

An aerial photograph of a city valley, showing a mix of urban development, green spaces, and a river. A semi-transparent grey box is overlaid on the image, containing text. The text is centered and reads: "SPRING SERIES ON POPULATION & ENVIRONMENT" at the top, "SESSION 1:" in smaller font below it, "INTRO TO" in large font, and "DEMOGRAPHY" in the largest font. At the bottom left of the box, it says "MARCH 9, 2022" and "POPULATION CONNECTION". In the bottom right corner of the image, there is a small circular logo with a blue and green design.

SPRING SERIES ON POPULATION & ENVIRONMENT

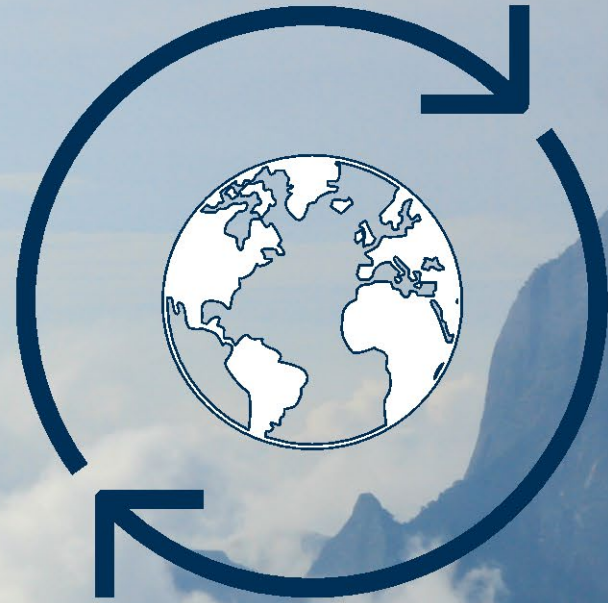
SESSION 1:

INTRO TO DEMOGRAPHY

MARCH 9, 2022
POPULATION CONNECTION



POPULATION
HEALTH
ENVIRONMENT





INTRO TO DEMOGRAPHY



China allows three children in major policy shift

🕒 31 May 2021

China's Births Hit Historic Low, a Political Problem for Beijing

The demographic crisis, a challenge to the economy, also signals a limit to the reach of the government, which has struggled recently to grow the population.

China forcing birth control on Uighurs to suppress population, report says

🕒 29 June 2020

China cuts Uighur births with IUDs, abortion, sterilization

By The Associated Press June 28, 2020

China restricts abortions for 'non-medical purposes'

Move comes as China introduces new policies aimed at encouraging families to have more children amid concerns over a decline in birthrates.

China's birth rate drops to record low in 2021

Reuters

These Chinese villages are paying couples to have more children



By **Jessie Yeung**, CNN

🕒 Updated 2:14 AM ET, Fri September 24, 2021



Uttar Pradesh bill: The myth of India's population explosion

By Soutik Biswas and Aparna Alluri
BBC News, Delhi

The pat © 13 July 2021

Why UP's Population Control Bill Can Prove Disastrous for Women, Poor Families



India's Population Will Be 1.52 Billion by 2036, With 70% of Increase in Urban Areas



The Gendered Impact of Uttar Pradesh's Population Control Bill

Improving women's access to family planning and education would be a better way to control population growth.

A cityscape at sunset with a large white text box overlaid. The text box contains the main title and subtitle of the article. The background shows a city with many buildings and a prominent dome, likely the Parliament Building in Tehran, Iran, under a hazy, orange-tinted sky.

Iran: Population Law Violates Women's Rights

Denies Access to Essential Reproductive Health Care, Information

Middle East

Iran doubles down on abortion and contraception restrictions

By Miriam Berger

December 1, 2021 at 2:11 p.m. EST

Iranian law to boost population takes effect; UN experts warn it will limit women's rights

Iran death penalty threat for abortion unlawful: UN rights experts

'Two is enough,' Egypt tells poor families as population booms

Egypt promotes birth control to slow population growth

Economy | Environment

Egypt's population nears 100 million, squeezing resources, jobs

Creating new space for housing, schools and hospitals is a priority as Egypt's population soars

Politics

Nigeria Overhauls Birth Policy to Slow Population Growth

Stakeholders seek population control, climate change mitigation in Lagos

By **Victor Gbonegun**

18 October 2021 | 4:01 am





U.S. Population Growth, an ^{U.S.} Economic Driver, Grinds to a Halt

Covid-19 pandemic compounds years of birth-rate decline, puts America's demographic health at risk

America Would Be More Happy With More People

Stagnant population growth in the U.S. hurts not only national economic growth but also the national mood.

REPORT

What the 2020 census will reveal about America: Stagnating growth, an aging population, and youthful diversity

William H. Frey · Monday, January 11, 2021

Japan's Population Problem Is Straining Its Economy. The World Is Watching for a Solution

By [Yuko Takeo](#) and [Hannah Dormido](#)
September 19, 2019, 6:00 AM

The World Might Be Running Low on Americans

May 20, 2021

ECONOMY >

Population slowdown is holding back Spain's economy

A low birth rate and new migration trends pose questions about the country's ability to generate growth



Pandemic Tied to Declining Birth Rates for U.S., Much of Europe

Sept. 20, 2021, at 8:05 a.m.

Coronavirus crisis will see 7 million unplanned pregnancies and 31 million gender-based violence cases, the UN says

COVID disrupts contraception services, leads to 1.4 million unintended pregnancies, says UNFPA

The Pandemic Caused a Baby Bust, Not a Boom

Birth rates in many high-income countries declined in the months following the first wave, possibly because of economic uncertainty



POPULATION IS EVERYTHING





What is demography?

Demography is the scientific study of human populations.

- Concerns everything that influences or can be influenced by variables like:
 - Population size (how many people there are in a place)
 - Population growth or decline (how the number of people in that place is changing over time)
 - Population processes (the levels and trends in fertility, mortality, and migration that are determining population size and change and which can be thought of as capturing three major life events: birth, partnership, childbirth)





What is demography?

- Population distribution (where people are located and why)
- Population structure (how many males and females there are of each age)
- Population characteristics (what people are like in a given place, in terms of indicators like):
 - Education
 - Income
 - Occupation
 - Family and household relationships
 - Immigrant and refugee status
 - Many other characteristics that add up to who we are as individuals and groups



U.S. Demographics 1900-2020	1900	2000	2020
World population (billions)	1.6	6.1	7.8
U.S. population (millions)	76	281	332
U.S. percent of world total	4.80%	4.60%	4.30%
Life expectancy	47	77	77.3
Children per woman	3.5	2.1	1.7
% of U.S. population in California	2%	12%	12%
Population of Buffalo, NY, compared to Los Angeles	About the same	LA is 35 times more populous	LA is 15 times more populous
Immigrants from Italy (1900–1910); (1990–2000); (2010-2020)	2 million	63,000	32, 986
Immigrants from Mexico (1900–1910); (1990–2000); (2010–2020)	50,000	2.2 million	1.1 million
% foreign-born	13.60%	11.10%	14%
% urban	40%	80%	83%
Number of passenger cars	8,000	130 million	276 million
% of population under 15	34.40%	21.40%	18.40%
% of population 65+	4.10%	12.40%	16.50%
Average persons per household	4.76	2.59	2.51
% high school graduates	10%	80%	88%



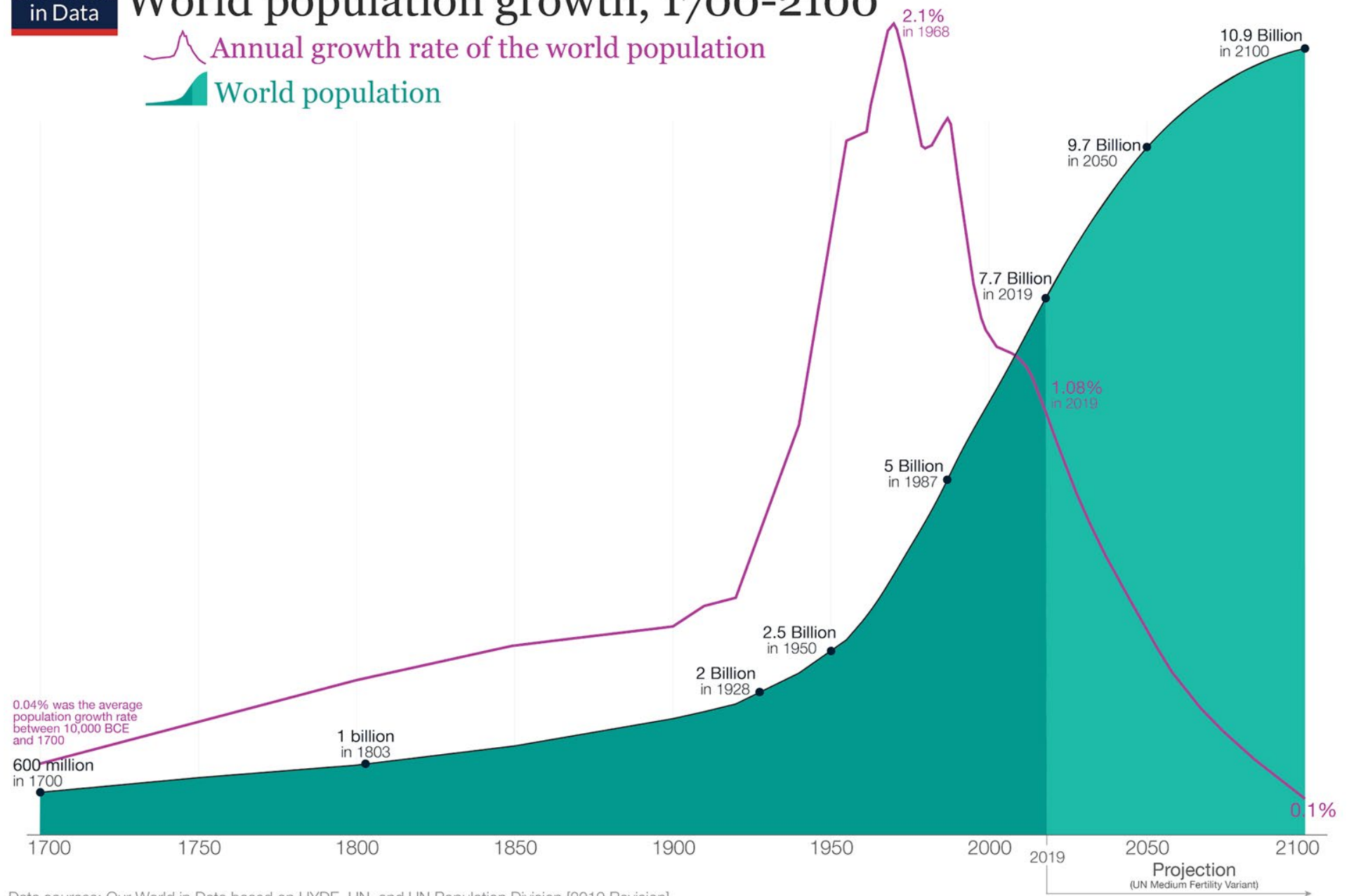


IT'S ALL CONNECTED...
TO DEMOGRAPHY



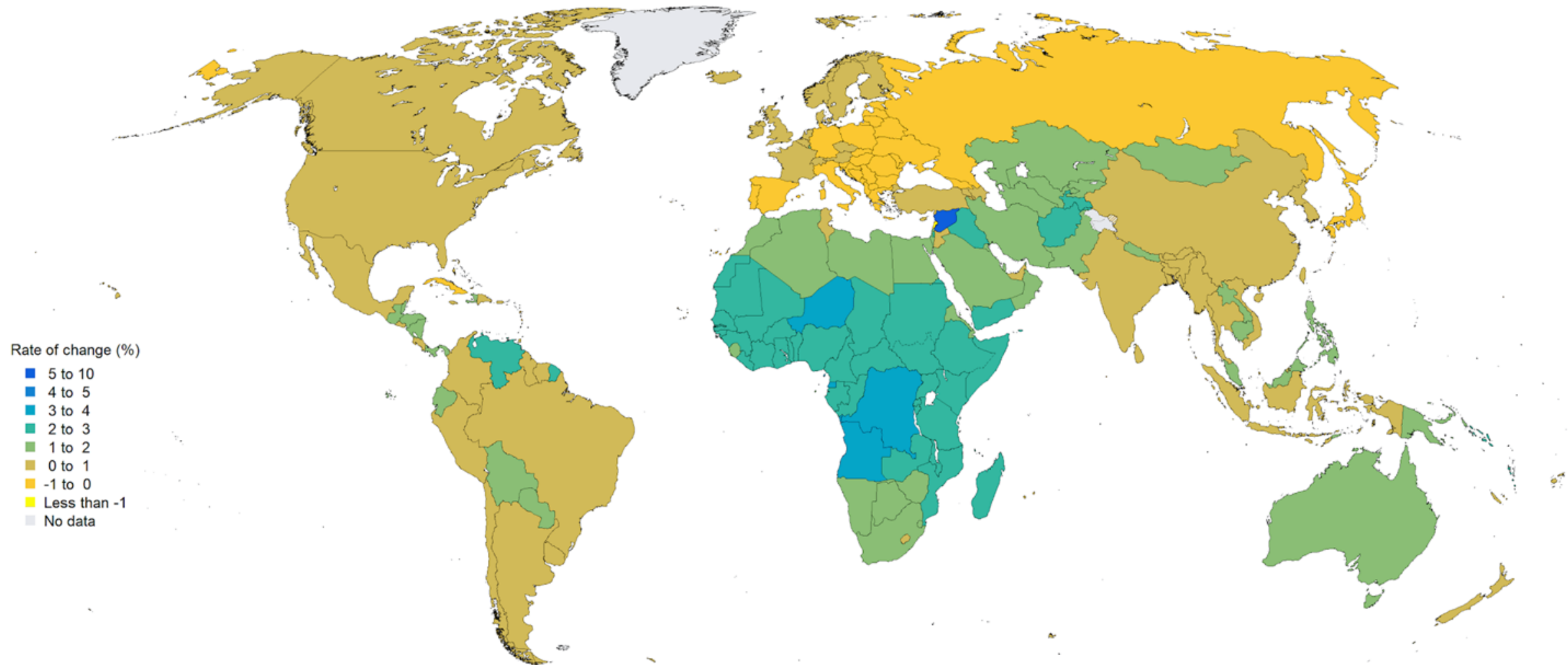
World population growth, 1700-2100

Annual growth rate of the world population
World population



Data sources: Our World in Data based on HYDE, UN, and UN Population Division [2019 Revision]
This is a visualization from [OurWorldinData.org](https://www.ourworldindata.org), where you find data and research on how the world is changing.

Average annual rate of population change (%), 2020-2025 (medium-variant projection)



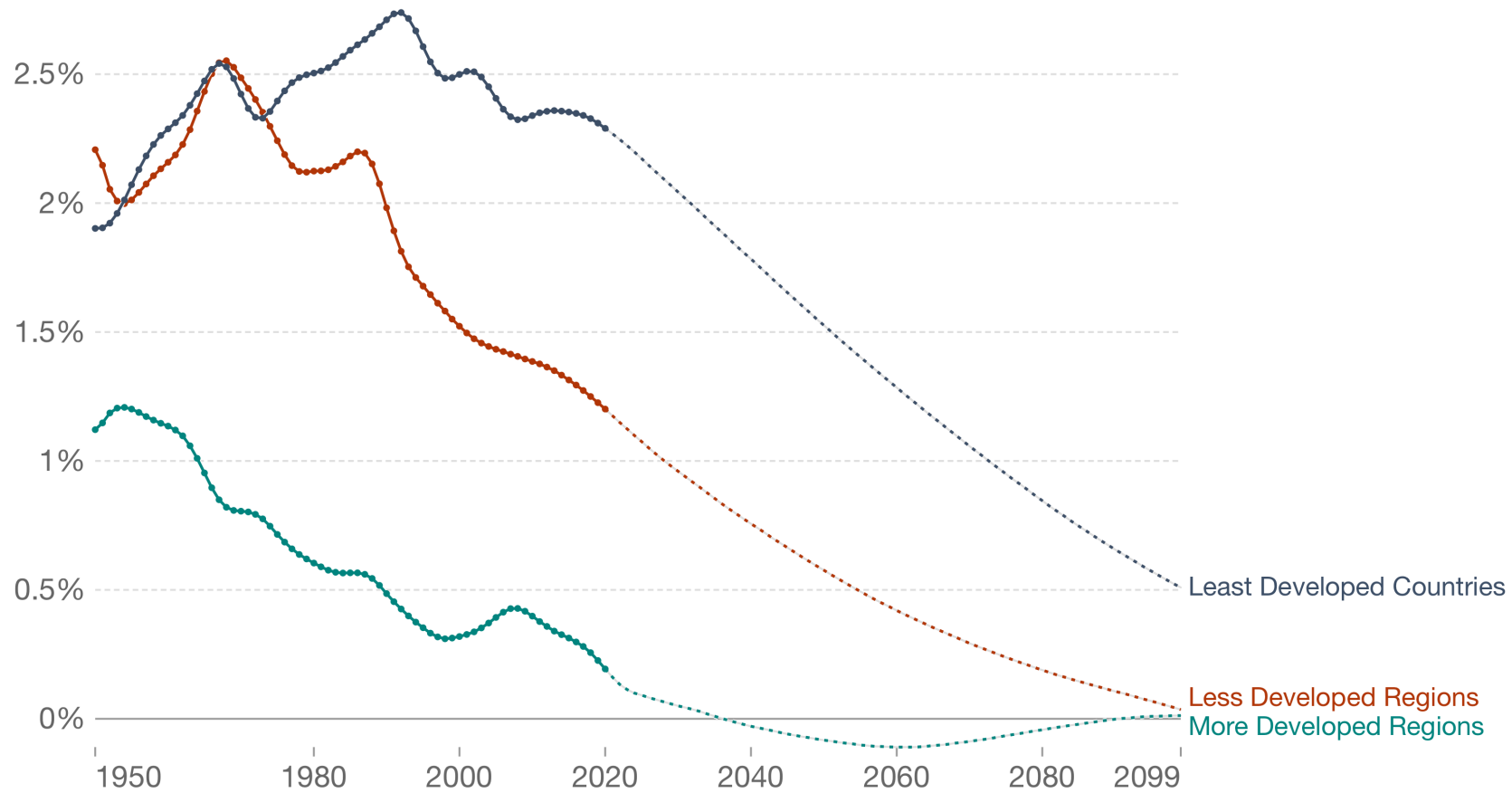
© 2019 United Nations, DESA, Population Division. Licensed under Creative Commons license CC BY 3.0 IGO.

Data source: United Nations, DESA, Population Division. *World Population Prospects 2019*. <http://population.un.org/wpp/>

The designations employed and the presentation of material on this map 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. Dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties. Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined. A dispute exists between the Governments of Argentina and the United Kingdom of Great Britain and Northern Ireland concerning sovereignty over the Falkland Islands (Malvinas).

Population growth rate by level of development

Historic population growth rates by the level of development of the region, with projections to 2099 using the UN medium scenario.



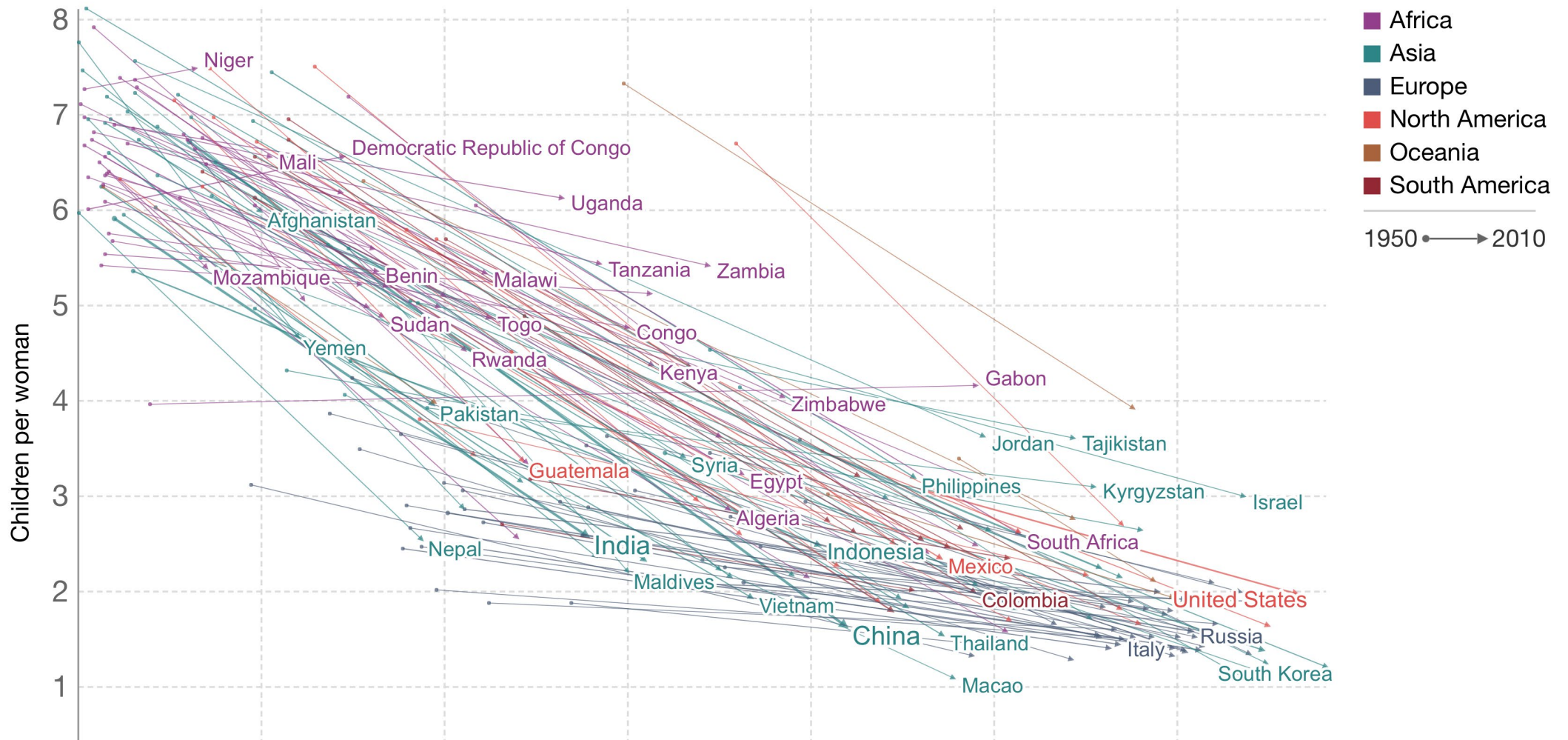
Source: United Nations – Population Division (2019 Revision)

OurWorldInData.org/world-population-growth/ • CC BY

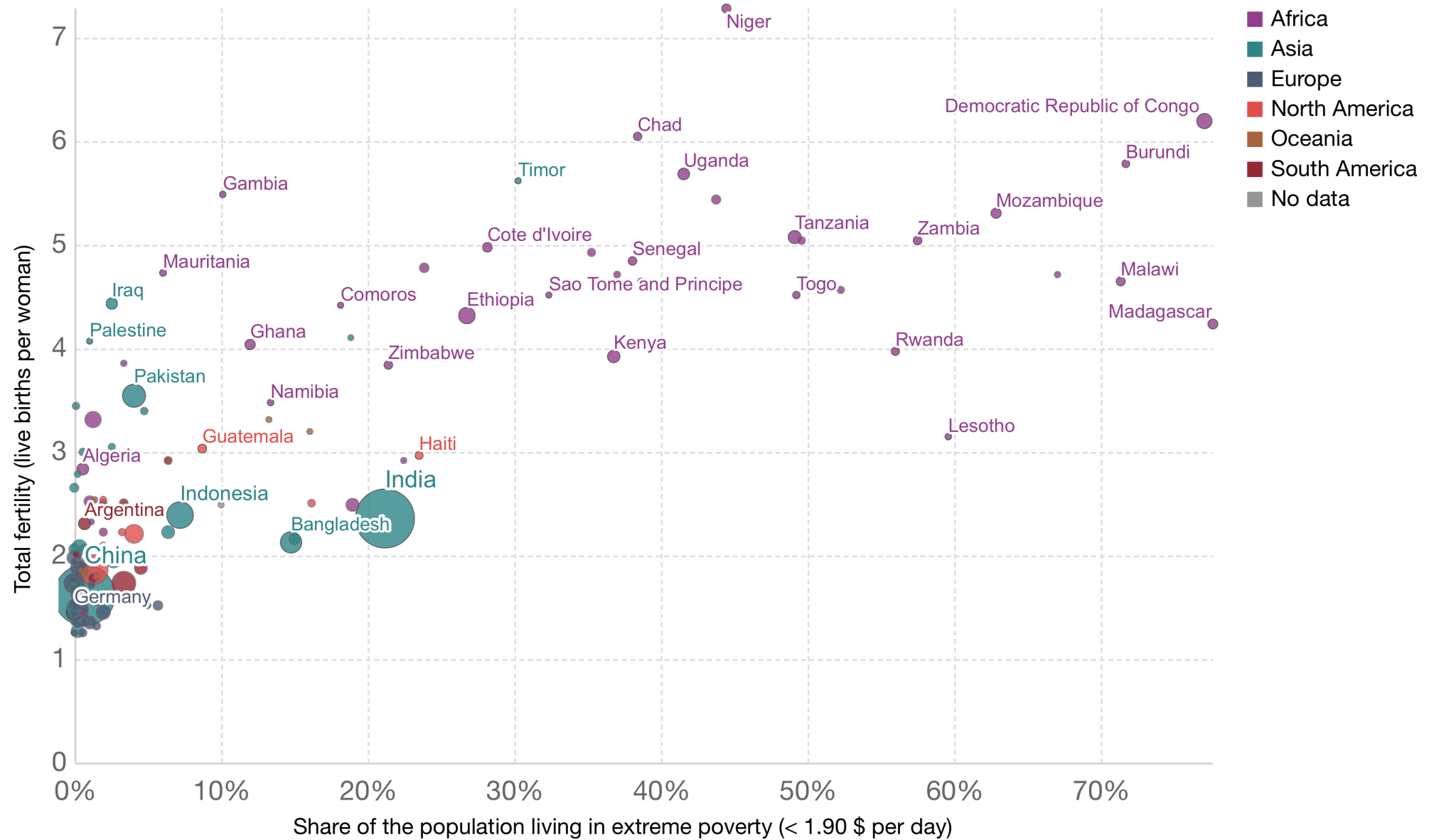
Note: More developed regions comprise Europe, Northern America, Australia/New Zealand and Japan; less developed regions comprise all regions of Africa, Asia (excluding Japan), Latin America and the Caribbean plus Melanesia, Micronesia and Polynesia; least developed countries are 48 countries, 33 in Africa, 9 in Asia, 5 in Oceania plus one in Latin America and the Caribbean.

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

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.

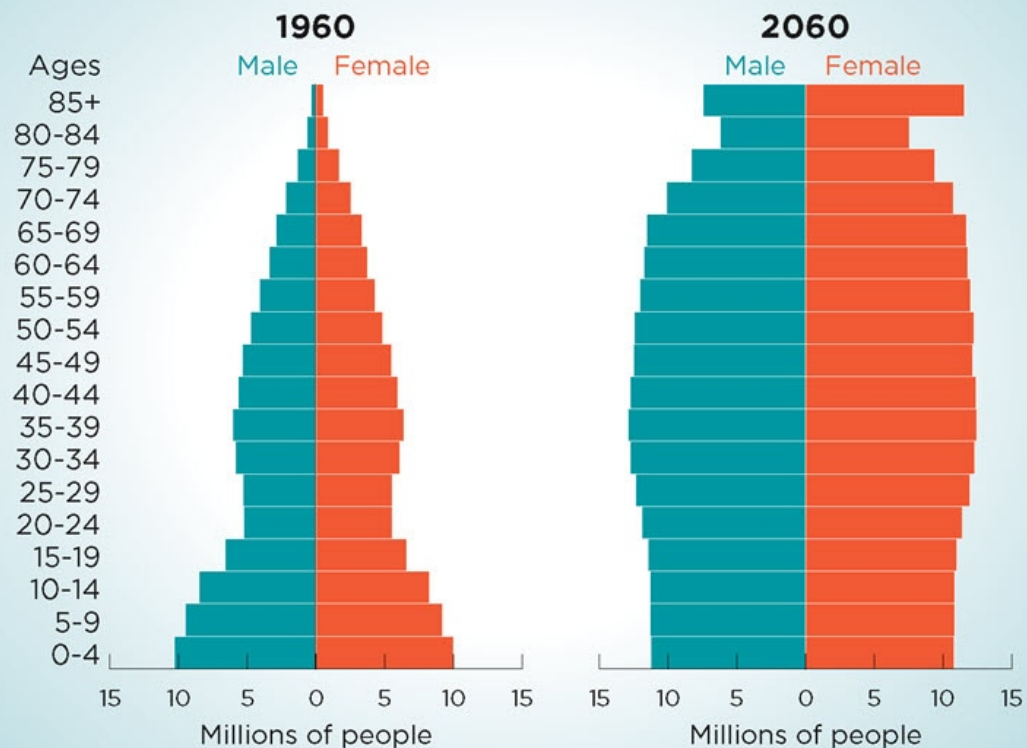


Fertility rate vs the share living in extreme poverty, 2015



From Pyramid to Pillar: A Century of Change

Population of the United States



United States[™]
Census
Bureau

U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU
[census.gov](https://www.census.gov)

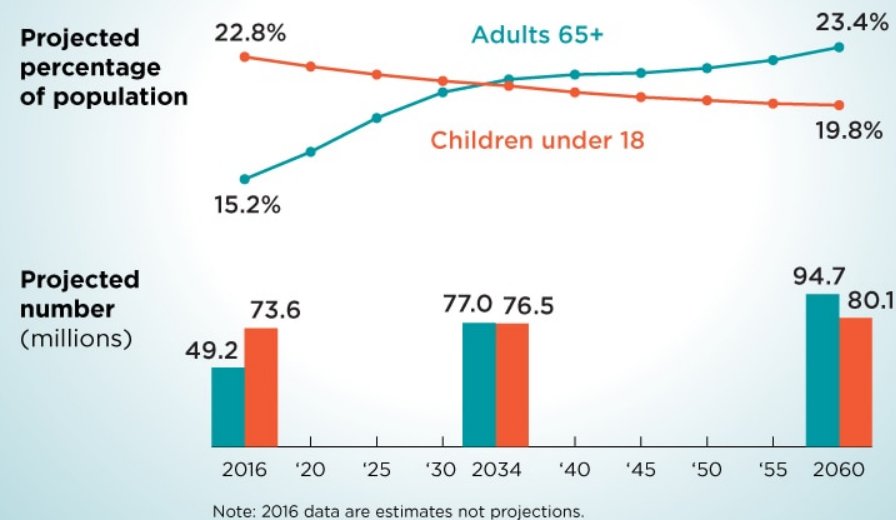
Source: National Population
Projections, 2017
www.census.gov/programs-surveys/popproj.html



An Aging Nation

Projected Number of Children
and Older Adults

For the First Time in U.S. History Older Adults Are
Projected to Outnumber Children by 2034

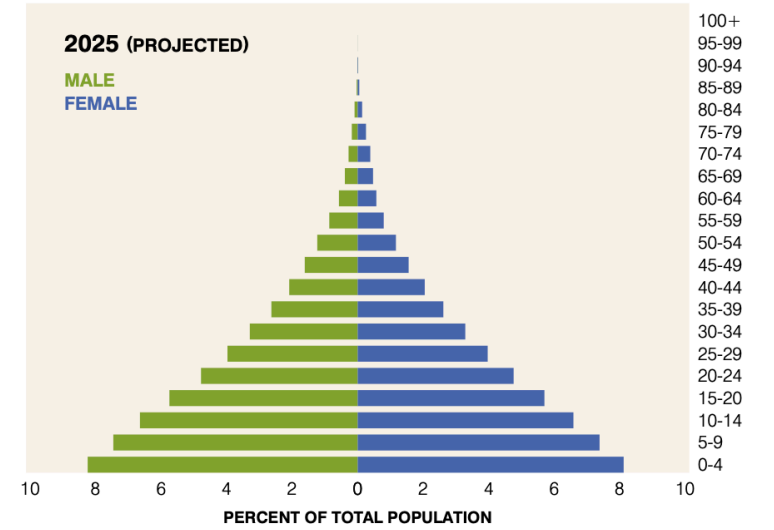
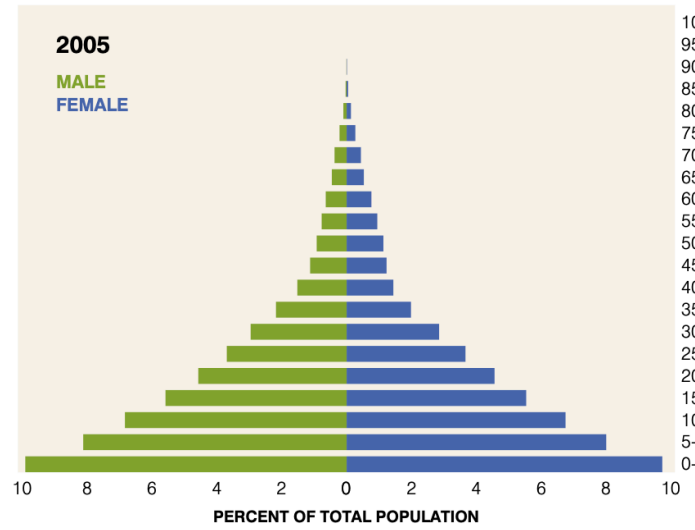
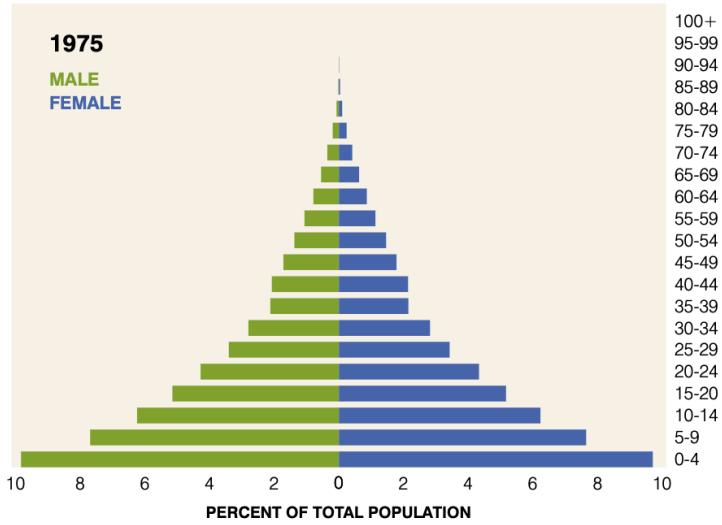


United States[®]
Census
Bureau

U.S. Department of Commerce
U.S. CENSUS BUREAU
[census.gov](https://www.census.gov)

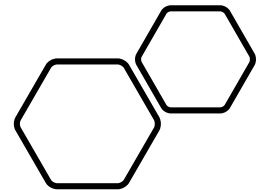
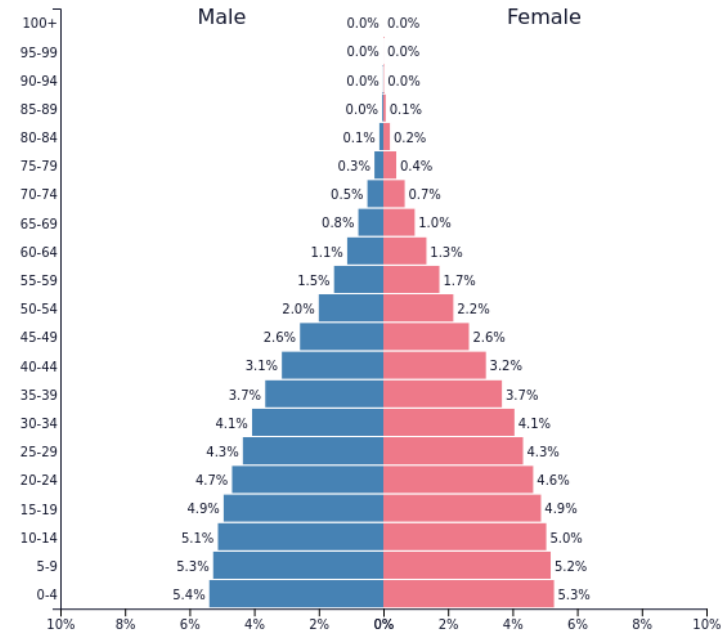
Source: National Population
Projections, 2017
www.census.gov/programs-surveys/popproj.html

FIGURE 1. UGANDA'S AGE STRUCTURES



UGANDA

2050



POPULATION & IMMIGRATION



GLOBALIZATION



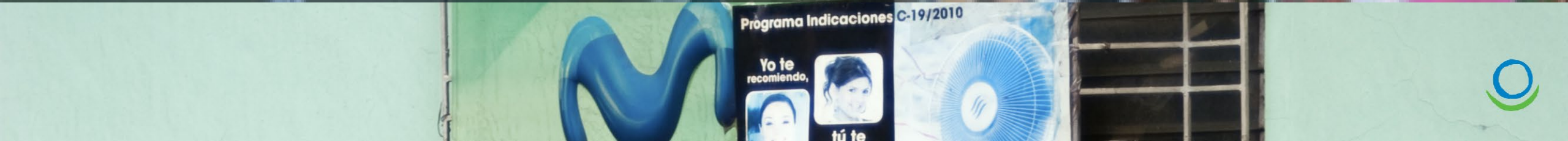


HURRY!

BUY MORE STUFF

Telefonica

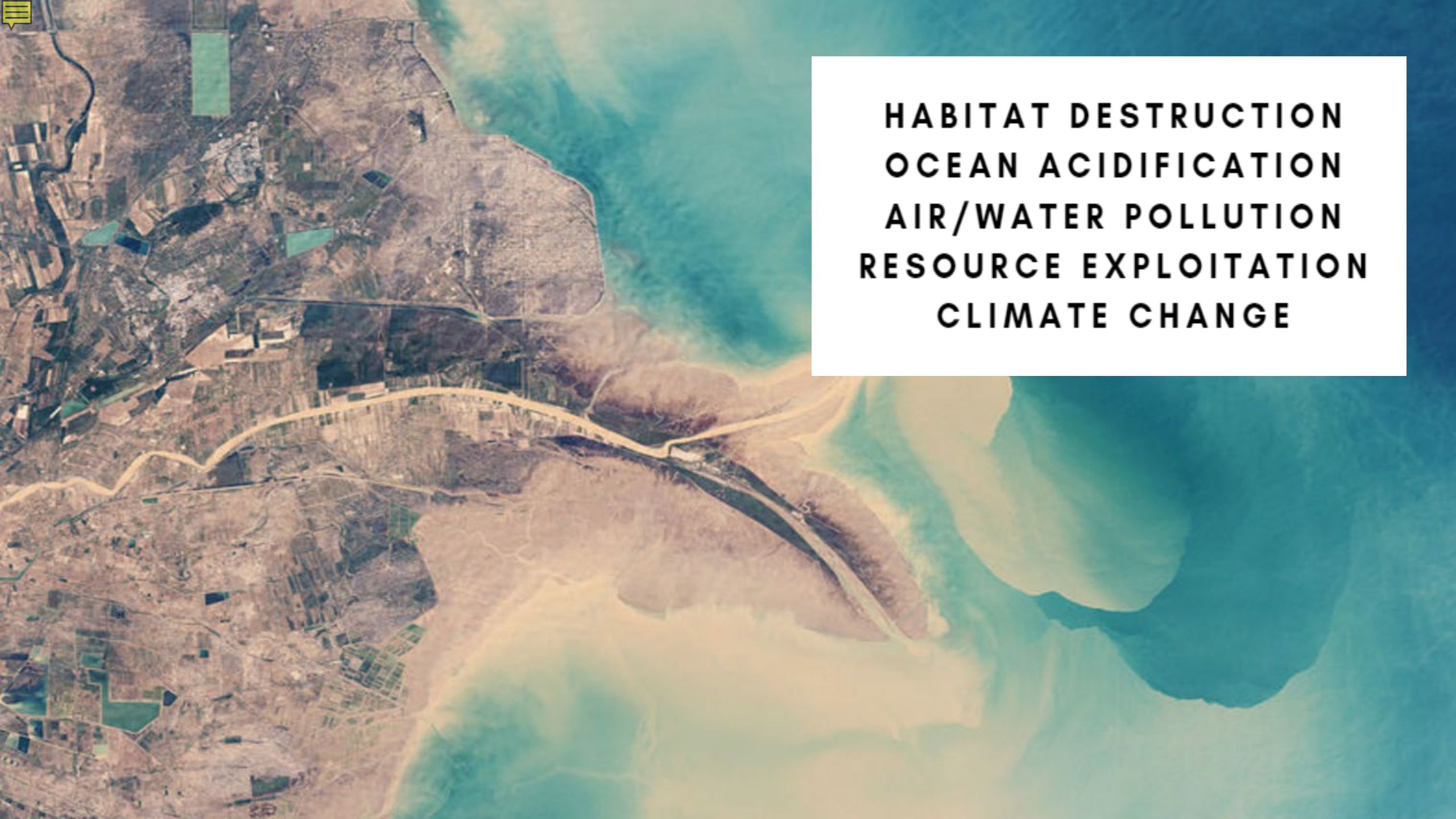
Digicel



Programa Indicaciones C-19/2010

Yo te recomiendo, tú te





**HABITAT DESTRUCTION
OCEAN ACIDIFICATION
AIR/WATER POLLUTION
RESOURCE EXPLOITATION
CLIMATE CHANGE**



Human activities are to blame for the highest concentration of carbon dioxide emissions in at least 2 million years.

Global temperatures are increasing at the fastest rate in at least 2,000 years because of human influence.

The impacts of climate change are widespread and global in scope. Unless drastic cuts to emissions are made on a global scale, climate disasters will continue to intensify.

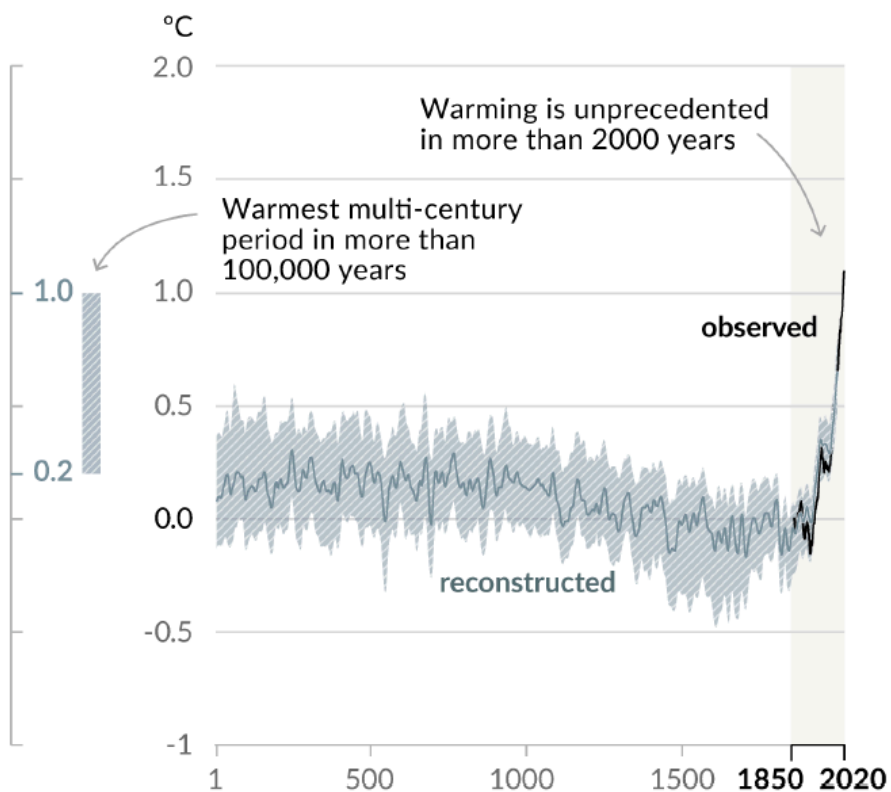


Human influence has warmed the climate at a rate that is unprecedented in at least the last 2000 years

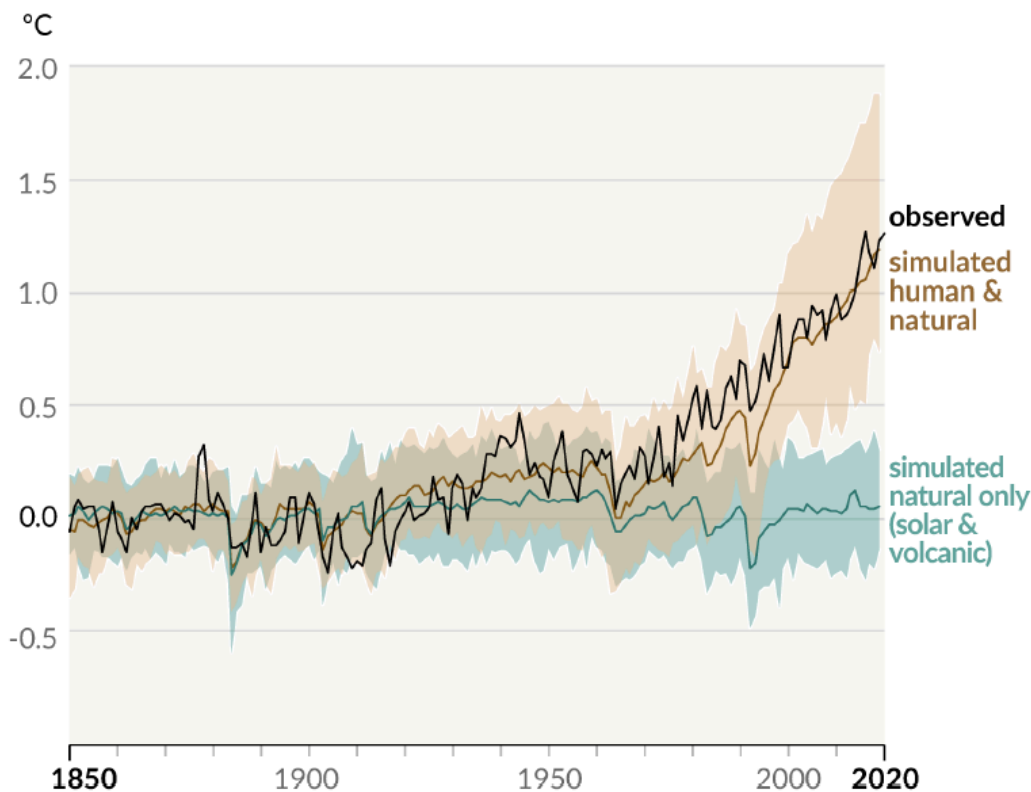
Figure SPM.1

Changes in global surface temperature relative to 1850-1900

a) Change in global surface temperature (decadal average) as **reconstructed** (1-2000) and **observed** (1850-2020)



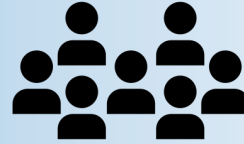
b) Change in global surface temperature (annual average) as **observed** and simulated using **human & natural** and **only natural** factors (both 1850-2020)



The interconnected challenges facing the world today

Population growth

7.8bn people today expect
9.7bn by 2050

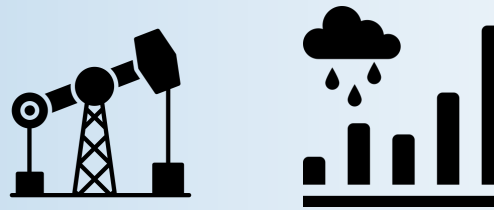


Demand for food and energy
Pressure on scarce resources
Negative environmental impact

Source: United Nations, 2020

Climate change

Linked to fossil fuels and
tropical deforestation



CO₂ rising 10 times faster than any sustained
rise in **800,000** years

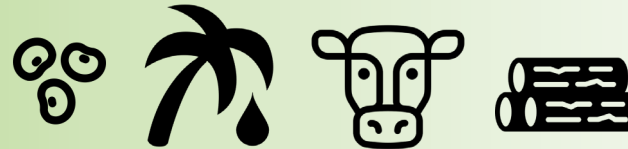
Pushes planetary boundaries
Accelerated biodiversity loss

Source: NASA, NOAA, IPCC, 2020*

Deforestation

Four commodities:
Soy, palm oil, beef, lumber

15,000 sq miles tropical land destroyed each year



Human intrusion biodiversity hotspots

Disruption and disturbance

Ecosystem degradation

Source: NASA, NOAA, IPCC, 2020*

Consumption and production

Increasing demand for
animal protein



More than **50bn** animals consumed



50bn



1.5bn



1.5bn



1.5bn

Unsustainable production and consumption

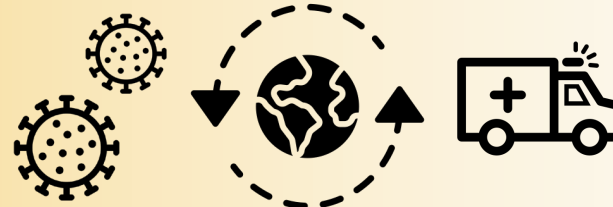
Reduce food waste, increase plant-based

Tackle overuse and misuse of antibiotics

Source: World Economic Forum 2020

Health and wellbeing

Ensure healthy lives
Combat communicable disease



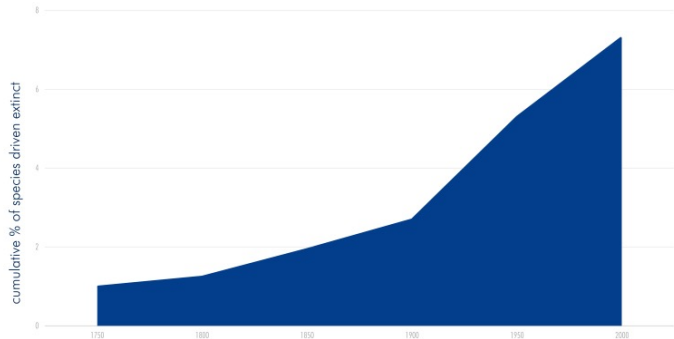
Emergence of infectious disease

Underprepared health systems

Dislodged viruses

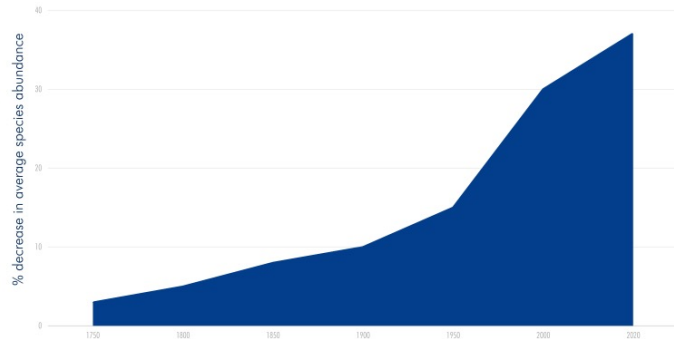


Species Extinction, 1750–2000



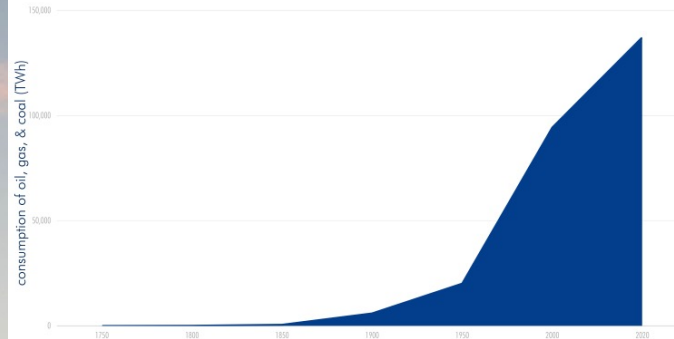
Source: IPBES

Terrestrial Biosphere Degradation, 1750–2020



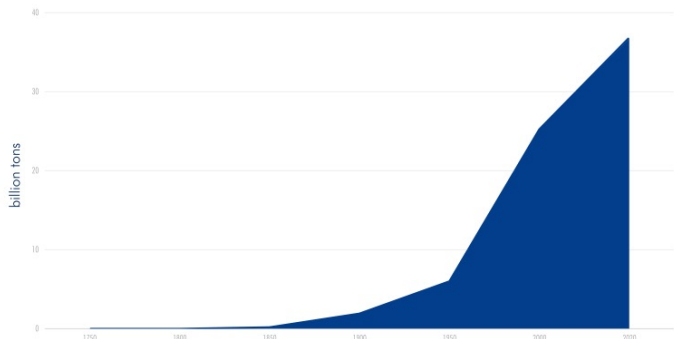
Source: WWF 2018

Fossil Fuel Consumption, 1750–2020



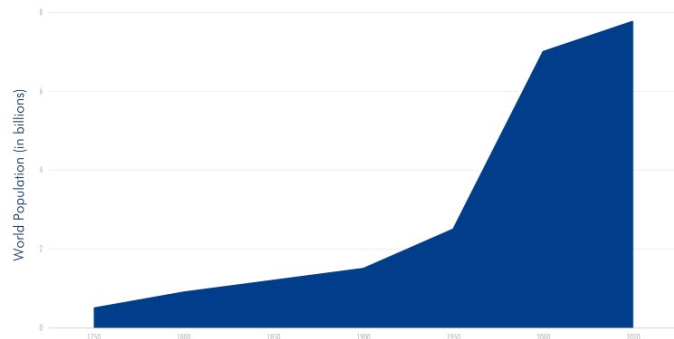
Source: Our World in Data, 2019

Co Emissions from Fossil Fuels, 1750–2020



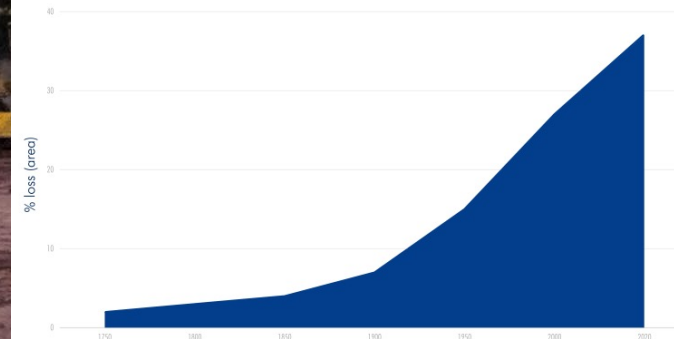
Source: Our World in Data, 2020

World Population 1750–2020



Source: World Wildlife Fund, 2018, World Bank, 2020

Tropical Forest Loss, 1750–2020



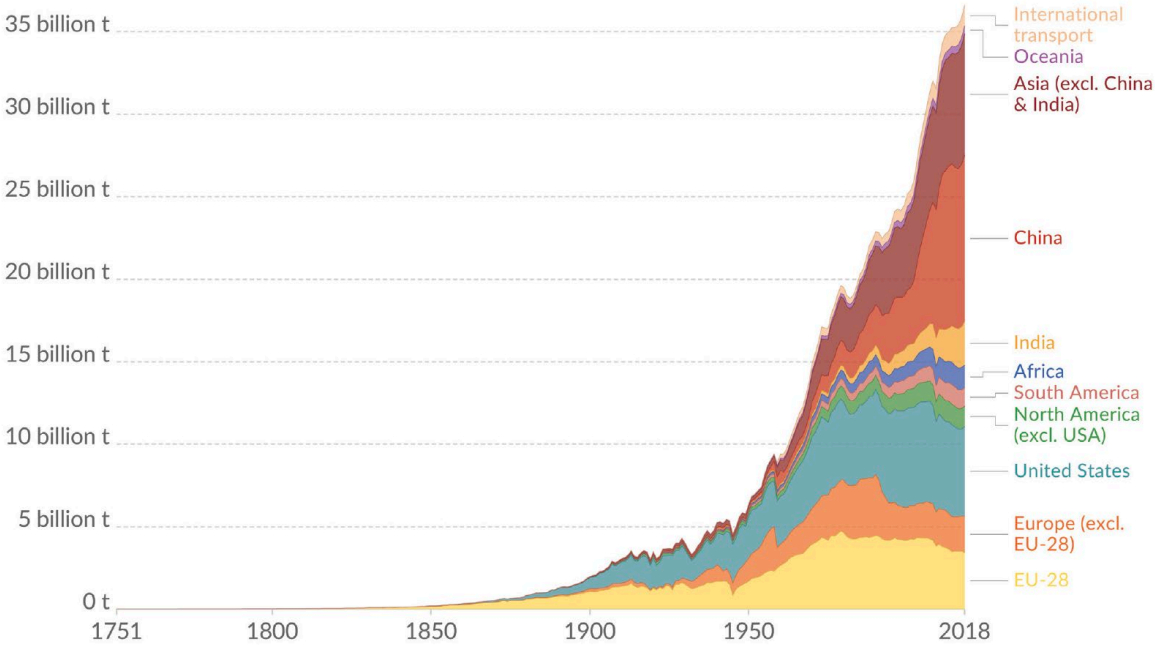
Source: World Wildlife Fund, 2018, Global Forest Watch 2020



INDUSTRIALIZATION

Annual total CO₂ emissions, by world region

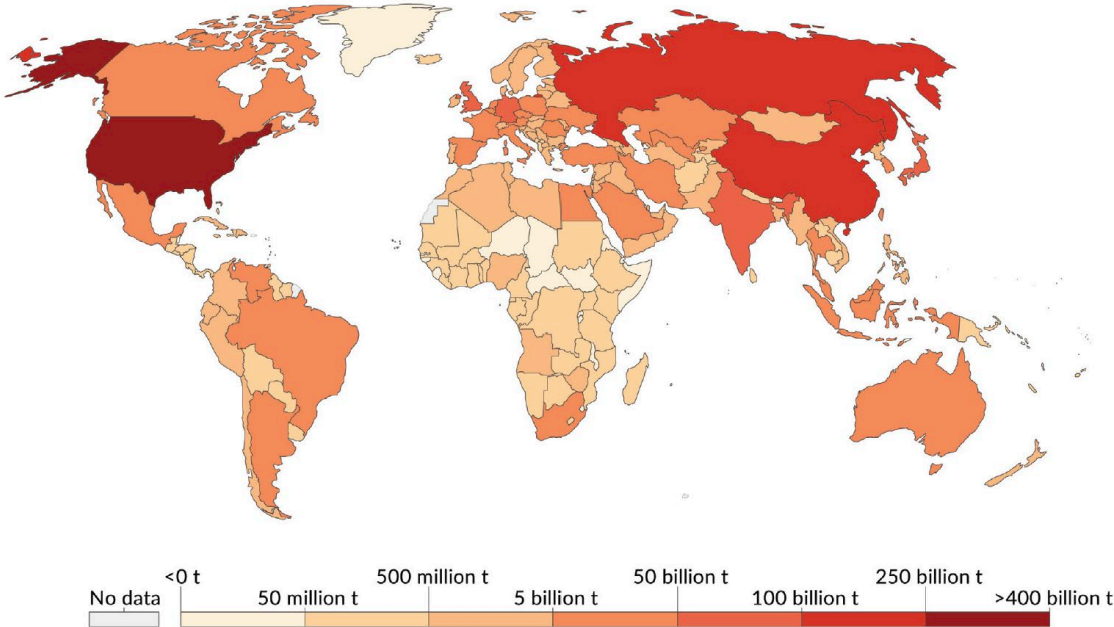
This measures CO₂ emissions from fossil fuels and cement production only – land use change is not included.



Source: Carbon Dioxide Information Analysis Center (CDIAC); Global Carbon Project (GCP)
Note: 'Statistical differences' included in the GCP dataset is not included here.
OurWorldInData.org/co2-and-other-greenhouse-gas-emissions • CC BY

Per capita CO₂ emissions, 2018

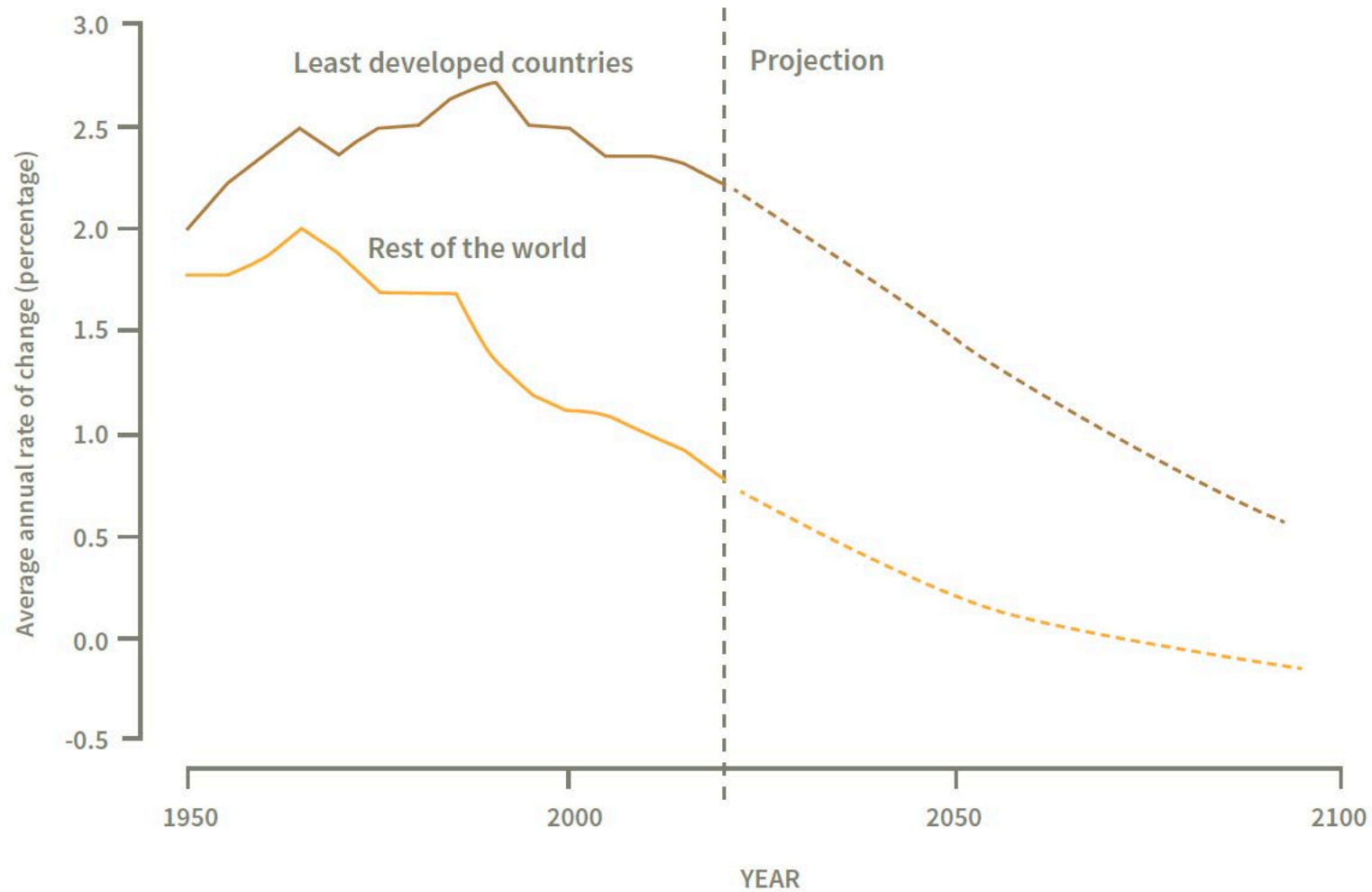
Average carbon dioxide (CO₂) emissions per capita measured in tonnes per year. This measures CO₂ emissions from fossil fuels and cement production only – land use change is not included.



Source: Global Carbon Project (GCP); Carbon Dioxide Information Analysis Centre (CDIAC)
OurWorldInData.org/co2-and-other-greenhouse-gas-emissions/ • CC BY



Estimated and projected annual population growth rates for the 47 least developed countries and the rest of the world, 1950–2100, according to the UN's medium-variant projection



UN Department of Economic and Social Affairs, World Population Prospects 2019
https://population.un.org/wpp/Publications/Files/WPP2019_Highlights.pdf

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

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

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

An aerial photograph of a city valley, showing a mix of urban development, green spaces, and a river. A semi-transparent rectangular box is overlaid on the center of the image, containing the title text. In the bottom right corner, there is a small circular logo with blue and green elements.

INTRO TO DEMOGRAPHY

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