

# Population Trends: Humanity in Transition

## Coping with Crisis

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## Foreword

Terje Rød-Larsen

*President, International Peace Academy*

The International Peace Academy (IPA) is pleased to introduce a new series of Working Papers within the program *Coping with Crisis, Conflict, and Change: The United Nations and Evolving Capacities for Managing Global Crises*, a four-year research and policy-facilitation program designed to generate fresh thinking about global crises and capacities for effective prevention and response.

In this series of Working Papers, IPA has asked leading experts to undertake a mapping exercise, presenting an assessment of critical challenges to human and international security. A first group of papers provides a horizontal perspective, examining the intersection of multiple challenges in specific regions of the world. A second group takes a vertical approach, providing in-depth analysis of global challenges relating to organized violence, poverty, population trends, public health, and climate change, among other topics. The Working Papers have three main objectives: to advance the understanding of these critical challenges and their interlinkages; to assess capacities to cope with these challenges and to draw scenarios for plausible future developments; and to offer a baseline for longer-term research and policy development.

Out of these initial Working Papers, a grave picture already emerges. The Papers make clear that common challenges take different forms in different regions of the world. At the same time, they show that complexity and interconnectedness will be a crucial attribute of crises in the foreseeable future.

First, new challenges are emerging, such as climate change and demographic trends. At least two billion additional inhabitants, and perhaps closer to three billion, will be added to the world over the next five decades, virtually all in the less developed regions, especially among the poorest countries in Africa and Asia. As a result of climate change, the magnitude and frequency of floods may increase in many regions; floods in coastal Bangladesh and India, for example, are expected to affect several million people. The demand for natural resources—notably water—will increase as a result of population growth and economic development; but some areas may have diminished access to clean water.

Second, some challenges are evolving in more dangerous global configurations such as transnational organized crime and terrorism. Illicit and violent organizations are gaining increasing control over territory, markets, and populations around the world. Non-state armed groups complicate peacemaking efforts due to their continued access to global commodity and arms markets. Many countries, even if they are not directly affected, can suffer from the economic impact of a major terrorist attack. States with ineffective and corrupted institutions may prove to be weak links in global arrangements to deal with threats ranging from the avian flu to transnational terrorism.

Finally, as these complex challenges emerge and evolve, “old” problems still persist. While the number of violent conflicts waged around the world has recently declined, inequality—particularly between groups within the same country—is on the rise. When this intergroup inequality aligns with religious, ethnic, racial and language divides, the prospect of tension rises. Meanwhile, at the state level, the number of actual and aspirant nuclear-armed countries is growing, as is their ability to acquire weapons through illicit global trade.

As the international institutions created in the aftermath of World War II enter their seventh decade, their capacity to cope with this complex, rapidly evolving and interconnected security landscape is being sharply tested. The United Nations has made important progress in some of its core functions—“keeping the peace,” providing humanitarian relief, and helping advance human development and security. However, there are

reasons to question whether the broad UN crisis management system for prevention and response is up to the test.

Not only the UN, but also regional and state mechanisms are challenged by this complex landscape and the nature and scale of crises. In the Middle East, for example, interlinked conflicts are complicated by demographic and socioeconomic trends and regional institutions capable of coping with crisis are lacking. In both Latin America and Africa, “old” problems of domestic insecurity arising from weak institutions and incomplete democratization intersect with “new” transnational challenges such as organized crime. Overall, there is reason for concern about net global capacities to cope with these challenges, generating a growing sense of global crisis.

Reading these Working Papers, the first step in a four-year research program, one is left with a sense of urgency about the need for action and change: action where policies and mechanisms have already been identified; change where institutions are deemed inadequate and require innovation. The diversity of challenges suggests that solutions cannot rest in one actor or mechanism alone. For example, greater multilateral engagement can produce a regulatory framework to combat small arms proliferation and misuse, while private actors, including both industry and local communities, will need to play indispensable roles in forging global solutions to public health provision and food security. At the same time, the complexity and intertwined nature of the challenges require solutions at multiple levels. For example, governments will need to confront the realities that demographic change will impose on them in coming years, while international organizations such as the UN have a key role to play in technical assistance and norm-setting in areas as diverse as education, urban planning and environmental control.

That the world is changing is hardly news. What is new is a faster rate of change than ever before and an unprecedented interconnectedness between different domains of human activity—and the crises they can precipitate. This series of Working Papers aims to contribute to understanding these complexities and the responses that are needed from institutions and decision-makers to cope with these crises, challenges and change.



Terje Rød-Larsen

## Introduction: Past Trends

During the twenty-first century billions of people are expected to join the world's current population of 6.7 billion. Virtually all of these newcomers will be born in the less developed countries of the world, and many in the least-developed.

In addition to this enormous growth of humanity, major global population trends and significant demographic differentials are interacting with powerful forces of globalization, resulting in mounting critical challenges to human well-being, social and economic development, international relations, and security. In particular, these challenges are impacting (1) social, economic, and environmental conditions and human well-being; (2) political participation and representation; and (3) international relations among countries and regions as well as between groups within countries.

Before examining likely future population trends and impending challenges, it is both desirable and useful to have some basic understanding and appreciation of past demographic conditions that have brought about the current state of affairs. In particular, it is important to keep in perspective the extraordinary, unprecedented changes in world population that took place during the twentieth century.

For most of humanity's past, world population grew very slowly. Two thousand years ago, for example, the world's population is believed to have been around 300 million people (United Nations,

1999). Near the close of the fifteenth century, it was approaching the half billion mark. And when Thomas Malthus wrote his famous essay on population at the end of the Eighteenth century, world population had not yet reached one billion (Figure 1).

The slow growth of world population was the result of high death rates due largely to famine, disease, and war. For all except a fortunate few, living conditions were extremely poor and life was harsh, difficult, and relatively short. Although births were numerous, deaths among infants and children were common. In addition, maternal mortality was high and very few people reached their sixtieth birthday. Moreover, before 1800, no one is believed to have reached the age of 100 years (Carey 2003).

Prior to modern times, virtually all of the world's population lived off the countryside (Figure 2). A thousand years ago, for example, only a small proportion of the world lived in urban areas. Even in 1700, the proportion of urban population had changed little and only five cities had more than a half a million inhabitants, namely, Istanbul, Tokyo, Beijing, Paris, and London. By 1800, about 3 percent of the world's population of some 1 billion lived in cities or urban places. A hundred years later, approximately 15 percent of the world's population of 1.6 billion resided in urban areas and the number of cities with more than a half a million inhabitants grew to forty.

In contrast to earlier periods, the twentieth century was one of revolutionary demographic developments, unparalleled during all preceding

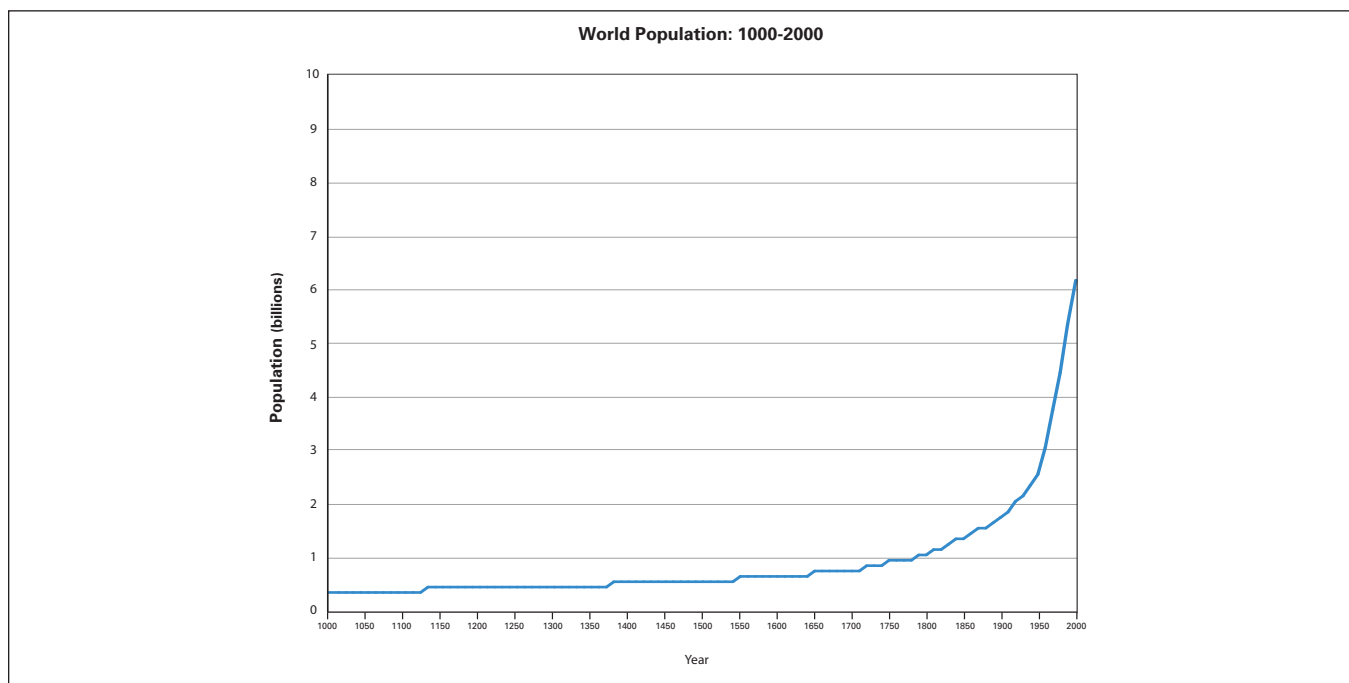


Figure 1

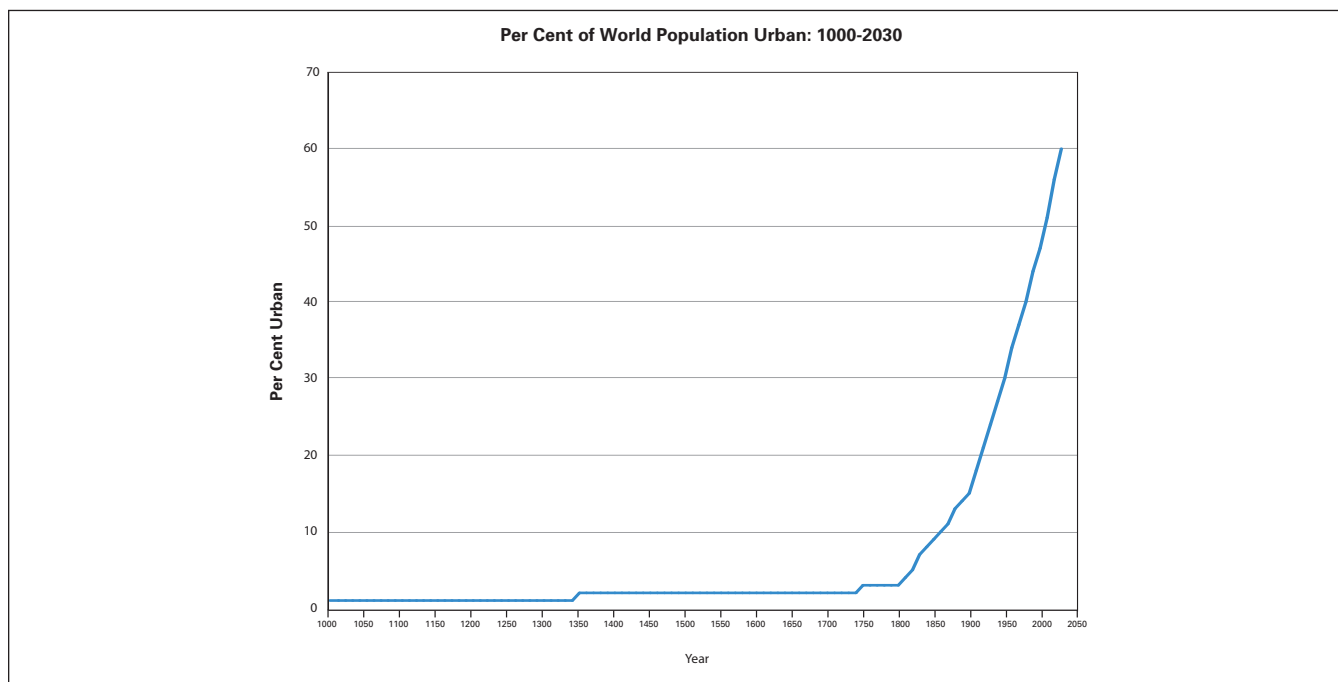


Figure 2

centuries. Indeed, one of its features that altered the course of all life—as well as the environment and natural resources—on this planet is the unprecedented growth of world population. In the future, historians may well conclude that the most significant event of the twentieth century was the rapid growth of world population.

World population nearly quadrupled during the past century, growing from 1.6 to 6.1 billion. In addition, most of this growth—80 per cent—took place during the second half of the century. In particular, the middle of the twentieth century ushered in the world’s most rapid rates of population growth. The global growth rate peaked at around 2 per cent in the late 1960s and by the century’s end was about 1.3 per cent. The twentieth century also ushered in revolutionary changes in human survival and reproduction. Infant and child mortality rates are a fraction of what they were at the beginning of the century. Life expectancies increased dramatically with many diseases, such as smallpox and polio, being largely overcome. Also, throughout much of the twentieth century, the average number of children was five or more; today the average number of children per woman for the world is about half that earlier level (i.e., well under three children per woman). In addition, the twentieth century experienced increased migration, both internally and internationally. At the beginning of the century, a small minority of the world’s population—15 percent—lived in urban areas; by the century’s end, the proportion residing in urban

places had tripled (Figure 2). International migration was also a significant demographic feature of the twentieth century. After a slow-down following the First World War and then the Great Depression, migration increased greatly during and after the Second World War, with millions dislocated and resettled abroad. By 1960, the number of international migrants in the world was about 76 million (Table 1). Forty years later, the number of persons residing outside their country of birth had more than doubled to 175 million people, or about 3 percent of world population.

Population trends and critical demographic differentials are interacting with globalization, resulting in profound social, economic, and political consequences and repercussions at the global, regional, national, as well as subnational levels. While these population changes are of enormous significance, they are frequently unnoticed or inadequately addressed by governments and policy makers. Ignoring the challenges arising from these population trends is likely to lead to increased instability, calamity, and conflict.

## Future Challenges

### Population Growth

The rapid growth of population is perhaps the major demographic force challenging human well-being, development, the environment, and international

**International Migrants  
by Regions of Destination: 1960-2000 (millions)**

<b>Region</b>	<b>1960</b>	<b>1970</b>	<b>1980</b>	<b>1990</b>	<b>2000</b>
Africa	9	9.9	14.1	16.2	16.3
Asia	29.3	28.1	32.3	41.8	43.8
Europe	14	18.7	22.2	26.3	32.8
USSR (former)	2.9	3.1	3.3	30.3	29.5
Latin America & Caribbean	6	5.8	6.1	7	5.9
Northern America	12.5	13	18.1	27.6	40.8
Oceania	2.1	3	3.8	4.8	5.8
<b>World</b>	<b>75.9</b>	<b>81.5</b>	<b>99.8</b>	<b>154</b>	<b>174.9</b>

Source: United Nations (2005a)

**Table 1**

relations and security. It is widely acknowledged that slower population growth provides countries with more time to adjust to future population increases. This in turn increases the ability and prospects of those countries to improve the quality of life of their citizens and foster economic growth and development, while at the same time safeguarding the environment and natural resources. In other words, slowing down rapid population growth would make it considerably easier for countries to build the foundations for future sustainable development. Recognizing the benefits of slower rates of population growth, the United Nations International Conference on Population and Development recommended "... to facilitate the demographic transition as soon as possible in countries where there is an imbalance between demographic rates and social, economic and environmental goals, while fully respecting human rights" (United Nations 1995).

Today's world population of 6.7 billion is expected to increase markedly over the coming decades. At least two billion additional inhabitants and perhaps closer to 3 billion more people can be expected to be added to the world over the next five decades (Table 2). The three variants of the 2004 Revision United Nations projection—high, medium, and low—show a growing world population during the coming decades. The medium variant projected increase of 2.5 billion by 2050 is the second highest half-century population increase in human history; the record setting 3.6 billion was added to the world

between 1950 and 2000. Clearly, the enormous growth of world population that began in middle of the twentieth century is not yet over and the potential for enormous population increases, especially in some of the poorest regions, remains high (United Nations 2005a).

However, the range for future world population growth is wide, depending largely on the future course of fertility levels in developing countries, which governments and others may certainly influence. Most future population figures cited in this paper (and elsewhere) are based on the United Nations medium variant projection, which assumes fertility levels decline in developing countries. These declines are contingent on ensuring that couples in those countries have access to effective methods of family planning. However, if fertility levels were to remain essentially unchanged, the world's population in 2050 would be two and a half billion people larger than the medium variant projection, i.e., 11.7 billion versus 9.1 billion, which is equivalent to total world population in 1950. On the other hand, if fertility levels were to decline even more rapidly than the medium variant assumes, the world population at mid-century would be nearly a billion and half less, i.e., 7.7 billion versus 9.1 billion (Figure 3), a difference which is more than the current population of China.

Virtually all of the projected world population growth will be taking place in the less developed regions, especially among the poorest countries. The



Population for World and Major Areas: 1960-2050										
	A. Population size (millions)					B. Percentage distribution				
	1900	1950	2005	2025	2050	1900	1950	2005	2025	2050
World	1,650	2,521	6,465	7,905	9,076	100	100	100	100	100
More developed	540	813	1,211	1,249	1,236	32.7	32.2	18.7	15.8	13.6
Less developed	1,110	1,709	5,253	6,656	7,840	67.3	67.8	81.3	84.2	86.4
Africa	133	221	906	1,344	1,937	8.1	8.8	14	17	21.3
Asia	947	1,402	3,905	4,728	5,217	57.4	55.6	60.4	59.8	57.5
Europe	408	547	728	707	653	24.7	21.7	11.3	8.9	7.2
Latin America	74	167	561	697	783	4.5	6.6	8.7	8.8	8.6
Northern America	82	172	331	388	438	5	6.8	5.1	4.9	4.8
Oceania	6	13	33	41	48	0.4	0.5	0.5	0.5	0.5

Source: United Nations (1999, 2005a)

Table 2

population of the currently more developed regions taken as a whole is projected to remain near its present size of some 1.2 billion inhabitants (Table 2). Of the roughly 78 million people added to the world’s population every year, six countries—India, China, Pakistan, Nigeria, Indonesia and Bangladesh—account for about half of this growth. India alone accounts for 22 percent of global population growth and is followed by China, which contributes 11 percent. As a consequence, India’s population is projected to exceed

China’s within 25 years, i.e., around 2030 (Table 3).

In terms of annual rates of growth, the world’s most rapidly growing region is Africa. During the last half century, the population of Africa more than tripled, increasing from 221 million to over 800 million. Vigorous growth is expected to continue, with the African continent projected to be 1.3 billion in 2025 and close to 2 billion inhabitants by 2050, largely due to high fertility levels, i.e., six or more children per woman (Table 4). The populations of Asia and

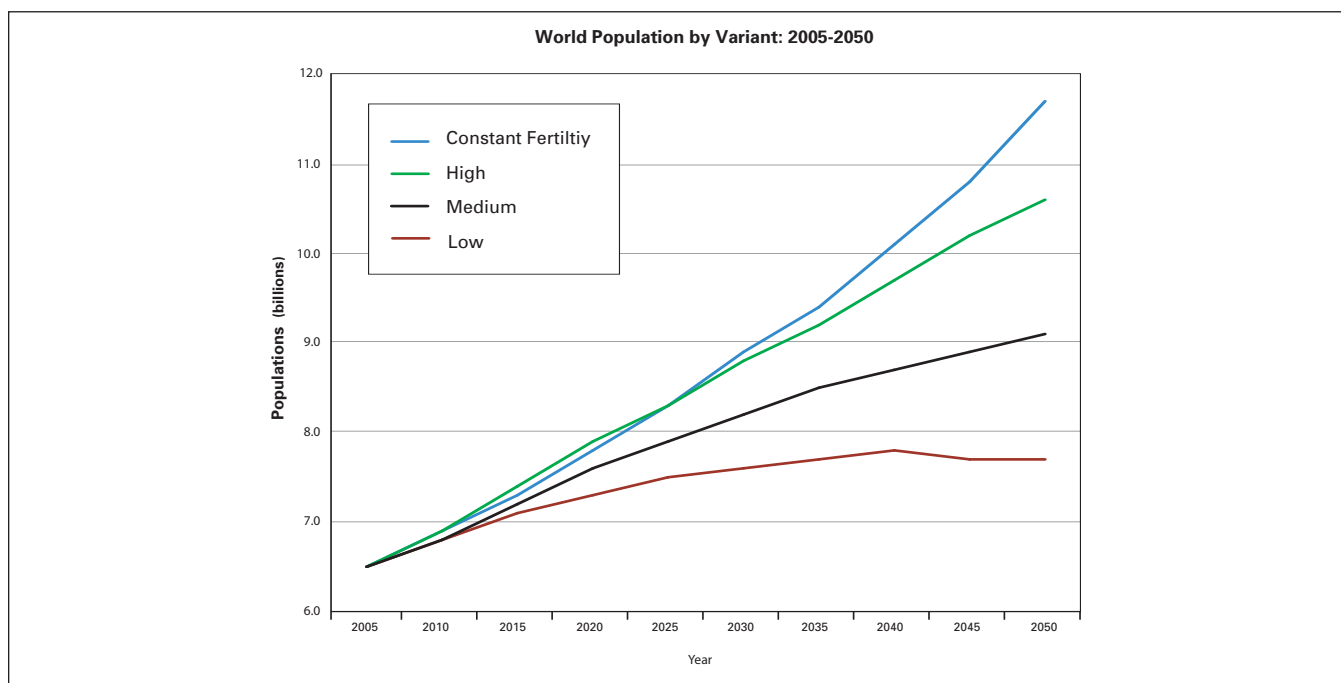


Figure 3

## Selected Population Shifts: 1950, 2006 and 2050 (millions)

Country	1950	2006	2050
China	554.8	1,323.6	1,392.3
India	357.6	1,119.5	1,592.7
Europe	547.4	728.1	653.3
Africa	224.1	925.5	1,937
Russian Federation	102.7	142.5	136.7
Pakistan	36.9	161.2	304.7
Germany	68.4	82.7	78.8
Turkey	21.5	74.2	101.2
Spain	28	43.4	42.5
Morocco	9	31.9	46.4
Japan	83.6	128.2	112.2
Philippines	20	84.5	127.7
Cuba	5.9	11.3	9.7
Haiti	3.3	8.7	13
Israel	1.3	6.9	10.4
Occupied Palestinian Territories	1	3.8	10.1

Source: United Nations (2005a)

Table 3

Latin America are also expected to increase markedly over the next 45 years, from 3.9 to 5.2 billion and from 561 to 783 million, respectively (Table 2).

### Population Decline and Reversals

Among the more developed regions, Australia, Canada, New Zealand, and the United States are expected to continue growing due in large part to international migration. In contrast, many European

nations as well as Japan, Republic of Korea, and some less developed countries are now entering a period of population decline and these trends are expected to continue well into the future. More specifically, by mid-century, the populations of fifty-one countries are projected to be smaller than they are today (United Nations 2005a). The countries that are projected to decline most in number are the Russian Federation, down 31 million; Ukraine, down 20 million; and Japan, down 16 million. The countries projected to

### Ten Countries with Highest and Lowest Total Fertility: 2000-2005 (average number of children per woman)

Highest	Total fertility	Lowest	Total fertility
Niger	7.9	Ukraine	1.12
Timor-Leste	7.8	Czech Republic	1.17
Guinea-Bissau	7.1	Slovakia	1.20
Afghanistan	7.5	Slovenia	1.22
Uganda	7.1	Republic of Korea	1.23
Mali	6.9	Republic of Moldova	1.23
Burundi	6.8	Bulgaria	1.24
Liberia	6.8	Belarus	1.24
Angola	6.8	Poland	1.26
Dem. Rep. Congo	6.7	Romania	1.26

Source: United Nations (2005a)

Table 4

Twelve Countries Declining Most in Number and Percent: 1960-2050 (Population – thousands)							
A. Number				B. Percent			
Country or Area	2005	2050	Decline	Country or Area	2005	2050	Decline
Russian Federation	143,202	111,752	-31,449	Ukraine	46,481	26,393	-43.2%
Ukraine	46,481	26,393	-20,088	Guyana	751	488	-35.0%
Japan	128,085	112,198	-15,887	Bulgaria	7,726	5,065	-34.4%
Italy	58,093	50,912	-7,181	Georgia	4,474	2,985	-33.3%
Poland	38,530	31,916	-6,613	Belarus	9,755	7,017	-28.1%
Romania	21,711	16,757	-4,954	Latvia	2,307	1,678	-27.3%
Germany	82,689	78,765	-3,925	Tonga	102	75	-26.7%
Republic of Korea	47,817	44,629	-3,188	U.S. Virgin Islands	112	82	-26.4%
Belarus	9,755	7,017	-2,738	Lithuania	3,431	2,565	-25.3%
Bulgaria	7,726	5,065	-2,661	Romania	21,711	16,757	-22.8%
Hungary	10,098	8,262	-1,835	Russian Federation	143,202	111,752	-22.0%
Czech Republic	10,220	8,452	-1,767	Republic of Moldova	4,206	3,312	-21.3%

Source: United Nations (2005a)

Table 5

decline most in terms of percent are Ukraine, down 43 percent; Guyana, down 35 percent; and Bulgaria, down 34 percent (Table 5).

These declines are primarily the result of low fertility levels (Table 4). It is estimated at present that sixty-five countries, accounting for 43 percent of world population, have fertility at or below the replacement level—i.e., 2.1 children per woman (United Nations 2005a). Moreover, in many of these countries the average fertility level is closer to one child than two children per couple.

An important consequence of demographic growth in developing countries and population decline among many developed countries is the regional shift in world population, which has notable geopolitical significance. For instance, whereas in 1950 the population of Europe was nearly three times the size of Africa's, today they are roughly equal in number. And by mid-century, Africa's population will be about three times as large as Europe's (Table 3).

Differential growth rates also have significant implications at the subregional level. For example, in 1950 the population of the Russian Federation was more than double the size of Pakistan's population; today they are roughly the same size (Table 3). By mid-century, however, Pakistan's population is expected to be more than triple the size of the Russian Federation's. Other notable instances of projected reversals in population size due to differential growth rates are Germany and Turkey, Spain and Morocco, Japan and the Philippines, and Cuba and

Haiti. Also, although not a reversal, the relative sizes of the populations of Israel and Occupied Palestinian Territories (OPT) will change significantly. While the population of Israel is currently almost double the size of the population of the OPT, by mid-century the two populations are expected to be roughly equivalent. In the coming decades, the effects of these population reversals and shifts are likely to become even more evident and consequential. In addition to impacting levels and patterns of consumption and production, these reversals will have social, cultural, and political repercussions on national identity and perceived relative strength and vitality within the regions.

### Mortality

The United Nations population projections cited in this paper also assume improvements in mortality rates. However, forecasting future mortality trends is a risky undertaking, especially with serious global health threats looming on the horizon, such as SARS and avian influenza. If, for example, the AIDS epidemic continues to spread rapidly or another devastating global health threat emerges such as avian flu, death rates could increase tremendously, especially in Africa. And as a result of these possibly large numbers of deaths, the future population of the world would be smaller than currently being projected.

Nevertheless, mortality rates and increased longevity are generally expected to continue improving throughout the twenty-first century. Today,

for the world as a whole, life expectancy at birth is sixty-five years, which is more than double the level at the beginning of the twentieth century and twenty years more than the level in 1950. By mid-century, the global life expectancy at birth is projected to increase by at least ten years to around seventy-six.

Further mortality declines appear likely, especially with advances in medical technology and increasing concerns and changes with respect to lifestyle and nutrition. Unforeseen breakthroughs in medical science, in particular the prevention/cure of illnesses, the engineering of cells, genes and tissue, and the replacement of organs and body parts, are likely to extend human life well beyond current projections.

### Urbanization

Most of the world's projected population growth over the coming decades will be in urban areas (Figure 4). Moreover, within a few years, perhaps by 2008, the majority of the world will no longer be rural dwellers as has been the case throughout human history, but rather, urban dwellers. In addition, over the next three decades, for example, urban areas in less developed regions are expected to double in size, growing from 1.9 billion today to 3.9 billion by 2030. It is worth noting that while thirty-five years ago about two-thirds of the world lived in rural areas, thirty-five years from now nearly two-thirds of the world's population will be living in urban areas.

While the unprecedented and dramatic growth of

cities may be challenging the capacities of some governments, especially in less developed regions, urbanization is at the same time transforming the world. Generally speaking, urban dwellers are more educated, have higher incomes, smaller families, better health and greater longevity than their rural counterparts. In addition, these differences are likely to increase in the future as economic development efforts focus on urban centers, capitals and primary cities. Nevertheless, many people living in most cities of the developing world lack proper housing, clean running water, basic sanitation facilities and the benefits and opportunities offered by modern urban life. Moreover, as countries urbanize, agricultural production may suffer as many rural dwellers move to more lucrative and less physically demanding work in the cities, thus giving rise to concerns about food security. Without doubt, effectively addressing the urban population revolution is one of the world's most important development challenges in the twenty-first century.

### Aging

Declining fertility levels and increased longevity are also resulting in population aging, the consequences of which are of mounting concern for developed countries as well as for increasing numbers of developing countries. While population aging was an important demographic development in the twentieth century, it will be even more critical during the

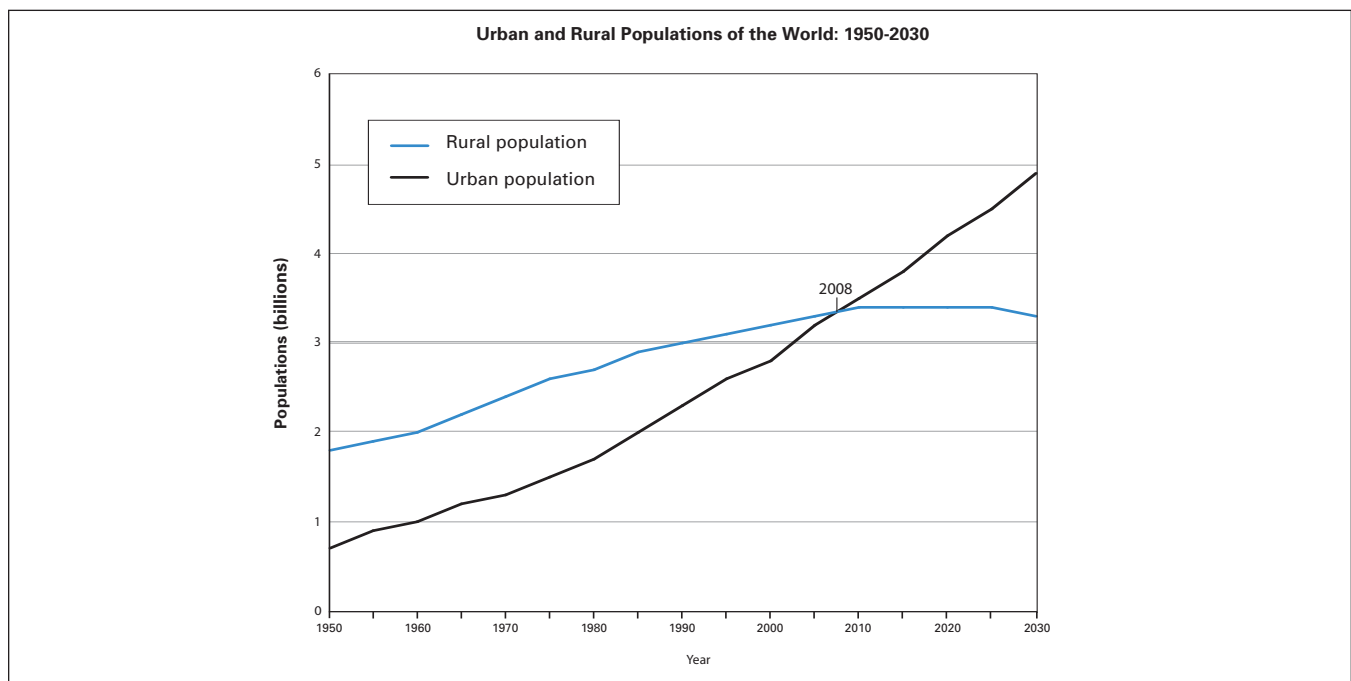


Figure 4

twenty-first century. For example, whereas the median age of world population increased by about four years during the last half century, from twenty-four to twenty-eight years, during the coming half century it is expected to increase by ten years to thirty-eight. Also, by mid-century, the proportion sixty-five years or older is expected to roughly double. In many countries, such as Italy, Japan, and Spain, one person out of three is expected to be sixty-five years or over.

The consequences of population aging will be especially relevant for women. Women survive to higher ages than men; are usually the principal caregivers to elderly relatives; and generally have lower incomes, savings, and private pensions than men. Particularly noteworthy in this regard are the large numbers of elderly women who reside alone. In more developed countries, for example, approximately one out of three women aged sixty years or older is living alone (United Nations 2005b).

The prospects of population aging, coupled with population decline in many industrialized countries, are already raising crucial issues for countries, states, and cities and forcing governments to reconsider many of their existing social and economic policies and programs, especially with regard to employment, living arrangements, health care, and social security. In particular, population aging is raising serious questions about the financial viability of pension and health care systems for the elderly at all levels of government. With the relative numbers of workers to those of retirement age, as well as the rapidly growing numbers of longer-living retirees, many anticipate the arrival of a “red ink society.” Today’s budgets for social security, pensions, and health care are in the black largely as a result of the favorable demographics of the past. With changing demographics—i.e., fewer and fewer workers per retiree—many fear that the costs for promised pensions and health care services will overwhelm projected state revenue, leading to serious economic shocks of large deficits and plenty of “red ink” on the government ledgers.

### **International Migration**

International migration is expected to remain a critical global phenomenon throughout much of the twenty-first century. Much of these anticipated flows involve voluntary movements rather than forced migration due to persecution and civil conflict. Today, for example, it is estimated that about 7 percent of the total global migrant stock are refugees. Also, it should be noted that, while not technically international migrants and therefore not included in the estimates

and discussion presented here, the internal displacement of persons (IDPs) may lead in certain circumstances, as seen in the past, to migration across international borders. Although difficult to anticipate, suffice it to say that the occurrences of IDPs will likely continue, if not increase, in the coming decades, especially in Africa and Asia.

Over the next fifty years, the more developed regions are expected to continue being net receivers of international migrants, with an average gain of about two million per year. Today, many European countries already rely for their modest population growth on international migration, which is largely coming from Africa and Asia. Although fertility may rebound in the coming decades, few believe that fertility in most developed countries will recover sufficiently to reach replacement level in the foreseeable future. And as a consequence, international migration is expected to have significant impacts on population growth in the more developed regions.

With prospects of returning to replacement fertility considered remote in Europe (Frejka and Sardon 2003; Lesthaeghe and Willems 1999), the populations of many of these countries are projected to decline relatively soon without international migration (Table 6). Also, during the period 2000–2005, it is estimated that net migration either prevented population decline or at least doubled the contribution of natural increase (births minus deaths) to population growth in twenty-eight countries (United Nations 2005a). Coupled with rapidly aging populations, these projected declines in population size and their consequences—e.g., reduced labor force and increased old-age dependency—are guiding many industrialized countries to reevaluate current policies and programs concerning international migration (United Nations 2001).

Unlike the more developed countries, the populations of most sending countries continue to grow relatively rapidly, with many in the working ages facing difficulties finding gainful employment. As a consequence, large numbers of skilled and unskilled youths are seeking opportunities in the wealthier receiving countries, especially in Europe, North America, and Australia. The major labor sending countries are China, Mexico, India, Philippines, Pakistan, and Indonesia. In total, some 100 million people are projected to migrate to the large cities of more developed regions during the first five decades of this century (United Nations 2005a). The outflow of the highly skilled and educated (i.e., “the brain drain”) from the less developed countries, particularly

**Population in Europe and Selected European Countries  
with and without Migration: 2005-2050 (thousands)**

Country or Area	2005 Population	2050 with migration Population	Change	2050 without migration Population	Change
Europe	728,389	653,323	-75,066	609,871	-118,518
Russian Federation	143,202	111,752	-31,449	108,870	-34,332
Ukraine	46,481	26,393	-20,088	30,960	-15,521
Italy	58,093	50,912	-7,181	46,188	-11,905
Poland	38,530	31,916	-6,613	32,560	-5,970
Romania	21,711	16,757	-4,954	17,127	-4,585
Germany	82,689	78,765	-3,925	65,589	-17,100
Belarus	9,755	7,017	-2,738	7,126	-2,629
Bulgaria	7,726	5,065	-2,661	5,439	-2,287
Iceland	295	370	75	345	50
Albania	3,130	3,458	328	4,124	994
Norway	4,620	5,435	815	4,692	72
Netherlands	16,299	17,139	840	15,270	-1,029
Sweden	9,041	10,054	1,013	8,704	-337
Ireland	4,148	5,762	1,614	4,735	587
France	60,496	63,116	2,620	60,468	-27
United Kingdom	59,668	67,143	7,476	57,367	-2,301

Source: United Nations (2005a)

**Table 6**

Africa, is also likely to further challenge and undercut developmental efforts in many of these countries. Among many less developed countries however, such as Egypt, Mexico, and Morocco, immigration has resulted in the return flow of remittances, now believed to exceed \$100 billion annually.

Heightened security concerns resulting from the terrorist events that took place in the United States, Europe, and elsewhere have also greatly influenced international migration policies and programs. In the aftermath of these tragic events, many countries have tightened their borders and stiffened their immigration policies. Immigration has also recently become a central issue in the elections and politics of some European countries. Although the absolute numbers of migrants in these communities are relatively small, they have increased noticeably in proportion over the past few decades. The recent election successes and political gains of some of the parties of the right have been linked to their opposition towards immigration.

Also, in contrast to the recent past, the composition of immigrants in many instances differs markedly from that of the receiving country. In Europe, for example, many of the immigrants after World War II came from the relatively poorer countries of southern Europe—e.g., Italy, Spain, and Portugal. Many of today's immigrants to Europe are ethnically different from the native populations as well as being poorly educated and low skilled. These conditions are contributing to greater ethnic diversity and tensions

within countries, raising concerns about cultural integrity, national identity, integration, and assimilation. Moreover, these difficulties are not confined to developed countries; developing countries are increasingly concerned with these issues.

The situation is further complicated by the presence of large numbers of migrants who have entered illegally or lack documents for legal residence. Of the nearly 40 million immigrants residing in the United States, for example, it is estimated that approximately twelve million are unauthorized. How to address the growing presence of unauthorized migrants, many working at jobs natives avoid, is an issue of considerable debate in many countries around the world. Some wish to regularize the undocumented migrants by granting amnesty; others want to repatriate them; and still others argue for something in between, such as temporary work visas possibly leading to citizenship. This situation is further complicated by growing political tensions arising from contemporary discourses on changing national identities and the limits of multiculturalism.

### Equality of Women

Another noteworthy population trend concerns the changes in the role and status of women. During the twentieth century, noteworthy progress was achieved in women's equality, and this process is expected to spread globally throughout the twenty-first century.

Progress is being greatly facilitated by improvements in women's health, urbanization, delayed marriage and childbearing, and declines in family size. Among the more developed countries, and increasingly in the urban areas of less developed regions, the traditional stay-at-home mom is not staying at home. Like men, growing numbers of women are seeking higher education, employment, and social identity. On the college campuses of most developed countries, for example, women now outnumber men. In addition, more women are entering professions traditionally the domain of men.

Efforts to achieve similar social, economic, and political gains for women in many developing or conservative countries are encountering resistance from those wishing to maintain traditional roles and lifestyles for men and women. At the same time, the powerful demographic changes taking place around the world are exerting pressure on governments to reexamine many of their social, economic, and political policies and programs relating to the role and status accorded women. However, in many instances, especially in Africa and Asia, conservative religious groups are strongly resisting, at times through violence, attempts to achieve gender equality in social, economic, and political spheres of society.

Son preference is one traditional gender belief that is of particular global concern, especially for the coming years. With couples having one child in China and increasingly fewer children in India and other populous countries in Asia, and the growing use of prenatal ultrasound scanning, government authorities are facing difficulties enforcing laws and prohibitions against sex-selective abortion. While the cultural belief that the family is incomplete or unbalanced without a son is evident in many parts of the world, this belief is especially widespread and strong in countries of East and South Asia. Among other things, couples desire a son to continue the family name and bloodline, earn money, look after the family, perform ritual functions, and take care of parents in old age. A daughter, in contrast, is often considered a liability as she is perceived as costly to marry off and once married she is expected to move to her husband's household.

The long-term consequences of skewed sex ratios in favor of baby boys in China and India are likely to be significant. The growing gender imbalance among the population becomes especially worrisome when children reach young adulthood. Due to the relative shortages of eligible women, young men are likely to find it more difficult to form romantic relationships with young women and to find wives. This may push

many men to look for brides in younger age groups, spurring the reemergence of child brides for early marriage or promise of marriage and increased trafficking of women and girls. By 2020, for example, it is estimated that the number of young "surplus males" unable to find brides could be more than 35 million in China and 25 million in India. Such large numbers of surplus males may generate high levels of crime and social disorder and even possibly lead to the build-up of large armies to provide a safety valve for the frustrations and energies of these bachelors.

In addition, parental choice of the sex of their offspring represents the first step toward exercising control not over whether and when to have children, but over what kind of children are acceptable to parents. In the future, these matters will no doubt become even more complex with advances in medical technology raising further difficult and weighty questions surrounding the use of "characteristic-selective" induced abortion.

## **Coping Capacities**

The population trends and impending challenges presented above are by and large well known to policy makers, development experts, and concerned citizens. Moreover, there are no secrets about what needs to be done to address these mounting challenges. The needed policies and recommended actions have already been identified and adopted by the international community of nations at the various UN international conferences and summits convened during the past fifteen years on, for example, children (New York, 1990), the environment (Rio de Janeiro, 1992), human rights (Vienna, 1993), population (Cairo, 1994), women (Beijing, 1995), social development (Copenhagen, 1995), human settlements (Istanbul, 1996), AIDS (New York, 2001), and aging (Madrid, 2002).

Except perhaps for the least developed countries, the developing world has the capacity to implement many of those recommended actions. While developing countries as a whole have mobilized the resources for population and reproductive health programs, the poorest countries continue to rely entirely on external assistance (United Nations 2004). And in those cases where resources may be lacking, the international community has pledged to provide assistance. However, what unfortunately exists is a lack of political will by governments in both developed and developing regions to implement agreed-upon commitments and financial pledges, complemented by

an abundance of broken promises and excuses for inaction.

For example, in terms of policy responses to high rates of population growth, eighty governments, or half of the less developed countries, view their population growth as too high and wish to reduce it by lowering fertility (United Nations 2006). In India and Pakistan, for example, births outnumber deaths by a factor of 3 to 1 and 4 to 1, respectively. Both countries are seeking to achieve population stabilization: in India by 2045 and in Pakistan by 2020. However, government sponsored family planning programs in most instances are poorly implemented and inadequately funded.

Also, as noted earlier, most of the world's projected population growth over the coming decades will be in urban areas. Generally speaking, government reactions to urbanization and the growth of cities have not been favorable. The speed and scale of urban growth, especially among the poorer developing countries, have greatly strained government budgets and the capacities of local administrations to provide basic amenities and services to their urban residents. Three out of four countries report dissatisfaction with the spatial distribution of their populations. And among less developed countries, almost three-quarters of the governments have adopted policies to reduce the flow migrating into metropolitan areas.

While the primary responsibility for expediting the demographic transition and dealing with the consequences of rapid urban growth rests with the governments themselves, increased international aid from the industrialized nations, as well as assistance from international organizations, would be of great help to developing countries. In particular, the prevention of unwanted pregnancies, which is neither difficult nor costly, would be beneficial to individual families as well as to overall societal well-being and development efforts.

In contrast to the less developed regions, many industrialized countries are expressing serious concerns about how to manage low levels of fertility and their consequences (Chamie 2004). The number of governments that view their fertility level as too low is forty-six, of which thirty-eight have policies to raise fertility (United Nations 2006a). Many of these governments are worried about population decline and the social, economic, and cultural consequences of low fertility. As a result, governments are increasingly adopting policies and programs to encourage, assist, and support families, particularly with regard to child rearing and parenting responsibilities (Doroozynski

2003; Demeny 1999; Hyun-chu 2003). Some governments, such as France and Sweden, already provide extensive childcare services to assist working couples, maternity and paternity leave, and financial assistance.

However, there are many who view the population decline as a welcome development. In many countries, especially the industrialized ones, much of the public would like to see less density, overcrowding, and congestion, as well as lower levels of immigration. In addition, many see future population decline as reducing the harmful effects of modern production and consumption patterns on the environment, especially with regard to global warming. Also, there are others who are questioning the widely held orthodoxy that an ever increasing population is required in order to maintain economic vitality, societal well-being, and sustainable development. Perhaps modern technology and well-functioning democratic institutions and organizations may be sufficient to ensure current affluent life styles well into the future even with population decline.

As noted earlier, population projections assume that mortality rates will continue to improve throughout the twenty-first century. However, many less developed countries are struggling to provide basic public health services and access to primary health-care. All countries should provide sufficient resources for primary health services for their citizens. Among the least developed countries, action on preventable and treatable diseases should be a high priority, including the vaccination of children and widespread use of low-cost treatments, such as oral rehydration therapy.

As has been seen in the case of HIV/AIDS, serious health setbacks can and are likely to emerge in the coming decades. In such instances, Governments will need to quickly mobilize all sectors of society to combat the spread of the disease. High priority needs to be given to information and education campaigns, and the effective communication of required medical steps to both those infected and those not infected, especially those most susceptible to infection. The international community can help tremendously by mobilizing the human and financial resources required to reduce the spread of emergent health threats, such as SARS, Ebola, Hantavirus, avian influenza (H5N1), drug-resistant bacteria, and multi-drug resistant tuberculosis.

The aging of humanity is likely to be among the most significant events of the twenty-first century. The projected aging of populations is unprecedented, a global phenomenon affecting every household.



Moreover, as population aging is occurring much faster in developing countries than in developed countries, the poorer countries will have less time to adjust to its consequences.

Possible policy responses to population aging in the industrialized countries, as well as increasing numbers of developing countries, fall into four areas. First, old age benefits and health care coverage could be reduced. However, this is politically difficult and considered heartless. Second, taxes and pension contributions could be raised and expanded. Again, this option is difficult, especially for low-paid workers, and is viewed as political suicide by most politicians. Third, the age at retirement could be raised. While also difficult, raising the retirement age appears to be less problematic in the short run as it usually takes effect some time in the future. Fourth, pensions and health care systems for the elderly could be privatized. In traditional pay-as-you-go (PAYGO) systems, current workers pay for the benefits of current retirees. Privatization would replace or modify PAYGO systems with private retirement accounts, in which current workers would put aside funds needed to cover their own retirement benefits. In addition to the difficulties of moving from one system to another, public reactions to privatization have been largely unfavorable. Not surprisingly, none of these options are popular among elected officials or the general public. Other more acceptable and frequently mentioned responses are increasing worker productivity and technological advances or fixes. However, this may turn out to be simply wishful thinking.

The international community, regional groups and individual nations are all also struggling with the question of how best to manage international migration, especially illegal flows. Given the concerns and challenges posed by international migration, increasing numbers of countries are attempting to restrict immigration. Thirty years ago, one out of twenty countries had policies to reduce immigration flows; today one out of three countries has a policy to do so (United Nations 2006a). At the same time, economic, social, and political crises in many less developed countries, combined with rapid population growth and urbanization, have increased pressures and desires to immigrate to the wealthy countries of the north. As a result, migration has become more varied, including people of all skill levels, and in the face of growing restrictions to labor migration, has increased the proportion of illegal immigrants. A most recent example is the Canary Islands, where the number of illegal migrants has increased four-fold over the level

in 2005.

Little agreement exists as to what should be done or, indeed, whether this is even an appropriate topic for discussion and recommendations at the international level. At the United Nations, for example, migration has not been on the agenda in the form of a global intergovernmental conference similar to those on the environment, urbanization, and women's issues, among others.

Given its controversial nature, especially among receiving countries, achieving a global consensus on how best to address the many complex facets of international migration seems unlikely in the near term. Although the United Nations General Assembly convened a "high-level" dialogue on international migration and development on September 14-15, 2006, the only agreed-upon outcome was a chairman's summary of the two-day gathering. Also, while the Secretary-General's Report for the high-level dialogue proposed the establishment of a consultative forum for UN member states to discuss issues related to international migration and development, the proposed form is not intended to produce negotiated outcomes. Clearly, further international cooperation among member states will be needed to address the many pressing challenges arising from international migration.

## **Scenarios and Recommendations**

A number of likely future population scenarios can be imagined. Three are presented below, ranging from the worst case "catastrophic" scenario to the best case "golden" scenario, with the middle "muddling through" scenario falling somewhere in between the two extremes.

### **Worst Case: Catastrophic**

Rapid world population growth continues unabated, largely the result of fertility rates remaining high, particularly in South Asia and Africa. The world population grows at least for another 100 years and exceeds 11 billion by mid-century. Diseases and death rates remain at miserably high levels, with increases in HIV/AIDS and other infectious diseases contributing to premature deaths and human misery and suffering. Couples have more children than they desire, contributing to low levels of literacy and education, especially among women, and general ill health hampers development efforts. Increased human numbers accelerates global warming coupled with the

increasing depletion of natural resources, especially water shortages, having devastating effects on the environment and human welfare. Rapid urbanization, especially in Africa and Asia, overwhelms the capacities of governments to provide basic services, including housing, public health, transportation, medical care, and human security. Emigration increases, with growing numbers of professional and skilled men and women migrating from developing countries to industrialized countries. Equality for women encounters serious resistance, with many civic and religious leaders advocating a return to traditional roles. Increasing numbers of elderly lead to collapses in pension and health care systems.

### **Middle Case: Muddling Through**

Although fertility rates decline markedly in most of Latin America and East Asia, rates in Africa and South Asia change very little. World population continues growing, but at a slower rate and therefore world population is projected to stabilize around ten billion. Limited progress is achieved in lowering death rates. While the levels of HIV/AIDS and other infectious diseases have not increased, they remain at relatively high levels, especially in the poorest countries. Literacy and educational levels show modest levels of improvement, but with girls remaining behind boys. Continuing population growth slows the pace of development efforts. While housing, public health systems, transportation, and medical care services are available to many in the middle-class living in urban areas, much of the poor and those in rural areas live at subsistence levels. Although many professionals remain in the country, many continue to migrate out. Limited numbers of the elderly have adequate retirement funds and health care insurance.

### **Best Case: Golden**

As a result of declining fertility rates, especially in Africa and South Asia, world population growth declines markedly. World population stabilizes below 9 billion. Diseases and death rates decline rapidly, with changes in human sexual behavior and new drugs bringing down the prevalence of HIV/AIDS and other infectious diseases. Low and planned fertility contributes to high levels of literacy and education, especially among women, which in turn spur development efforts. Slower urban growth provides governments with more time to provide adequate housing,

public health systems, transportation, and medical care services. Emigration, especially of professional and skilled workers, declines to low levels. Considerable progress is achieved in women's equality. Increased ages at retirement and better health contribute to sound pension and health care systems.

How countries, international organizations and the larger community of non-governmental organizations will steer clear of the catastrophic scenario and move toward achieving the golden scenario is the central question at hand. While international organizations and NGOs certainly have a role to play, the major responsibility remains with the countries themselves. As mentioned earlier, the path ahead lies to a great extent in the implementation of the programs of action adopted at the various United Nations conferences during the past 15 years. In particular, three recommendations are of high priority, namely the provision of (1) modern family planning methods and information in order to have every birth be a wanted birth; (2) basic public health services and primary health care; and (3) primary education to all children.

While no doubt the future remains uncertain, many of the demographic trends, resultant challenges, and the needed policies and programs have become increasingly evident. During the coming decades of the twenty-first century, billions of people are expected to be added to the world's population, with nearly all of population growth taking place in the urban areas of the less developed regions. In addition to population growth and urbanization, other global population trends and critical demographic differentials are interacting with globalization, and are increasingly having important social, economic, and political consequences and repercussions at the global, regional, and national as well as sub-national levels. Like tectonic plates moving beneath the Earth's surface, often unrecognized but of enormous significance, long-term global population trends and their consequences often go unnoticed and unattended by governments and policy makers. Doing so is likely to lead to declines in human well-being, developmental setbacks, and civil unrest. To deal effectively with the world of tomorrow, it is essential not only to understand and anticipate these global population trends, but also to adopt appropriate policies and implement effective programs to address the critical challenges to which these trends contribute.

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*This volume reviews the history of world population growth and appraises what can be known about its future. The author considers the major limitations to population growth, e.g., water, food, environmental degradation, etc.*

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*This book examines current environmental problems, the importance of scientific processes, and evidence relating to such issues as population growth, desertification, food production, global warming, ozone depletion, acid rain, and biodiversity loss.*

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*This handbook provides an overview and update of the issues, theories, processes, and applications of population studies.*

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*This volume is an insightful discussion of the 1994 International Conference on Population and Development and the global consensus that emerged and continues to influence multilateral institutions and donor assistance to developing countries.*

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*This report presents the latest global urban/rural estimates and projections prepared by the United Nations.*

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