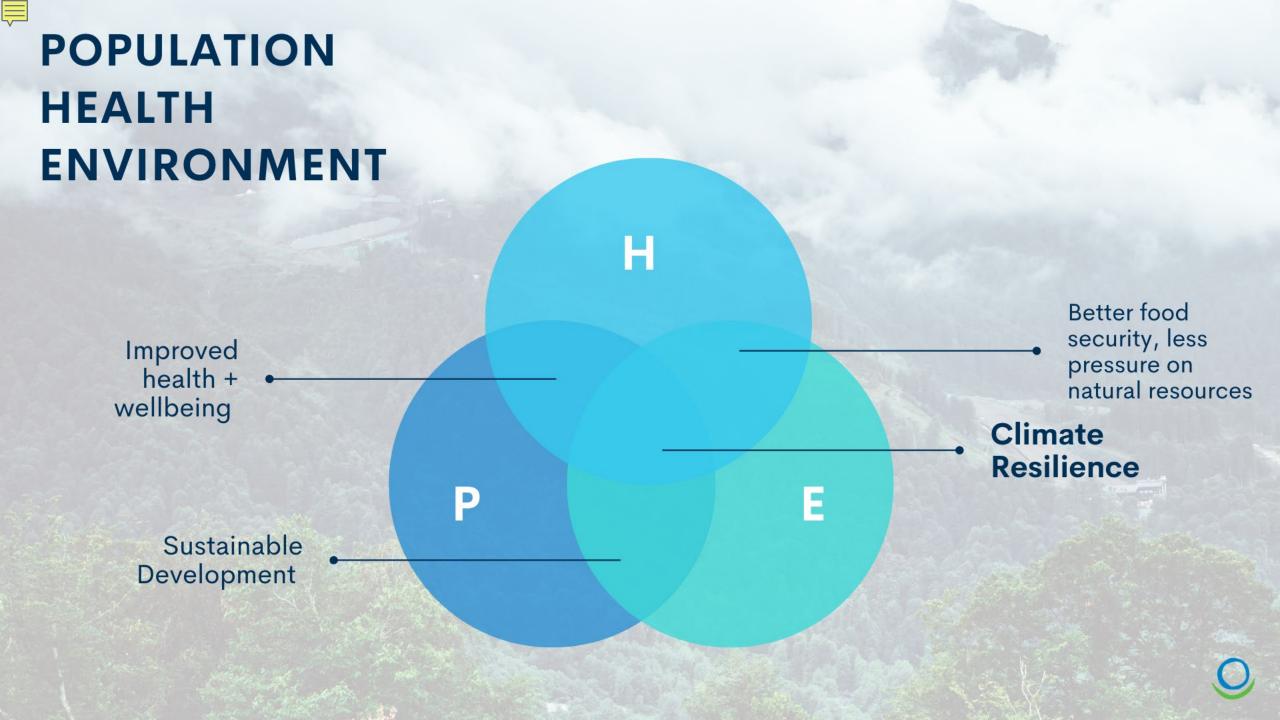
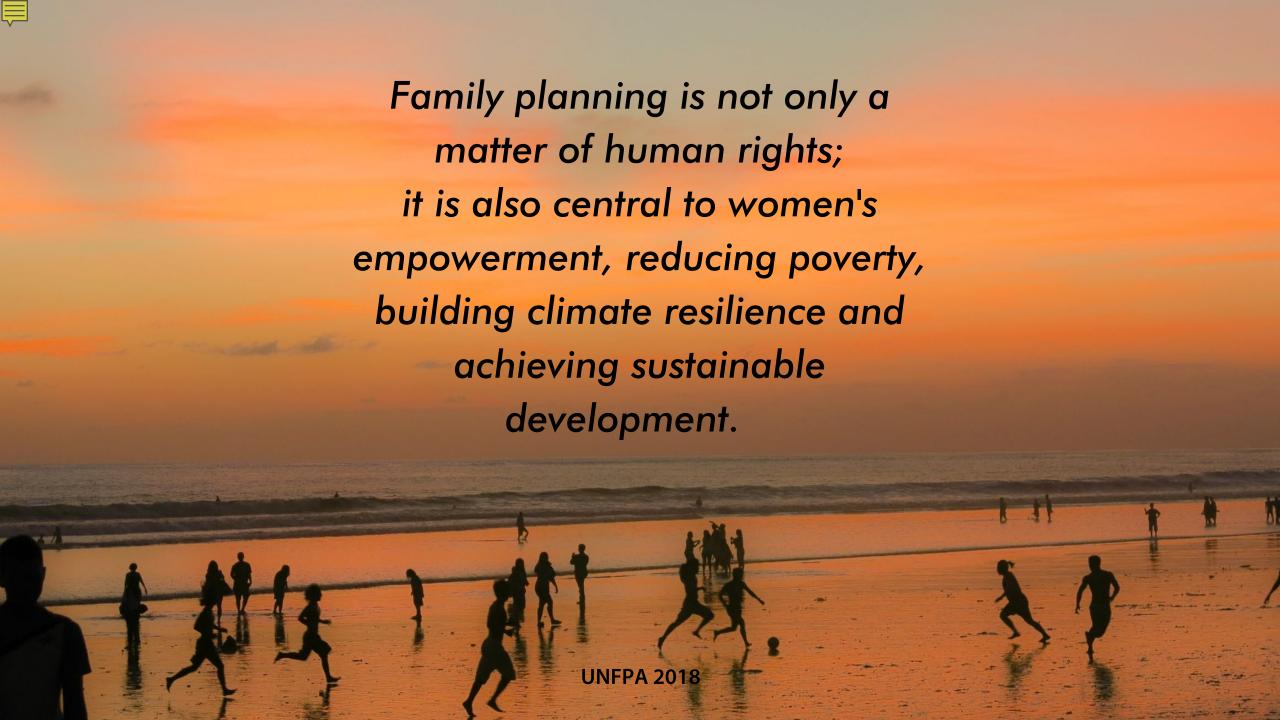
Solutions Through Reproductive Health: Why Health and Education Matter to Climate Change





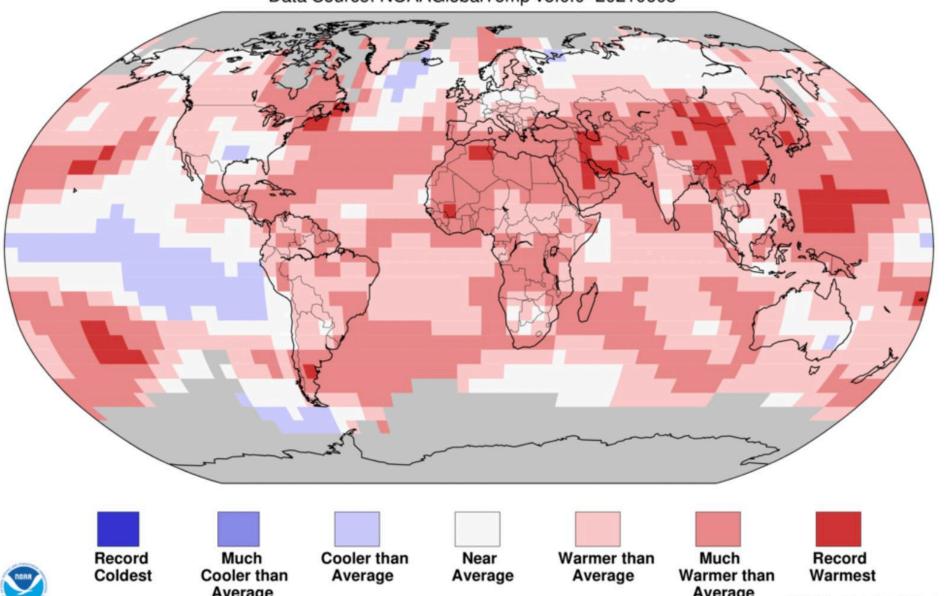




Land & Ocean Temperature Percentiles Jan-May 2021

NOAA's National Centers for Environmental Information

Data Source: NOAAGlobalTemp v5.0.0-20210608









GHCNM v4.0.1.20210607.qfe

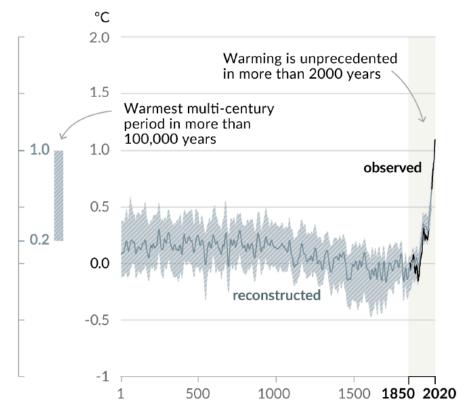




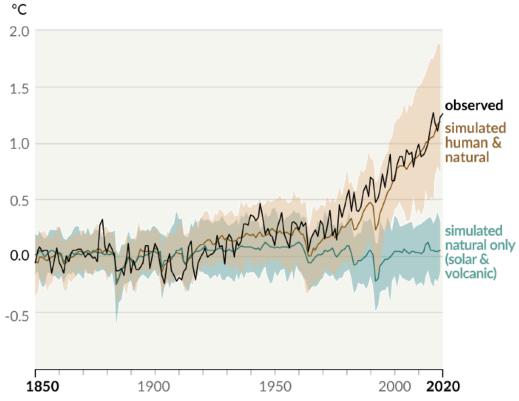
Human influence has warmed the climate at a rate that is unprecedented in at least the last 2000 years

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)





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.





The interconnected challenges facing the world today

Population growth

7.8bn people today expect **9.7bn** by 2050

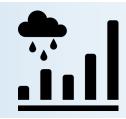


Demand for food and energy Pressure on scarce resources Negative environmental impact Source: United Nations, 2020

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









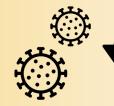
Unsustainable production and consumption Reduce food waste, increase plant-based Tackle overuse and misuse of antibiotics

Source: World Economic Forum 2020

Health and wellbeing

Source: Forbes 2020

Ensure healthy lives
Combat communicable disease





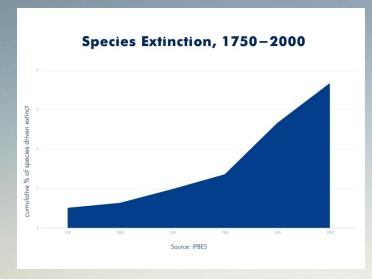
1.5bn

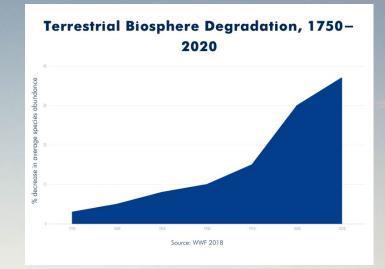


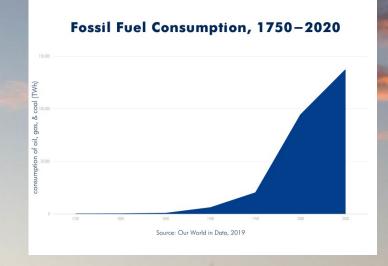
Emergence of infectious disease Underprepared health systems Dislodged viruses

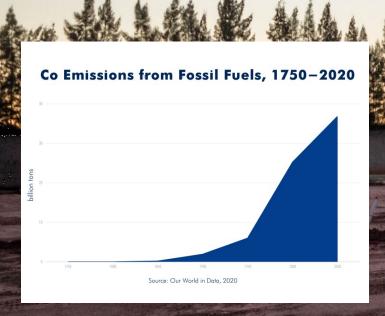


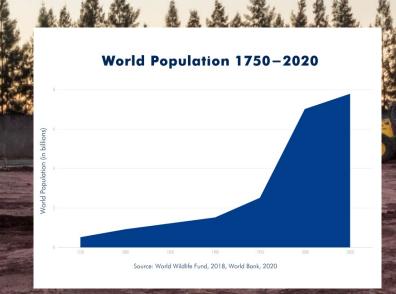


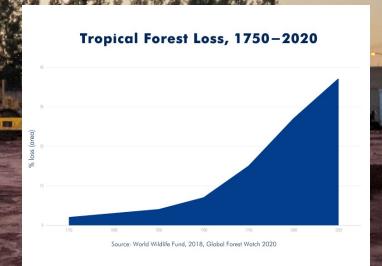












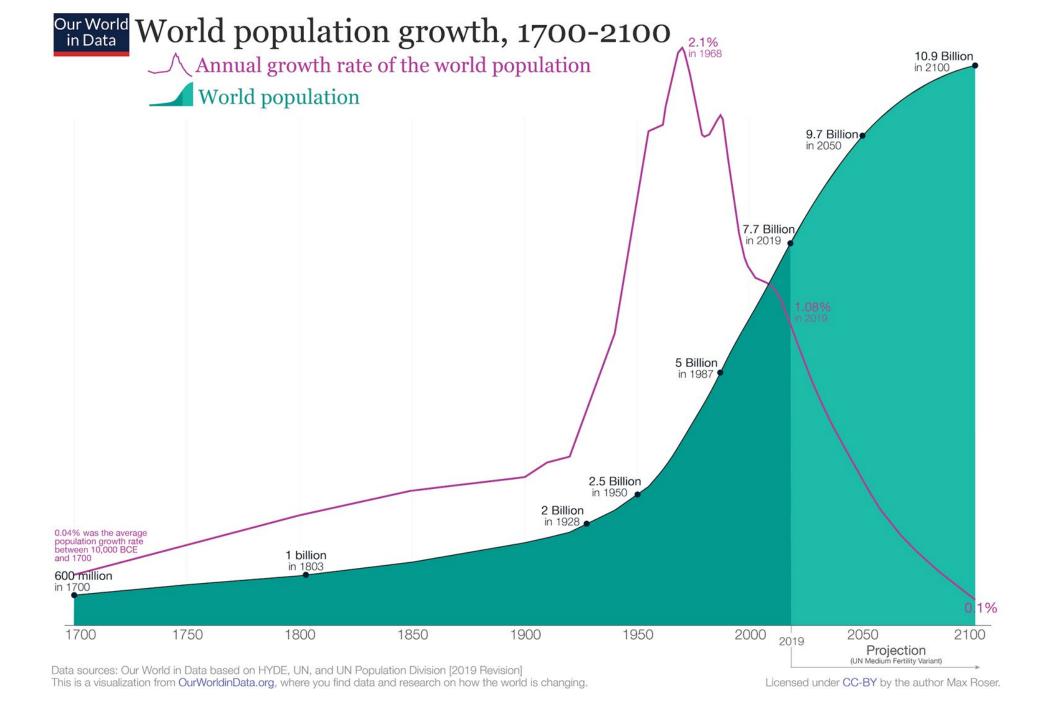
The Global Footprint Network estimates that humanity now demands 60% more of our planet than its ecosystems can renew.

In order to maintain 85% of the world's biodiversity, human demand should only use half of what the planet can provide.

This means that current demand exceeds that goal by at least a factor of 3.

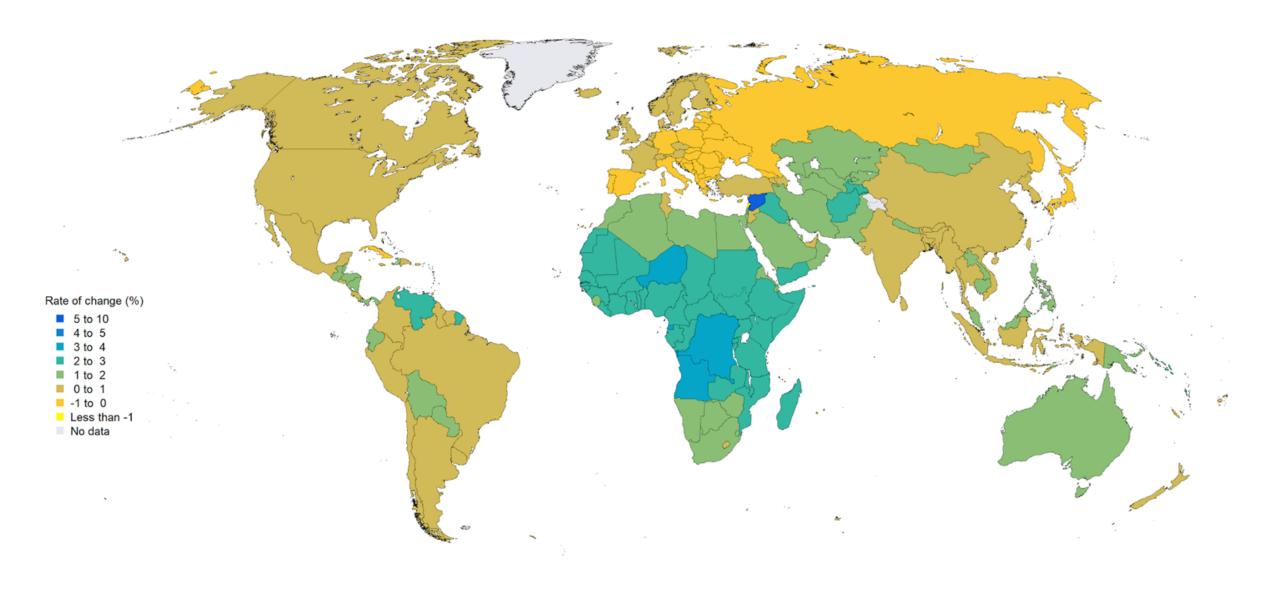
One of the most important factors behind this growing imbalance is the continued growth of the human population.







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



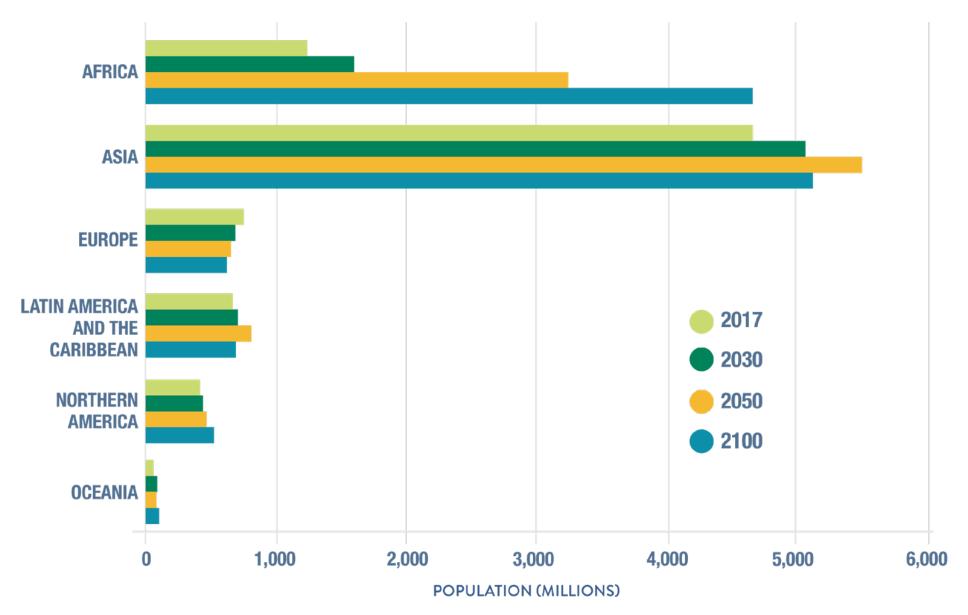
© 2019 United Nations, DESA, Population Division. Licensed under Creative Commons license CC BY 3.0 IGO.

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 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 by Continent, 2017-2100

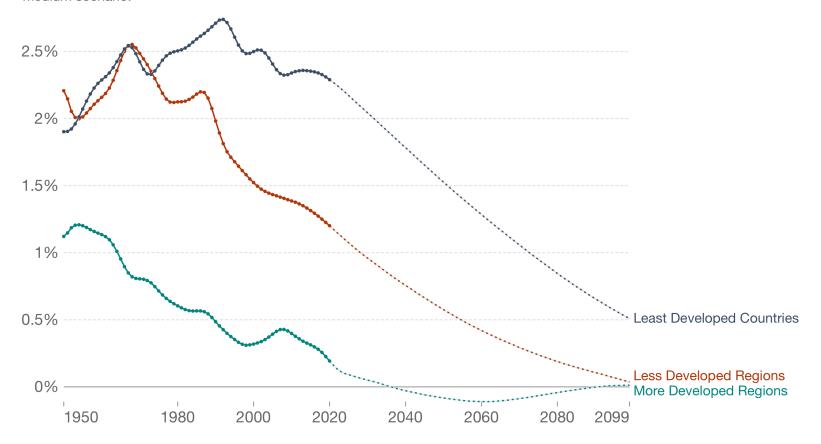


Source: Population Matters

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.



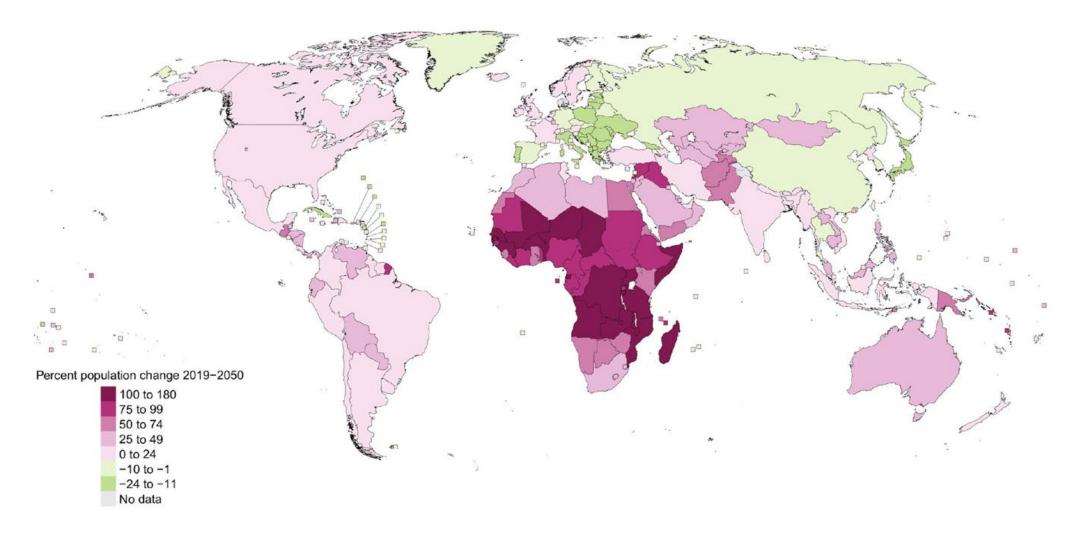
Source: United Nations – Population Division (2019 Revision)

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.



Many least developed countries will continue to experience rapid population growth between 2019 and 2050

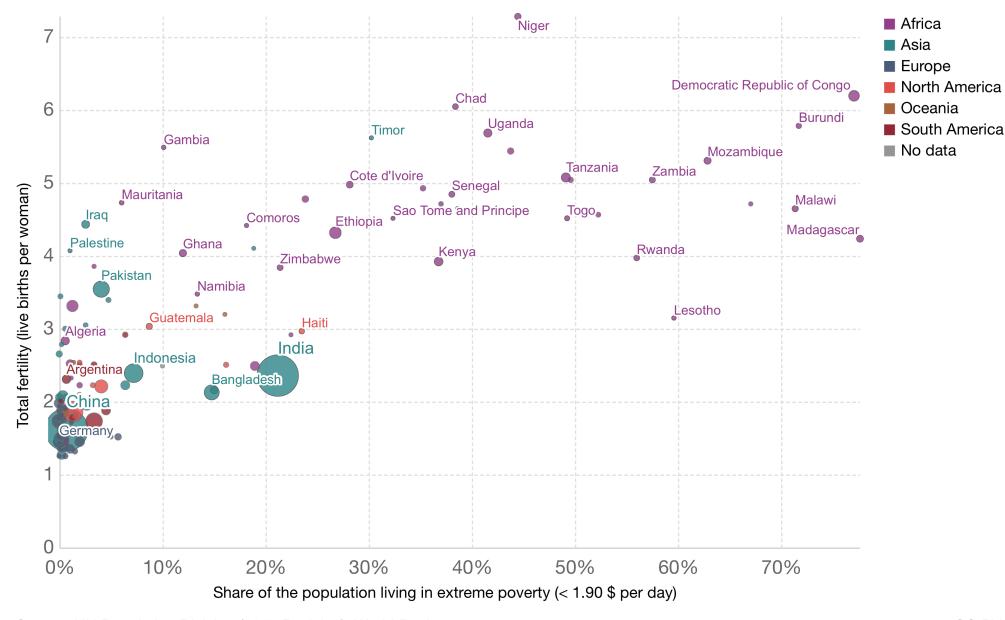


Source: UN WPP Data booklet 2019



Fertility rate vs the share living in extreme poverty, 2015







Population and Climate Vulnerability

According to the UN, the world's 47 least developed countries are also the fastest growing. Many are projected to double in population between 2020 and 2050 – increasing strain on already scarce resources and slowing progress in health and economic growth.

Sources: UN Population Prospects 2019

Time 2019

Projected population increase from 2019-2100 in the 10 most climate change-threatened countries

increase from 2019

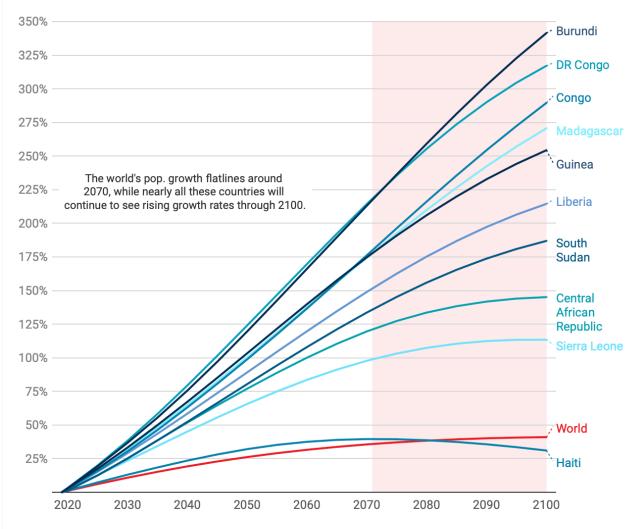


Chart: Elijah Wolfson for TIME • Get the data • Created with Datawrapper

UNFCCC's National Adaptation Programs of Action (NAPAs)

Table 1. Extent and frequency of reference to rapid population growth among the 40 National Adaptation Programmes of Action reports

Rapid population growth	Number of countries (n = 40)	Countries	
Not mentioned	3	Eritrea, Liberia, Sao Tome and Principe	10
Identified as pertinent to at least one specific consequence of climate change	37	Bangladesh, Benin, Bhutan, Burkina Faso, Burundi, Cambodia, Cape Verde, Central African Republic, Comoros, Democratic Republic of the Congo, Djibouti, Ethiopia, Gambia, Guinea, Guinea-Bissau, Haiti, Kiribati, Lesotho, Madagascar, Malawi, Maldives, Mali, Mauritania, Mozambique, Niger, Rwanda, Samoa, Senegal, Sierra Leone, Solomon Islands, Sudan, Tuvalu, Uganda, United Republic of Tanzania, Vanuatu, Yemen, Zambia	
Identified as a main priority	6	Ethiopia, Gambia, Kiribati, Malawi, Samoa, Uganda	21.32

Table 2. Ten most-cited issues identified as linked to population growth by 37 National Adaptation Programmes of Action reports

National Adaptation Programmes of Action Reports ($n = 37$)		
21		
18		
18		
17		
14		
11		
8		
8		
7		
5		



Population and Climate Vulnerability

- · Population growth hinders development by increasing hunger, resource use, localized environmental degradation, and habitat destruction.
- Investments in sustainable development—including education, health care, and women's empowerment—will help build resilience and adaptive capacity for all populations.
 - Increasing access to comprehensive reproductive health care is one important solution to, and adaptation strategy for, climate change.







HEALTH BENEFITS

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

overall

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

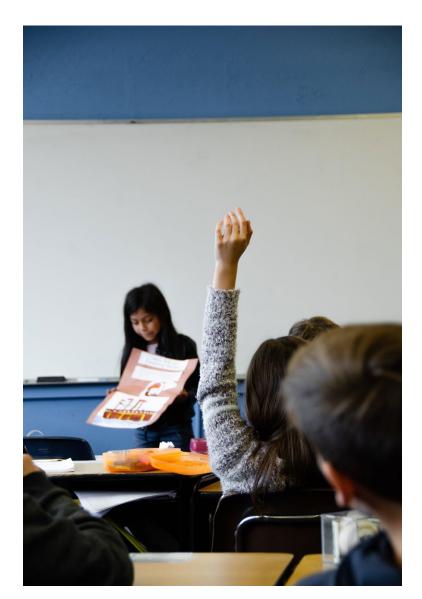




Solutions Through Health and Education

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

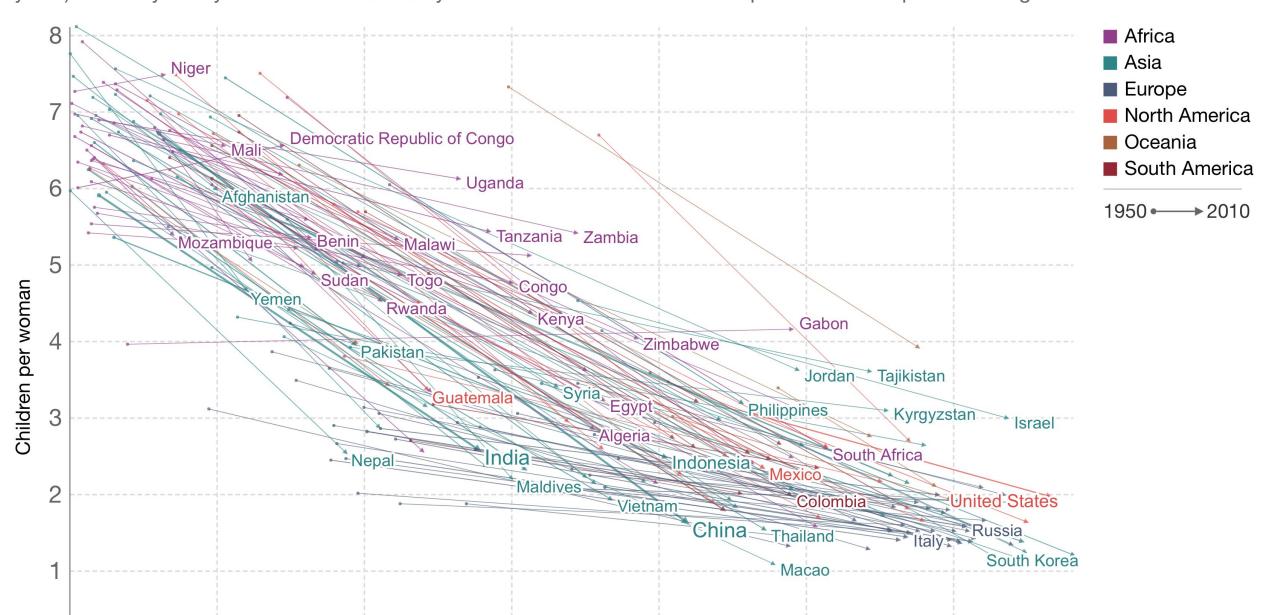
- Higher levels of education afford more options for sustained employment and help increase livelihoods.
 - More resources become available to help women and girls choose when and how to start a family.
- Women who are educated tend statistically to have fewer, healthier children.



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

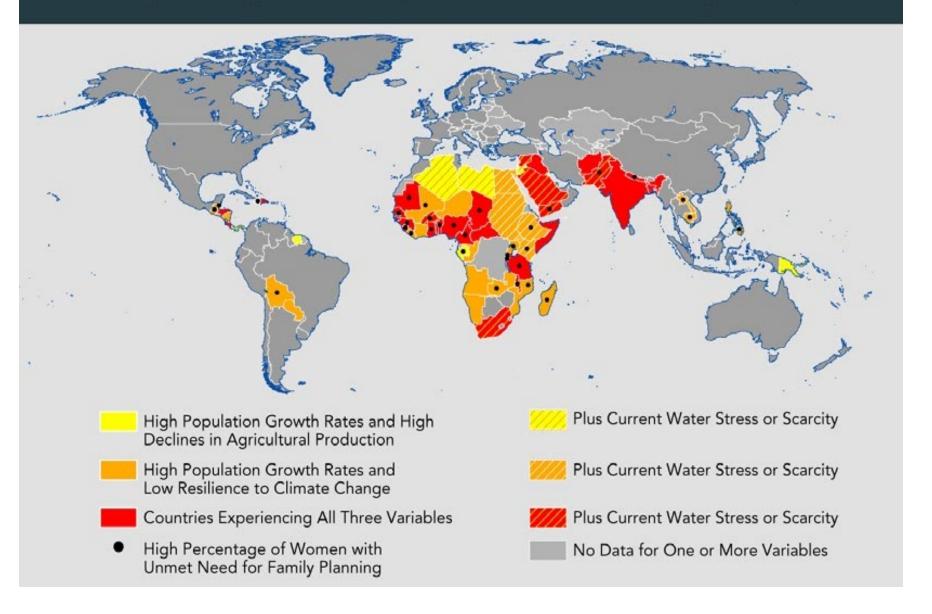


Shown on the x-axis is the average number of years of schooling of women in the reproductive age (15 to 49 years). On the y-axis you find the 'total fertility rate' – the number of live births per woman in reproductive age.

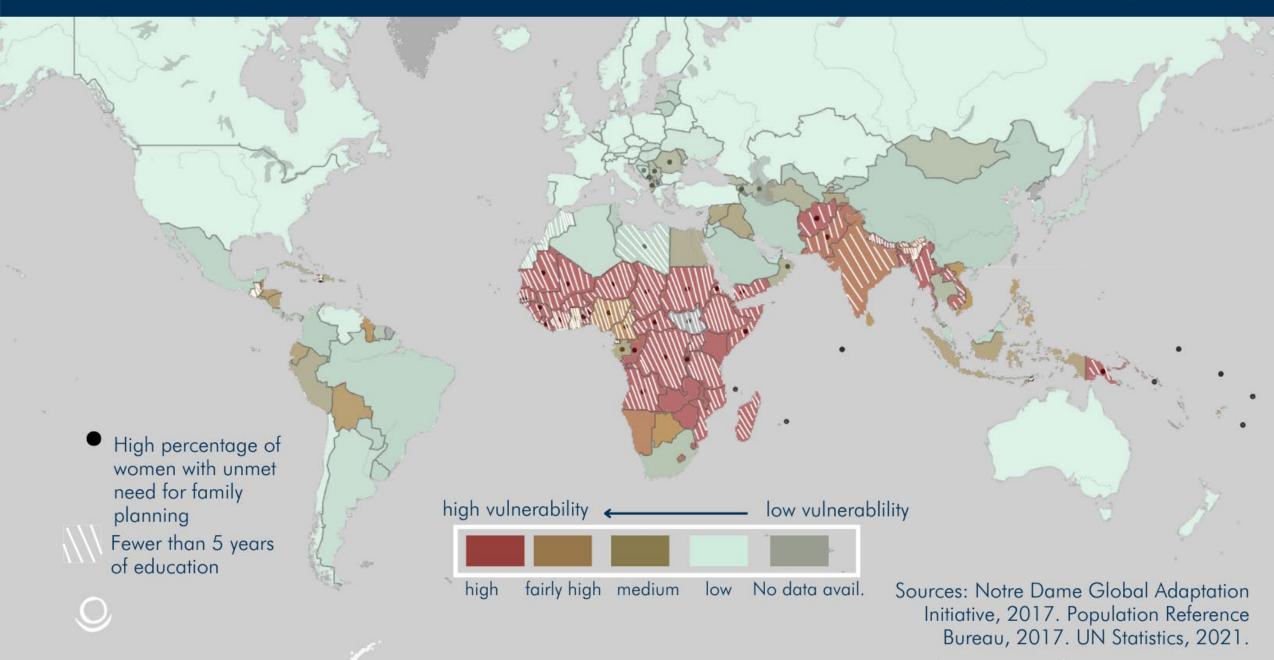




Family Planning Needs in Population and Climate Change Hotspots



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





Women and childrer are healthier

a fundamental aspect o 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

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



Slower population growth

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

Source: Population Reference Bureau 2018



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





57.7Refrigerant
Management

*CO₂-equivalent reduction by 2050 (GT)



Source: The Drawdown Review 2020



Individual Solutions

The rankings shown here are based on projected emissions impact globally. The relative importance of a given solution can differ significantly depending on context and particular ecological, economic, political, or social conditions.

Scenario 1 Overall Ranking Solution	TOTAL CO ₂ -eq (GT) Reduced/ Sequestered (2020-2050)	Net First Cost To implement solution (Billion \$US)	Net Lifetime Cost To operate solution (Billion \$US)	Net Lifetime Profit other implementation & operation (Billion \$US)
1 Reduced Food Waste	87.4	-	-	_
2 Health and Education	85.4	-	-	-
3 Plant-Rich Diets	65.0	-	-	-
4 Refrigerant Management	57.7	-	600	-
5 Tropical Forest Restoration	55.4	-	-	-
6 Onshore Wind Turbines	47.2	800	-3,800	-
7 Alternative Refrigerants	43.5	-	-	-
8 Utility-Scale Solar Photovoltaics	42.3	-200	-12,900	-
9 Improved Clean Cookstoves	31.3	100	1,900	-
10 Distributed Solar Photovoltaics	27.9	400	-7,800	-

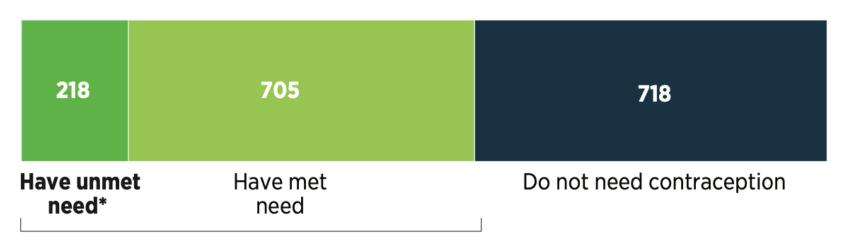
*Based on the minimum impact scenario of solution implementation, Drawdown 2020





In LMICs, 218 million women are considered to have an unmet need for modern contraception because they want to avoid a pregnancy but are not using a modern method.

1,640 million women of reproductive age, 2019



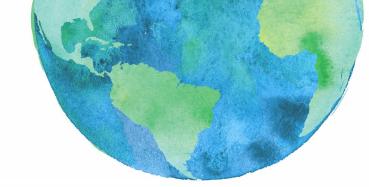


923 million want to avoid a pregnancy

Source: Guttmacher Institute 2020

^{*148} million using no method plus 70 million using a traditional method. *Notes:* Numbers may not add to totals because of rounding. LMICs=low- and middle-income countries (see Figure 1.1). *Source:* reference 45.





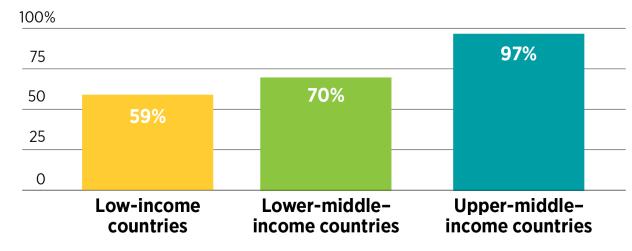
Investing in sexual and reproductive health care would dramatically reduce unintended pregnancies, unsafe abortions and maternal deaths

1				
	At current levels - of care	If all needs = are met	Averted if all needs are met	% change if all needs are met
Unintended pregnancies	111M	35M	76M	-68%
Unsafe abortions	35M	10M	26M	-72%
Maternal deaths	299K	113K	186K	-62%

2020 Guttmacher Institute

Unmet needs for services are greatest in the poorest countries

This is apparent when examining the proportion of women who deliver their babies in a health facility



guttmacher.org

Source: Guttmacher Institute 2020





CONCLUSIONS

- Expanding access to FP/RH is critical to women's empowerment and can play an impactful role in climate adaptation efforts.
- Slowing population growth through rights-based innovations like voluntary planning services and girls' education can mitigate climate change by offsetting emissions in the long-term.
- Family planning is a building block of resilience to climate change impacts.
- Family planning programs receive 1% of all overseas development assistance, and yet are some of the most cost-efficient and effective investments a country can make.



