

An unequal and declining growth

2019 world population estimates and projections

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1. The world's population continues to grow, albeit at a slower pace than at any time since 1950

The growth rate of the world's population peaked in 1965-1970, when it was increasing by 2.1% per year, on average. Since then, the pace of global population growth has slowed by half, falling below 1.1% per year in 2015-2020, and it is projected to continue to slow through the end of this century.

The global population is expected to reach 8.5 billion in 2030, 9.7 billion in 2050 and 10.9 billion in 2100, according to the medium-variant projection, which assumes a decline of fertility for countries where large families are prevalent, a slight increase of fertility in several countries where women have fewer than two live births on average over a lifetime, and continued reductions in mortality.

There is inherent uncertainty in population projections. At the global level that uncertainty depends on the range of plausible future trends in fertility, mortality and international migration, which have been assessed for each country or area using demographic and statistical methods. This analysis concludes that, with a certainty of 95%, the size of the global population will stand between 8.5 and 8.6 billion in 2030, between 9.4 and 10.1 billion in 2050, and between 9.4 and 12.7 billion in 2100.

The Population Division of the Department of Economic and Social Affairs provides the international community with timely and accessible population data and analysis of population trends and development outcomes for all countries and areas of the world. To this end, the Division undertakes regular studies of population size and characteristics.

The 2019 revision of the 'World Population Prospects' is the twenty-sixth edition of the United Nations population estimates and projections. It presents population estimates from 1950 to the present for 235 countries or areas, underpinned by analyses of historical demographic trends.

The population estimates and projections presented describe two of the four demographic megatrends (population growth and ageing).

Extract of UN DESA Population Division, 'World Population Prospects 2019 - Highlights' (June 2019). Available at: <http://bit.do/wpo>.

Thus, the size of the world's population is virtually certain to rise over the next few decades. Later in the century, although a continued increase of the global population is considered the most likely outcome, there is roughly a 27% chance that the world's population could stabilize or even begin to decrease sometime before 2100.

2. Sub-Saharan Africa will account for most of the growth of the world's population over the coming decades, while several other regions will begin to experience decreasing population numbers

Of the additional 2.0 billion people who may be added to the global population between 2019 and 2050, 1.05 billion (52%) could be added in countries of sub-Saharan Africa.

Another 25% of global population growth is expected to be concentrated in Central and Southern Asia, which is projected to add 505 million people between 2019 and 2050. Sub-Saharan Africa is projected to become the most populous of the eight geographic regions [1] (hereafter "regions" or "SDG regions") around 2062, surpassing both Eastern and South-Eastern Asia and Central and Southern Asia in size.

While population growth in Northern Africa and Western Asia has been slower than in sub-Saharan Africa over recent decades, the region is also projected to continue to grow through the end of this century, adding 237 million people between 2019 and 2050 and another 170 million people between 2050 and 2100.

The world's two most populous regions in 2019 are Eastern and South-Eastern Asia, with 2.3 billion people, representing 30% of the global population, and Central and Southern Asia, with 2.0 billion (26%). Both regions, which experienced rapid population growth since the mid-twentieth century, are expected to reach their peak population size in the coming decades. Eastern and South-eastern Asia is projected to reach a maximum population size of 2.4 billion around 2038 and Central and Southern Asia is projected to peak some 27 years later at under 2.6 billion around 2065.

The combined population of Europe and Northern America is stabilizing, having reached 1.11 billion in 2019 and, according to the medium variant, projected to grow slowly to just under 1.14 billion around 2042 and decline thereafter to about 1.12 billion at the end of the century. The population of Latin America and the Caribbean, which more than tripled in size between 1950 and 2019, is projected to peak at just below 768 million around 2058 and decline thereafter to about 680 million in 2100. The population of Oceania [2] is projected to continue to grow through the end of the century.

The total population of the region, excluding Australia and New Zealand, is expected to increase from just over 12 million in 2019 to 19 million in 2050 and 26 million in 2100. Australia and New Zealand, which are home to 30 million people in 2019, could see their population grow to 38 million in 2050 and 49 million in 2100, according to the medium-variant projection.

3. Two-thirds of the projected growth of the global population through 2050 will be driven by current age structures

It would occur even if childbearing in high-fertility countries today were to fall immediately to around two births per woman over a lifetime. Globally, the generation of young people now entering their reproductive years is larger than their parents' generation. Thus, even if the global level of fertility were to fall immediately to around two births per woman, the number of births would still exceed the number of deaths for several decades, and the world's population would continue to grow.

The implication of the current population age structure for future population growth is called "population momentum" and can be assessed at the global level by projecting the population while assuming that (a) mortality rates remain constant at current levels; and (b) fertility instantly equals the replacement level associated with the current level of mortality.

A comparison of the projected size of the world's population according to the medium variant and the 'momentum scenario' indicates that 68% of global population growth between 2020 and 2050 is implied by the current population age structure. That is, this growth would occur even if global fertility were to fall immediately to around two births per woman over a lifetime. The remaining 32% of the growth projected by the medium variant is due to fertility above the level required to balance mortality, as well as improvements in survival, that are considered likely over that period. After 2050, the population size projected by the momentum scenario gradually levels off at around 9.3 billion, and the impact of the current age structure on projected growth between 2050 and 2100 is negligible.

This assessment of population momentum implies that over the short term, between 2020 and 2050, only a limited portion of world population growth can be influenced by policies that slow or accelerate fertility decline.

In regions where fertility has declined recently such that it is close to two births per woman over a lifetime, including Central and Southern Asia and Latin America and the Caribbean, virtually all of the projected population growth between now and 2050 will be driven by relatively youthful population age structures. By contrast, in regions where lifetime fertility remains well above two births per woman, such as sub-Saharan Africa and Oceania, population momentum accounts for 42 and 58%, respectively, of projected growth between 2019 and 2050. In these regions, future growth is additionally driven by levels of fertility above the level required to balance mortality and yield zero growth over the long run.

4. Continued rapid population growth presents challenges for sustainable development

The rate of population growth remains especially high in the group of 47 countries designated by the United Nations as least developed [3], including 32 countries in sub-Saharan Africa. With an average growth of 2.3% annually from 2015 to 2020, the total population of the least developed countries as a group is growing 2.5 times faster than the total population of the rest of the world. Although the growth rate of LDCs is projected

to slow in the future, the population of this group of countries is projected to nearly double in size from 1 billion inhabitants in 2019 to 1.9 billion in 2050, and to increase further to 3.0 billion in 2100.

Between 2019 and 2050, the populations of 18 LDCs, all in sub-Saharan Africa, have a high probability of at least doubling in size, while in one country, Niger, the population is projected to nearly triple by 2050. Most of the LDCs that are expected to double in population size are the world's poorest countries, with gross national income (GNI) per capita below US\$1,000.

Several of the least developed countries that are experiencing rapid population growth are Small Island Developing States (SIDS) [4], such as Comoros, Guinea-Bissau, Sao Tome and Principe, the Solomon Islands and Vanuatu. For many SIDS, the challenges to achieving sustainable development are compounded by their vulnerability to climate change, climate variability and sea-level rise. The SIDS collectively are home to 71 million people in 2019. It is projected that this group of countries or areas will house 78 million people in 2030 and 87 million in 2050.

5. Several of the world's largest countries will drive much of anticipated global population change

More than half of the projected increase in the global population to 2050 will be concentrated in just nine countries. Ordered by the absolute increase in population, they are: India, Nigeria, Pakistan, Democratic Republic of the Congo, Ethiopia, the United Republic of Tanzania, Indonesia, Egypt and the United States of America.

India is expected to add nearly 273 million people between 2019 and 2050, while the population of Nigeria is projected to grow by 200 million. Together, these two countries could account for 23% of the global population increase to 2050.

Disparate population growth rates among the world's largest countries will re-order their ranking by population size.

China, with 1.43 billion people in 2019, and India, with 1.37 billion, have long been the two most populous countries of the world, comprising 19 and 18%, respectively, of the global total in 2019. They are followed by the United States of America, with 329 million in 2019, and Indonesia, with 271 million.

The populations of both Pakistan and Nigeria more than doubled in size between 1990 and 2019, with Pakistan moving up in rank from the 8th to the 5th position and Nigeria from the 10th to the 7th position. Current projections indicate that India will surpass China as the world's most populous country around 2027.

After this re-ordering between 2019 and 2050, the ranking of the five largest countries is projected to be preserved through the end of the century, when India could remain the world's most populous country with nearly 1.5 billion inhabitants, followed by China with just under 1.1 billion, Nigeria with 733 million, the United States with 434 million, and Pakistan with 403 million inhabitants.

6. A growing number of countries are experiencing a decrease in population size

This is due to sustained low levels of fertility and, in some places, high rates of emigration. In total, 27 countries or areas have experienced population decrease of at least one% since 2010. The largest decline was observed in the Syrian Arab Republic, where the population in 2019 is 20% smaller than in 2010, due to the outflow of refugees and heightened mortality risks associated with the conflict there. Already high rates of emigration from Puerto Rico increased further in the wake of Hurricane Maria in 2017 and, as a result, the island's population decreased by 18% between 2010 and 2019. Another eight countries or areas also experienced population decrease of more than five% since 2010: Andorra, Bosnia and Herzegovina, Bulgaria, Latvia, Lithuania, Romania, Saint Pierre and Miquelon, and Wallis and Futuna Islands.

In 14 of the 27 countries or areas where the population declined by at least one% between 2010 and 2019, the rate of natural increase was negative over that period, that is, the number of deaths exceeded the number of births. Examples include Japan, which recorded 2.6 million more deaths than births from 2010 to 2019, and Ukraine, where deaths exceeded births by close to 2.3 million over that period. In 23 of the 27 countries or areas where the population declined between 2010 and 2019, more people left the country than arrived, that is, net international migration was negative.

Between 2019 and 2050, 55 countries or areas are expected to see their populations decrease by at least one%. In the largest of these, China, the population is projected to shrink by 31.4 million, or 2.2%. As a proportion of the total population, the largest projected declines are for Lithuania and Bulgaria, where the projected population in 2050 will be 23% smaller than in 2019.

7. In some parts of the world, populations are still relatively young

In some countries, the number of people in the working ages is growing faster than in other age groups, creating a window of opportunity for rapid economic growth known as the 'demographic dividend'.

Although the populations of all countries are expected to grow older within the foreseeable future, populations will remain relatively young, at least for the short-term, in regions where fertility is still high. In sub-Saharan Africa, for example, 62% of the population is below age 25 in 2019. This percentage is expected to fall only slightly to 59% in 2030 and to decline further to around 52% in 2050.

In most of sub-Saharan Africa, as well as in Oceania and parts of Asia, Latin America and the Caribbean, the working-age population (25 to 64 years) is growing faster than other age groups. These conditions can yield an opportunity for accelerated economic growth known as the 'demographic dividend'. The percentage of the population that is aged 25 to 64 years in sub-Saharan Africa is projected to rise for several decades, from 35% in 2019 to 43% in 2050 and to 50% in 2100. In Latin America and the Caribbean, the window of time

for an increasing proportion of the population at working ages will be shorter, with a peak around 2039, while in Central and Southern Asia the proportion aged 25 to 64 is expected to peak around 2047. Of the eight SDG regions, the proportion of the population of working age is highest in Eastern and South-Eastern Asia, where 56% are aged 25 to 64 years in 2019. This age group accounts for more than half of the population in Europe, Northern America and Australia/New Zealand as well. However, as a result of population ageing the projections indicate that by 2050 the proportion aged 25 to 64 years will fall below 50% in each of these regions.

8. Historically low levels of fertility combined with increased longevity ensure that populations in virtually all countries and areas are growing older

In 2018, for the first time in human history, persons aged 65 years or over outnumbered children under five years of age worldwide. Between 2019 and 2050, the number of persons aged 65 or over globally is projected to more than double, while the number of children under five is projected to remain relatively unchanged. Consequently, the projections indicate that in 2050 there will be more than twice as many older persons as children under five. Moreover, it is expected that in 2050 the 1.5 billion people aged 65 years or over worldwide will outnumber adolescents and youth aged 15 to 24 years (1.3 billion).

Whereas the overall numbers of males and females globally are about equal, women outnumber men at older ages owing to their longer average life expectancy. In 2019, women comprise 55% of those aged 65 years or over and 61% of those aged 80 years or over globally.

All 201 countries or areas with at least 90,000 inhabitants in 2019 are projected to see an increase in the proportion of persons aged 65 or over between 2019 and 2050. At the global level in 2019, approximately nine% of people are aged 65 or over. The proportion of older persons in the world is projected to reach nearly 12% in 2030, 16% in 2050 and it could reach nearly 23% by 2100. Europe and Northern America have the most aged population in 2019, with 18% aged 65 or over, followed by Australia/New Zealand (16%). Both regions are continuing to age further. Projections indicate that by 2050 one in every four persons in Europe and Northern America could be aged 65 years or over.

Populations in other regions are also projected to age significantly over the next several decades. For Latin America and the Caribbean, the share of the population aged 65 years or over could increase from 9% in 2019 to 19% in 2050. Similarly, the proportion aged 65 or over in Eastern and South-Eastern Asia is expected to increase from 11% in 2019 to 24% in 2050. Sub-Saharan Africa, which has the youngest age distribution of the eight SDG regions, is also projected to experience population ageing over the coming decades, but to a much lesser extent, with the percentage of the population aged 65 or over rising from three% in 2019 to around five% in 2050.

The number of people above age 80 years is growing even faster than the number above age 65. In 1990 there were just 54 million people aged 80 or over in the world, a number that nearly tripled to 143 million in 2019. Globally, the number of persons aged 80 or over is projected to nearly triple again to 426 million in 2050 and to increase further to 881 million in 2100. In 2019, 38% of all persons aged 80 or over reside in Europe and Northern America, a share that is expected to decline to 26% in 2050 and to 17% in 2100 as the older populations of other regions continue to increase in size.

Population ageing will have a profound effect on the potential support ratio, defined here as the number of people of working age (25 to 64 years) per person aged 65 years or over. In 2019, sub-Saharan Africa has 11.7 persons aged 25 to 64 for each person aged 65 or over. This ratio is 10.2 for Oceania, 8.3 for Northern Africa and Western Asia, 8.0 for Central and Southern Asia, 5.8 for Latin America and the Caribbean, 5.0 for Eastern and South-Eastern Asia, 3.3 for Australia and New Zealand, and 3.0 for Europe and Northern America. At 1.8, Japan in 2019 has the lowest potential support ratio of all countries or areas with at least 90,000 inhabitants.

An additional 29 other countries or areas, mostly in Europe and the Caribbean, have potential support ratios below three. By 2050, 48 countries, mostly in Europe, Northern America, Eastern Asia or South-Eastern Asia, are expected to have potential support ratios below two. These low values underscore the potential impact of population ageing on the labour market and economic performance as well as the fiscal pressures that many countries are likely to face in the coming decades in relation to public systems of health care, pensions and social protection schemes for older persons.

[1] Sub-Saharan Africa will account for most of the growth of the world's population over the coming decades, while several other regions will begin to experience decreasing population numbers.

[2] Oceania refers to Oceania excluding Australia and New Zealand, throughout this report.

[3] The group of least developed countries includes 47 countries: 32 in Sub-Saharan Africa, 2 in Northern Africa and Western Asia, 4 in Central and Southern Asia, 4 in Eastern and South-Eastern Asia, 1 in Latin America and the Caribbean, 4 in Oceania. Further information is available at <http://unohrrls.org/about-ldcs/>

[4] The group of Small Island Developing States (SIDS) is composed of 58 countries or territories: 29 in the Caribbean, 20 in the Pacific and 9 in the Atlantic, Indian Ocean, Mediterranean and South China Sea (AIMS). Further information is available at <http://unohrrls.org/aboutsids/figure>.