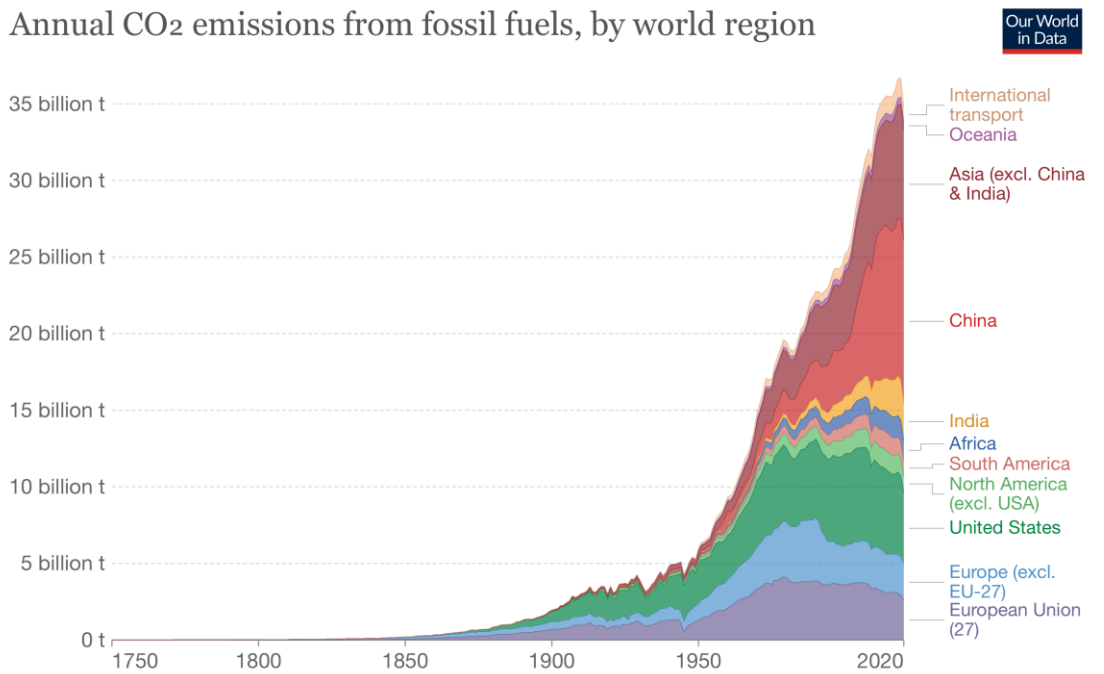
Our World in Data



Source: Our World in Data based on the Global Carbon Project

OurWorldInData.org/co2-and-other-greenhouse-gas-emissions/ • CC BY

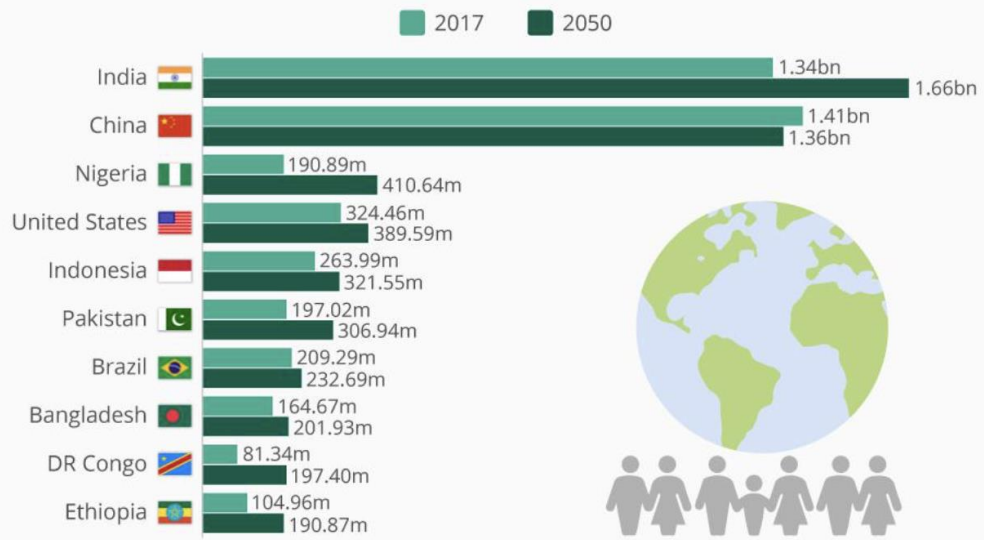
Annual CO_2 emissions from fossil fuels, by world region



Source: Global Carbon Project OurWorldInData.org/co2-and-other-greenhouse-gas-emissions • CC BY
Note: This measures CO_2 emissions from fossil fuels and cement production only – land use change is not included. 'Statistical differences'

The World's Most Populous Nations In 2050

Population in 2017 and forecast for 2050

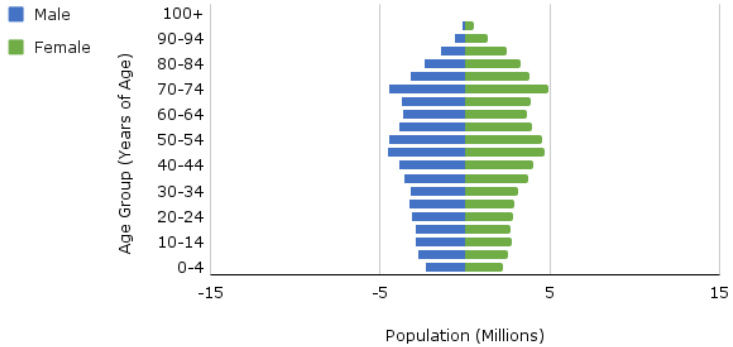


@StatistaCharts Source: UN Population Division

Forbes statista

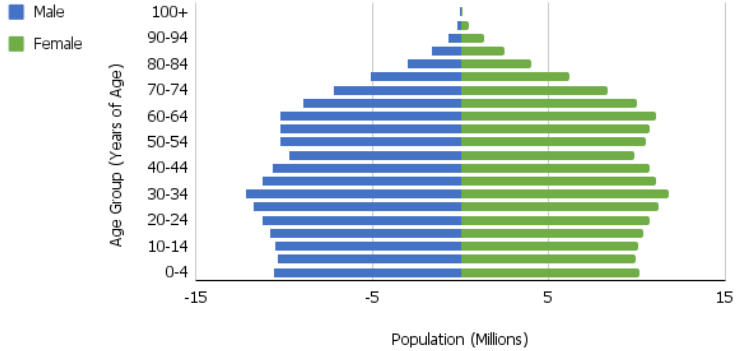
Japan, 2022

US Census Bureau



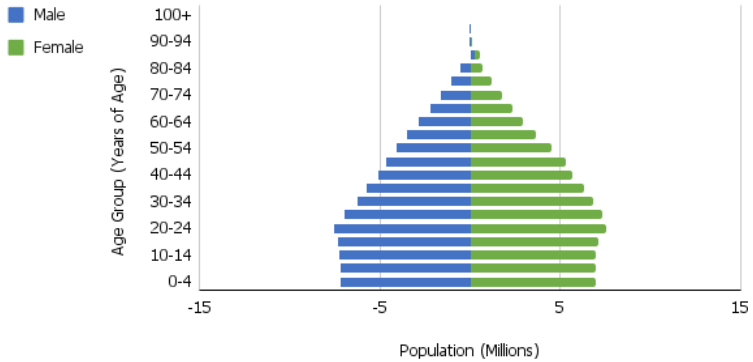
United States, 2022

US Census Bureau



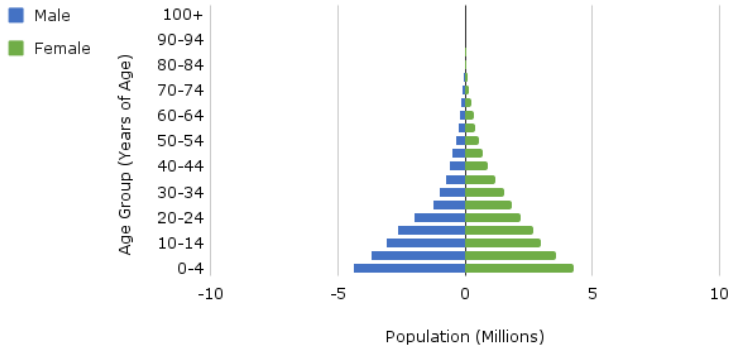
Bangladesh, 2022

US Census Bureau



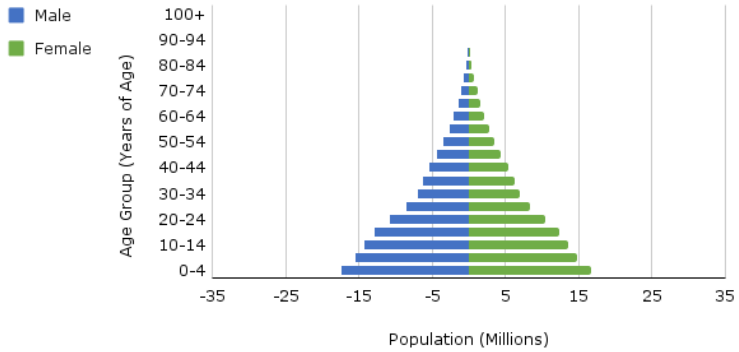
Uganda, 2022

US Census Bureau

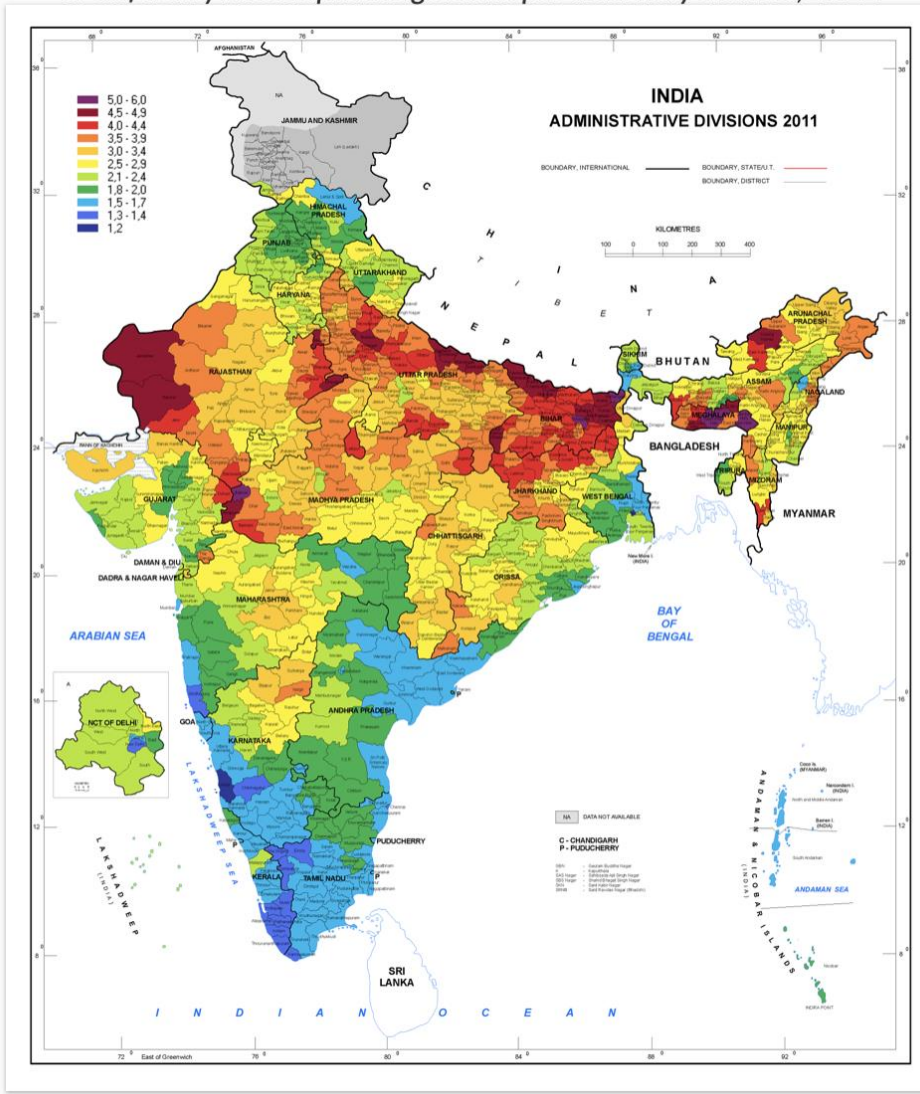


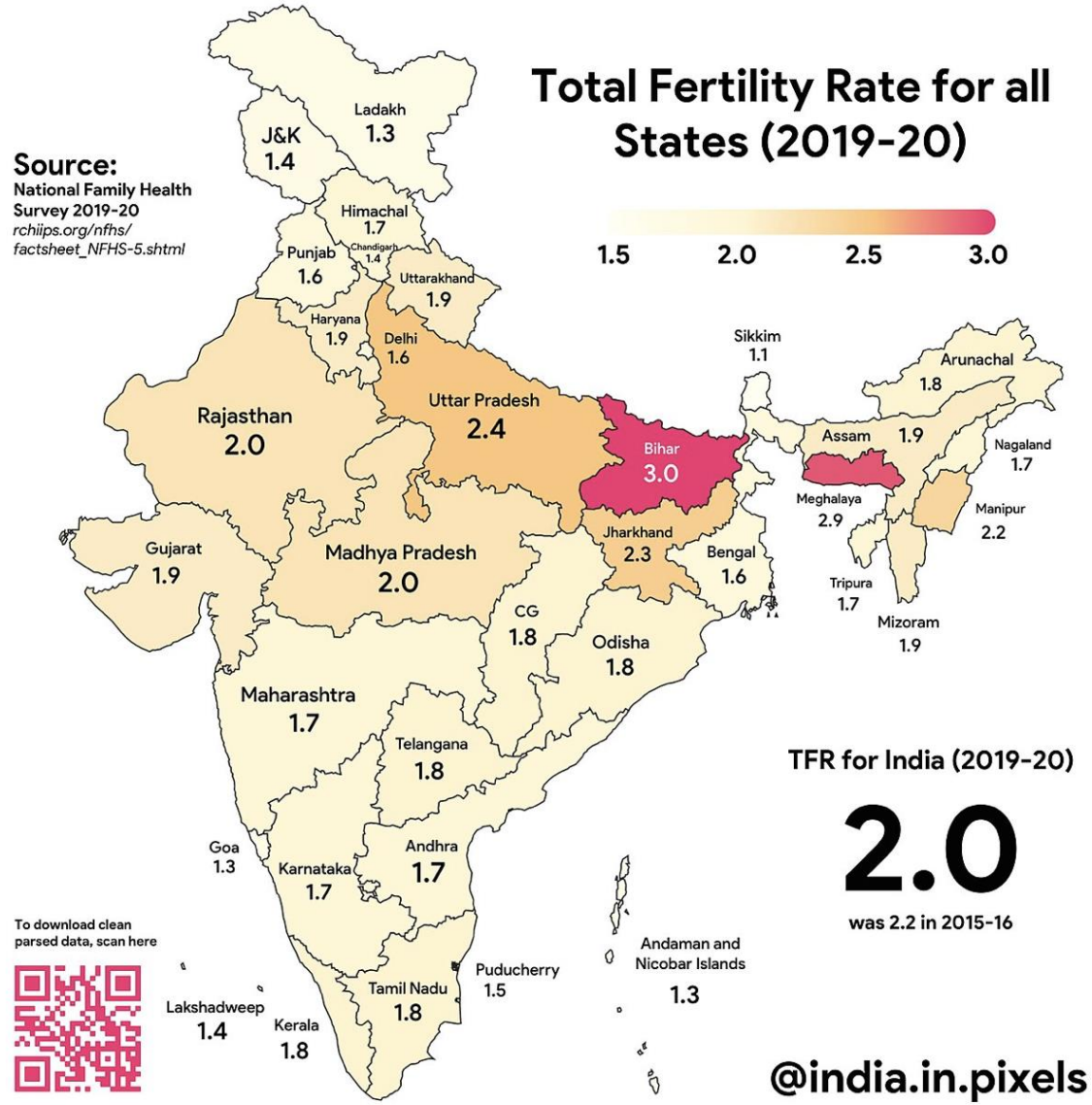
Nigeria, 2022

US Census Bureau



Total fertility rate map: average births per woman by districts, 2011





HEALTH BENEFITS

- Reduces maternal mortality & morbidity
- Reduces infant and child mortality
- Reduces rates of unintended pregnancy
- Reduces rates of unsafe abortions
- Increases health overall

Photo by Theodore Goutas on Unsplash

Voluntary Family Planning and Reproductive Health care

Informed choice: enable women and couples to freely and responsibly determine the number, timing and spacing of their births.

SOCIAL, ECONOMIC & ENVIRONMENTAL BENEFITS

- Increases education rates for women and girls
- Improves livelihoods and wellbeing
- Reduces poverty
- Relieves population pressure on:
  - Natural resources
  - Economic growth
  - Food production
  - Infrastructure development
  - State stability
- Slower population growth reduces greenhouse gas emissions
  - Lessens climate vulnerability

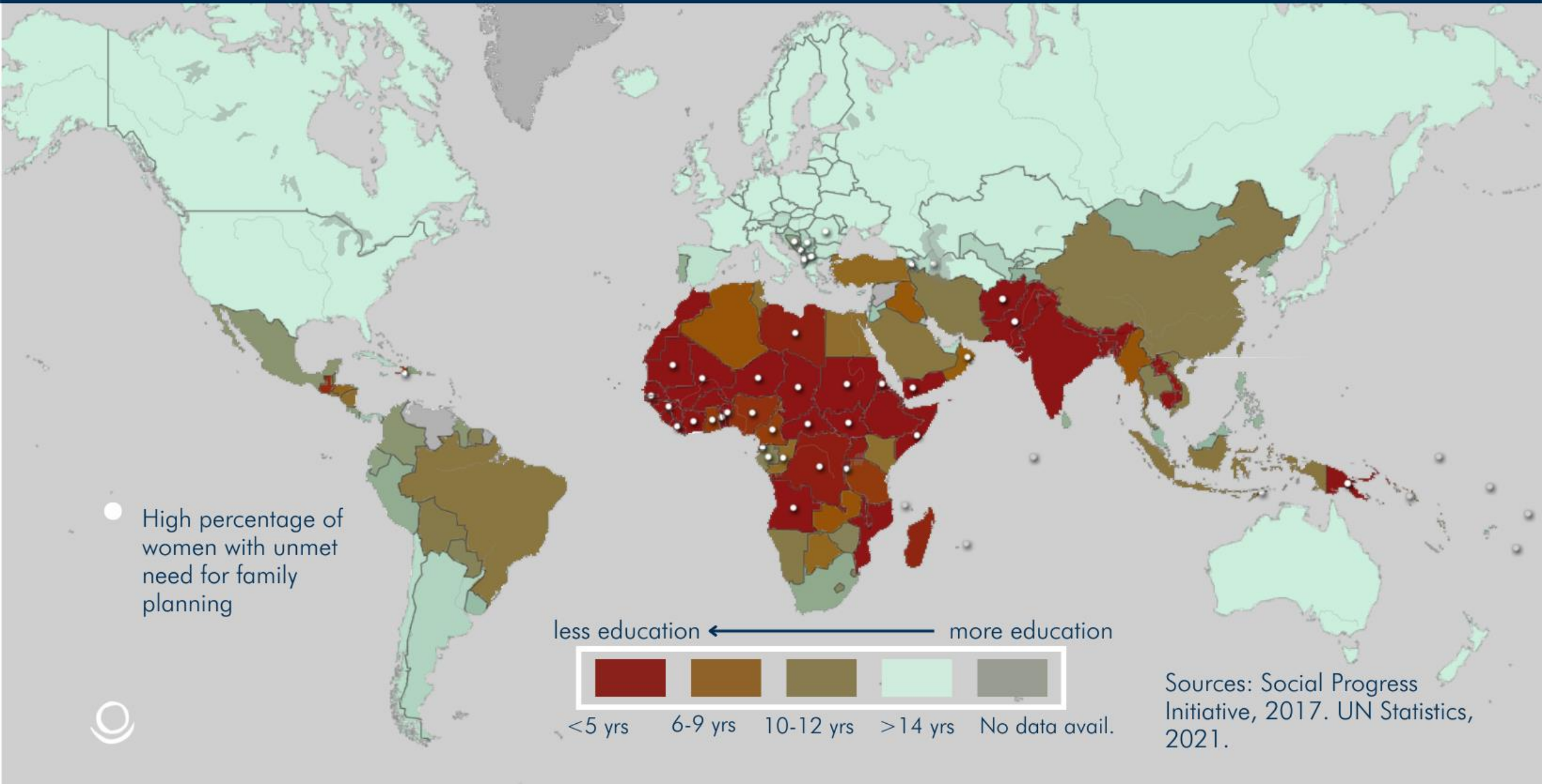
Solutions Through Health and Education

When education levels rise for women and girls, they gain social, political and economic power.

- Higher levels of education afford more options for sustained employment and help increase livelihoods.
  - More resources become available to help women and girls choose when and how to start a family.
- Women who are educated tend statistically to have fewer, healthier children.

Photo by Taylor Wilcox on Unsplash

Years of education for women & unmet need for family planning



Sources: Social Progress Initiative, 2017. UN Statistics, 2021.

Gender inequality intersects with climate change in ways that threaten the health, livelihoods, safety, and security of women and girls worldwide.

WORLD • CLIMATE CHANGE

Kenya Is Trying to End Child Marriage. But Climate Change Is Putting More Young Girls at Risk

Why climate change is creating a new generation of child brides

As global warming exacerbates drought and floods, farmers' incomes plunge – and girls as young as 13 are given away to stave off poverty

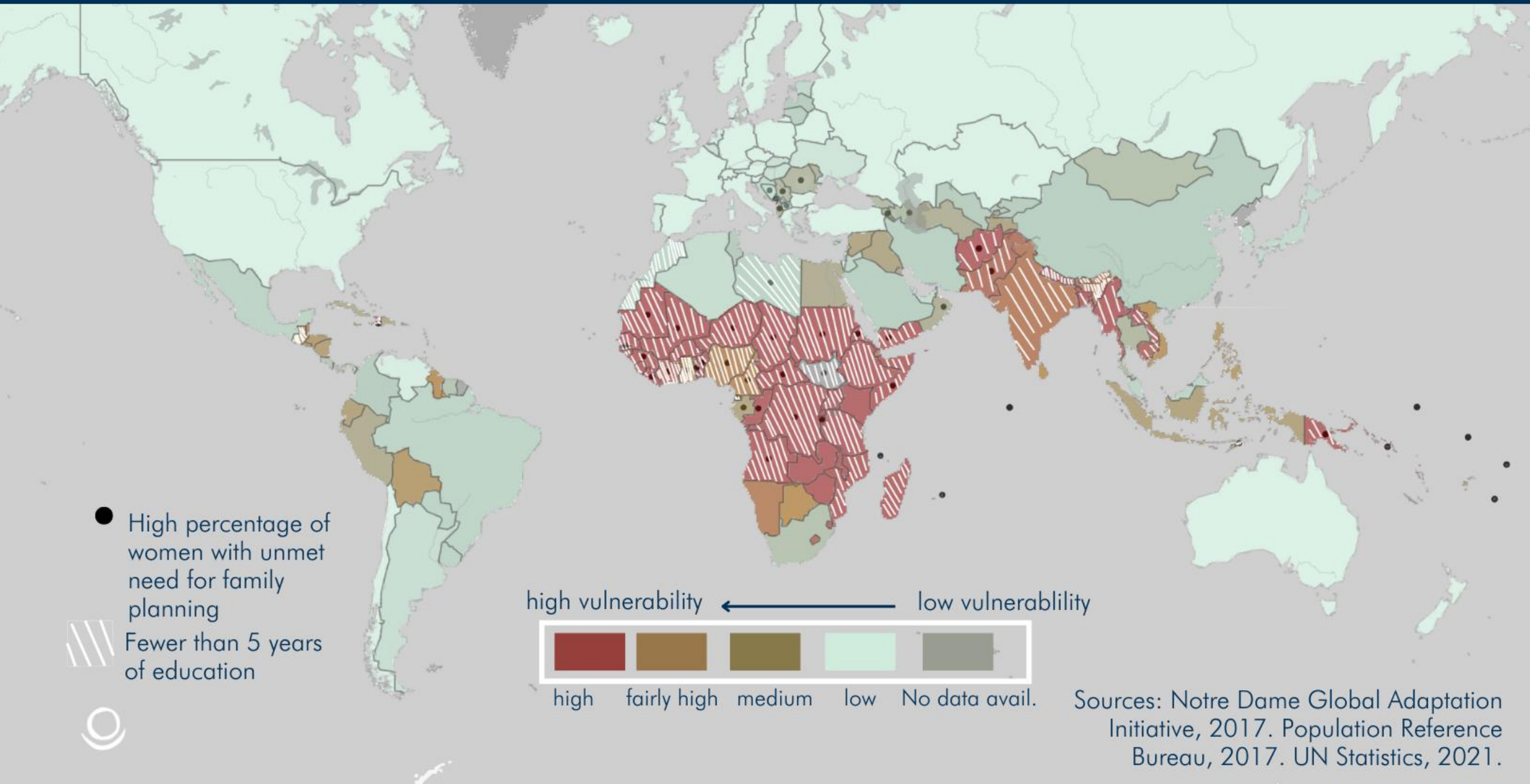
Ethiopian drought leading to 'dramatic' increase in child marriage, Unicef warns

With hunger across Horn of Africa and 600,000 children out of school, 'desperate' parents push more girls into early marriage

Displaced people queue to receive food aid last week at the Higlo camp in Gode, a town in the Somali region of Ethiopia. Photograph: Tiksa Negeri/Reuters

THE CLIMATE CRISIS IS A REPRODUCTIVE JUSTICE ISSUE

Climate vulnerability, years of education, & unmet need for family planning



Sources: Notre Dame Global Adaptation Initiative, 2017. Population Reference Bureau, 2017. UN Statistics, 2021.

GENDER EQUITY
IS A
CLIMATE
SOLUTION

Women and children are healthier

a fundamental aspect of building climate resilience

Women become more empowered

increasing possibilities for engaging in climate adaptation efforts

Rates of unintended pregnancies drop

resulting in smaller families and a reduced demand for climate-sensitive resources like food and water

Slower population growth

lessens pressure on local natural resources and exposes fewer people to climate impacts

Meeting women's needs for FP/RH benefits climate adaptation

Top 5 solutions to climate change

54.4
Tropical Forest Restoration

85.4*
Health and Education
(FAMILY PLANNING & EDUCATING GIRLS)

87.4
Reduced Food Waste

57.7
Refrigerant Management

65.0
Plant-rich Diets

*CO_2-equivalent reduction by 2050 (GT)

Source: The Drawdown Review 2020

POPULATION

HEALTH

ENVIRONMENT

GLOBAL SOLUTIONS FOR A
SUSTAINABLE FUTURE