



Beyond 8 Billion:

What You Need to Know About Population Projections

We live in a demographically divided world. The populations of some countries today are young on average and growing rapidly, while those of other countries are older and growing more slowly. The populations of many countries have peaked and are now slowly decreasing in size. These differing profiles strongly influence the course of human events and will continue to do so. The July 2024 edition of the United Nations' biannual publication, *World Population Prospects*, outlines national, regional, and global projections suggesting how the world's population will most likely change through the rest of this century.¹ At the Population Institute, we've identified seven important takeaways.

1. According to the medium projection scenario, world population is projected to continue growing until late in the 21st century, but at a slowing rate.

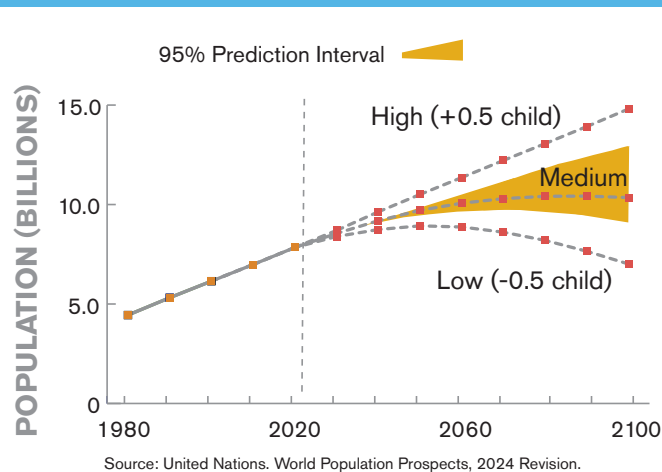
Over the past several years, world population—which surpassed 8 billion in 2022—has continued to increase by about 70 million people per year (an annual rate of about 0.9 percent in 2024). The 2024 *World Population Prospects*' global medium projection scenario—which many demographers consider the most likely future trend—shows a global population near 8.5 billion by 2030, and 9.6 billion in 2050 (Fig. 1), when it is projected to increase by about 40 million per year. The medium projection scenario reaches a peak of about 10.3 billion people in the mid-2080s, after which this projection begins to slowly decline. By 2100, the medium projection scenario's rate of global decline is projected to be less than 0.2 percent annually in a world populated by about 10.2 billion people.

2. Our world is demographically divided.

While global population growth is projected to continue throughout most of the 21st century, countries experience vastly different population trends. *World Population Prospects* indicates that:

- Population in 63 countries and areas (including China, Germany, Japan, and Russia) peaked before 2024.
- In another 48 countries (Brazil, Iran, Turkey, and Vietnam, for example), population is projected to peak before 2054.

Figure 1. World population is projected to grow through most of the 21st century.
Estimated and Projected Trends in World Population



- In the remaining 126 countries and areas (including India, Indonesia, Nigeria, and Pakistan), population is projected to continue growing beyond 2054. The United States population is projected to continue growing throughout the 21st century, due in large part to projection assumptions regarding immigration.

In nine of the 126 countries and areas in this final group, population growth is projected to be very rapid, with populations at least doubling between today and



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2054. This group includes Angola, the Central African Republic, the Democratic Republic of the Congo, Niger, and Somalia. How growth proceeds in these 126 countries will be a key factor in determining the size and timing of the peak of global population.

3. Population trends shape a country's population age structure, which has big implications for policies and planning.

Trends in population growth and decline affect *population age structure*, the distribution of a nation's population across age groups at any given point in time. Shifts in fertility, mortality, and migration change a country's population age structure over time. Population age structure has significant implications for the functioning of governments, economies, and the social and natural systems that support that population's needs. Research indicates that when a country enters a period in which its population's median age is between 26 to 40 years, or the intermediate/mature age

structure categories shown in Fig. 2, it takes a critical step toward achieving upper-middle income status² and high levels of political stability.³ According to the 2024 *World Population Prospects*' medium projection scenario, by 2054, more than 50 countries in Europe

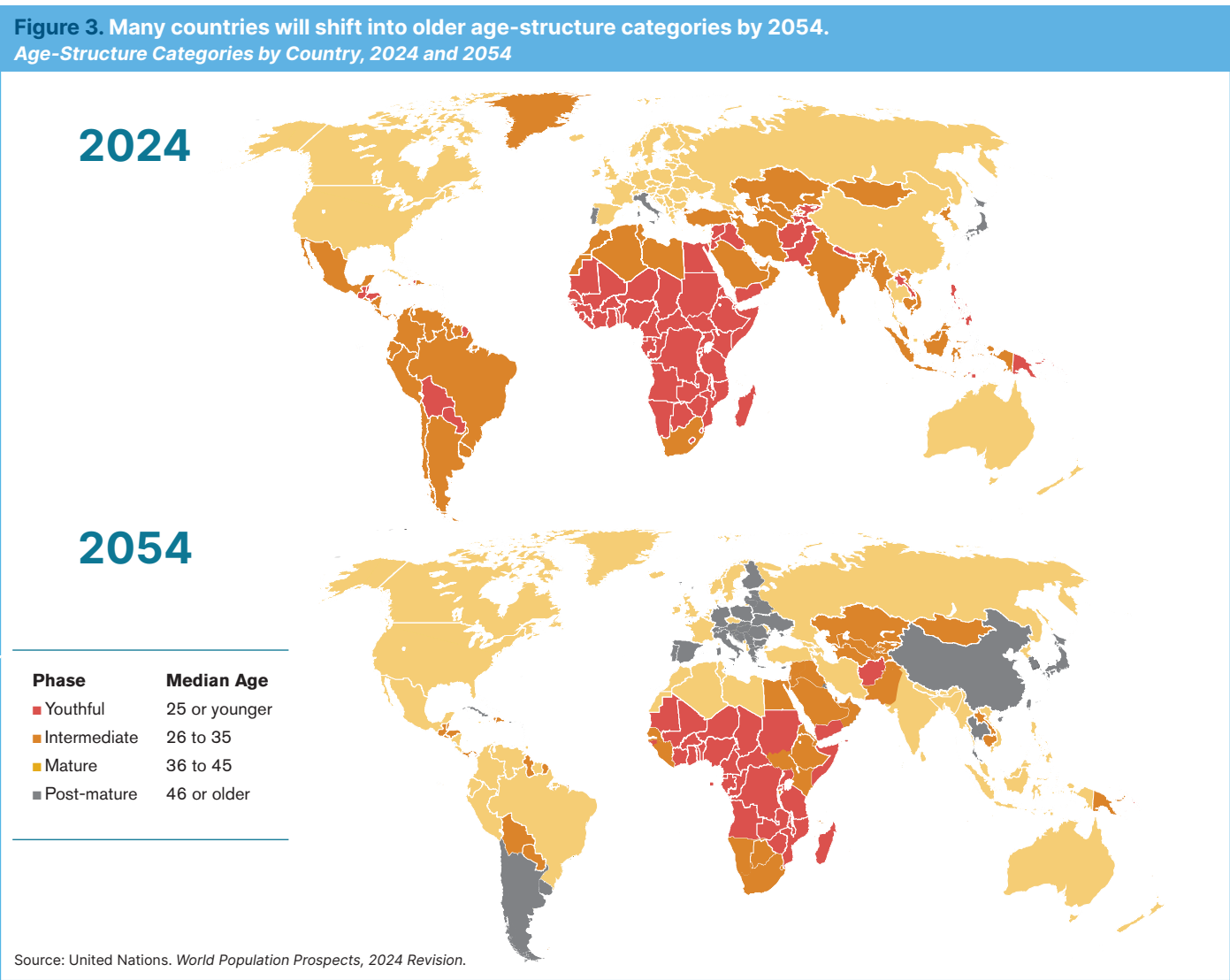
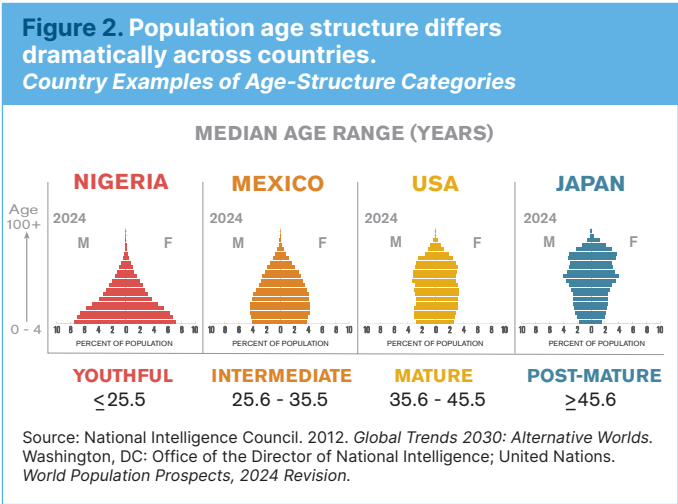
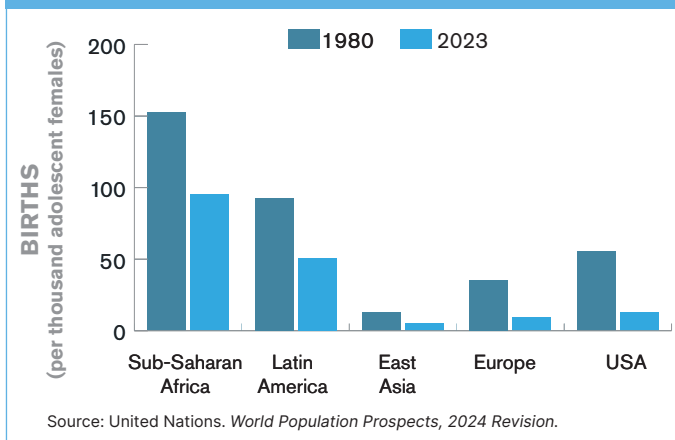


Figure 4. Adolescent childbearing remains high in some regions.
Adolescent Birth Rate (Ages 15-19)



and East and Southeast Asia (including China) are projected to shift into the post-mature category (median age of 46 or older). Many countries in sub-Saharan Africa, meanwhile, are projected to retain youthful age structures (Fig. 2 and 3).

4. Sustained high fertility rates remain a powerful driver of population growth and youthful age structures.

Average family size has become smaller in most countries around the world in recent decades—prompting some to worry about global population decline despite the world’s continuing growth. Yet *total fertility rates* (the average number of births a woman will have in her lifetime) across the tropical belt of sub-Saharan Africa and in parts of the Middle East and southern Asia have declined very slowly or stalled. This trend will continue to be a key driver of population growth and youthful age structures throughout this century. In the Sahel, Central Africa, and Coastal West Africa, total fertility rates remain near or even higher than five children per woman. These high rates are due, in part, to a lack of reproductive autonomy and child-bearing that begins early in life for women and girls. In these regions, annual data indicate that one in every 11 adolescent females (ages 15 to 19) bears a child, a rate nearly twice as high as in Latin America, and seven times that of the United States (Fig. 4). Early childbearing can have serious adverse consequences for the health and well-being of young mothers and

their children. In places where child marriage and early childbearing are widespread, efforts to increase the average age at marriage and first childbearing can have positive effects on women’s health, education, and labor force participation. Increasing the age at first childbearing also contributes to slowing population growth, reducing the scale of the investments required to advance development objectives that are inclusive and sustainable.

5. Low fertility rates are driving population aging in many countries.

Globally, one in four people live in a country whose population has already peaked. Today, more than half of the world’s countries have total fertility rates below 2.1 births per woman, the approximate level at which most populations would maintain a constant size over time without migration. And the populations of about one fifth of all countries and areas are experiencing ultra-low fertility, with fewer than 1.4 live births per woman over a lifetime. As population age structures become more top-heavy, the median population age will increase, and countries will need more support for larger cohorts of seniors and elderly. Investments in technology, lifelong learning, and retraining can support multigenerational workforces and improve productivity for all age groups. Simultaneously, plans to strengthen systems for health, long-term care, and social protection for older populations are needed.

6. Momentum matters too.

The youthful age structure of many countries today all but guarantees that the number of people of reproductive age will increase through 2050, even with continued declines in total fertility rates. United Nations demographers calculate that *positive momentum* (the outcome of a youthful bulge in the age structure) will account for about three-quarters of global population growth over the next three decades. As countries pass into the mature and post-mature age structure categories (Fig. 2), the effects of this momentum typically wane. Countries that sustain very low fertility rates can expect to experience *negative momentum* (the outcome of a dramatic narrowing in the younger portions of the age structure), an effect that could further slow population growth, even if fertility rises.

7. Projections are not predictions.

Like previous *World Population Prospects* revisions, the 2024 edition presents a single set of *estimates* of the demographic past and multiple *projections* of the demographic future—that is, conditional scenarios based on assumptions of future fertility, mortality, and migration—rather than actual *predictions* of what will occur. *World Population Prospects* offers a multitude of projections, or scenarios, for future population change (Fig. 1). The medium projection scenario can be a useful shorthand when referring to potential population change over time. United Nations demographers indicate a significant probability that world population will vary somewhat from the medium projection scenario—possibly growing through the century or peaking around 2050 and then declining (see shaded trend area in Fig.

1.) And it's important to note that demographers do not assume there will be any reductions in global life expectancy during the century. The medium projection scenario tells us where each country, region, and the world are heading, but not precisely where they will go.

The ultimate global population pathway in the latter part of this century will depend on many variables, including the level of investments made by governments and donors in the current decade and thereafter. Policies and programs that support girls' educational attainment, ensure greater access to family planning services, and work to augment women's autonomy and rights—all important development objectives on their own—are likely to encourage population outcomes that enhance human well-being and contribute to sustainable development.



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Endnotes

- 1 United Nations. 2024. *World Population Prospects 2024 Revision*. <https://population.un.org/wpp/>.
- 2 Cincotta, R. 2017. "The Age-Structural Theory of State Behavior" in *Oxford Research Encyclopedia, Politics*, edited by W. Thompson. Oxford: Oxford University Press.
- 3 Cincotta, R. 2023. "Population Age Structure and the Vulnerability of States to Coups d'État." *Statistics, Politics, and Policy* 14(3):331-355.

