

The Population Dilemma*

Because humankind is on the threshold of the twenty-first century, there is considerable speculation about what the future will look like. It is evident that not only will the population continue to grow rapidly in the future, but technological innovations and inventions will also multiply rapidly. Indeed, it appears as if population and technology rely on one another for their sustenance and growth.

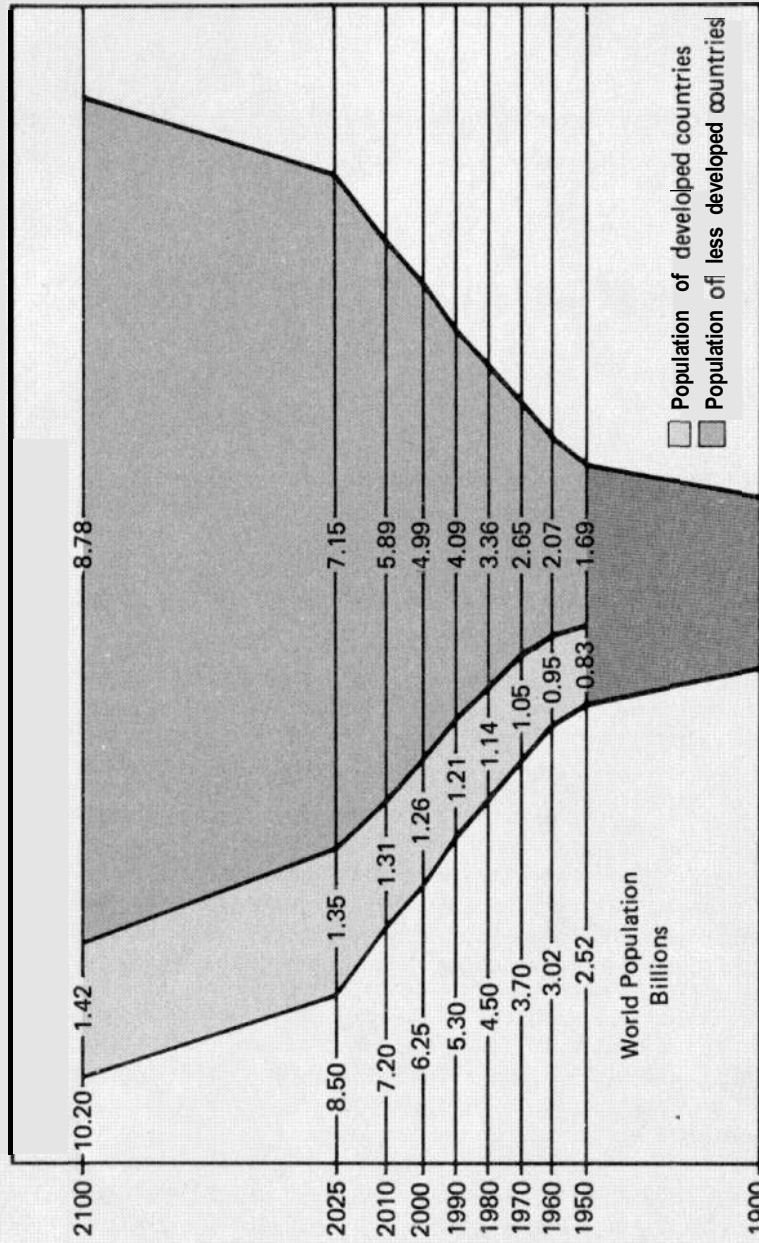
Technology has helped humankind to produce more food, provide better health care, better communication, faster modes of travel, better consumer durables, greater amenities and, by and large, better quality of life for millions of people around the world.

However, at the same time, there has been a marked trend towards the marginalization of poor and uneducated people and a widening of the technological gap between developed and developing countries. These have been intertwined with problems associated with the effects of rapid population growth, uneven population distribution, environmental degradation and, more generally, the threat of unsustainable development in the long run.

Here, then, is the crux of the population and development dilemma – the golden promise of technology for continued human progress, on the one hand, and the perilous threat of unsustainable development resulting from the worsening nexus between population, resources and technology, on the other.

* By Tatsuro Kunugi, Deputy Executive Director, United Nations Population Fund. This note is adapted from an article that appeared in the 8 January 1990 issue of the *Asahi Evening News*.

Growth of world population



Source: Meeting the Population Challenge, (New York, UNFPA, 1990), p. 5.

How to bring these elements into harmony so as to achieve a long lasting, sustainable development is an issue that deserves the most serious attention of the international community during the last, crucial decade of this century.

Mounting pressures

The world population, which has doubled since 1950, is currently estimated at 5.25 billion people. It is increasing at a rate of 1.73 per cent a year – i.e., over 90 million people every year or nearly a quarter of a million persons every day.

The United Nations estimates that the world population will likely reach 9.5 billion by the middle of the next century, but only if the rates of human reproduction continue to decline in the coming decades as expected. Should these rates not decline, however, the earth's population may soar to as high as 12 billion people by the year 2050.

The fact that well over 90 per cent of the population increase is taking place in developing countries adds a special dimension to the problem of achieving sustainable development.

Furthermore, rapid population growth in poorer countries is resulting in mass migrations from rural areas to urban centres. Urban populations in developing countries will double between 1990 and the year 2000, creating numerous large cities, including 16 of the world's 20 largest "mega-cities" - all with populations larger than 10 million.

By the year 2000 it is estimated that 75 per cent of Latin America's population, along with 42 per cent of Africa's and 37 per cent of Asia's, will be urbanized. This will create grave internal tensions for countries and severe hardships for urban migrants. It will also create pressure for international migration, particularly from developing countries to developed countries. And such mass movement could simultaneously pose a serious threat to international security unless its catalysts can be reduced.

In addition, around the middle of the next century, there could be hundreds of millions of "environmental refugees" newly uprooted from coastal areas because of the gradually rising sea level.

Without fundamental changes in population growth rates and patterns of environmental conservation, it is likely that the disequilibrium between population, resources and technology will produce ever-worsening levels of acid rain, depletion of the ozone layer, deforestation, desertification, accumulation



A high population growth rate in Nepal puts an increasing strain on resources and the environment. The attainment of sustainable development through an effective balance between population and resources can save humanity from disaster. (United Nations photograph)

of non-degradable chemicals, depletion and loss of topsoil and other permanent damage to the world's ecosystems.

Therefore, it is necessary to work towards stemming the tide of such worsening trends or, at least, minimizing their consequences. It is of paramount importance to act now before the situation deteriorates further and the damage already done becomes irreversible. This is the challenge that must be met by the community of nations and by people everywhere.

This concern has found expression in the International Development Strategy for the Fourth United Nations Development Decade, which was adopted by the General Assembly at its forty-fourth session. The General Assembly recommended adoption of the following five priority aspects of development: eradication of poverty and hunger; human resources and institutional development; population; environment; and food and agriculture. These tasks are to be done by promoting the development of developing countries within the context of strengthening global development.

Survival equation

The attainment of sustainable development through an effective balance between population and resources can save humanity from disaster, or at least from permanent crippling. Certainly, each country and preferably each community should pursue such a balance in a serious and effective manner. It should be stressed that such a balance is by its very nature dynamic, not static.

The dynamic equilibrium that determines the sustainability (S) may appropriately be conceptualized by a simple equation of the process of interaction between the three key factors: population (P), resources (R) and ingenuity (I).

$$S = \frac{R \times I}{P}$$

While this is only a conceptual equation - since numerical values cannot easily be assigned to the components R, I and even P - it does show that sustainability is a function of the intelligent use of natural resources. As natural resources diminish and population increases, the impact of human ingenuity takes on even greater importance.

This is particularly true as regards political, social and economic organization of human action, as well as technological management of natural resources. It also highlights the crucial importance of innovative approaches, such as the "greening of technology", for the survival of humankind in the next century.

Population (P) should be considered not merely as steadily increasing “numbers” negatively contributing to the depletion of natural resources. Instead, population, as the most important activator of the interaction process, should be conceived of as a mass of people having varying dynamic characteristics as to: growth (whether plus or minus); distribution (where they live and where they migrate); and composition (age and gender structure, literacy etc.). It should also be underlined that an appropriate level of population growth has often been a facilitator, if not a requisite, of sustainable growth.

The equation also helps to explain why the limited availability of natural resources played only a minor role in the modern economic growth of European societies, Japan, Hong Kong and others. It illustrates that economic growth is dependent on production technologies, social organization and management skills. Moreover, this equation may serve not only as an analytical tool to assess options but also as a strategic planning tool to help to determine the direction and type of action that should be taken in order to restore and maintain the optimum equilibrium in the population, resources and ingenuity nexus, with regard to particular situations at various levels, i.e. local, national, regional or global.

Mass commitment

The time is short and the challenge formidable. But to lose any more time is only to court disaster for everyone. It is necessary to try to harmonize self-interest with the collective goal of saving the Earth by fostering sustainable development.

Humankind has witnessed turbulent times throughout the 1980s, with a new generation of ecological crises, international debt issues, rampant violence and the plague of drug traffic around the globe. However, as we now prepare for the twenty-first century, some encouraging signs of a community of interests are seen coming to the surface.

Thanks to a mass consciousness of human rights and fundamental freedoms all over the world, and likewise owing to the rapid advancement of globally shared technologies and communications, the impulses of reform are gathering an energy and setting a pace exceeding the anticipations of decision-makers and expert observers.

Humankind has to restore and maintain harmony in the ruptured relationship between humankind and nature that at present threatens both. All of us must join together to meet the serious challenges that lie ahead. Together, and only together, will we perish or survive. The choice is still ours. It is time to act before it is too late.