

The battle to feed all of humanity is over. In the 1970s hundreds of millions of people will starve to death in spite of any crash programs embarked upon now. At this late date nothing can prevent a substantial increase in the world death rate.

This is the certain fall in life expectancy following the overpopulation that [Paul Ehrlich](#), author of the book "[The Population Bomb](#)", published in 1968 and which sold millions of copies, announced. Half a century later, the [size of the world's population has more than doubled](#). Even though hundreds of millions of people still suffer from hunger, we have never had [so much food per person](#). And in terms of mortality rates, [global life expectancy](#) has increased by more than 15 years.

Theme of the month: Overpopulation and Longevity

Decline around 2064

It is time for some pessimists to put aside their images of doom about overpopulation. According to a recent study published in the scientific journal [The Lancet](#), the world population will peak around 2064 at 9.7 billion people, and then begin a decline to 8.8 billion by the end of the century.

In the 1960s, each woman still had an average of 4.5 children, today this figure is less than 2.5. This is not much higher than the replacement rate of 2.1: the number you need to maintain a population.



As Swedish physician [Hans Rosling](#) writes in his book [Factfulness](#): *When parents see that children stay alive, that children are no longer needed for work, and that women receive an education and have access to contraceptives, both sexes, in all cultures and religions, begin to dream of fewer, but well-educated, children.*

In 1950, 25 babies were born for each person who blew out 80 candles. Today, that number is about seven. If current trends continue, by 2100, for every person over 80 years of age, there will be only one baby. It is an invisible revolution, an inverted population pyramid, never seen before in history. It's

time to think about it, instead of wallowing in obsolete images of a supposedly inevitable explosion of the world's population.

It is said that by 2100, 183 countries will not have the fertility rates needed to maintain the current population.

Today there are about 7.8 billion of us. Demographers already knew that our population was expected to decline within a few decades, but this new study predicts that it will happen even faster than we thought.

The United Nations has also assumed that countries that fall below the replacement rate will stabilize at around 1.75 children per woman, but according to The Lancet, this estimate is based on a restricted sample. In countries such as Thailand, South Korea, and Greece, we find that the decline is continuing, at less than one and a half children per woman. And that makes a big difference in the long run.

Of course, a world of about 10 billion people remains a challenge, especially if we want everyone to benefit from the level of prosperity enjoyed in the West (one billion people don't even have access to electricity yet). But with modern science and technology, this is certainly surmountable. More people even means, in many ways, good news.

A priori, it seems plausible that the more people there are, the fewer resources remain for everyone. However, from an economic point of view, this is not always true. More people often means less scarcity. Because many brains, densely packed together, come up with smarter ideas and become more specialized. The [Simon Index of Abundance](#), named after economist and thinker [Julian Simon](#), shows that raw materials become more abundant and cheaper as the world's population increases. It sounds crazy and counter-intuitive, but this is often the case with scientific knowledge.

But beware, this can only be envisaged in the long run in a world where technological progress allows the use of mainly renewable energies and raw materials. This is technically possible, but it requires a political, social and economic will that is still insufficient today.

We must also temper the image of an overpopulated world. The surface of the planet is about 200 million square miles, 57 million of which is land. A country like Bangladesh is [self-sufficient in food](#) with more than 160 million inhabitants (one fortieth of the world's population on one thousandth of the surface of the land mass).

By 2100, 183 of the 195 countries are predicted to lack the fertility rates needed to maintain current population levels, with a prediction of 2.1 births per woman, said researchers at the [Institute for Health Metrology and Evaluation at the University of Washington School of Medicine](#). Some 23 countries - including Japan, Thailand, Italy and Spain - would see their populations decline by more than 50 percent.

However, the population of sub-Saharan Africa could triple, allowing just under half of the world's population to be African by the end of the century.

The world, since the 1960s, has really focused on the so-called population explosion," [Dr. Christopher Murray](#), who led the research, told CNN. Suddenly, we're now at that kind of turning point where it's very clear that we're rapidly moving from too many to too few.

More people over 80 will be over 80 than under 5 years old.

The study also predicts major changes in the global age structure as fertility declines and life expectancy increases. By 2100, an estimated 2.37 billion people worldwide will be over 65 years of age, compared with 1.7 billion under 20 years of age.

The number of people over 80 years of age in the world could be multiplied by six, from 141 million to 866 million. At the same time, the number of children under the age of five is expected to decrease by more than 40%, from 681 million in 2017 to 401 million in 2100. [Childhood could become rare](#) (article in French).

What about healthy longevity in all this?

First of all, it is necessary to recall, as was done as early as 2012 in a "[Death of Death](#)" letter (in French), that there is a strong correlation between life expectancy and fertility. In regions of the world where women and men live longer (and are better educated and more affluent), the birth rate is falling and the population tends to decrease. When life expectancy increases, the birth rate decreases and population growth is lower (or negative).

So the first good news is that longevity is a stabilizing factor for the population. To put it in a way that will appear provocative: to be fewer in number, let's live longer!

Second good news: where people live longer, they tend to be more cautious. If one day, life expectancy becomes potentially much longer, well beyond a century, citizens will naturally be much more prudent, will invest more in their future and will not wish, for themselves or for others, an overpopulated planet.

There is, however, less good news. To this day, for populations beyond the age of 80 or 90, we still are not achieving significant progress in health. As already stated in previous letters, in terms of maximum lifespan, our progress is insufficient, particularly in terms of healthy longevity.

So, in the current state, overpopulation is not something that we are at risk of, on the contrary. However we do stand to have a world with a large population in fragile health. This is one of the many reasons why research for a much longer life in good health is fundamental, not only in the individual interest, but also in the collective interest.

This month's good news: Alzheimer's disease is declining in Europe and the United States. Plasma and albumin to reduce the impact of Alzheimer's disease. An enzyme prevents memory loss in mice.

The risk of developing Alzheimer's disease or another form of neuronal degeneration at a given age has been reduced by 13% in ten years, reports an important [study](#) conducted in the United States and several European countries.

Beware, this good news is relative. Because of the increase in life expectancy, the number of people with Alzheimer's disease is still increasing. In other words, the percentage of people affected in a given age group is decreasing, while the absolute number of people affected continues to increase.

In the field of Alzheimer's disease research itself, a [clinical trial](#) to remove aging factors from the blood (by injecting albumin and immunoglobulin) is showing good results. This study is randomized and double-blind. It remains to be confirmed, however, especially since it is funded by a company producing albumin and immunoglobulin for therapeutic purposes.

In an [article](#) to be published in the journal Acta Neuropathologica, Lars and Arne Ittner, researchers specializing in the study of dementia at Macquarie University, detail how activation of a key enzyme (p38gamma) in the brain can prevent the type of memory loss associated with advanced forms of Alzheimer's disease, and even reverse it. An important advance tested on mice, to be confirmed on humans.

For more information, please visit:

- [Heales.org](https://heales.org), sens.org, longevityalliance.org and longecity.org.
- [Image Source.](#)