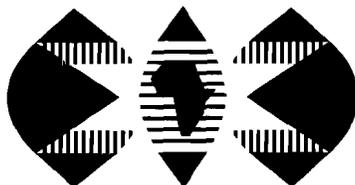


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**A Global Population Policy
To Advance Human Development in the
Twenty-First Century,
With Particular Reference to Sub-Saharan
Africa**

by
Robert S. McNamara



Global Coalition for Africa

**Kampala, Uganda
May 1992**

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Preface

The Advisory Committee of the Global Coalition for Africa, meeting in Kampala, Uganda May 8-9, 1992, has placed on its agenda a discussion of fertility trends in Sub-Saharan Africa and their implications for future economic and social advance. At their request, and as a basis for the discussion in Kampala, I have prepared this statement. It is an adaptation of the Raphael M. Salas memorial Lecture, which I presented at the United Nations on December 10, 1991. I know of no problem which will so influence human development in the region as the current explosive growth of population. It must be brought under control. The paper presents a program for doing so. Needless to say, at this stage, I am solely responsible for its contents.

Robert S. McNamara
Washington, D.C.
May 1992

A Global Population Policy to Advance Human Development in the 21st Century, with Particular Reference to Sub-Saharan Africa

I. Introduction

In September 1968, in my first speech as President of the World Bank, speaking to the Finance Ministers of the world at the annual meeting of the Bank and International Monetary Fund, I stated: " The rapid growth of population is one of the greatest barriers to economic growth and social well-being of [the people of] our member states."¹

That was my view in 1968. It is my view today.

In the intervening 23 years, the world's population has grown faster than ever before, from 3.4 billion to 5.4 billion, an increase of over 60%. Sub-Saharan Africa (SSA) has grown over 100%, from 264 million to 548 million. Growth rates for both the world and the region are still extraordinarily high. If the fertility rates continue their present decline, three billion people will be added to global population over the next thirty years. During the same period, after taking account of AIDS, about which I will have more to say later, SSA's population will increase by approximately 600 million.

Is this a cause for concern?

For many, the answer is not immediately clear. In spite of the increase of 2 billion people in the past quarter century, during the same period of time there have been remarkable advances in economic and social welfare in most of the developing countries where 80% of the world's population lives. Infant mortality rates have fallen; literacy rates have increased; average nutritional levels, in all regions other than SSA, have improved; life expectancy has risen; and, for the developing countries, excluding SSA, consumption per capita rose by 70%—SSA was a notable exception, it registered almost *no* growth.

But in spite of such progress:

1. "Address to the Board of Governors," Robert S. McNamara, World Bank, Wash., D.C., 9/30/68.

- The number of human beings suffering from hunger has increased to over 1 billion, including 180 million in SSA.²
- The number of illiterates has risen to 900 million, 249 million in SSA.²
- Maternal mortality has increased: 500,000 women now die each year from pregnancy and childbirth-related causes, with 140,000 occurring in SSA.²
- Infant and child mortality remains at totally unacceptable levels: 47,000 children, including 11,000 in SSA²—at least half of whom could be saved—die each day.

So, I return to the basic question: Is the increase in human numbers and its environmental and development ramifications a cause for concern?

I will argue that it is; that the interests of both developing and developed countries—particularly the interests of women and children in the developing world—demand immediate action to accelerate the reduction in population growth rates; that there is clear evidence this is possible; and that the action can be undertaken within acceptable expenditure limits.

I will conclude by suggesting how such a program can be initiated.

II. The Consequences of Rapid Population Growth³

When the World Bank began to discuss population issues systematically in the late 1960's, and made its first family planning loan in 1970, there was broad agreement among most scholars that population growth has generally negative consequences for development. The arguments were not as simplistic as those of Malthus who, in the 18th Century, argued that food production would not keep pace with population growth. Nor did they project such catastrophic conse-

2. SSA is far worse off than other regions in the developing world when measured by each of these factors: 33% of the population in all developing countries are suffering from hunger vs. 47% in SSA; 45% are illiterate in all LDC's vs. 59% in SSA; maternal mortality in all LDC's is 290 per 100,000 live births vs. 530 in SSA; and infant mortality in all LDC's is 67 per 1,000 births vs. 100 in SSA.

3. This section draws in part on an unpublished paper by Steven W. Sinding of the Rockefeller Foundation, 1990; on *Economic Consequences of Population Change in the Third World*, by Allen C. Kelley, *Journal of Economic Literature*, Vol XXVI, Dec. '88, pp 1685-1728; and on an as yet unpublished new study on the subject by the same author.

quences as Paul Erhlich in *The Population Bomb* (1968) and Jay Forrester in *World Dynamics* (1971) or Donella H. Meadows, et al. in the Club of Rome's report *The Limits of Growth* (1972)—the latter predicted that the world had only about 100 years remaining before economic and/or biosystems collapsed. Instead, I and my associates in the Bank believed that lack of capital, and surplus labor in the rural areas, were major constraints to human advance in the developing countries—and that rapid population growth aggravated both of these handicaps.

By the late 1970's, this argument began to be questioned. What might be characterized as "revisionist" thinking came into vogue. It was suggested that if decisions regarding family size were made at the family level based on market signals (e.g. the value of additional children as farm labor), these decisions would maximize not only individual welfare but social welfare as well, unless there were clear market failures.

The pendulum appeared to swing back in the mid- and late 1980's. A major report by the World Bank in 1984⁴ emphasized that there were indeed institutional and market failures and that high population growth rates could, and were, severely inhibiting economic growth and human development throughout most of the developing countries.

In the seven years that have passed since publication of that World Bank report, we have learned much more about the adverse consequences of rapid population growth. In sections IV, V, and VI, I will present evidence that high population growth rates:

- Aggravate degrading poverty in the developing countries, which is affecting ever greater numbers, if not ever greater percentages, of their inhabitants.
- Adversely affect the role and status of women and the health and opportunities of their children.
- Increase the danger that the present paths of economic development—in developing and developed countries alike—are unsustainable and risk the destruction of their physical environment.

It is this evidence which leads me to urge a renewed effort—an effort which, as I will explain later, must be concentrated in this

4. *World Development Report 1984*, World Bank, Oxford University Press, NY, 1984.

decade—to reduce rates of population growth and long-term population stabilization levels. Before turning to a more extended discussion of the adverse consequences of high population growth rates and how to deal with them, it will be helpful to examine in more detail past and projected population trends.

III. Population Growth: Past and Projected

For thousands of years, as the table below indicates, the world's population grew at a snail's pace. It took over a million years to reach 1 billion in 1800. But then the pace quickened. The second billion was added in 130 years, the third in 30 and the fourth in 15.

The Rate of Growth of the World's Population

<i>Year</i>	<i>Total Population</i>	<i>Yrs to Add 1 Billion</i>
1,000,000 B.C.	a few thousand	
8,000 B.C.	8 million	
1 A.D.	300 million	
1800	1 billion	one million
1930	2 billion	130
1960	3 billion	30
1975	4 billion	15
1987	5 billion	12
1998	6 billion	11

Source: Population Reference Bureau, based on UN and World Bank Estimates

SSA's growth during the past 70 years has been even more explosive—from 130 million in 1930 to 170 million in 1950 and over 700 million in 2000.

During this decade alone, one billion people will be added to the planet, including 200 million in SSA. Where will it end? The United Nations prepares long-range population projections which it revises every 10 years. The last such projection, prepared in 1982, estimated that population would stabilize at about 10.2 billion by 2085. But today the situation looks less promising. Population growth will stop much later and at much higher levels than previously thought.⁵

A new UN estimate, now in preparation, will raise the figures

5. *The State of the World Population - 1991*, UNFPA.

substantially. The World Bank has just completed, but not yet published, a similar calculation. The Bank's new "standard projection" will indicate the stationary level will not be less than 12.4 billion, with 2.7 billion in SSA (after adjustment for AIDs) compared to 548 million today. And Dr. Nafis Sadik, Executive Director of UNFPA, has stated "the world could be headed toward an eventual total of 14 billion" in which case the numbers for SSA would be even higher.⁶ What would such population levels mean in terms of the alleviation of poverty, the status of women and children, and the sustainability of development programs? To what degree are we consuming today the very capital required to achieve decent standards of living for future generations?

IV. The Relationship Between Population Growth and Sustainable Development

To determine whether the world—or a particular region such as SSA—is on a path of sustainable development, one must relate future population levels and future consumption patterns to their impact on the environment. I will do so in this section.

Population, Consumption and Environmental Damage

The relationship can be expressed in the form of an equation:⁷

$$E_d = P \times C \times D$$

Where: E_d = Environmental Damage

P = Population

C = Consumption per capita

D = the Environmental Damage per unit of consumption.

Our task is to look into the next century and insert values into the equation. We can do so in terms of multiples of present levels.

6. *The State of the World Population - 1990*, UNFPA pp 1-2.

7. The equation oversimplifies the relationship between population, consumption and the environment. Environmental damage has many causes: wasteful consumption and technology, bad management and poor policy. However, the point I wish to emphasize is that, other things being equal, the impact of human activity on the environment is not proportional to changes in population alone, but rather to the *product* of population levels and consumption per capita, both of which will rise sharply in the future.

I begin with population.

Were population to rise to the figure projected by the World Bank—12.4 billion—there would be 2.3-fold increase in P (12.4 billion divided by 5.4 billion) for the world and a 5-fold increase in P for SSA (2.7 billion divided by 548 million).

To approximate C—the growth of consumption per capita—one can begin by recognizing the heavily skewed income distribution, both within the developed countries and between the developed and developing countries.

Within the US the income per capita of the top fifth of the population is 10 times that of the bottom fifth. Between developed and developing countries, on the basis of purchasing power parities, the ratio is approximately 7 to 1—the ratio for SSA may be on the order of 14 to 1. Although these differentials may ultimately be affected by the redistribution of income within nations and between nations, both developed and developing countries must put primary emphasis on raising production per capita, if they are to meet the demands of their people for a better life. “Economic Growth” must continue if the quality of life is to be improved for the billions of poor across the globe. For decades ahead, no other course will be acceptable. Were consumption per capita to grow in the future at 2% per annum—about two-thirds the rate realized during the past 25 years⁸ and roughly the level planned for SSA at the end of this decade—it would double in 35 years, quadruple in 70 years, and by the end of the next century would be 8 times greater than today. Some may say it is unreasonable to consider an 8-fold increase in the per capita incomes of the peoples in the developing countries in the next century. They are wrong. Per capita incomes in the US rose at least as much in this century, starting from a much higher base. A substantial increase—on the order of 8-fold—in per capita incomes in developing countries is both economically and socially desirable and politically justifiable.

If one multiplies an 8-fold increase in consumption per capita by the respective increases in population (2.3-fold for the world and 5-fold for SSA), the globe’s production output would be approximately 20 times, and SSA’s 40 times, greater than today. The impact on non-

8. See table 1.

renewable and renewable resources would be 20 and 40 times greater, assuming no change in the environmental damage per unit of production.

On the assumptions I have made, the question becomes: can a 20-fold (or a 40-fold) increase in the consumption of physical resources be sustained? The answer is almost certainly “No”. If not, can substantial reductions in environmental damage per unit of production be achieved? Here, the answer is clearly “Yes”.

The Outlook for Reduction in Environmental Damage

Environmental damage per unit of production can—and will—be cut drastically. There is much evidence that the environment is being stressed today. But there are equally strong indications that we have barely scratched the surface in minimizing the consumption of resources and the generation of pollution and waste per unit of “human advance.” I will elaborate on both these points.

With each passing year we are learning more about the environmental damage which is caused by present population levels and present consumption patterns. The superficial signs are clearly visible. Our water and air are being polluted, whether we live in Los Angeles, Mexico City or Lagos. Disposal of both toxic and non-toxic wastes is a world-wide problem. And the ozone layer, which protects us all against skin cancer, is being destroyed by the concentration of chlorofluorocarbons in the upper atmosphere.

But for each of these problems there are known remedies—at least for today’s population levels and current consumption patterns. The remedies are costly, politically difficult to implement, and require years to become effective, but they can be put in place.

- New compounds will be substituted for chlorofluorocarbons at a cost of \$35 billion⁹ over the next several decades.
- Steps are being taken to reduce packaging materials per unit of GNP: for example, the weight of containers (cans, bottles, pots) has been reduced by 50 percent in recent years.¹⁰

9. *The New York Times*, 10/1/91.

10. *The London Economist*, 4/13/91.

- Water and air pollution are being reduced—at least in the developed world—although at a heavy cost.

The impact, however, of the huge increments of growth on basic ecosystems such as land, water, forests, and climate is far more difficult to appraise. As Robert V. Ayres points out, the growth of complex systems such as these is essentially non-linear and subject to discontinuities.¹¹ Therefore, they are very difficult to predict. Nathan Keyfitz in a recent article makes the same point.¹²

Land and Water Resources

Can the world's land and water resources produce the food required to feed a population of 12.4 billion, including SSA's 2.7 billion, at acceptable nutritional levels?

Modern agricultural techniques have greatly increased crop yields per unit of land, and have kept food production ahead of population growth—in all major regions of the world except SSA—for several decades. The global increase has been achieved mainly through the Green Revolution: high-yield crop varieties, increased use of fertilizers and pesticides, and the expansion of irrigated land. As the population doubled from 1950 to 1987, global grain production rose even faster: per capita output increased 25%.

But the costs of all of this are proving to be high: widespread acceleration of erosion and nutrient depletion of soils; pollution of surface waters; overuse and contamination of groundwater resources; rapid deforestation; and desertification of over-cultivated or over-grazed lands in many regions.¹³

The early gains of the Green Revolution now have nearly run their course. Since the mid-1980s, increases in worldwide food production have lagged behind population growth. And as I indicated earlier, in Sub-Saharan Africa a "harvest deficit" has existed for several decades.

11. Robert V. Ayres, *Eco-Restructuring: Managing the Transition to an Ecologically Sustainable Economy*, IIASA and Carnegie-Mellon University, 6/12/91, p20.

12. Nathan Keyfitz, *Seven Ways of Causing the Less Developed Countries' Population Problem to Disappear — in Theory*, IIASA, 6/11/91, p2.

13. L. Brown et al, 1990 and 1991, *State of the World 1990 and State of the World 1991*, W.W. Norton, New York; World Resources Institute, International Institute for Environmental and Development, and United Nations Environment Programme, *World Resources 1988-89*, Basic Books, New York.

During the 1960s food production barely kept pace with population growth. Thereafter growth in food output slowed considerably, averaging only half the rate of population growth. Today food production per capita is down about 20% compared to 1970.

What, then, of the future?

Today, in terms of grain equivalent, the 4 billion people in the developing countries consume about 250 kilograms per capita per year. That compares to 450 kilograms in the European Community and 840 kilograms in the U.S.¹⁴ A substantial percentage of the people in the developing world—well over 25%—are malnourished. And the extent of malnourishment is far greater in SSA. Caloric intake per capita, in the region, would have to be increased 30% to equal that of China and 70% to approximate that of the developed world.

As incomes rise, diets of populations in the developing countries will rise in terms of consumption of plant energy. Therefore, looking to the future, we should plan on an increase, in developing countries, of about 50% per capita in food consumption—the comparable figure for SSA would be about 70%—to a level of 375 kilograms of grain equivalent per capita per year. For a population of 12.4 billion this would require a 3.5-fold increase—and for SSA a nearly 9-fold increase—over today's production. Are such increases feasible?

Bernard Gilland considers a 3.5-fold increase for the globe impossible.¹⁵ He estimates that, on average, per capita food consumption approximates 6,000 calories of plant energy and should be planned to increase to 9,000 (an increase of 50%, as I have suggested). By increasing the area of land under cultivation, and by using land-saving technology, especially genetic engineering, Gilland estimates that maximum global food output would support a population of not more than 7.5 billion.

More recent studies¹⁶ are somewhat more optimistic with respect to the global food potential. They conclude that if a variety of actions were taken, beginning with a substantial increase in agricultural

14. "Global Food Resources and Prospects" an unpublished World Bank paper, Aug 1991, Chap 2, p11.

15. "Considerations on World Population and Food Supply," Bernard Gilland, *Population and Development Review* 9, 1983, 2:203-11.

16. In particular, the unpublished study by the World Bank that is referred to in footnote 13.

research, the world's agricultural system could have the capacity to meet food requirements for at least the next forty to fifty years. However, they underline *capacity*. It seems clear that the actions required to realize that capacity are not now being taken. As a result there will be severe regional shortfalls within the global capacity—particularly in SSA, as the paragraph below indicates. As the period of time is extended and the population continues to increase, the likelihood of meeting the requirement will become ever more doubtful.

In 1990, SSA's 524 million people produced about 90 million metric tons of food (maize equivalent). With consumption of 100 million tons, there was a gap of 10 million tons which was met by imports. If population, and food consumption per capita, were to rise to the levels I have assumed (2.7 billion people consuming at levels somewhat below those of the developed world today), consumption would total nearly 900 million tons. I know of no reputable study which projects SSA's production potential at anywhere close to that figure. Even if consumption per capita did not increase above today's levels—levels which leave a high percentage of the population malnourished—the production shortfall by 2025 is likely to rise from 10 million tons to approximately 100 million tons, an alarming prospect. The conclusion is clear: SSA will not be able to feed its people if population growth continues at projected rates.

Forests

Turning to forests, we are beginning to understand their importance, particularly the importance of tropical forests. They are both the primary source of genetic diversity, harboring perhaps 50% or more of all species, and they are a major factor affecting our ability to minimize the concentration of greenhouse gases in the atmosphere and its potential effect on global climate. Yet we continue to destroy them at alarming rates.

A recent forest cover survey by the Food and Agriculture Organization reveals that we are now losing 17 million hectares of tropical forest every year: an area more than half again as large as previously reported.¹⁷ In SSA, 3.3 million hectares of forests and woodlands—out of a total of 660 million—have been lost each year of the 1980's.

Reforestation has reversed only 3% of the acreage lost. Degradation and destruction of forests has already had a severe impact on the wildlife habitat and biodiversity. The World Conservation Union estimates that 64% of the original wildlife habitat in SSA has already been lost. Of even greater concern to the average African family is that in the more densely populated savannah zone of SSA, only 25-30% of total fuelwood needs can now be met from annual regrowth. Although conditions for tree regrowth are favorable in many countries, rapid population growth is causing immense problems. According to FAO and World Bank estimates, eleven countries in SSA faced fuelwood shortages in 1980: Burkina Faso, Burundi, Chad, The Gambia, Kenya, Malawi, Niger, Rwanda, Swaziland, Tanzania and Uganda. By the end of the century, seven more are projected to join the list: Ethiopia, Madagascar, Mali, Nigeria, Senegal, Sierra Leone and Zimbabwe.

Changes in macro-economic policy and changes in forest management, along with technological advances, can, of course, reduce the rate of loss of forest cover. Over time, these factors can even expand the cover. But, as in the case of food production, the changes required are financially costly, politically difficult, and very time consuming. I know of no one who predicts our present course will lead to "sustainable tropical forest management"—and certainly not in SSA—over the next century.

* * * *

More generally, with regard to sustainability, many biologists are beginning to stress that there are biological limits to the size of population which the globe can support at acceptable standards of living. They say, in effect, "we don't know where those limits are but they clearly exist."

Energy and Climate Change

One of the potential biological limits is related to energy use and its effects. The release of carbon dioxide into the atmosphere has been measured since the mid 1950's. It is only, however, in recent years that it has become widely—but still not universally—accepted that the

17. Food and Agriculture Organization of the United Nations, *An Interim Report on the State of Forest Resources in the Developing Countries*, FAO, Rome 1988; and *World Resources 1990-91*, Oxford University Press, 1990, pp. 101-102.

concentration of CO₂, together with the other greenhouse gases, carries the risk of a general warming of the earth's surface and worldwide climate change. If greenhouse gas emissions are not limited, it is estimated that over the next century mean temperatures will increase between 2.6 and 5.8 degrees Celsius, and the level of the sea will rise between 30 and 100 centimeters.¹⁸ SSA is contributing substantially to greenhouse gas concentrations. The Max Plank Institute (Germany) reports that fires, associated with the "slash and burn" agricultural practices of the region, add nearly three times as much carbon dioxide and particles to the atmosphere as do all the fires set by farmers and settlers in South America, including the dramatic fires of Amazona.

Uncertainties abound, all vastly complicating the efforts of politicians to come to grips with the problem. If global warming occurs, what are its likely consequences? How soon will changes appear? What specific changes in weather and rainfall patterns might occur in any given place? Who wins and who loses in the lottery of climate change? How will agriculture and natural ecosystems be affected?

I don't have answers to these questions. But the risks of procrastination are so great, I believe we must begin to act now to stabilize, and then reduce, greenhouse gas emissions across the globe. I am confident that within a decade or two that objective can be achieved at acceptable cost, and without penalizing economic growth in the developing countries. In the U.S., for example, energy consumption per capita and per unit of GNP is approximately twice the level in Germany and Japan. And yet those two nations are planning to reduce per capita consumption below present levels. Therefore, the U.S. should be able to make cuts of 50 to 60%.

Movement in that direction is already occurring.

On May 20, 1991, the Southern California Edison Company, the second largest power generating company in the U.S., announced it would reduce CO₂ emissions from electricity generating sources by 10% over the next decade. There will be a further 10% reduction by the year 2010. Such reductions, in the face of a growing population

18. J.T. Houghton, G.J. Jenkins and J.J. Ephraums, eds., Intergovernmental Panel on Climate Change, *Climate Change, the IPCC Scientific Assessment*. Report prepared for IPCC Working Group I, WMD and UNEP, Cambridge Univ. Press, 1990.

in the area served by the Company and rising production per capita, point to the potential for dramatic changes in both technology and consumption patterns.

Conclusions on Sustainability Limits

Within the past decade, four global environmental phenomena have surfaced: the loss of bio-diversity, acid rain, destruction of the ozone layer and climate change. All are a function of rising population levels and increasing consumption per capita. They should cause us to wonder when other unseen, but silently accumulating, environmental damage will come to our attention. When it does, will we have time to deal with it without coercive limits on population growth or economic activity?

Advances in technology will reduce resource use in relation to production. We can look forward, therefore, to substantial population growth and continuing growth in consumption without comparable increases in environmental damage. But we have no assurance that the globe—or the SSA region—can tolerate production increases of anything approaching the magnitude I have hypothesized.

How much might population grow and production increase without going beyond sustainable levels, levels which are compatible with the globe's capacity for disposal of waste, and which do not deplete essential resources?

Jim MacNeil, Peter Winsemaus and Taizo Yakushiji try to answer the question in *"Beyond Interdependence."* They begin by stating: "Even at present levels of economic activity, there is growing evidence that certain critical global thresholds are being approached, perhaps even passed."¹⁹ They then estimate that if developing nations were to provide their present populations with the level of consumption now prevailing in the industrialized world, energy supply with current forms of energy development would have to increase by a factor of 5. With respect to population levels, the authors state: "If human numbers double [i.e. to 10 billion], a five- to ten-fold increase in economic activity would be required to enable them to meet their basic needs and minimal aspirations." They ask the question: "Is there,

19. *Beyond Interdependence*, Jim MacNeil, et al, Oxford University Press, NY, 1991, p19.

in fact, any way to multiply economic activity a further five to ten times, without it undermining itself and compromising the future completely?"²⁰ They clearly believe the answer is "No."

Such a conclusion would be shared, I believe, by the World Commission on Environment and Development, chaired by Prime Minister Brundtland. The Commission report *Our Common Future* states: "In many parts of the world, the population is growing at rates that cannot be sustained by available resources."²¹

Even if the ultimate "carrying capacity" of the earth and SSA could support population levels and a total output of the size I have discussed—a 2.6-fold increase in population and a 20-fold increase in "output" for the globe, and a nearly 6-fold increase in population and 40-fold increase in output for SSA, by the end of the next century—it is highly unlikely that the technical, institutional and political changes would occur fast enough, and evenly enough across regions, to meet the output requirements during the intervening years.

Similar questions and doubts exist in the minds of many experts in the field. In July of last year, Murray Gell-Mann, Nobel Laureate and Professor of Physics at Cal Tech, Gustave Speth, President of World Resources Institute, and John Steinbruner, Director of Foreign Policy Studies at the Brookings Institution instituted a multi-year project to try to understand how "humanity can make the shift to sustainability." They point out that "such a change, *if it could be achieved* [emphasis added] would require a series of transitions in fields ranging from technology to social and economic organization and ideology—".²² The implication of their statement is not that we should assume the outlook for sustainable development is hopeless, but rather that we must begin now to identify and introduce the changes necessary to achieve it if we are to avoid more precipitate and costly action in the future. I fully share that view and, as I will conclude later, one of the changes which would enhance the prospects for sustainable development in almost all developing countries—and certainly in SSA—would be a reduction in prospective population growth rates.

20. *Ibid.*, p5.

21. *Our Common Future*, The World Commission On Environment and Development, Oxford University Press, NY, 1987, p11.

22. Speth letter of invitation to the conference, 4/1/91.

V. The Relationship of Population Growth to Economic Development and the Alleviation of Poverty²³

As I stated earlier, the developing world has made enormous economic progress over the past three decades. But at the same time, the number of human beings living in “absolute poverty”—if such a condition can be properly described as living—has risen sharply. That is true both for the developing countries as a group, and in particular for SSA.

“Absolute poverty” is a word of art. When I coined it in the late 1960’s I did so to distinguish a particular segment of the poor in the developing world from the billions of others who would be classified as poor in Western terms. The “absolute poor” are those living, literally, on the margin of life. Their lives are so characterized by malnutrition, illiteracy and disease as to be beneath any reasonable definition of human dignity.

Today the number of such individuals exceeds one billion, including 185 million in SSA. As a proportion of total global population, the absolute poor have decreased over the past two decades, but in absolute numbers they have increased. In SSA they have increased both percentage-wise and absolutely. The total number of absolute poor is likely to rise by nearly another 100 million in this decade with nearly all of that increase in SSA.²⁴

A major concern raised by poverty of this magnitude lies in the possibility of physical and intellectual impairment of children. Parental investments of both money and time are critical in the early years of development if a child is to reach its full potential. The distribution of family size by family income in many countries is such that the great majority of children are born into poor families. They are disadvantaged at birth. In Colombia and Malaysia during the 1970’s, for example, the number of children in the poorest 20 percent of the households, was 3 times as great as in the richest 20 percent.

Surveys have shown that millions of the children in these low-income families receive insufficient protein and calories to permit

23. This section draws, in part, on: *World Development Report 1990*, World Bank, Oxford University Press, NY, June 1990.

24. *World Development Report 1990*, World Bank, Oxford University Press.

optimal development of their brains, thereby limiting their capacity to learn and to lead fully productive lives. Additional millions die each year, before the age of five, from debilitating disease directly attributable to nutritional deficiencies.

The penalizing effects at the family level are compounded by weak educational systems. High-fertility countries face a doubling or tripling of their school age population within a decade or two. This is bound to lead to a reduction in the already poor quality of education. A culture of poverty is being transmitted down the generations, sacrificing human resources and impeding social mobility.

It is a disgrace that we in the developed countries, as well as the elite within the developing nations, permit such a situation to exist.

To what extent do high population growth rates contribute to the problem? All would agree they are not the only factor affecting economic and social advance: political organization, macro-economic policies, institutional structures, growth in the industrial nations all affect the rate of growth in developing nations. And, as I mentioned in Section II, economists continue to debate the quantitative impact of population growth on economic development. But intuitively we recognize that the immediate effects are adverse. This is particularly the case in countries where markets are not fully effective, and where institutions capable of offsetting the effects of rapidly rising population levels are not strong.

Our intuition is supported by facts: in Latin America, during the 1970's, when school-age population expanded dramatically, public spending per primary school student fell by 45% in real terms. In Mexico, life expectancy for the poorest 10 percent of the population is twenty years less than for the richest 10 percent. In Cote d'Ivoire, the primary enrollment rate of the poorest fifth is less than half that of the richest.²⁵ In Thailand, the fewer the numbers of children in the family, the more likely that a child will stay in school.²⁶

Based on such analyses, the World Bank stated that "up to a point population growth can be accommodated: in the past three decades

25. *World Development Report 1990*, World Bank, Oxford University Press, NY, July* 1990, p2.

26. *Family Size and Family Well Being in Thailand*, by Napaporn Havanon, John Knodel, Werasing Sittiral.

many countries have managed to raise average incomes even as their populations grew rapidly. In that strict sense, population growth has been accommodated. But the goal of development extends beyond accommodation of an ever larger population: it is to improve people's lives. Rapid population growth in developing countries has resulted in less progress than might have been—lost opportunities for raising living standards, particularly among the large numbers of the world's poor."²⁷ The Bank concluded by stating: "The evidence points overwhelmingly to the conclusion that population growth at the rates common in most of the developing world slows development —. Policies to reduce population growth can make an important contribution to [social advance]."²⁸

I strongly agree with such a judgment. It accords with my experience in 13 years of endeavoring to help the developing countries maximize their rates of economic and social advance, particularly for the absolute poor.

VI. The Impact of Current Population Growth Rates on the Status of Women and Children

Most economists and policy makers have approached population issues as I have so far, i.e. from the point of view of the effects of rapid population growth on the national and international objectives of maximizing economic growth, alleviating poverty and assuring environmental sustainability. There is nothing wrong or illogical about this approach, but we are learning it is seriously incomplete. It is crucial to look at rapid population growth, as well, in terms of its meaning to individuals and families.

From the viewpoint of the family, the most important effect of high growth rates is too many children, too closely spaced. The result is lost opportunities for both women and children.

The first benefit of family planning—of choosing the number and spacing of children—is the benefit of better health for the mother and child.

27. *World Development Report 1984*, World Bank, Oxford University Press, NY, July 1984, p79.

28. *Ibid*, p105.

The health benefits of family planning have been proven by study after study over recent decades.²⁹

The World Fertility Surveys (1972-1984) first showed birth-spacing's health benefits for infants and children. The more recent Demographic and Health Surveys reinforce this finding. They both conclude that high mortality rates accompany more frequent pregnancies.

Babies born less than two years after their next oldest brother or sister are more likely to be underweight and anemic at birth. They start life with a huge disadvantage: on average, they are almost twice as likely to die as those born after a two-year interval. In many countries, birthspacing alone could prevent one in every five infant deaths and the reduction in maternal mortality would be substantial as well.

As I pointed out in Section V, similar arguments can be made about the effects of high population growth rates on the ability of families to educate their children. Education is inevitably costly—in terms of school fees, school clothing, transportation, and income foregone—especially as children stay in school longer. In the face of such costs—costs paid by both society and the individual family—higher growth rates contribute to less education per child. And the penalty falls most heavily on females.

The discrimination against females is seen in many other facets of life. Although in subsistence economies, and in poor families, women do substantially more of the work connected with agricultural production than do men, the women generally suffer the highest level of malnutrition. Men are given first claim on such food as is available, children second, and the mothers last. The malnourished mothers give birth to weak and unhealthy infants, and have problems nursing them adequately.

The mothers, constantly pregnant or nursing infants, are unable to play a larger role in the outside-the-home work force. This diminishes their occupational and economic status, which in turn reinforces the concept that males are more important. This makes sons more desirable than daughters. When only daughters are born, another pregnancy must ensue in order to try again for a son. Repeated

29. *Safeguarding the Future*, Nafis Sadik, UNFPA, NY 1989, p18; and *Family Planning Saves Lives*, 2nd Edition, Pop. Ref. Bureau, Wash DC, 1991.

pregnancy not only increases the family size, but exhausts the mother and weakens her health. Thus the whole cycle begins again.

Such a phenomenon is evident in demographic data. A recent UNDP report states: "100 million women are missing."³⁰ In societies in which girls are treated much the same as boys, there are about 106 females for every 100 males because females, on average, live longer. But if women do not receive equal treatment, the story changes. In most of Asia and North Africa, far fewer female children and women survive because they suffer active discrimination: there are only 94 females for 100 males. The UNDP calculates, therefore, there is a shortage of 12% from the natural figure, a "shortfall" of 100 million women.

At the extreme, the male attitude toward females is represented by the recent event at a school in a developing country where a midnight raid of male students resulted in the deaths of 19 girls and the rape of 71 others. The Deputy Principal of the school was quoted as saying: "The boys never meant any harm—. They just wanted to rape."³¹ Newspapers, in both the developed and developing nations, cited the incident as evidence that in many parts of the world males think of females as objects to serve their pleasure.

As a result of such attitudes, women are being denied the right to make—or to share in making—the most fundamental decisions regarding their own lives. Family planning is an important means by which women can begin to enhance their role and status.

VII. The Implications of the Adverse Effects of High Fertility Rates for Population Policy

Any one of the adverse consequences of the high population growth rates—environmentally unsustainable development; adverse effects on the rate of economic and social advance and the alleviation of poverty; and the impact on the status and welfare of women and children—would be reason enough for developing nations across the globe to move more quickly to reduce fertility rates. Taken together they make an overwhelming case.

30. *Human Development Report 1991*, UNDP, Oxford University Press, NY, 1991, p27.

31. *Time Magazine*, 8/12/91, p43.

If a nation were to decide to lower population growth, what would be a reasonable objective and how might it be accomplished? As I indicated in Section III, the World Bank projects that current trends may lead to national growth patterns which, for the world as a whole, would not stabilize below 12.4 billion, including 2.7 billion in SSA. Such an estimate assumes that adoption of contraceptive practices in the developing world—now at over 50% of all couples in their reproductive years (only 10.8% in SSA, Table IV)—will continue to increase at a moderate pace. Could the rate of increase be accelerated? The answer is clearly “Yes”. In Section IX, I will suggest how that might be done.

The point I wish to emphasize here is that each developing nation has the opportunity to act now to establish—within broad limits—its future population growth, and to set the rate of growth at levels that will maximize the welfare of both present and future generations.

Should not every such developing country, therefore, formulate long-term population objectives on that basis? They would be constrained only by the maximum feasible rate at which the use of contraception could be increased in the particular nation. If this were done the individual country contraception targets might approximate those shown in Table IV, leading to the population stabilization levels shown in Table III. They total 9.7 billion, including 1,549 million in SSA. That is an 80% increase for the globe, and a nearly 200% increase for SSA, over today’s population levels of 5.4 billion and 548 million. But population levels of 12.4 billion and 2.7 billion would be 28% and 90% larger. And by the end of the next century, the additional SSA population of 1.2 billion people—on the assumption of an 8-fold increase in consumption per capita—would require a production output nearly 18 times greater than SSA’s total output today. Think of it: the increment of African population, that I am suggesting can be avoided, would consume 18 times today’s total African production.

VIII. The Urgency of Acting Now

Before turning to a discussion of how acceleration of the rate of increase in contraception prevalence rates can be accomplished, I want to stress that if SSA and other developing nations wish to hold

mately 8.4 billion.³² The populations will continue to grow because the high birth rates of the past have produced an age distribution with a relatively high proportion of males and females in, or still to enter, their reproductive years.

The age distribution of today cannot be changed, but by accelerating the rate of use of family planning, it is possible to accelerate the movement toward stability. The table below shows, for four developing countries, the effect of accelerating the achievement of replacement level fertility by 25 or 30 years.

Population size scenarios
(population in millions)

Country	1990 Population	Ultimate	Ultimate	Difference due to delay	
		Population if NRR=1 in 2010	Population if NRR =1 in predicted year	in reaching NRR=1 Population	% of 1990 Population
Bangladesh	114.8	277	300.0	23.0	20.0
Ghana	15.0	46	66.2	20.2	134.9
Nigeria	118.8	341	617.3	276.3	232.6
Pakistan	114.6	334	556.2	222.2	193.9

Predicted year for NRR=1; Bangladesh 2015; Ghana 2035; Nigeria and Pakistan 2040; 1
Source: World Bank estimates for column 2; Population Reference Bureau estimates for column 3.

If Nigeria, for example, were to realize the contraception prevalence objective for the year 2000 which is shown in Table IV, and thereby achieve a Net Reproduction Rate of 1 (replacement level fertility) in 2010 instead of 2040, its population, now about 119 million, would level off at approximately 341 million instead of 617 million. The difference is equal to 233% of today's population.

Not all developing countries would see as great a change as Nigeria by acting now to achieve the contraception objectives listed in Table IV. But stabilization levels for all would be substantially lower.

32. *Long-Range World Population Projections* (Advance Unedited Copy, 8/27/91), UN, NY.

Before turning to the next section, I should address a question which, at this point, may be in the minds of many readers. Will not the effects of the spread of AIDS across SSA make unnecessary special efforts to reduce fertility rates? The short answer is No: let me explain.

WHO estimates that the prevalence of the AIDS virus (HIV) in SSA has risen from 2 million cases in 1988 to more than 6 million in 1991. This figure is expected to grow to 10 million by 1994. The plague will impose enormous costs on society and will inflict immense suffering on individuals. Preliminary studies on Uganda and Tanzania reveal AIDS will strike heaviest among the working-age population. Productive capacity—through loss of skilled labor and increased morbidity—will be reduced; purchasing power and savings capacity will be reduced; and dependency ratios will be pushed even higher than they are now. Uganda's dependency ratio—because of AIDS and high fertility—is likely to climb to about 113 by 2010, compared to about 67 in the average developing country. The increase in the number of orphans will exacerbate the heavy dependency burden.

The primary effect of AIDS will be, as I say, to impose a heavy economic burden on nations and immense suffering on human beings. A secondary effect will be to reduce population levels in SSA below what they would otherwise be. Preliminary estimates indicate that the stabilization level of 2.7 billion which I referred to in Section III would have been approximately 200 million higher if it were not for AIDS.³³ *So it is clear that even in the face of AIDS SSA's population will explode.* The cost the disease will impose will multiply the burden of the high population growth rates. But the increasing recognition of these facts offers the opportunity to vastly expand the rate at which family planning is accepted.

At present—and very likely for a considerable time in the future—there are only three methods by which the transmission, and eventual death from AIDS, can be prevented: abstinence, monogamy between

33. This does not imply that in SSA 200 million will die from AIDS. The figure includes those dying directly of AIDS as well as births averted because over time those dying will not marry and will not have families.

partners without the HIV virus, and use of condoms in all other contexts. There is evidence—based on the increased demand for condoms in Kenya and Uganda—that this fact is being increasingly recognized. It can and should be the basis for a rapid expansion in the use of condoms across the whole of SSA.

IX. The Path to Reductions in Rates of Population Growth

Assuming a nation wishes to reduce fertility rates to replacement levels at the fastest possible rate, what should be done?

The Bucharest Conference, in 1974, emphasized that high fertility is in part a function of “low” development. Experience has, indeed, shown that as economic growth occurs, particularly when it is accompanied by broadly based social advance, birth rates tend to decline. But Kenya in the 1970’s, and Brazil in the 1950’s and 1960’s, advanced economically while, at the same time, fertility rates remained high or actually increased. Hence it is generally recognized today that not all economic growth leads to immediate fertility reductions and, in any event, such reductions can be accelerated by direct action to increase the use of contraceptives.

It follows, therefore, that any campaign to accelerate reductions in fertility rates should focus on two components:

1. For sustained medium and long-term effect, increasing the pace of economic and social advance, with particular emphasis on enhancing the status of women and on reducing infant mortality;
2. For maximum short-term impact, introducing or expanding comprehensive family planning programs.

Much has been learned in recent years about how to raise rates of economic and social advance in developing countries. I won’t try to summarize the lessons here other than to stress the need to place special emphasis on:

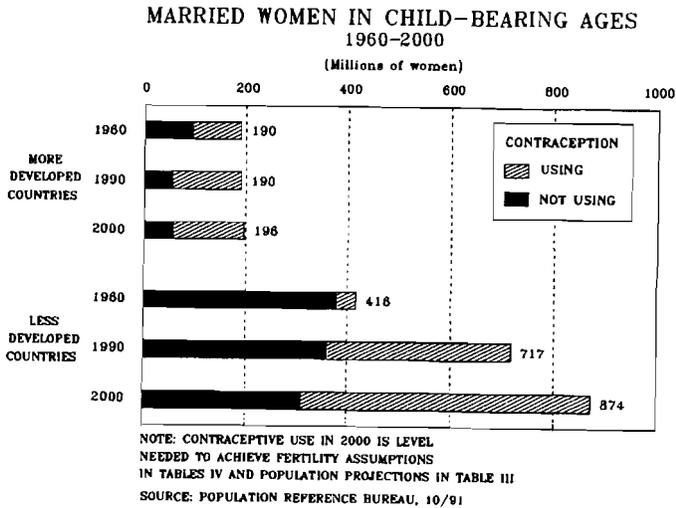
- Increasing the percentage of females attending primary and secondary schools. This is particularly required in SSA. Female literacy in SSA is far below male levels. Table I indicates, for example, that in SSA in 1985 only 36% of females were literate vs 57% of males; Sudan shows 10% vs 39%. Raising school enrollments of females affects

fertility by: delaying marriage age; improving female employment opportunities; and increasing the probability of greater attention by the females to the health of the children.

- Improving the health of both women and children. Infant mortality remains high in many developing countries, including SSA. On average, for the years 1985-90 it amounted to 100 per 1000 births in SSA compared to 32 in China (Table I). High infant mortality rates keep women on a treadmill of reproduction with high cost to society and grave consequences to their health.

I do wish, however, to expand on the magnitude of the increases required, during the decade, in the use of family planning, if population levels in individual countries are not to rise substantially above the figures projected in Table III.

The chart below shows the number of married women in reproductive ages in 1960, 1990, and 2000 for all developing countries.



The number of married women in child-bearing ages in developing countries is projected to increase from 717 million in 1990 to 874 million in 2000, an increase of 22% in one decade.

If the contraception prevalence objectives shown in Table IV are to be met, the number of those women in families using contracp-

tion must rise by nearly 60%, from 257 million in 1990 to 565 million in 2000. The required increase of 206 million in one decade compares with the actual increase of 175 million in the 20 years 1970 - 1990.

The comparable projections for SSA show a 37% increase during the decade in married women in child-bearing ages (from 89 million in 1990 to 122 million in 2000), and a required increase in the number of families using contraception of over 400% (from 10 million in 1990 to 54 million in 2000) to meet the objectives shown in Table IV.

The contraception prevalence objectives for the developing countries as a group will be difficult to achieve by the year 2000 and those for SSA appear unattainable. In Section XII however, I will propose a family planning program for SSA which, I believe, will permit achievement of the objectives. It draws on the experience of Thailand, Indonesia, Bangladesh and Mexico, all of which realized dramatic increases in contraception prevalence rates. The actions those countries took are known and their experience can be exported. It is available to all who ask.

Almost all successful family planning programs have:

- Provided services—contraception methods—diverse enough to meet the needs of populations with widely different mores, income levels, and personal habits.
- Put great emphasis on the health benefits from family planning to both women and children.
- Used both public and private sectors, government and non-government organizations, for the support of the programs.
- Drawn on political leaders—especially those at the local levels—and religious leaders for support. This has been particularly true of the Indonesian program.

In one major respect, the task for the decade ahead is far less difficult than it appears to be. Contraception prevalence rates rise when there is both a demand for services and a supply available. Often the “demand” factor is the most difficult to create. But all the evidence indicates that today there is a large unmet demand waiting to be filled. Fertility surveys, for example, indicate that significant proportions of women have had unwanted births. In addition, substantial numbers

of women who wish to limit or space their children report they are not practicing contraception³⁴—in SSA, the figures range between 20 and 40%.

Table V supports the conclusion. It shows that in many countries—including, for example, Burundi, Ghana, Kenya and Mali—desired family size has decreased substantially in recent years, indicating a rising demand for contraception services. Yet the UNFPA estimates that 300 million couples are still not now served by family planning networks, or live in areas where such services are unavailable. The gap between demand and supply—the “Unmet Demand”—is particularly large in Africa, but it exists across the developing world.

“Unmet Demand” for Contraception in Selected Countries
(% of Married Women)

	<u>Contraception Prevalence Rate</u>	<u>“Unmet Demand”</u>
Burundi	9	20
Ghana	13	27
Kenya	28	29
Mali	5	21
Morocco	42	18
Ecuador	48	22
Peru	55	23
Average (all LDC's)	51	17

Source: *The KAP-Gap and the Unmet Need for Contraception*, John Bongaarts, Population and Development Review, Vol 17, No. 2, June '91, p308.

The “Unmet Demand” can be overcome by improving family planning services and contraceptive distribution. It is estimated that this action alone would reduce population stabilization levels by about 2.2 billion,³⁵ including 400 or 500 million in SSA.

One of the factors standing in the way of meeting the unmet demand is lack of financial resources.

34. *The Demographic Impact of Family Planning Programs*, John Bongaart, et al, Studies in Family Planning Vol. 21, 1990, p305.

35. *Ibid*, p306.

X. Financial Requirements

Developing countries in 1990 spent \$4 to \$4.5 billion of public funds on family planning, \$3 to \$3.5 billion from domestic sources and about \$800 million from external sources (Table VII). Comparable figures for SSA are difficult to obtain, but it is clear that expenditures of public funds for such purposes are very small, perhaps \$160 million from domestic sources and \$150 million from foreign donors.

I estimate that a global family planning program of the size I am proposing for the year 2000 would require approximately \$8 billion in public funds in 1990 dollars,³⁶ including something on the order of \$1.5 billion for SSA.

Because of the substantial increase in cost, I believe that the portion financed by foreign donors should be increased above the 1990 level. If local currency expenditures, in relation to GDP, were held to the 1990 levels they would rise from \$3 to \$3.5 billion in 1990 to about \$4.5 billion in 2000. And the foreign funds required would increase from \$800 million to approximately \$3.5 billion, of which a significant share would have to be earmarked to finance a major part of SSA's program. While the increment of \$2.7 billion in external funds—required for the global program—appears large, it is very, very small in relation to GNP and Official Development Assistance (ODA) projected for the OECD countries. In the year 2000 it would amount to less than two-hundredths of one percent of GNP and 5% of ODA.

Clearly, it is within the capabilities of the industrialized nations and the multilateral financial institutions to assist the developing countries to finance expanded family planning programs. The World Bank has already started on such a path, doubling its financing of population projects in the current fiscal year (from \$169 million in 1990 to an estimated \$340 million in 1991). Others should follow its lead. The funds required are so small and the benefits to both families and nations so large that *money should not be allowed to stand in the way of reducing fertility rates as rapidly as desired by the developing countries. This applies particularly to SSA.*

36. The estimate is at best a rough approximation. However, it is sufficiently representative to permit judgments to be made as to whether family planning programs should be continued at present levels or sharply expanded.

XI. Organizing to Reduce Population Growth

If it were agreed that the interests of SSA and the other developing nations would be served by mobilizing a massive global effort during the 1990s to expand family planning services as I have proposed, what specific action is required?

I urge that emphasis be placed on six steps:

1. Each developing country, including the countries of SSA, with the assistance of UNFPA, the World Bank and whatever other organizations it wishes to call on should establish a target for its own long-term stabilization level, and support that target with a series of quantifiable and monitorable sub-objectives for the decade of the 1990's. Such sub-targets should include: fertility rates, contraceptive prevalence, family-planning expenditures, sources of finance, and so forth.

2. Each developing country should develop specific plans to achieve the objectives and report to its own people each year on the degree to which the objectives are being achieved.

3. The World Bank should assume the responsibility to organize the external financing required to support the country plans and serve as a financing source of last resort.

4. The UNFPA should exercise overall surveillance and monitoring of the Global Program.

5. The Economic and Social Council of the UN, meeting at ministerial level, should receive annual reports from UNFPA on the progress or lack thereof and determine what further action is required to assure that the nations of the world are on a path towards sustainable development and are making satisfactory progress in alleviating the disgraceful levels of poverty so evident across the globe.

6. And, finally, I strongly recommend that a "Population Commission," similar in structure and purpose to the Pearson, Brandt, Palme and Nyeye commissions, be established, chaired preferably by a Third World woman, to assist in the preparation of the 1994 World Conference on Population.

Now, before concluding, I turn to a brief discussion of a specific program to reduce population growth rates in SSA.

XII. A Proposed Program to Accelerate Reductions in SSA's Population Growth Rates

I recognize that most governments in SSA officially endorse programs to reduce fertility rates. To date, however, with few exceptions (most notably Mauritius and Zimbabwe and to a somewhat lesser degree Botswana and Kenya), *they have failed*. In general, total fertility rates are the highest in the world, exceeding 6.5 for many countries, and contraception prevalence rates are the lowest, ranging from near zero to an average of 10% for the region (Table IV). *The prevalence rates must rise sharply—they should quadruple—during this decade, if acceptable rates of economic and social advance in the 21st Century are to be realized.*

Fifteen to twenty points of the thirty-point increase in the contraceptive prevalence rate, required in this decade to meet the fertility and population targets listed for SSA countries in TABLE IV, can be achieved by meeting the existing “unmet” demand, i.e. by providing easy uninterrupted access to contraceptives suitable to client needs. To attain the additional 10 to 15 point increase required, by the year 2000, and to continue to increase contraception prevalence rates, in the early years of the next century, until they reach approximately 75% by 2025, will require strengthening all aspects of the population control program.

To meet these goals, changes in both the organizational structure and the substance of the family planning and associated welfare programs are required:

1. *Establish National Population Councils.* Establishment of National Population Councils, and where appropriate regional sub-councils in each country would appear to be essential. These should function at the highest levels of government to affirm sustained and unequivocal commitment to the rapid reduction of population growth. The Councils would need to coordinate the involvement of the public and private sectors, and monitor programs. Over 25 countries have developed population policies or are in the process of doing so. But these policies have yet to be translated into effective programs. The Population Councils would be an instrument for doing so.

2. *Set National Goals.* As a first step, the Councils, after consultation with local and national groups, should establish the national

population goals, which I referred to earlier. These should be supported by a series of quantifiable and monitorable sub-objectives—fertility rates, contraceptive prevalence, family-planning expenditures, sources of funds, etc.—for the decade of the 1990s.

3. *Expand the Roles of NGO's and the Private Sector.* Successful programs in other developing countries have been based on a full partnership—which does not now exist in most SSA nations—among government and non-governmental organizations, including private sector enterprises. These organizations can play a crucial role, particularly in the early stages, in desensitizing the issues, reaching the people with client-oriented services and preparing the way for rapid expansion of programs. Because the capacity of NGO's is limited in SSA, donors should give increased support to the International Planned Parenthood Federation and its local affiliates to help them expand their capacities.

4. *Meet the "Unmet Needs."* Many countries in SSA are today experiencing shortages of contraceptives, in part because of the stimulus to demand arising from the AIDs crisis. Donors should immediately express a willingness to provide the foreign exchange required to finance the needed imports of condoms and other materials. And the local governments should move just as rapidly to expand the outlets for contraceptive services. Recent Demographic and Health Surveys reveal that more than 20% of the population in much of rural SSA is not even within five kilometers of a family planning clinic, pharmacy or health center. No other developing region is so poorly served.

5. *Promote Reproductive and Sexual Health.* Never before has the concept of reproductive and sexual health assumed such importance in SSA as now when all types of sexually transmitted diseases, including but not limited to AIDs, are rampant in the region. The use of mass media, traditional and religious leaders and other means of communication should be expanded to promote the use of contraceptives for reproductive health.

6. *Enhance the Role of Women.* By any standard, the educational situation of SSA women, as indicated by their literacy levels, is appalling. Most SSA women are illiterate (64% in 1985) and in many nations the illiteracy rate exceeds 75% (Table 1). As I have already indicated, female literacy in SSA compares unfavorably with what has

been achieved in other developing countries, for example China (55%) and Indonesia (64%). SSA women are illiterate because they have not been in school to learn to read or they remained but a short time. School enrollment and retention rates for girls are both extremely low. Both must be increased.

It is difficult to exaggerate the importance of the links between education and the greater acceptance of contraception and lower infant mortality—this linkage exists in SSA as it does throughout the developing world. The process at work here is far broader than the learning that is directly conveyed in classrooms; rather it stems from the ‘empowerment’ effect that school attendance can imply for girls and women. School attendance is the first step in a process of familiarization with the outside, modern world. Women who have had such exposure are better prepared to move beyond the traditional confines of household and village and to see themselves as able and entitled to cope with that world. The more educated a woman is, the more likely she is to want, and be able to obtain: contraception services for herself; and immunization, modern health care, and education for her children.

7. *Reach and Involve the People.* The participation of the people in national population programs is essential if the programs are to be socially and culturally acceptable. The African Population Advisory Committee has developed an “Agenda for Action to Improve Population Program Implementation” to assure participation of both rural and urban populations.

8. *Monitor Progress—or the Lack of It.* Only by each nation establishing goals for its population program and—annually—reporting progress against them, will action be initiated to assure that the explosive rates of population growth are reduced to levels which are compatible with acceptable rates of economic and social advance. Today no more than 3 or 4 governments are performing the monitoring function, and there is no comprehensive annual report on progress—or lack of it—for the region as a whole. The Global Coalition for Africa should assume the responsibility for preparing such a statement.

XIII. Conclusion

Given the severity of the environmental and poverty problems facing SSA and the other developing countries and the global community, reducing population growth rates below currently projected levels, is a necessary, humane and low-cost step which will contribute to their solution. Reducing fertility will allow political leaders more time to come to grips with the immense pressures building on natural resources, and it will permit Third World governments to devote more resources to human development by increasing investment in education, health, welfare, and job creation.

The subject of "population" has only recently been placed on the agenda of the United Nation's Conference on the Environment and Development, to be held in Rio this year. Surely it deserves extended discussion there. And should there not be initiated there as well a discussion—which will require decades to complete—of how we in the developed world, consuming seven times as much per capita as do the citizens of the developing countries, may both adjust our consumption patterns, and reduce the environmental impact of each unit of consumption, so as to help assure a sustainable path of development for all the inhabitants of our planet.

It will be neither morally defensible nor politically acceptable to do less.

TABLE I - Basic Indicators

Country	GNP Per Capita Growth Rate		Infant Mortality (per 1000 births) ²	Life Expectancy ²	% Literates ⁴		% Age Struc. ³ 0-14 years
	Amount ¹	1985-88			Females	Males	
World⁵	3,784	3.0	70	64	50	71	35
More Developed	17,675	2.5	15	74	94	98	22
Less Developed	766	3.0	78	62	49	71	37
Africa	623	0.7	103	54	35	58	45
Sub Saharan	340	0.6	100	52	36	57	45
Low income	242	-0.1	112	47	35	57	47
Benin	380	0.1	90	46	12	26	47
Burkina Faso	320	1.2	138	47	6	23	44
Burundi	220	3.0	119	48	32	53	45
Central African Rep.	390	-0.5	104	49	19	45	45
Chad	190	-2.0	132	46	13	34	43
Ethiopia	120	-0.1	137	44	--	--	46
Gambia	240	--	143	43	11	30	44
Ghana	390	-1.6	90	54	42	63	45
Guinea	430	--	145	43	8	26	47
Guinea-Bissau	180	--	151	42	18	43	41
Kenya	360	1.9	72	58	53	77	50
Lesotho	470	5.2	100	56	84	62	43
Liberia	--	--	142	53	21	43	45
Madagascar	230	-1.8	120	54	68	86	45
Malawi	180	1.1	151	47	31	52	49
Mali	270	1.6	169	44	15	31	47
Mauritania	500	-0.4	127	46	16	40	45
Mozambique	80	--	142	47	16	39	44
Niger	290	-2.3	135	45	11	32	48
Nigeria	250	0.9	105	51	31	55	47
Rwanda	320	1.5	122	49	32	59	49
Sierra Leone	220	--	154	41	6	21	44
Somalia	170	0.5	132	45	9	27	47
Sudan	--	0.0	108	50	10	39	45
Tanzania	130	-0.5	106	53	88	93	49
Togo	390	0.0	94	53	25	51	45
Uganda	250	-3.1	103	51	29	57	50
Zaire	260	-2.1	83	52	53	79	46
Zambia	390	-2.1	80	53	59	77	49
Medium income	1,464	1.3	88	57	36	58	43
Angola	610	--	137	45	23	50	45
Botswana	1,600	8.6	67	59	60	82	49
Cameroon	1,000	3.7	94	52	36	61	47

Source: World Bank, *World Development Reports 1990 and 1991*, New York, Oxford University Press, 1990 and 1991; United Nations, *World Population Prospects*, 1990 (ST/ESA/SER.A/120), New York 1991; and United Nations Development Programme, *Human Development Report, 1990*, New York, Oxford University Press, 1990.

¹ Excludes countries with populations of less than 1 million.

¹1989; ²1985-90; ³1985-90; ⁴1985; ⁵1990.

**TABLE I - Basic Indicators
(continued)**

Country	GNP Per Capita		Infant Mortality		% Literates ⁴		% Age
	Amount ¹	Growth Rate 1966-88	(per 1000 births) ²	Life Expectancy ³	Females	Males	0-14 years
Congo	940	3.5	73	53	38	66	46
Cote d'Ivoire	790	0.9	96	52	31	53	48
Gabon	2,960	0.9	103	52	43	70	32
Mauritius	1,990	2.9	23	69	77	89	29
Namibia	1,030	--	106	56	--	--	46
Reunion	--	--	14	71	81	77	32
South Africa	2,470	0.8	73	60	--	--	37
Senegal	650	-0.8	87	47	19	45	45
Zimbabwe	650	1.0	66	58	55	70	45
North Africa	1,265	2.9	71	62	33	60	41
Algeria	2,230	2.7	74	64	35	63	44
Egypt	640	3.6	65	59	30	60	39
Lybia	5,310	-2.7	82	61	40	70	46
Morocco	880	2.3	82	61	30	54	41
Tunisia	1,260	3.4	52	66	47	68	38
Latin America and the Caribbean	1,953	2.1	54	67	80	84	36
Argentina	2,160	0.0	32	71	94	95	30
Bolivia	620	-0.6	110	53	65	81	44
Brazil	2,540	3.6	63	65	77	80	35
Chile	1,770	0.1	20	72	92	93	31
Colombia	1,200	2.4	40	68	84	86	36
Costa Rica	1,780	1.4	18	75	92	92	36
Cuba	--	--	15	75	91	94	23
Dominican Rep.	790	2.7	65	66	79	82	38
Ecuador	1,020	3.1	63	65	81	86	40
El Salvador	1,070	-0.5	64	62	65	73	44
Guatemala	910	1.0	59	62	44	60	45
Guyana	340	--	56	63	94	97	33
Haiti	360	0.4	97	55	42	54	40
Honduras	900	0.6	69	64	65	71	45
Jamaica	1,260	-1.5	17	73	98	98	33
Mexico	2,010	2.3	43	69	82	88	37
Nicaragua	--	-2.5	62	63	78	78	46
Panama	1,760	2.2	23	72	86	87	35
Paraguay	1,030	3.1	42	67	86	91	40
Peru	1,010	0.1	88	61	75	90	38
Puerto Rico	--	--	15	75	89	90	26
Trinidad & Tob.	3,230	0.9	16	71	94	96	34
Uruguay	2,620	1.3	24	72	95	96	26
Venezuela	2,450	-0.9	36	70	88	84	38
Asia & Middle East	631	3.7	73	59	47	71	35
Afghanistan	--	--	172	41	9	38	42
Bangladesh	180	0.4	119	51	19	45	44
Bhutan	--	--	128	48	19	45	40
Cambodia	--	--	130	48	17	41	35
China	350	5.4	32	69	55	80	26
Cyprus	7,040	--	12	76	85	93	26
Fiji	1,650	--	27	64	75	85	37

TABLE I - Basic Indicators
(continued)

Country	GNP Per Capita Growth		Infant Mortality (per 1000 births) ⁷	Life Expectancy ²	% Literates ⁴		% Age Strut. ¹ 0-14 years
	Amount ¹	Rate 1985-88			Females	Males	
Hong Kong	10,350	6.3	7	72	81	95	21
India	340	1.8	99	58	29	58	36
Indonesia	500	4.3	75	60	64	80	36
Iran, Islamic Rep.	3,200	--	52	65	36	59	44
Iraq	--	--	69	64	41	64	46
Israel	9,790	2.7	12	75	93	97	31
Jordan	1,1640	--	44	66	62	86	44
Korea, PDR	--	--	28	70	--	--	29
Korea, Rep	4,400	6.8	25	69	91	98	26
Kuwait	16,150	-4.3	18	73	63	75	35
Lao, PDR	180	--	110	48	76	92	44
Lebanon	--	--	49	65	69	86	36
Malaysia	2,160	4.0	24	69	65	83	38
Mongolia	--	--	68	61	87	95	41
Myanmar	--	--	70	60	69	88	37
Nepal	180	--	128	51	11	34	42
Oman	5,220	6.4	40	64	12	47	46
Pakistan	370	2.5	109	56	18	43	46
Papua New Guinea	890	0.5	59	54	32	60	41
Philippines	710	1.6	45	63	87	88	40
Saudi Arabia	6,020	3.8	71	63	43	69	45
Singapore	10,450	7.2	8	73	76	90	23
Sri Lanka	430	3.0	28	70	81	92	33
Syrian Arab Rep.	980	2.9	49	65	44	74	48
Taiwan ⁶	--	--	--	--	85	96	--
Thailand	1,220	4.0	28	65	87	95	33
Turkey	1,370	2.6	76	64	64	88	35
U. Arab Emirates	18,430	--	26	70	--	--	31
Vietnam	--	--	64	61	80	90	39
Yemen	650	--	120	50	20	47	50
Eastern Europe	2,469	3.9	21	71	87	97	24
Albania	--	--	39	72	--	--	33
Bulgaria	2,320	--	16	72	--	--	20
Czechoslovakia	3,450	--	15	71	--	--	23
Hungary	2,590	5.1	20	70	--	--	20
Poland	1,790	--	18	72	--	--	25
Romania	--	--	23	70	--	--	23
Yugoslavia	2,920	3.4	25	72	87	97	23
U.S.S.R.	--	--	24	70	--	--	25
OECD countries	19,747	2.4	9	76	96⁷	98⁷	20
Australia	14,360	1.7	8	76	--	--	22
Austria	17,300	2.9	11	74	--	--	17
Belgium	16,220	2.5	10	75	--	--	18
Canada	19,030	2.7	7	77	--	--	21
Denmark	20,450	1.8	7	75	--	--	17
Finland	22,120	3.2	6	75	--	--	19
France	17,820	2.5	8	76	--	--	20
Germany	20,440	2.4	9	75	--	--	16

⁶A province of China; ⁷data not available; these are approximations.

**TABLE I - Basic Indicators
(continued)**

<u>Country</u>	<u>GNP Per Capita</u>		Infant Mortality (per 1000 births) ²	Life Expectancy ³	<u>% Literates⁴</u>		<u>% Age Strut.⁵ 0-14 years</u>
	<u>Amount¹</u>	<u>Growth Rate 1965-88</u>			<u>Females</u>	<u>Males</u>	
Ireland	8,710	2.0	9	74	--	--	28
Italy	15,120	3.0	11	76	96	98	17
Japan	23,810	4.3	5	78	--	--	18
Netherlands	15,920	1.9	8	77	--	--	18
New Zealand	12,070	0.8	11	75	--	--	23
Norway	22,290	3.5	7	77	--	--	19
Sweden	21,570	1.8	6	77	--	--	17
Switzerland	29,880	1.5	7	77	--	--	16
United Kingdom	14,610	1.8	9	75	--	--	19
United States	20,910	1.6	10	76	--	--	21

TABLE II - Population and Population Growth Rates: Past and Current

<u>Country</u>	<u>Population (in millions)</u>			<u>Growth Rates - Average Annual</u>		
	<u>1950</u>	<u>1990</u>	<u>2000¹</u>	<u>1950-1980</u>	<u>1980-1990</u>	<u>1990-2000</u>
World[*]	2,516.4	5,292.2	6,260.8	1.9	1.7	1.7
More Developed	788.6	1,150.1	1,206.4	1.1	0.6	0.5
Less Developed	1,678.4	4,070.6	4,978.3	2.3	2.1	2.0
Africa	221.0	639.3	862.7	2.6	3.0	3.0
Sub Saharan	178.4	524.1	717.6	3.9	4.5	3.0
Low income	145.0	429.7	592.6	2.6	3.1	3.2
Benin	2.0	4.6	6.4	1.8	2.9	3.2
Burkina Faso	3.7	9.0	12.1	2.1	2.6	3.0
Burundi	2.5	5.5	7.4	1.7	2.8	3.0
Central African Rep.	1.3	3.0	4.1	1.9	2.7	2.9
Chad	2.7	5.7	7.3	1.7	2.4	2.6
Ethiopia	19.6	49.2	66.4	2.3	2.4	3.0
Gambia	0.3	0.9	1.1	2.6	3.0	2.6
Ghana	4.9	15.0	20.6	2.6	3.4	3.1
Guinea	2.6	5.8	7.8	1.9	2.5	3.1
Guinea-Bissau	0.5	1.0	1.2	1.5	1.9	2.2
Kenya	6.3	24.0	35.1	3.3	3.7	3.8
Lesotho	0.7	1.8	2.4	2.0	2.8	2.9
Liberia	0.8	2.6	3.6	2.7	3.2	3.3
Madagascar	4.2	12.0	16.6	2.4	3.1	3.3
Malawi	2.9	8.8	12.5	2.5	3.5	3.5
Mali	3.5	9.2	12.7	2.2	2.9	3.2
Mauritania	0.8	2.0	2.7	2.1	2.7	2.9
Mozambique	6.2	15.7	20.5	2.2	2.6	2.7
Niger	2.4	7.7	10.8	2.8	3.2	3.3
Nigeria	32.9	108.5	149.6	2.9	3.2	3.2
Rwanda	2.1	7.2	10.2	3.0	3.4	3.4
Sierra Leone	1.9	4.2	5.4	1.7	2.4	2.7
Somalia	2.4	7.5	9.7	2.6	3.4	2.6
Sudan	9.2	25.2	33.6	2.4	3.0	2.9
Tanzania	7.9	27.3	39.6	2.9	3.7	3.7
Togo	1.3	3.5	4.9	2.3	3.0	3.2
Uganda	4.8	18.8	27.0	3.4	3.6	3.6
Zaire	12.2	35.6	49.2	2.6	3.0	3.2
Zambia	2.4	8.5	12.3	2.9	3.9	3.7
Medium income	33.4	94.4	125.0	2.6	2.8	2.8
Angola	4.1	10.0	13.3	2.1	2.6	2.8
Botswana	0.4	1.3	1.8	2.8	3.7	3.3
Cameroon	4.5	11.8	16.7	2.2	3.1	3.4
Congo	0.8	2.3	3.2	2.4	3.1	3.3
Cote d'Ivoire	2.8	12.0	17.6	3.6	3.8	3.8
Gabon	0.5	1.2	1.6	1.8	3.7	3.2

Source: Population Council, New York, September 1991.

^{*} Excludes countries with populations of less than half a million.

¹ Based on UN median projection in United Nations, *World Population Prospects, 1990*, New York, 1991.

TABLE II - Population and Population Growth Rates: Past and Current
(continued)

<u>Country</u>	<u>Population (in millions)</u>			<u>Growth Rates - Average Annual</u>		
	<u>1950</u>	<u>1990</u>	<u>2000¹</u>	<u>1950-1980</u>	<u>1980-1990</u>	<u>1990-2000</u>
Reunion	0.3	0.6	0.7	2.3	1.6	1.5
Mauritius	0.5	1.1	1.2	2.2	1.1	1.0
Namibia	0.7	1.8	2.4	2.2	3.1	3.1
S. Africa	13.7	35.3	43.7	2.4	2.2	2.1
Senegal	2.5	7.3	9.7	2.7	2.8	2.8
Zimbabwe	2.7	9.7	13.1	3.2	3.1	3.0
North Africa	42.6	115.2	145.1	2.4	2.6	2.3
Algeria	8.8	25.0	32.9	2.5	2.9	2.8
Egypt	20.3	52.4	64.2	2.3	2.5	2.0
Libya	1.0	4.5	6.5	3.6	4.0	3.6
Morocco	9.0	25.1	31.6	2.6	2.6	2.3
Tunisia	3.5	8.2	9.9	2.0	2.5	1.9
Latin America and the Caribbean	164.2	445.2	535.2	2.6	2.1	1.8
Argentina	17.1	32.3	36.2	1.7	1.4	1.1
Bolivia	2.8	7.3	9.7	2.3	2.7	2.8
Brazil	53.4	150.4	179.5	2.7	2.1	1.8
Chile	6.1	13.2	15.3	2.0	1.7	1.5
Colombia	11.9	33.0	39.4	2.7	2.0	1.8
Costa Rica	0.9	3.0	3.7	3.2	2.8	2.1
Cuba	5.9	10.6	11.5	1.7	0.9	0.8
Dominican Republic	2.4	7.2	8.6	2.9	2.3	1.8
Ecuador	3.3	10.6	13.3	3.0	2.6	2.3
El Salvador	1.9	5.3	6.7	2.8	1.5	2.5
Guatemala	3.0	9.2	12.2	2.8	2.8	2.8
Guyana	0.4	0.8	0.9	1.9	0.5	1.1
Haiti	3.3	6.5	8.0	1.7	1.9	2.1
Honduras	1.4	5.1	6.8	3.2	3.4	2.9
Jamaica	1.4	2.5	2.7	1.4	1.4	1.1
Mexico	28.0	88.6	107.2	3.1	2.3	1.9
Nicaragua	1.1	3.9	5.3	3.1	3.3	3.1
Panama	0.9	2.4	2.9	2.6	2.1	1.8
Paraguay	1.4	4.3	5.5	2.8	3.1	2.6
Peru	7.6	21.5	26.3	2.7	2.2	2.0
Puerto Rico	2.2	3.5	3.8	1.2	0.8	1.0
Trinidad & Tobago	0.6	1.3	1.5	1.8	1.7	1.5
Uruguay	2.2	3.1	3.3	0.9	0.6	0.6
Venezuela	5.0	19.7	24.7	3.7	2.7	2.3
Asia & Middle East	1,294.4	2,990.7	3,585.7	2.2	1.9	1.8
Afghanistan	9.0	16.6	26.5	1.9	0.3	4.7
Bangladesh	41.8	115.6	150.6	2.5	2.7	2.6
Bhutan	0.7	1.5	1.9	1.8	2.0	2.3
Cambodia	4.3	8.2	10.0	1.3	2.5	2.0
China	554.8	1,139.1	1,299.2	2.0	1.3	1.3
Cyprus	0.5	0.7	0.8	0.8	1.1	0.8
Fiji	0.3	0.8	0.9	2.6	1.9	1.4
Hong Kong	2.0	5.9	6.3	3.1	1.5	0.8
India	357.6	853.1	1,041.5	2.2	2.1	2.0
Indonesia	79.5	184.3	218.7	2.1	2.0	1.7

**TABLE II - Population and Population Growth Rates: Past and Current
(continued)**

<u>Country</u>	<u>Population (in millions)</u>			<u>Growth Rates - Average Annual</u>		
	<u>1950</u>	<u>1990</u>	<u>2000¹</u>	<u>1950- 1980</u>	<u>1980- 1990</u>	<u>1990- 2000</u>
Iran, Islamic Rep.	16.9	54.6	68.8	2.8	3.4	2.3
Iraq	5.2	18.9	26.3	3.2	3.5	3.3
Israel	1.3	4.6	5.3	3.8	1.7	1.5
Jordan	1.2	4.0	5.6	2.9	3.2	3.3
Korea, PDR	9.7	21.8	26.1	2.1	1.8	1.8
Korea, Rep	20.4	42.8	46.4	2.1	1.2	0.8
Kuwait	0.2	2.0	2.6	7.3	3.9	2.6
Lao, PDR	1.8	4.1	5.5	2.0	2.6	2.8
Lebanon	1.4	2.7	3.3	2.0	0.1	2.1
Malaysia	6.1	17.9	22.0	2.7	2.6	2.1
Mongolia	0.8	2.2	2.8	2.6	2.8	2.6
Myanmar	17.8	41.7	51.1	2.1	2.1	2.0
Nepal	8.2	19.1	24.1	2.0	2.5	2.3
Oman	0.4	1.5	2.2	2.9	4.2	3.7
Pakistan	39.5	122.6	162.4	2.6	3.6	2.8
Papua New Guinea	1.6	3.9	4.8	2.2	2.3	2.2
Philippines	21.0	62.4	77.5	2.8	2.6	2.2
Saudi Arabia	3.2	14.1	20.7	3.6	4.1	3.8
Singapore	1.0	2.7	3.0	2.9	1.2	1.0
Sri Lanka	7.7	17.2	19.4	2.2	1.5	1.2
Syria	3.5	12.5	17.8	3.1	3.5	3.5
Taiwan ²	--	--	--	--	--	--
Thailand	20.0	55.7	63.7	2.8	1.8	1.3
Turkey	20.8	55.9	66.8	2.5	2.3	1.8
U. Arab Emirates	0.1	1.6	2.0	8.9	4.5	2.1
Vietnam	30.0	66.7	82.4	1.9	2.2	2.1
Yemen	4.3	11.7	16.6	2.1	3.5	3.5
Eastern Europe	87.7	124.0	129.2	1.0	0.5	0.4
Albania	1.2	3.2	3.8	2.6	1.9	1.6
Bulgaria	7.3	9.0	9.1	0.7	0.2	0.1
Czechoslovakia	12.4	15.7	16.2	0.7	0.2	0.3
Hungary	9.3	10.6	10.5	0.5	-0.1	0.0
Poland	24.8	38.4	40.4	1.2	0.8	0.5
Romania	16.8	23.3	24.3	1.0	0.5	0.5
Yugoslavia	16.3	23.8	24.9	1.0	0.7	0.4
U.S.S.R.	180.1	288.6	308.4	1.3	0.8	0.7
OECD countries	519.56	733.0	763.5	1.0	0.5	0.4
Australia	8.2	16.9	18.9	1.9	1.4	1.1
Austria	6.9	7.6	7.6	0.3	0.0	0.0
Belgium	8.6	9.8	9.8	0.4	0.0	0.0
Canada	13.7	26.5	28.5	1.9	1.0	0.7
Denmark	4.3	5.1	5.2	0.6	0.0	0.0
Finland	4.0	5.0	5.1	0.6	0.4	0.2
France	41.8	56.1	58.1	0.8	0.4	0.4
Germany	68.4	77.6	77.0	0.5	-0.1	-0.1
Ireland	3.0	3.7	4.1	0.5	0.9	0.9
Italy	47.1	57.1	57.2	0.6	0.1	0.4

² A province of China.

**TABLE II - Population and Population Growth Rates: Past and Current
(continued)**

<u>Country</u>	<u>Population (in millions)</u>			<u>Growth Rates - Average Annual</u>		
	<u>1950</u>	<u>1990</u>	<u>2000¹</u>	<u>1950- 1980</u>	<u>1980- 1990</u>	<u>1990- 2000</u>
Japan	83.6	123.5	128.5	1.1	0.6	0.6
Netherlands	10.1	15.0	15.8	1.1	0.6	0.6
New Zealand	1.9	3.4	3.7	1.6	0.9	0.8
Norway	3.3	4.2	4.3	0.7	0.3	0.3
Sweden	7.0	8.4	8.6	0.6	0.2	0.1
Switzerland	4.7	6.6	6.8	1.0	0.4	0.2
United Kingdom	50.6	57.2	58.4	0.4	0.2	0.2
United States	152.3	249.2	266.1	1.3	0.9	0.7

TABLE III - Projected Population Levels by Country (in millions)

<u>Country</u>	<u>1990</u>	<u>2000</u>	<u>2025</u>	<u>2050</u>	<u>2100</u>
World*	6,220.8	6,023.3	7,765.5	8,911.9	9,706.6
More Developed	1,150.1	1,212.9	1,318.4	1,338.0	1,347.0
Less Developed	4,070.6	4,832.8	6,447.2	7,573.9	8,359.0
Africa	639.3	827.4	1,226.9	1,547.5	1,807.8
Sub Saharan	526.1	687.7	1,033.2	1,314.1	1,549.3
Low income	429.7	567.5	856.9	1,094.0	1,295.9
Benin	4.6	6.2	9.2	11.7	13.7
Burkina Faso	9.0	11.3	16.0	19.8	23.1
Burundi	5.5	7.2	10.7	13.8	16.5
Central African Rep.	3.0	3.8	5.5	6.9	8.0
Chad	5.7	6.9	9.5	11.5	13.5
Ethiopia	49.2	67.3	101.9	130.1	155.4
Gambia	0.9	1.1	1.5	1.8	2.1
Ghana	15.0	19.4	28.9	36.6	42.8
Guinea	5.8	7.1	9.9	12.2	14.4
Guinea-Bissau	1.0	1.2	1.6	2.0	2.4
Kenya	24.0	32.6	51.3	66.9	77.9
Lesotho	1.8	2.2	3.2	4.0	4.6
Liberia	2.6	3.3	5.0	6.2	7.2
Madagascar	12.0	14.9	21.7	27.1	31.7
Malawi	8.8	11.3	17.2	21.7	25.8
Mali	9.2	10.7	15.8	20.0	23.6
Mauritania	2.0	2.4	3.5	4.3	5.1
Mozambique	15.7	20.3	29.8	37.4	44.2
Niger	7.7	9.9	14.8	18.8	22.4
Nigeria	108.5	155.0	236.5	303.3	359.3
Rwanda	7.2	10.0	16.5	21.9	26.8
Sierra Leone	4.2	5.0	6.7	8.1	9.4
Somalia	7.5	8.0	11.5	14.3	16.8
Sudan	25.2	32.2	46.6	58.4	68.7
Tanzania	27.3	32.0	47.9	60.8	71.7
Togo	3.5	4.9	7.4	9.7	11.5
Uganda	18.8	23.2	35.8	46.5	55.6
Zaire	35.6	47.0	72.9	94.4	112.7
Zambia	8.4	11.1	18.0	23.7	28.5
Medium income	94.4	120.2	176.3	220.1	253.5
Angola	10.0	12.6	18.2	22.7	26.8
Botswana	1.3	1.6	2.3	2.9	3.2
Cameroon	11.8	15.9	25.3	33.3	39.4
Congo	2.3	3.1	5.0	6.6	7.9
Cote d'Ivoire	12.0	17.1	27.9	36.6	44.2
Gabon	1.2	1.5	2.1	2.8	3.3
Mauritius	1.1	1.2	1.4	1.5	1.5
Namibia	1.8	2.3	3.5	4.4	5.1
Reunion	0.6	0.7	0.6	1.0	1.0

Source: World Bank Data Files

Note: The projections assume that each "Less Developed" country will increase in the use of contraceptives at the maximum possible rate. They approximate the World Bank's estimate of "rapid" reductions in fertility rates.

* Excludes countries with populations of less than half a million.

TABLE III - Projected Population Levels by Country (in millions)
(continued)

<u>Country</u>	<u>1990</u>	<u>2000</u>	<u>2025</u>	<u>2050</u>	<u>2100</u>
South Africa	35.3	42.6	57.7	68.3	75.4
Senegal	17.3	9.3	13.8	17.6	20.9
Zimbabwe	9.7	12.4	18.1	22.3	24.6
North Africa	115.2	139.7	193.7	233.3	258.5
Algeria	25.0	32.0	47.0	58.2	64.1
Egypt	52.0	61.2	81.2	95.5	105.8
Libya	4.5	6.1	9.4	12.1	13.9
Morocco	25.1	30.5	42.6	51.4	57.2
Tunisia	8.2	9.9	13.6	16.1	17.5
Latin America and the Caribbean	445.2	516.3	685.9	798.9	860.6
Argentina	32.3	35.5	43.1	48.3	51.1
Bolivia	7.3	9.3	13.4	16.7	19.4
Brazil	150.4	175.1	230.8	265.6	285.7
Chile	13.2	14.8	18.6	20.8	21.9
Colombia	33.0	37.8	50.1	57.5	61.1
Costa Rica	3.0	3.3	4.5	5.1	5.4
Cuba	10.6	11.7	13.6	14.2	14.3
Dominican Republic	7.2	8.4	11.2	13.1	14.2
Ecuador	10.6	12.9	17.7	21.0	22.9
El Salvador	5.3	6.1	8.5	10.5	11.7
Guatemala	9.2	11.7	17.4	22.2	25.3
Guyana	0.8	0.8	1.0	1.2	1.3
Haiti	6.5	7.5	9.7	11.6	13.2
Honduras	5.1	6.4	9.5	11.8	13.2
Jamaica	2.5	2.5	2.9	3.3	3.5
Mexico	88.6	101.3	137.8	162.3	173.2
Nicaragua	3.9	5.0	7.6	9.7	10.9
Panama	2.4	2.8	3.7	4.2	4.4
Paraguay	4.3	5.3	7.5	9.2	10.1
Peru	21.6	26.13	5.3	41.7	45.7
Puerto Rico	3.5	3.4	3.5	3.7	3.7
Trinidad & Tobago	1.3	1.4	1.8	2.1	2.2
Uruguay	3.1	3.3	3.8	4.1	4.3
Venezuela	19.7	24.0	32.9	38.8	41.9
Asia & Middle East	2,990.7	3,472.1	4,539.1	5,235.4	5,698.4
Afghanistan	16.6	25.3	34.8	42.2	49.3
Bangladesh	115.6	134.6	183.3	219.4	249.4
Bhutan	1.5	1.7	2.2	2.7	3.1
Cambodia	8.2	9.8	12.7	14.8	17.0
China	1139.1	1284.6	1582.0	1741.1	1826.3
Cyprus	0.7	0.8	0.9	0.9	1.0
Fiji	0.8	0.8	1.0	1.1	1.2
Hong Kong	5.9	6.3	7.0	6.8	6.4
India	853.1	991.7	1287.4	1495.0	1648.8
Indonesia	184.3	210.3	275.8	320.0	347.7
Iran, Islamic Rep.	54.6	70.9	105.2	130.8	147.7
Iraq	18.9	25.5	39.7	51.3	58.9
Israel	4.6	5.5	7.0	7.9	8.2
Jordan	4.0	4.4	7.0	9.1	10.5
Korea, PDR	21.8	25.3	32.7	36.6	38.3

TABLE III - Projected Population Levels by Country (in millions)
(continued)

<u>Country</u>	<u>1990</u>	<u>2000</u>	<u>2025</u>	<u>2050</u>	<u>2100</u>
Korea, Rep.	42.8	46.7	53.4	55.2	55.1
Kuwait	2.0	2.8	3.9	4.4	4.6
Lao, PDR	4.1	5.3	7.7	9.7	11.4
Lebanon	2.7	2.9	3.9	4.8	5.2
Malaysia	17.9	21.4	29.3	34.7	37.3
Mongolia	2.2	2.6	3.8	4.7	5.2
Myanmar	41.7	50.1	68.0	81.2	90.0
Nepal	19.1	23.5	32.6	39.6	45.5
Oman	1.5	2.2	3.6	4.8	5.6
Pakistan	122.6	149.9	225.7	285.8	332.4
Papua New Guinea	3.9	4.8	6.5	8.1	9.3
Philippines	62.4	72.9	98.5	117.2	128.3
Saudi Arabia	14.1	20.7	33.5	44.0	51.7
Singapore	2.7	3.0	3.4	3.5	3.5
Sri Lanka	17.2	18.9	23.7	26.5	27.9
Syrian Arab Rep.	12.5	17.4	28.5	37.8	44.2
Taiwan ¹	--	22.1	25.7	26.7	26.6
Thailand	55.7	63.8	82.6	94.1	100.4
Turkey	55.9	67.2	89.1	103.8	112.4
U. Arab Emirates	1.6	1.9	2.4	2.5	2.7
Vietnam	66.7	81.0	112.3	135.0	147.4
Yemen	11.7	15.6	24.4	31.8	38.1
Eastern Europe	124.0	128.0	139.7	146.9	152.7
Albania	3.2	3.8	4.9	5.6	5.9
Bulgaria	9.0	8.4	8.4	8.5	8.6
Czechoslovakia	15.7	16.1	17.6	18.4	19.1
Hungary	10.6	10.4	10.4	10.4	10.5
Poland	38.4	39.5	43.7	46.4	48.7
Romania	23.3	24.5	27.1	29.1	30.6
Yugoslavia	23.8	25.2	27.6	28.6	29.3
U.S.S.R.	288.6	307.9	352.6	379.3	397.4
OECD countries	733.0	771.6	819.0	803.9	788.8
Australia	16.9	19.5	23.1	23.9	23.9
Austria	7.6	7.7	7.6	7.1	6.7
Belgium	9.8	10.2	10.1	9.7	9.3
Canada	26.5	28.8	32.2	31.9	31.0
Denmark	5.1	5.1	5.0	4.6	4.4
Finland	5.0	5.1	5.1	4.9	4.8
France	56.1	58.9	62.8	62.9	62.3
Germany	77.6	76.3	71.7	64.7	60.8
Ireland	3.7	3.6	4.2	4.6	4.8
Italy	57.0	57.7	55.0	50.1	45.6
Japan	123.5	128.7	130.7	124.6	119.9
Netherlands	15.0	15.5	15.9	14.8	14.0
New Zealand	3.4	3.7	4.2	4.4	4.4
Norway	4.2	4.4	4.7	4.6	4.6
Sweden	8.4	8.8	9.2	9.1	9.2
Switzerland	6.6	6.9	6.9	6.5	6.2
United Kingdom	57.2	58.9	61.36	1.2	60.9
United States	249.2	271.7	309.1	314.1	315.9

¹ A province of China.

**TABLE IV - Fertility Rates and Contraceptive Use in Developing Countries
(Associated with the population projection in Table III)**

Country	Fertility Rates				Contraceptive Use ¹		
	1965	1990	2000	2025	1990	2000	2025
World¹	5.0	3.48	2.65	2.13	53.8	65.4	73.6
More Developed	2.6	1.92	1.88	2.04	71.3	70.7	65.6
Less Developed	6.1	3.92	2.83	2.14	50.5	64.4	74.7
Africa	6.8	6.13	4.14	2.20	16.6	43.7	72.9
Sub Saharan	6.6	6.09	4.13	2.19	10.8	44.5	73.5
Low income	6.8	6.69	4.53	2.23	7.8	37.4	72.2
Benin	7.0	6.35	4.10	2.23	5.9	40.0	70.5
Burkina Faso	6.7	6.50	4.10	2.31	3.1	38.3	68.2
Burundi	6.8	6.80	4.40	2.28	8.7	40.2	71.9
Central Afr. Rep.	5.7	5.75	4.11	2.24	12.7	37.8	69.3
Chad	6.0	5.96	4.00	2.25	17.2	43.3	71.0
Ethiopia	6.7	7.50	5.10	2.31	3.8	33.6	73.1
Gambia	6.5	6.50	4.31	2.43	0.0	32.6	65.1
Ghana	6.9	6.25	4.00	2.17	13.4	45.4	73.3
Guinea	7.0	6.50	4.32	2.49	0.0	32.4	64.1
Guinea-Bissau	5.2	6.00	4.80	2.60	18.9	36.3	68.3
Kenya	8.1	6.66	4.00	2.11	28.4	57.1	79.7
Lesotho	5.8	5.65	3.68	2.14	18.9	48.0	72.5
Liberia	6.7	6.35	4.10	2.14	7.0	40.7	72.2
Madagascar	6.6	6.45	4.06	2.27	0.0	36.6	67.7
Malawi	7.1	7.60	5.20	2.36	7.0	35.3	73.6
Mali	7.1	7.03	4.74	2.31	4.6	34.7	71.3
Mauritania	6.5	6.80	4.40	2.34	0.0	34.5	68.3
Mozambique	6.4	6.41	4.45	2.27	0.0	29.1	67.4
Niger	7.1	7.14	4.91	2.31	0.0	30.1	70.4
Nigeria	6.9	6.58	4.44	2.16	7.3	38.0	73.0
Rwanda	7.8	8.29	5.89	2.33	14.4	38.1	78.3
Sierra Leone	6.3	6.50	4.10	2.39	4.0	38.8	67.2
Somalia	6.6	6.77	4.37	2.31	0.0	34.6	68.7
Sudan	6.7	6.33	4.25	2.27	3.4	35.8	68.8
Tanzania	6.9	6.56	4.38	2.25	3.0	34.2	69.5
Togo	6.6	6.65	4.40	2.18	33.9	56.7	80.8
Uganda	6.9	7.30	4.90	2.28	4.9	35.2	73.1
Zaire	6.0	6.05	4.72	2.20	14.2	33.8	72.6
Zambia	6.6	6.71	4.90	2.20	3.0	29.2	71.8
Medium income	6.5	5.49	3.73	2.15	32.5	51.6	74.9
Angola	6.4	6.47	4.40	2.28	3.0	32.8	68.6
Botswana	6.9	4.81	2.72	2.06	35.0	65.0	75.0
Cameroon	6.1	6.47	4.72	2.13	2.0	28.6	71.5
Congo	6.1	6.56	5.13	2.17	11.2	30.1	74.0
Cote d'Ivoire	7.4	7.32	5.28	2.24	3.0	30.0	73.8
Gabon	4.1	5.71	4.89	2.22	30.8	39.8	75.7

Source: Fertility rates are from World Bank Data Files; contraceptive use is from The Population Council Data Bank.

¹ Excludes countries with populations of less than half a million.

¹ Percentage of married women of childbearing age in families using contraception.

**TABLE IV - Fertility Rates and Contraceptive Use in Developing Countries
(continued)**

<u>Country</u>	<u>Fertility Rates</u>				<u>Contraceptive Use¹</u>		
	<u>1965</u>	<u>1990</u>	<u>2000</u>	<u>2025</u>	<u>1990</u>	<u>2000</u>	<u>2025</u>
Mauritius	5.0	1.88	1.78	2.03	79.5	80.9	77.4
Namibia	6.1	5.94	3.90	2.10	14.2	44.4	73.0
Reunion	5.2	2.29	2.06	2.05	69.6	73.3	73.6
S. Africa	6.2	4.28	2.71	2.07	56.3	71.0	79.1
Senegal	7.0	6.50	4.10	2.28	14.9	45.8	72.5
Zimbabwe	7.5	4.98	2.76	2.07	45.7	71.0	79.5
North Africa	7.0	4.55	2.89	2.11	41.2	62.7	74.3
Algeria	7.4	5.16	3.18	2.10	44.5	65.8	79.2
Egypt	6.8	4.11	2.69	2.13	40.8	62.2	71.5
Libya	7.3	6.67	3.87	2.10	4.7	43.7	72.6
Morocco	7.1	4.69	2.91	2.11	41.5	61.9	74.0
Tunisia	7.0	3.90	2.56	2.09	54.2	71.1	77.5
Latin America and the Caribbean	5.8	3.37	2.36	2.09	60.3	72.5	76.3
Argentina	3.1	2.82	2.17	2.07	61.5	71.3	72.8
Bolivia	6.6	5.91	3.90	2.18	31.0	55.0	77.1
Brazil	5.7	3.23	2.24	2.08	69.2	79.4	81.2
Chile	4.9	2.59	2.10	2.07	64.4	71.2	71.6
Colombia	6.5	2.90	2.14	2.08	66.7	75.6	76.3
Costa Rica	6.4	3.06	2.17	2.07	70.9	80.1	81.3
Cuba	4.5	1.90	1.91	2.05	61.0	60.7	57.2
Dominican Rep.	7.0	3.51	2.50	2.09	55.3	69.4	75.4
Ecuador	6.8	4.03	2.61	2.10	48.4	67.4	75.0
El Salvador	6.7	4.65	2.89	2.09	52.6	69.5	79.3
Guatemala	6.7	5.45	3.50	2.10	26.6	53.6	74.7
Guyana	6.1	2.85	2.17	2.08	51.1	63.1	64.8
Haiti	6.2	4.83	3.05	2.18	10.8	41.0	60.5
Honduras	7.4	5.27	2.98	2.10	46.1	69.5	80.0
Jamaica	5.7	2.44	2.08	2.05	56.4	64.2	64.6
Mexico	6.7	3.32	2.22	2.08	57.9	73.0	75.1
Nicaragua	7.2	5.35	3.42	2.09	38.9	61.6	78.5
Panama	5.8	2.90	2.10	2.07	66.4	75.7	76.1
Paraguay	6.6	4.65	2.85	2.09	47.0	65.8	76.5
Peru	6.7	3.82	2.58	2.10	54.9	70.4	76.9
Puerto Rico	3.9	2.29	2.08	2.06	74.8	77.5	77.7
Trinidad & Tob.	4.4	2.80	2.14	2.06	54.5	66.4	68.0
Uruguay	2.9	2.31	2.09	2.07	69.5	73.0	73.4
Venezuela	6.2	3.56	2.47	2.08	40.6	60.1	67.7
Asia & Middle East	6.0	3.53	2.59	2.13	56.1	68.2	75.0
Afghanistan	7.1	6.90	4.50	2.61	1.6	35.0	65.1
Bangladesh	6.8	4.88	3.20	2.28	32.9	55.3	70.0
Bhutan	5.9	5.53	3.52	2.38	8.9	41.3	62.8
Cambodia	6.3	4.56	3.20	2.20	23.8	46.8	65.8
China	6.0	2.47	2.12	2.08	74.9	78.5	79.0
Cyprus	3.1	2.23	2.09	2.07	71.1	73.4	73.6
Fiji	5.3	3.05	2.18	2.08	44.7	61.9	64.0
Hong Kong	4.7	1.55	1.60	2.00	82.6	81.9	75.8
India	5.7	4.00	2.68	2.14	44.9	64.1	72.7
Indonesia	5.5	3.25	2.27	2.10	52.2	68.0	70.9
Iran, Islam. Rep.	7.1	6.03	3.50	2.12	30.8	58.7	77.1

**TABLE IV - Fertility Rates and Contraceptive Use in Developing Countries
(continued)**

Country	Fertility Rates				Contraceptive Use ¹		
	1965	1990	2000	2025	1990	2000	2025
Iraq	7.2	6.20	3.95	2.12	12.4	45.0	73.5
Israel	3.8	2.85	2.14	2.07	60.7	71.4	72.7
Jordan	8.0	6.30	4.05	2.08	35.8	59.3	81.3
Korea, PDR	6.3	2.36	2.11	2.07	68.4	72.5	73.1
Korea, Rep	5.0	1.77	1.78	2.03	76.1	76.0	71.6
Kuwait	7.4	3.66	2.47	2.05	52.1	69.6	75.8
Laos, PDR	6.2	6.69	4.29	2.29	5.1	38.4	70.2
Lebanon	6.2	3.64	2.51	2.10	38.7	58.4	66.5
Malaysia	6.3	3.65	2.46	2.08	56.8	71.3	76.7
Mongolia	6.0	4.74	3.02	2.11	15.1	48.3	66.5
Myanmar	5.8	3.87	2.79	2.10	45.5	60.8	72.2
Nepal	6.0	5.71	3.76	2.27	18.1	46.8	70.4
Oman	7.2	7.02	4.77	2.08	0.0	32.5	74.1
Pakistan	7.0	6.55	4.30	2.21	15.4	45.1	74.6
P. New Guinea	6.2	5.10	3.24	2.20	13.4	46.0	65.9
Philippines	6.3	3.63	2.53	2.10	48.9	66.3	73.1
Saudi Arabia	7.3	7.02	4.77	2.10	1.2	33.3	74.2
Singapore	4.2	1.85	1.87	2.04	73.5	73.2	70.1
Sri Lanka	4.9	2.42	2.10	2.07	65.5	71.0	71.4
Syrian Arab Rep.	7.6	6.61	4.36	2.10	10.6	41.6	75.0
Taiwan ²	--	1.85	1.78	2.03	78.0	79.1	75.3
Thailand	6.3	2.43	2.12	2.08	73.5	77.5	78.0
Turkey	5.9	3.56	2.50	2.09	65.9	76.7	81.3
U. Arab Emirates	6.8	4.59	2.85	2.07	31.0	55.8	69.9
Vietnam	6.0	3.94	2.56	2.09	56.4	72.6	78.6
Yemen	7.7	7.71	5.31	2.38	1.8	31.3	72.3
Eastern Europe	2.4	2.06	2.04	2.08	67.6	67.8	67.3
Albania	5.4	2.97	2.18	2.08	60.9	72.2	73.8
Bulgaria	2.2	1.90	1.91	2.06	76.0	75.8	73.5
Czechoslovakia	2.2	2.00	2.01	2.06	75.0	74.9	74.0
Hungary	1.9	1.81	1.83	2.05	74.0	73.6	69.5
Poland	2.5	2.10	2.11	2.09	75.0	75.0	75.3
Romania	2.5	2.13	2.11	2.08	58.0	58.5	59.2
Yugoslavia	2.6	2.00	2.01	2.07	55.0	54.8	52.9
U.S.S.R.	2.5	2.36	2.10	2.07	35.1	43.6	44.7
OECD countries	2.6	1.72	1.76	2.03	72.1	71.2	65.3
Australia	3.1	1.85	1.87	2.04	75.0	74.7	71.6
Austria	2.7	1.48	1.54	2.00	72.7	71.3	59.6
Belgium	2.5	1.60	1.64	2.01	81.0	80.4	74.5
Canada	3.1	1.68	1.71	2.02	73.3	72.6	66.2
Denmark	2.4	1.50	1.55	2.00	63.0	61.3	46.0
Finland	2.3	1.68	1.71	2.01	80.0	79.5	74.7
France	2.7	1.83	1.85	2.03	79.0	78.7	75.9
Germany	2.4	1.44	1.50	2.00	76.9	75.6	64.4
Ireland	3.9	2.17	2.09	2.08	68.4	69.9	70.1
Italy	2.5	1.31	1.38	1.99	78.0	76.3	61.5
Japan	2.0	1.68	1.71	2.01	64.4	63.5	55.1
Netherlands	2.9	1.54	1.59	2.00	71.3	70.2	59.8
New Zealand	3.5	2.00	2.01	2.06	75.0	74.9	74.1

² A province of China.

**TABLE IV - Fertility Rates and Contraceptive Use in Developing Countries
(continued)**

<u>Country</u>	<u>Fertility Rates</u>				<u>Contraceptive Use¹</u>		
	<u>1965</u>	<u>1990</u>	<u>2000</u>	<u>2025</u>	<u>1990</u>	<u>2000</u>	<u>2025</u>
Norway	2.8	1.80	1.82	2.03	71.0	70.5	66.2
Sweden	2.2	1.98	1.98	2.06	74.8	74.6	73.4
Switzerland	2.4	1.65	1.69	2.02	71.0	70.1	62.4
United Kingdom	2.7	1.84	1.86	2.04	82.5	82.3	80.1
United States	2.9	1.88	1.89	2.04	68.2	67.9	64.7

TABLE V - Trends in Average Number of Children Desired among Married Women, 1970s vs. 1980s

<u>Country</u>	<u>Date of Field Work</u>		<u>Mean Number of Children Desired</u>		<u>Percent Decline</u>
	<u>1970s</u>	<u>1980s</u>	<u>1970s</u>	<u>1980s</u>	
Sub-Saharan Africa					
Ghana	1979/80	1988	6.0	5.5	9
Kenya	1977/78	1988/89	7.2	4.7	35
Senegal	1978	1986	8.3	7.1	14
North Africa					
Egypt	1980	1988/89	4.1	2.9	29
Morocco	1979/80	1987	4.9	3.7	24
Tunisia	1978	1988	4.1	3.5	17
Asia					
Indonesia	1976	1987	4.1	3.2	22
Sri Lanka	1975	1987	3.8	3.0	21
Thailand	1975	1987	3.7	2.8	24
Latin America					
Colombia	1976	1986	4.1	3.0	27
Dominican Rep.	1975	1986	4.6	3.6	22
Ecuador	1979	1987	4.1	3.3	19
Mexico	1976	1987	4.4	3.3	25
Peru	1977/78	1986	3.8	2.9	24
Trinidad & Tob.	1977	1987	3.8	3.1	18

Source: Charles F. Westoff, "Reproductive Preferences: A Comparative View," *Demographic and Health Surveys Comparative Studies*, no. 3, Institute, for Resource Development/Macro Systems, Inc., February 1991.

TABLE VI - Evaluation of Family Planning Programs in Developing Countries

<u>Strong</u>	<u>Moderate</u>	<u>Weak</u>	<u>Very Weak or None</u>
Bangladesh	Algeria	Afghanistan	Argentina
Botswana	Chile	Angola	Bhutan
China	Colombia	Benin	Cambodia
El Salvador	Costa Rica	Bolivia	Chad
India	Cuba	Brazil	Cote d'Ivoire
Indonesia	Dominican Rep.	Burkina Faso	Gabon
Korea, Rep.	Ecuador	Burundi	Iraq
Mexico	Egypt	Cameroon	Kuwait
Sri Lanka	Ghana	Central African Rep.	Lao, PDR
Taiwan ¹	Guatemala	Congo	Libya
Thailand	Guyana	Ethiopia	Malawi
Tunisia	Honduras	Guinea	Myanmar
Vietnam	Iran, Islamic Rep.	Guinea-Bissau	Namibia
	Jamaica	Haiti	Oman
	Kenya	Jordan	Saudi Arabia
	Korea, PDR	Lesotho	Somalia
	Lebanon	Madagascar	Sudan
	Malaysia	Mali	U. Arab Emirates
	Mauritius	Mauritania	
	Morocco	Mozambique	
	Nepal	Niger	
	Pakistan	Nigeria	
	Panama	Papua New Guinea	
	Peru	Paraguay	
	Philippines	Rwanda	
	South Africa	Senegal	
	Singapore	Sierra Leone	
	Trinidad & Tob.	Syrian Arab Republic	
	Venezuela	Tanzania, United Republic	
	Zambia	Togo	
	Zimbabwe	Turkey	
		Uganda	
		Uruguay	
		Yemen	
		Zaire	

Source: W. Parker Maudlin and John A. Ross, "Family Planning Programs: Efforts and Results, 1982-1989," *Studies in Family Planning*, vol. 22, no. 6, Nov./Dec. 1991.

¹ A province of China.

TABLE VII - Sources of Foreign Assistance for Population Activities - 1989
(in million US dollars)

<u>Country</u>	<u>Amount</u>	<u>Percentage of GDP</u>	<u>Percentage of ODA</u>
Australia	5.4	.00205	.53
Austria	0.2	.00014	.06
Belgium	1.0	.00064	.14
Canada	31.9	.00603	1.38
Denmark	18.4	.01823	1.97
Finland	15.7	.01395	2.22
France	0.7	.00007	.01
Germany	31.3	.0026	.63
Italy	2.9	.00033	.08
Japan	59.9	.00211	.67
Netherlands	33.0	.01428	1.58
New Zealand	0.4	.00108	.50
Norway	43.7	.04949	4.77
Soviet Union	0.5	----	----
Sweden	34.4	.01861	1.91
Switzerland	5.4	.00292	.96
United Kingdom	28.5	.00843	1.10
United States	247.7	.00473	3.23
TOTAL	561.0	.0036	1.21
World Bank	125.4		
Private Sources	39.3		
UNFPA Trust Fund	31.1		
GRAND TOTAL	756.8		

Source: United Nations Population Fund, *Global Population Assistance Report 1982-1989*, New York, 1989.

Glossary

Carrying Capacity: The maximum sustainable size of a resident population in a given ecosystem.

Contraceptive Prevalence Rate: The percentage of couples of reproductive age who are using some method of family planning.

Crude Birth Rate (CBR): The number of births, per year, per 1,000 of population.

Crude Death Rate (CDR): The number of deaths, per year, per 1,000 of population.

Doubling Time: The number of years required for a population of an area to double its present size, given the current rate of population growth.

Infant Mortality Rate: The number of deaths, per year, of infants aged 0-12 months, per 1,000 live births.

Life Expectancy at Birth: The average number of years newborn children would live if subject to mortality risks prevalent for the cross-section of the population at the time of their birth.

Maternal Mortality Rate: The number of deaths to women due to pregnancy and childbirth complications per 100,000 live births in a given year.

Net Reproductive Rate (NRR): The number of daughters a woman would have, under prevailing fertility and mortality patterns, who would survive to the mean age of childbearing.

Rate of Natural Increase (NI): The difference between the crude birth rate and the crude death rate, usually expressed as a percentage.

Rate of Population Growth: The rate of natural increase, adjusted for migration, and expressed as a percentage of the total population in a given year.

Replacement-Level Fertility: A level of fertility equivalent to a Net Reproductive Rate of 1.0—the level at which childbearing women, on the average, have enough daughters to replace themselves in the population.

Stationary Population: A population that for a long time has had a constant replacement-level fertility and therefore also has a growth rate equal to zero and a constant age composition.

Total Fertility Rate (TFR): The number of live births an average woman would have if during her lifetime her childbearing behavior were the same as that of the cross-section of women at the time of observation. A total fertility rate of 2.1 is equivalent to replacement-level fertility.

“Unmet Demands”: The number or percentage of married women who say they either want to limit the number of births or space them more than two years apart but are not using family planning.

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