



## The 1998 Revision of the United Nations Population Projections

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## The 1998 Revision of the United Nations Population Projections

*The main results of the 1998 round of population estimates (from 1950 to the present) and population projections (up to 2050) were released by the Population Division of the Department of Economic and Social Affairs of the United Nations on 28 October 1998. These estimates and projections cover 228 countries and areas of the world ("from Pitcairn with 46 persons to China with 1.3 billion"). Full details of the exercise will be forthcoming by the end of the year in the publication Population Prospects: The 1998 Revision. An excerpt from a "Briefing Packet" issued by the Population Division is reproduced below.*

*The projections, and to a much less pronounced degree the retrospective estimates, are revised biennially. (From time to time, the Population Division also prepares supplementary world population projections, extending the regular projections in regional detail into the long term. For a summary of the most recent such exercise, World Population Projections to 2150, issued in February 1998, see the Documents section in the March 1998 PDR.) Compared with the two earlier sets of projections, the 1998 set shows some marked changes. The global population for 2050 according to the 1998 "medium" projection, perhaps the single most watched and cited summary figure, is 8.9 billion. The corresponding forecast was 9.4 billion in the 1996 revision and 9.8 billion in the 1994 revision. Only to a minor degree are these differences attributable to revised current population data, as the 1998 global estimates in the three sets show only modest shifts. (The global population estimate for 1998 was 5.98 billion in the 1994 revision, as compared with 5.93 billion and 5.90 billion in the 1996 and 1998 revisions, respectively.) Rather they reflect reconsiderations of the likely outlook for the future evolution of fertility and mortality, driven by changed assumptions concerning the most plausible extrapolation of recent population trends. Salient features of this shift include the acceptance of the notion that return to replacement-level fertility is unlikely in countries in which fertility is now below, and often well below, replacement level; a more rapid convergence of fertility to replacement level (albeit not below it) in countries in which fertility is still relatively high; and a darkened outlook on mortality attributable to the AIDS epidemic in significant portions of the developing world.*

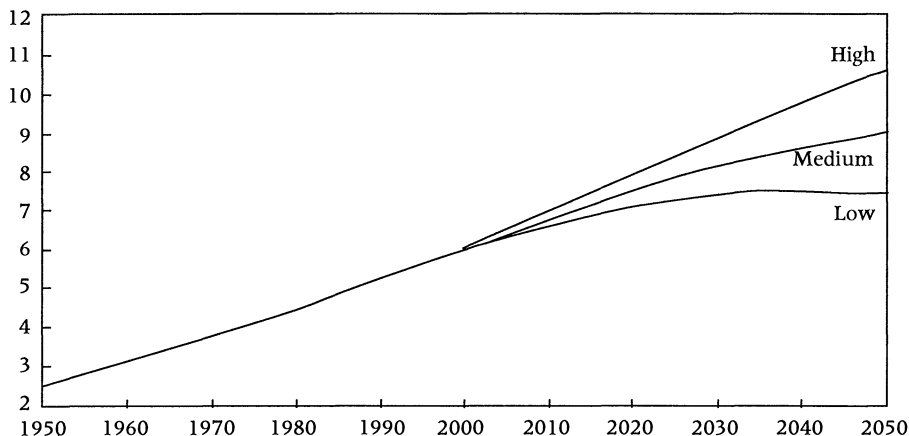
At mid-1998, world population stood at 5.9 billion. It is expected that the world population will reach the 6 billion mark in 1999.

Between 1995 and 2000 the world population is growing at 1.33 per cent per year, adding an average of 78 million persons each year. In the mid 21st century world population will be in the range of 7.3 to 10.7 billion, depending on the assumed future fertility trends. In the medium variant, the

world population reaches 8.9 billion in 2050 (figure I).

The mid-1998 world population stood at 5,901 million, with 4,719 million (80 per cent) in the less developed regions and 1,182 million (20 per cent) in the more developed regions. Asia accounted for 3,585 million, i.e. 61 per cent of the world total. During the last two years, Africa's population (749 million in 1998) became larger than Europe's

**FIGURE I World population size: Past estimates and medium-, high- and low fertility variants, 1950–2050 (billions)**



SOURCE: United Nations Population Division, *World Population Prospects: The 1998 Revision*, forthcoming.

(729 million). The population of Latin America and the Caribbean is estimated at 504 million, and that of Northern America at 305 million.

The world population is growing at 1.33 per cent per year between 1995 and 2000, which is significantly less than the peak growth rate of 2.04 per cent in 1965–1970, and less than the rate of 1.46 per cent in 1990–1995. The annual population increment also declined from its peak of 86 million in 1985–1990 to the current 78 million. It will further decline gradually to 64 million in 2015–2020, and then sharply to 30 million in 2045–2050.

In the medium-fertility variant, it is projected that the annual population growth rate will continue declining from 1.33 per cent in 1995–2000 to 0.34 per cent in 2045–2050. From 1804, when the world passed the 1 billion mark, it took 123 years to reach 2 billion people in 1927, 33 years to attain 3 billion in 1960, 14 years to reach 4 billion in 1974, 13 years to attain 5 billion in 1987 and 12 years to reach 6 billion in 1999. It will take 14 years to reach 7 billion in 2013, 15 years to reach 8 billion in 2028, and, with the slowing down of population growth, it will take 26 years to reach 9 billion, in 2054.

According to the high-fertility variant, the annual population growth rate will decrease more slowly, reaching 0.87 per cent per year in 2045–2050. The low-fertility vari-

ant results in a rapid decline of annual rate of population change, to a negative value of  $-0.23$  per cent per year in the middle of 21st century. The population in 2050 will be 10.7 billion according to the high variant and 7.3 billion according to the low variant.

Ninety-seven per cent of the world population increase takes place in the less developed regions. Every year the population of Asia is increasing by 50 million, the population of Africa by 17 million, and that of Latin America and the Caribbean by nearly 8 million. Africa has the highest growth rate among all major areas (2.36 per cent). Middle Africa, Eastern Africa and Western Africa have growth rates of 2.5 per cent and over. Europe, on the other hand, has the lowest growth rate (0.03 per cent), with a negative rate of  $-0.2$  per cent in Eastern Europe.

Sixty per cent of the world population increase is contributed by only 10 countries, with 21 per cent contributed by India and 15 per cent by China (table 1).

Currently 2 out of 5 people in the world live in either China (1,256 million) or India (982 million). There are eight other countries with a population over 100 million: the United States of America, Indonesia, Brazil, Pakistan, Russian Federation, Japan, Bangladesh and Nigeria. According to the medium-fertility variant projection, by the year 2050 eight additional countries will have

**TABLE 1 Top ten contributors to world population growth, 1995–2000 (net annual additions in thousands)**

No.	Country	Net addition	Per cent	Cumulative per cent
1	India	15,999	20.6	20.6
2	China	11,408	14.7	35.3
3	Pakistan	4,048	5.2	40.5
4	Indonesia	2,929	3.8	44.2
5	Nigeria	2,511	3.2	47.5
6	United States of America	2,267	2.9	50.4
7	Brazil	2,154	2.8	53.1
8	Bangladesh	2,108	2.7	55.9
9	Mexico	1,547	2.0	57.9
10	Philippines	1,522	2.0	59.8
	Sub-total	46,494	59.8	59.8
	World total	77,738	100	100

SOURCE: United Nations Population Division, *World Population Prospects: The 1998 Revision*, forthcoming.

exceeded the 100 million mark: Ethiopia, the Democratic Republic of the Congo, Mexico, Philippines, Viet Nam, Iran, Egypt and Turkey. The ranking will be somewhat different; India will then be the most populated country (1,529 million) followed by China (1,478 million), the United States of America (349 million) and Pakistan (346 million).

According to the medium variant, by 2045–2050, 56 countries will experience a negative population growth, including all European countries, Japan and China. The population of the more developed regions as a group is expected to reach a peak of 1,617 million in 2020, then it will start a gradual decline and by 2050 will be 2 per cent smaller than in 1998. By contrast, the population of the less developed regions will increase by 64 per cent, from 4,719 million in 1998 to 7,754 million in 2050. The fastest population growth will take place in Africa: its population will more than double during the first half of the 21st century; and Africa's share in the world population growth will increase from the current 22 per cent to 55 per cent in 2045–2050.

Different demographic growth rates lead to a redistribution of the world population among major geographic areas and groups of countries. While in 1950, Europe and Northern America accounted for 28.5 per cent of the world population, their share of the world to-

tal decreased to 17.5 in 1998, and it will further decline to 11.5 per cent in 2050. Conversely, the world population share of Africa increased from 8.8 per cent in 1950 to 12.7 per cent in 1988 and is projected to reach 19.8 per cent in 2050. The shares of Asia and Latin America are relatively more stable at approximately 60 and 10 per cent, respectively. All projection variants yield similar results with respect to the distribution of the world population.

The United Nations Population Division considered the demographic impact of AIDS in 34 countries with a population of at least 1 million and an adult HIV prevalence of 2 per cent or more, or with very large infected adult populations. Among these countries, 29 are in Sub-Saharan Africa, three are in Asia (Cambodia, India and Thailand) and two in Latin America and the Caribbean (Brazil and Haiti). Of the 30 million persons currently infected by HIV in the world, 26 million (85 per cent) reside in these 34 countries.

The *1998 Revision* shows a devastating toll from AIDS with respect to mortality and population loss. In the 29 African countries in which the impact of AIDS was studied, life expectancy at birth is projected to decrease to 47 years in 1995–2000 whereas it would have expected to have reached 54 years, in the absence of the AIDS epidemic, a loss of 7 years. The demographic impact of

**TABLE 2 Countries with a population of over 100 million, 1998 and 2050 (population in millions, medium variant)**

1998	
1 China	1,256
2 India	982
3 United States	274
4 Indonesia	206
5 Brazil	166
6 Pakistan	148
7 Russian Federation	147
8 Japan	126
9 Bangladesh	125
10 Nigeria	106
2050	
1 India	1,529
2 China	1,478
3 United States	349
4 Pakistan	346
5 Indonesia	312
6 Nigeria	244
7 Brazil	244
8 Bangladesh	213
9 Ethiopia	170
10 Democratic Republic of the Congo	160
11 Mexico	147
12 Philippines	131
13 Viet Nam	127
14 Russian Federation	122
15 Iran	115
16 Egypt	115
17 Japan	105
18 Turkey	101

SOURCE: United Nations Population Division, *World Population Prospects: The 1998 Revision*, forthcoming.

AIDS is even more dramatic when one focuses on the hardest hit countries, for example the 9 countries with an adult HIV prevalence of 10 per cent or more: Botswana, Kenya, Malawi, Mozambique, Namibia, Rwanda, South Africa, Zambia and Zimbabwe. In these countries the average life expectancy at birth is estimated to reach 48 years in 1995–2000 whereas it would have been expected to reach 58 years in the absence of AIDS, a loss of 10 years. By 2010–2015, the average life expectancy at birth in

**TABLE 3 Population of the major regions of the world, 1950, 1998 and 2050 (population in millions, medium variant)**

	1950	1998	2050
World	2,521	5,901	8,909
More developed regions	813	1,182	1,155
Less developed regions	1,709	4,719	7,754
Africa	221	749	1,766
Asia	1,402	3,585	5,268
Europe	547	729	628
Latin America and the Caribbean	167	504	809
Northern America	172	305	392
Oceania	13	30	46

SOURCE: United Nations Population Division, *World Population Prospects: The 1998 Revision*, forthcoming.

these countries is projected to reach only 47 years, instead of 64 years in the absence of AIDS: 17 years of life expectancy lost to AIDS.

Even in the worst cases, the toll of AIDS is not expected to lead to declines of population, because fertility in these countries is high. In the hardest-hit country, Botswana, with an adult HIV/AIDS prevalence of 25 per cent, the population in 2025 is expected to be 23 per cent smaller than what it would have been in the absence of AIDS. Nevertheless, the population is still expected to nearly double between 1995 and 2050.

According to the *1998 Revision*, 61 countries of the world exhibit a total fertility rate (TFR) in 1995–2000 at or below the level of 2.1 children per woman, which is the level necessary for the replacement of generations. The combined population of those 61 countries (2.6 billion in 1998) amounts to 44 per cent of the global population.

In practically all countries of the more developed regions, fertility is currently significantly below 2.1. In 20 of these countries the TFR has stayed at below-replacement level for more than two decades. In the 1980s–1990s fertility has decreased to levels below replacement in several countries from the less developed regions, including all countries in the populous region of Eastern Asia (except Mongolia). Consequently, in its medium variant, the *1998 Revision* assumes

that fertility in these countries will not return to replacement level within the time horizon of the projections, i.e. until 2050.

The 1998 Revision for the first time presents estimated and projected numbers of octogenarians, nonagenarians and centenarians, for all countries of the world. In 1998, 66 million persons were aged 80 or over, that is, about 1 of every 100 persons. That proportion was 5 times higher in the more developed regions than in the less developed regions (3.0 versus 0.6 per cent). Among them, 6.4 million were aged 90 years or over, and about 135 thousand are estimated to be aged 100 or over. The population aged 80 or over is projected to increase almost 6-fold and reach 370 million in 2050. The number of centenarians is projected to increase 16-fold to reach 2.2 million.

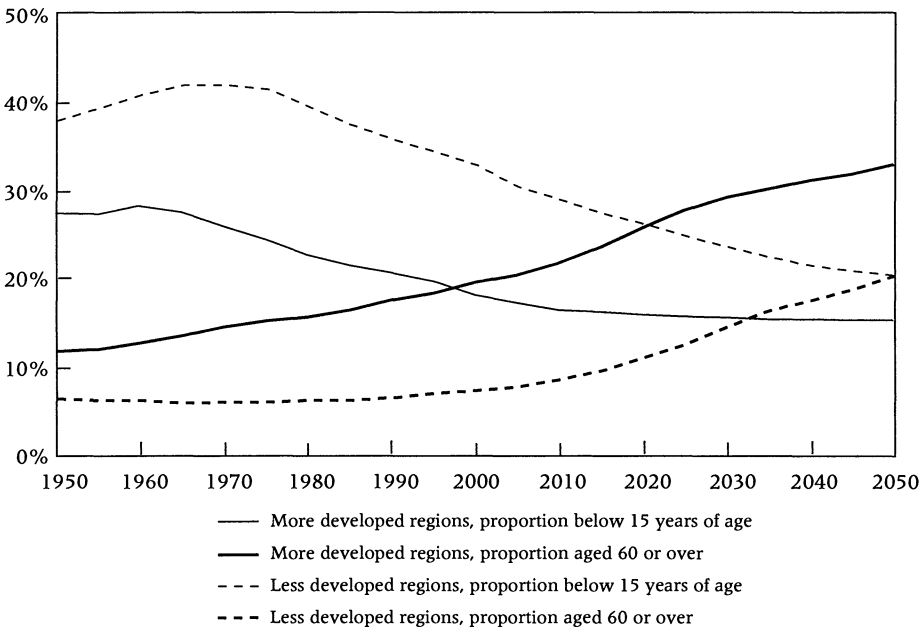
As a result of the combined effects of the decrease in fertility and the increase in life expectancy, the population of the world is becoming older, with a diminishing proportion of children, aged less than 15 years, and an increase of older persons, aged 60 or over.

Overall in the world there are still three times as many children (30 per cent) as older persons (10 per cent).

However, in the more developed regions, in 1998 the number of older persons exceeded that of children for the first time. Italy has the oldest population, with 60 per cent more older persons than children. Greece, Japan, Spain and Germany have between 50 per cent and 40 per cent more older persons than children. By the year 2050, in the medium variant, in the more developed regions there will be more than twice as many older persons as children (figure II).

In the less developed regions, the proportion of older persons will increase from 8 to 21 per cent between 1998 and 2050, while that of children will decrease from 33 to 20 per cent. For the world as a whole, the proportion aged 60 or over will increase from the current 10 per cent to 22 per cent in 2050, while the proportion aged less than 15 will decrease from 30 per cent to 20 per cent. By the year 2050, there will be more older persons than children in the world.

**FIGURE II** Proportion of total population aged 0–14 and 60 or over, more and less developed regions, 1950–2050 (medium variant projections)



SOURCE: United Nations Population Division, *World Population Prospects: The 1998 Revision*, forthcoming.