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World Should Prepare for 11 Billion or More People

Contrary to previous estimates, the number of people on the planet now seems unlikely to stabilize this century

Sep 19, 2014 | By [David Biello](#) |

In the 1970s, the world reached peak child—the highest rate of human population growth. Since then, countries in Asia, the Americas, Australia and Europe have all seen birth rates decline dramatically and in Africa, the number of children in families has dropped from an average of more than six to around four. But that decline in Africa is slower than the birth rate drops in other parts of the world. The persistence of that relatively high birth rate stems from a wide range of factors, including cultural influences, economics, and a lack of access to birth control or family planning. And there are enough children in Africa now that some demographers and statisticians are predicting that [human population growth](#) will not actually flatten in the 21st century, as some experts had foretold.

Other recent estimates have forecast a leveling out of [human population growth](#) by mid-century, from a current 7.2 billion people to around 10 billion by 2050. But those projections counted on families in Africa reducing the number of children they have at roughly the same rate that fertility declined in Asia and Latin America in previous decades. Instead, women are still having more children in many African countries and the rate of fertility decline has slowed—or even reversed—in some African countries in the last 15 years. "This has a compounding effect on population over time, because higher fertility means more children for the current population, and hence more grandchildren and so on," explains statistician Adrian Raftery of the University of Washington, part of the team that conducted the new analysis. "We project a large increase in the population of Africa, from the current 1 billion to 4.2 billion in 2100," he notes. Raftery and his colleagues detail their findings in a [report published online September 18 in *Science*](#).

How fast and how far fertility in Africa falls—or doesn't—will determine the fate of human population growth or decline this century. At current rates, the African continent would likely become as densely populated as China today. As a result, the "world population is likely to [continue growing](#) for the rest of the century," Raftery says, although fast population growth in Africa may also lead to the kind of shortages of food, water and other resources that can reduce population growth.

At the same time, declining population growth in countries such as Germany, Japan,



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China and Brazil mean that these nations will have nearly as many old people as they have young people in the next few decades. "The fast growth of the world population will be over in the second part of this century," says international health researcher Hans Rosling of the Karolinska Institute in Stockholm, who expects the world should [prepare for at least 11 billion people](#). Still, "the total population may continue to grow, but at a much slower rate, or it may even start to slowly decline after 2050," he adds.

The new analysis is part of a project to develop better methods for forecasting human population size—one of the [leading factors](#) influencing the global economy, environment and human health. Prior methods relied on arbitrary assumptions, such as adding or subtracting half a child to deliver high and low population estimates. This new estimate derives from [Bayesian statistics](#), in which different outcomes are assigned different probabilities based on what has already occurred.

The cancellation of funding for family planning programs in the U.S. in the early years of the 21st century may bear some of the blame for the stalled population growth slowdown in Africa. The Bush administration poured billions of dollars into the fight against AIDS but also required that none of that money be used to provide contraceptives—a policy since reversed by the Obama administration. According to United Nations surveys, at least 25 percent of women in sub-Saharan African countries want to stop or delay having children but [lack access to contraception](#). "This is largely unchanged over the last 20 years," Raftery notes.

Ultimately, empowering women by [educating girls](#) may do more to aid family planning than even providing money for contraceptives does. The countries with the highest fertility rates also have high rates of girls failing to receive an education. Educated women are far more likely to have [access to contraception](#), among other benefits, including faster economic growth for their nation. In Ghana, for example, uneducated women have an average of 5.7 children, whereas women with some education have 3.2 and women with a college education have just 1.5 kids. Says Rosling: "It is a shame that almost half of the women in Africa that want to use contraceptives still, to this day, do not have access to them."

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