

The world's population, today numbering some 5.5 billion people, may approach 12 billion by the end of the next century (Figure 1). By the year 2020, 26 years from today, it will most likely have increased by about 2.5 billion to a total of 8 billion people, an increase of nearly 100 million a year (Table 1). Over 93 percent of this growth will take place in the developing countries (Figure 2).

These estimates of population growth rates are drawn from the United Nation's (UN's) *World Population Prospects: The 1992 Revision*. The UN reports three sets of projections, which they call the medium variant, the high variant, and the low variant. These estimates are based on differing assumptions about fertility, and starting from a base year of 1990, show population growth over time (Figure 3). By the year 2020, the difference between the low and the high estimates is more than 900 million people. The UN's high and low variants include the "plausible" range of future demographic trends. Thus by 2020, the medium variant estimates, which are widely used internationally, could be too low or too high by as many as 450 million people, an error of approximately 5 percent of the total world population.

Using the medium variant estimates, the growth rate will be highest in Africa where population will more than double from 1990 to 2020 (from 643 million people to 1,421 million). More importantly, growth rates in Africa,

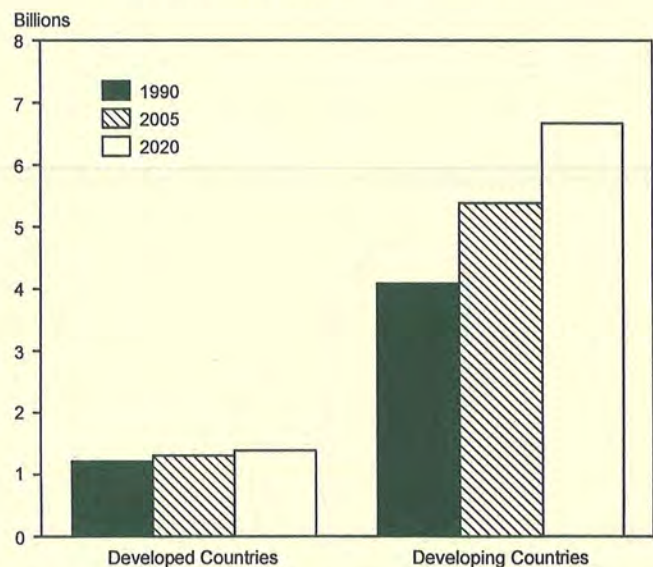
Table 1— UN population projection, 1990-2020, by world and regions, medium variant

| Region | 1990 | 1995 | 2000 | 2010 | 2020 |
|----------------------|-------|-------|-------|-------|-------|
| World | 5,295 | 5,759 | 6,228 | 7,150 | 8,050 |
| Developed countries | 1,211 | 1,244 | 1,278 | 1,341 | 1,387 |
| Developing countries | 4,084 | 4,515 | 4,950 | 5,809 | 6,663 |
| Africa | 643 | 744 | 856 | 1,116 | 1,421 |
| Asia | 3,118 | 3,408 | 3,692 | 4,214 | 4,689 |
| Latin America | 441 | 482 | 523 | 600 | 670 |
| Europe | 509 | 516 | 528 | 536 | 542 |
| North America | 277 | 292 | 306 | 330 | 352 |
| Oceania | 27 | 29 | 31 | 35 | 40 |
| Former U.S.S.R. | 281 | 289 | 297 | 317 | 336 |

Source: UN, *World Population Prospects*, 1993.

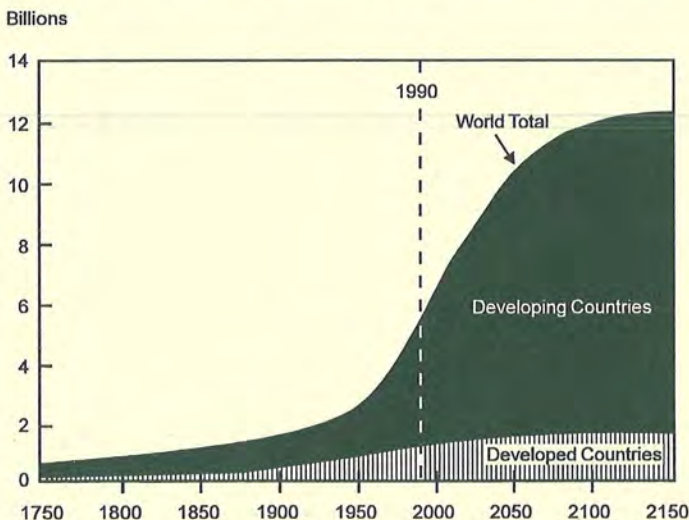
while decreasing, are still projected to be at 2.3 percent between 2015 and 2020 (they are 2.9 percent today) more than double the rates elsewhere and more than four times the rate projected for China during the 2015-2020 period (Table 2).

Figure 2—Population growth by developed and developing countries, 1990-2020, medium variant



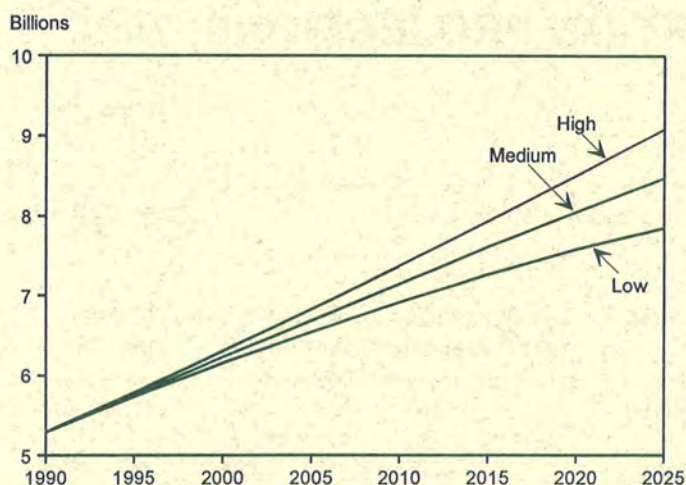
Source: UN, *World Population Prospects*, 1993.

Figure 1—World population projections, 1750-2150



Source: J. Bongaarts, *The Population Council*, 1994.

Figure 3—UN population projection: low, medium, and high variants, 1990-2025



Source: UN, *World Population Prospects*, 1993.

However, the greatest absolute number of these additional people will live in Asia where population will increase by over 1.5 billion people from 1990 to 2020 (with a relative increase of 50 percent). By the year 2020, China will have more than 1.5 billion people, and India will be close behind with over 1.3 billion people. Seven countries, China and India plus three others in Asia—Indonesia, Pakistan, and Bangladesh—plus Brazil and Nigeria, comprise today and will continue to comprise half the population in the world.

Table 2—Growth rate assumptions for UN projection, medium variant

| Region/Country | 1990-1995 | 2015-2020 |
|----------------------|-----------|-----------|
| | (percent) | |
| World | 1.68 | 1.13 |
| Developed countries | 0.54 | 0.30 |
| Developing countries | 2.01 | 1.30 |
| Africa | 2.93 | 2.33 |
| Belgium | 0.13 | -0.12 |
| Brazil | 1.59 | 0.83 |
| China | 1.31 | 0.55 |
| India | 1.91 | 0.98 |
| Nigeria | 3.13 | 2.48 |
| Tanzania | 3.36 | 2.89 |
| United States | 1.03 | 0.58 |

Source: UN, *World Population Prospects*, 1993.

Two regions in particular merit attention. South Asia and Africa, where large percentages of the poor live today and where future food production is of concern, face substantial increases in their populations. India, Pakistan, and Bangladesh plus the continent of Africa will add another 1.5 billion people to the population roles.

In sum, continued growth in the world's population, about which virtually nothing can be done in a short period of 15 to 20 years, will reach a level of at least 7.5 billion and perhaps as many as 8.5 billion people by the year 2020.

David F. Nygaard is research fellow in the director general's office at the International Food Policy Research Institute.



"A 2020 Vision for Food, Agriculture, and the Environment" is an initiative of the International Food Policy Research Institute (IFPRI) to develop a shared vision and a consensus for action on how to meet future world food needs while reducing poverty and protecting the environment. Through the 2020 Vision initiative, IFPRI is bringing together divergent schools of thought on these issues, generating research, and identifying recommendations. The *2020 Briefs* present information on various aspects of the issues.