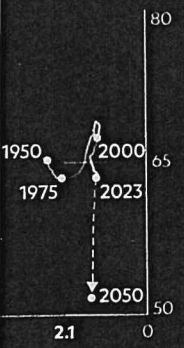


For populations projected to be too long, the share of the population plummets.



RILEY D. CHAMPINE, AND BRANDON SHYBKOWSKI, "POPULATION PROSPECTS, 2022", UNIVERSITY OF CALIFORNIA, ADRIAN RAFTERY, UNIVERSITY OF CALIFORNIA, PATRICK HEUVELINE, UCLA

the world's population will peak probably before the end of the century," says Patrick Gerland, who oversees projections for the UN's Population Division. Even as our numbers swell, children and some adults alive today could be the first people in hundreds, perhaps thousands, of years to see Earth's population plateau or even dip, with unfathomable consequences.

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Buried in the demographic data documenting fertility and longevity are striking contrasts in how we'll get there. More than half the population increase that's projected for the next quarter century is expected to come from just eight countries in Asia and Africa: Pakistan, the Philippines, India, Egypt, Ethiopia, Tanzania, Nigeria, and the Democratic Republic of the Congo. Yet by century's end, populations could fall by half in nearly two dozen others, including Thailand, Spain, and Japan. What will these changes mean for our ever evolving human story? Much can be learned from two countries worlds apart facing diametrically opposite realities: China and Nigeria.

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**T**HE UNITED NATIONS has projected that sometime this year, for the first time in hundreds of years, China will no longer be Earth's most populous country; India will

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surpass it. Even before China's one-child policy was instituted in 1980, its birth rate had been declining. The country's incomparable economic growth expanded education and career opportunities for women, and more have chosen to delay or forgo motherhood even as the number of women of childbearing age has dropped.

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Although people in China are living longer, its population—now about 1.4 billion—has started to decline. The workforce that made China the world's factory has already been shrinking for a decade. By 2050 China could see 500 million people older than 60. This imbalance between young and old will be China's great challenge.

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A continent away, things look different. Nigeria's median age is just 17, less than half that of China. The fertility rate there is falling, too, but remains about five times as high as in China. The country's population, now about 224 million, could more than triple by the end of the century. About a third of Nigerians live in extreme poverty, nearly half the number of people living in extreme poverty in India, which has a population more than six times as large. Hunger is already a concern: Millions in Nigeria are at risk of starvation.

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**H**OW WILL WE NAVIGATE the simultaneous booms and busts? None of these projections adequately account for the potential strain on Earth's finite resources.

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Fish and wildlife are already disappearing quickly, and climate change is becoming the greatest threat in history to biodiversity, food security, and access to water for drinking and farming.

Yet as extreme heat, rising seas, and severe weather promise to increase migration, our population trends, too, could initiate more movement between countries as those with dwindling workforces desperately seek labor from outside their borders. In high-income countries such as the United States, immigration will drive population growth.

In 1968, when Earth had just 3.5 billion people, biologist Paul Ehrlich, in his famously dire book *The Population Bomb*, fretted about overpopulation causing hundreds of millions to die from famine. Instead, a green revolution—the widespread adoption of fertilizers, mechanization, and high-yield crops—transformed agriculture. We are still hurtling toward a future with far more people—but in some places also far fewer. Will human ingenuity, and the billions more brains at our disposal, find ways to cope with this new reality? Nigeria and China may be our biggest tests. □

Craig Welch is a senior staff writer for *National Geographic*.

## POP TAP

People in the world—and rising as a global

### Population

By 2050 the world will be almost 7 billion. To support that population, they spend more on labor force

### Fertility

The global fertility rate per woman has dropped to 2.5, below the replacement level of 2.1, to decline to 1.8 by the end of the century.

### Countries

The world's population fell below 2 billion for the first time in 1987. If the trend continues, it will peak before 2050.