

The demographic dimension: past and future

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The human population took hundreds of thousands of years to reach 1 billion in the mid-nineteenth century, since when it has risen to 6 billion; it will probably reach some kind of equilibrium under 10 billion during the 21st century. This has been a unique historical event and is the social aspect of the Industrial Revolution. For most of this time population growth was constrained by food resources, as described by Malthus just as the period was ending. Boserup (1) argues that population growth itself was the main mechanism in increasing food resources.

We are still in a transitional period during which science and capital have greatly increased food production and, by lowering mortality, population numbers. Third World mortality fell steeply after World War II causing unprecedentedly high rates of population growth. The constraint of growth by reducing birth rates was brought about by birth control resulting from socio economic change, scientific breakthroughs and organised family planning programs. Food production has kept up with population growth, although there are still large numbers of undernourished people.

The presentation will focus on two issues, the future of population growth and the resource problems created by such growth. The United Nations population projections (2,3) will be examined to demonstrate global and regional implications. The end point of the demographic transition is no longer seen as being necessarily constituted by stationary population. In a world where 44% of the population already lives in countries with below-long-term-replacement fertility, it is quite possible that human numbers will peak at 8–10 billion during the 21st century and then begin a long period of decline. Fears that rapid population growth would impede economic growth or would outstrip increases in food production have so far proved unfounded and will probably remain so in the 21st century. The real question is the long-term equilibrium between population and resources in a world of almost 10 billion people, or sustainability in a situation where that number represents a hump preceding smaller numbers.

1. Boserup E. The conditions of agricultural growth and the economics of agrarian change under population pressure. Chicago: Aldine, 1965.
2. United Nations. World population prospects: the 1998 revision. New York, 1999.
3. United Nations. Long-range world population projections based on the 1998 revision. New York, 2000.