

# Rethinking Population, Improving Lives

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Sitting in a dark hut in central Mali, a teenager named Djenaba nursed a baby—her second—and said that if she could, she would wait at least three years to have the next one. The truth, she added, was that she would prefer to have few children because “it’s too hard [to support a large family]; we don’t have any wealth in the village.” But she said she knew she was powerless to put either of these wishes into effect, because no health clinic was within walking distance, and even the faraway ones rarely had contraceptives to offer. Survey research suggests Djenaba is not alone, and that nearly two out of every five women who learn they are pregnant wish they had waited at least a couple of years before giving birth again, if at all.<sup>1</sup>

Clearly, if all pregnancies could be the happy outcomes of women and men making earnest commitments to be parents,

population growth would slow even more rapidly than it is today. This slowdown is occurring as ideas about childbearing change and as access to contraception improves around the world. Indeed, had average family size not declined from the level in 1960 and had death rates stayed the same, more than 8 billion people would be alive today instead of 6.2 billion. If the decline continues, the growth of world population could conceivably end before the middle of this century. Already, most families in wealthy countries are small enough to reverse population growth eventually, and in a few countries population is actually decreasing.<sup>2</sup>

But in the 48 least-developed countries in the world, population is projected to triple by 2050. And in many more nations the population could double. Three billion people are under the age of 25, with all or most of their reproductive years ahead of them—and without much guidance or help on healthy sexuality and reproduction. There can be no guarantees of a peak in world pop-

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ulation this century without major commitments from governments to provide family planning and related services to those who seek them, and such commitments are anything but certain.<sup>3</sup>

There is more to population and the policies that surround it, however, than numbers and distribution of people. Demographers, social scientists, and politicians increasingly see the connections of human numbers to behavior, to relationships, to overall health care, and—especially—to the circumstances and status of women. Evolving from decades of demographic research and field experience, “population” as a concept and a professional discipline now embraces a diversity of efforts to improve the health, livelihoods, and capacities of women at each stage of their lives.

The concept of reproductive health has also evolved to encompass much more than planning and preventing pregnancy; it includes sex education, access to contraceptives, sexually transmitted diseases, infertility, and all matters relating to the reproductive system. The United Nations defines it as “a state of complete physical, mental and social well-being...in all matters related to the reproductive system, and its functions and processes. Reproductive health therefore implies that people are able to have a satisfying and safe sex life and they have the capability to reproduce and the freedom to decide if, when and how often to do so.”<sup>4</sup>

Providing education and health services for girls and women can hardly address all needs, however, until boys and men are engaged in efforts to improve unequal gender relations. The population and reproductive health fields have traditionally focused on women, even though men have historically exerted more control over when

to have sex and whether to use contraception. Luckily, in many places this is changing. “Increasingly, men—and especially younger men—see the opportunity for egalitarian relationships between men and women as a boon,” family expert Perdita Huston has suggested, “a fortunate trend that may allow them to become more involved in family life and less beholden to strict and restrictive gender roles.” Any father who spends more time with his child than his own father did with him can appreciate the truth of that statement.<sup>5</sup>

Anyone who seeks to fathom the future interaction between humans and the natural world must consider population change as a dominant force on the human side of that relationship. But any discussion of “population” is increasingly understood to include or at least touch on a host of related issues, including the coexistence of extravagant consumption and degrading poverty and the inability of many governments to meet the basic needs of their people for health care, education, clean water, energy, and shelter.

In considering the links between population and environmental change, a near revolution in thinking has occurred—much of it since the Earth Summit in Rio de Janeiro in 1992. It is increasingly clear that the long-term future of environmental and human health—and, critically, population—is bound up in the rights and capacities of the young, especially young women, to control their own lives and destinies. (See Box 6-1.) What remains unclear is whether political leaders today, still mostly men, will see the potential for positive change that lies in recognizing and responding to the rights and needs of women and children. Societies in rich nations and poor need a new kind of vision to cure the widespread gender myopia that refuses to acknowledge the long-term

### BOX 6-1. THE CHANGING FACE OF POPULATION AND WOMEN AT U.N. CONFERENCES

At international conferences throughout the 1990s, from Rio de Janeiro to Vienna and from Cairo to Beijing, women's health and human rights slowly but steadily made their way onto the international agenda. Thanks in large part to the involvement of women themselves, often acting together in nongovernmental organizations (NGOs) and coalitions, women are less likely to be seen as passive recipients of population programs but instead as full participants in a world where all people, including the young, are free to express their sexuality freely, safely, and responsibly.

At the United Nations Conference on Environment and Development (also known as the Earth Summit) in Rio in 1992, women's groups from developing as well as industrial countries lobbied for social change. *Agenda 21*, the plan of action that emerged from the conference, called for women's "full participation" in sustainable development; improvement in women's status, access to education, and income; and attention to the needs of women as well as men for access to reproductive health services, including family planning "education, information and means." This set the stage for the International Conference on Population and Development (ICPD) in Cairo in 1994, where the Programme of Action affirmed that reproductive and sexual health is a basic human right. A year later in Beijing, the Fourth World Conference on Women reaffirmed women's rights and their equal participation in all spheres of society as a prerequisite for human development.

SOURCE: See endnote 6.

implications of current relations between women and men and to see the critical role of gender in human development.<sup>6</sup>

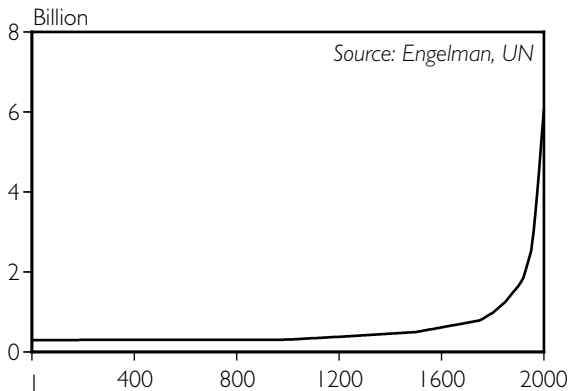
## The World by Numbers

Throughout most of human history, parents had on average roughly two children who themselves survived to become parents. We know this not by demographic surveys but by the simple observation that human population grew very slowly until relatively recently. The key word here is survived. Women undoubtedly had many babies, although some women practiced herbal and other means of contraception. But until recently, death rates among infants and children were so high that population growth was episodic and localized rather than consistent and global.<sup>7</sup>

With the advent of better nutrition and basic public health—hand washing, sanitation, immunization, and antibiotics—enough people survived infancy and childhood by the nineteenth and twentieth centuries to boost population growth to unprecedented rates. What had been a billion people around 1800 became 1.6 billion in 1900, 2.5 billion by 1950, and then 6.1 billion by 2000. (See Figure 6-1.) Sometime in the 1960s the global rate of population growth peaked and began to decline—from 2.1 percent a year to just under 1.3 percent today—although the still-growing population base meant that annual additions to human numbers continued increasing until recently. Even today, the planet adds about 77 million people each year, the equivalent of 10 New York Cities.<sup>8</sup>

The direct cause of slowing population growth was that women began having fewer children on average as infant mortality rates declined and as modern means of contraception became available—and

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**Figure 6-1. World Population Since A.D. 1**

increasingly attractive—in most countries. This demographic revolution, however, has developed unevenly around the world. In much of Europe and in Japan, use of birth control rose so rapidly from the 1970s through the 1990s that fertility fell well below the 2.1 average of children per woman needed to replace those who die with those who are born; eventually, continuation of such low fertility will end population growth in these nations. Countries such as Italy, Spain, Armenia, the Ukraine, and Russia now have fertility rates so low that some analysts are concerned about how the nations will adjust to having many fewer working-age people available to support the elderly in their aging populations. Others have countered that such trends are simply the byproduct of the combination of longer life spans and lower birth rates and that changes in tax, social security, and immigration policies can ease the transition to new population sizes and structures.<sup>9</sup>

For most of the world, however, population decline is anything but imminent. Average national fertility rates are at replacement level or higher in more than two thirds of the world's nations. Even with reasonably anticipated declines in fertility,

the current population of Nigeria of about 120 million, for example, is expected to grow to between 237 million and 325 million by mid-century. The number of people living on the entire continent of Africa is projected to more than double—from 800 million to between 1.7 billion and 2.3 billion—over the same period. South Central Asia (including India, Pakistan, Bangladesh, and Afghanistan) could more than double its current population of 1.5 billion.<sup>10</sup>

The stark differences between wealthy and poor nations in population trends create the conditions for an increased flow of people across international borders in coming decades. An estimated 150 million people—3 out of every 100 people on the planet—live outside their countries of birth. Between 1985 and 1990, the population of international migrants grew about 50 percent faster than world population as a whole, and given the greater migration of the 1990s and the slowdown in world population growth, it is likely that the gap has grown much wider. In the late 1980s, most migration was from one developing country to another, but in the future the South-to-North axis could dominate migration. (See Box 6-2.)<sup>11</sup>

The United Nations Population Division currently projects that today's world population of 6.2 billion will grow to anywhere from 7.9 billion to 10.9 billion by 2050. Global population by mid-century is projected to be overwhelmingly urban, more tropical, and significantly older than it is today.<sup>12</sup>

Despite this growth, the overwhelming influence on human population today is the fulfillment of parental intentions to have later pregnancies and smaller families. In 1960, women had five children on average

worldwide, and more than six in developing countries. By 2000, these numbers had fallen by roughly half, in part because contraceptive usage multiplied sixfold—from 10 percent of couples worldwide in 1960 to 60 percent in 2000. These changes are indica-

tors of a demographic revolution that continues today.<sup>13</sup>

Demographers and population policy analysts increasingly recognize the health and circumstances of women to be among the greatest determinants of how many

#### BOX 6-2. MIGRATION'S CONTINUING ROLE

In June 2000, 58 illegal Chinese immigrants en route to England through Belgium were packed into a nearly airless truck carrying a shipment of tomatoes. Only four survived the 18-hour journey. The next summer, immigration agents patrolling the U. S.-Mexico border found the bodies of 14 Mexicans dead from dehydration. The effort to cross into the United States kills more than 350 illegal migrants each year. Since migration generally involves great personal risk and expense, given the choice most people would rather stay where they are—close to family, familiar places, and others who speak their language. But the larger the gap between people's current quality of life and that which they believe they can attain in a new land, the more motivation they have to leave.

Among the nations that send the most migrants are China and India. Every year more than 400,000 Chinese leave for other countries and 50,000 Indians migrate to the United States, Australia, the United Kingdom, and Canada. Refugees—migrants forced from their homes by armed conflict or political upheaval—often have little choice but to cross borders. As this chapter was being written, it appeared that more than 1.5 million Afghans—in addition to the 2.5 million already displaced by two decades of conflict—could cross into neighboring countries as a result of U. S. retaliation against terrorists in the region.

In North America and Western Europe, the two regions of the world that receive the most migrants, migration has become a controversial and deeply sensitive topic, all the more so in

the wake of the terrorist attacks on the World Trade Center and the Pentagon in 2001. On the one hand, employers and national economies benefit from the generally inexpensive labor that immigrants offer. Societies benefit from cultural diversity unknown to previous generations. On the other hand, migrants make convenient targets for those unhappy about the accelerating pace of change, increasing congestion, or the unevenness of economic growth. In the United States, new fears about terrorism may add to this tension.

Pressures to migrate and opposition to continued immigration are both likely to mount as population density increases and the availability of critical natural resources decreases. Ultimately, each nation must decide how many people to welcome and under what circumstances. Some nations, cities, and communities—especially those without adequate renewable water supplies—may take measures to discourage further in-migration.

Since migration is approaching or even surpassing the number of births as a driver of population growth in many places, nations may ultimately learn to address migration in the context of overall population policy, rather than in response to concerns about the demographic weight of particular ethnic or language groups. The diversity that migration has contributed to the world's nations, especially the wealthy ones, is unlikely to recede for many decades to come.

SOURCE: See endnote 11.

children parents have. When women's education, opportunities, capacity, and status begin to approach those of men, their economic and health conditions improve. Moreover, assuming good access to family planning services, they have fewer children on average, and those they have arrive later in the mothers' lives. An estimated 125 million women worldwide do not want to be pregnant but, like Djenaba in Mali, are not using any type of contraception. Millions more women—survey research has not produced a precise number—would like to avoid pregnancy despite their sexual activity but are using contraception improperly, in many cases because of misinformation about what would be the best method for them. Overall, the U.N. Population Fund estimates, 350 million women worldwide lack any access to family planning services.<sup>14</sup>

A major contributor to later pregnancies and lower fertility is at least six or seven years of schooling. When girls manage to stay in school this long, what they learn about basic health, sexuality, and their own prospects in the world tends to encourage them to marry and become pregnant later in life and to have smaller families. In Egypt, for example, only 5 percent of women who stayed in school past the primary level had children while still in their teens, while over half of women with no schooling became mothers while still teenagers. In high-fertility countries, such as those in Africa, South Asia, and some parts of Latin America, women who have some secondary school experience typically have two, three, or four children fewer in their lifetimes than otherwise similar women who have never been to school.<sup>15</sup>

Educating girls and women also gives them higher hopes for themselves—including raised self-esteem, greater decisionmaking power within the family, more

confidence to participate fully in community affairs, and the ability to one day become educated mothers who pass on their knowledge to their own daughters and sons.<sup>16</sup>

Unfortunately, despite some halting progress in international and government commitments to support women's rights, women are still much less likely than men to complete secondary school—or to hold a paying job or sit in a legislature or parliament. (See Table 6–1.) In 1995, an estimated 75 million fewer girls than boys were enrolled in primary and secondary schools, and in all nations women still earn only two thirds to three fourths of what men earn for comparable work.<sup>17</sup>

It is difficult to predict how quickly these less-often-discussed human numbers will change for the better. Until they improve significantly, however, women around the world will be less able to choose to have smaller families.

## The Ecology of Population

Whether considering biodiversity or cropland and forests, the number of people on Earth combines with levels of consumption, dominant technologies, and distribution to determine humanity's use of resources. (See Table 6–2.) Consider the potential for population growth to make the planet's finite supply of fresh water inadequate for human needs. Human beings depend on less than one one-hundredth of 1 percent of the world's water; less than a third of this is really usable (much of it falls as rain too far from human settlements or runs to the ocean in floods), and more than half of the usable portion is already being tapped for human purposes.<sup>18</sup>

Hydrologists categorize countries with less than 1,000 cubic meters of renewable water per person a year as water-scarce,

**Table 6–1. Gender Disparity in Various Spheres**

Sphere	Description of Disparity
Education	Two thirds of the world's 876 million illiterate people are female. In 22 African and 9 Asian nations, school enrollment for girls is less than 80 percent that for boys, and only 52 percent of girls in the least developed nations stay in school after grade 4. In sub-Saharan Africa and South Asia—where access to higher education is difficult for both women and men—only between 2 and 7 women per 1,000 attend high school and college.
Economics	In most regions, women-headed households are much more vulnerable to poverty than male-headed ones. Single-mother households in the United States have 18 percent of American children but one third of the children living in poverty. Throughout most of the world women earn on average two thirds to three fourths as much as men. Women's "invisible" work (such as housekeeping and child care) is rarely included in economic accounting, although it has been valued at about one third of the world's economic production. Women account for 5 percent of the most senior staff of the 500 largest corporations in the United States. At the International Monetary Fund, 11 percent of the economists are women, and women occupy just 15 percent of managerial positions.
Politics	Women's representation continues to increase in all nations, but women are still vastly underrepresented at all levels of government as well as in international institutions. Of 190 heads of state and heads of government, only 10 are female. At the United Nations, women made up only 21 percent of senior management in 1999. While Nordic nations have the highest percentage of women in parliament, with 39 percent of seats in the lower and upper houses held by female representatives, women hold just 15 percent of parliamentary seats in the Americas and a scant 4 percent in Arab states. Only in nine countries is the proportion of women in the national parliament at 30 percent or above. In mid-2001, at least seven countries—Djibouti, Jordan, Kuwait, Palau, Tonga, Tuvalu, and Vanuatu—did not have a single woman in their legislatures.
Civic Freedom	In nations as diverse as Botswana, Chile, Namibia, and Swaziland, married women are under the permanent guardianship of their husbands and have no right to manage property (women's rights for divorce are also widely constrained). Husbands in Bolivia, Guatemala, and Syria can restrict a wife's choice to work outside the home. In some Arab nations, a wife must obtain her husband's consent in order to get a passport.

SOURCE: See endnote 17.

while those with 1,000–1,700 cubic meters are water-stressed. Any inequities in access occur on top of the limitations imposed by basic availability. And the figures say nothing about the quality of the water provided, although as a general rule the scarcer water becomes, the more likely it is to be polluted due to the increasing pressure on each bucketful to serve human needs. (These rules of thumb hold as well for the relationship between population and the availabili-

ty of other natural resources.)<sup>19</sup>

History shows that few countries have raised living standards successfully while experiencing water scarcity. Sandra Postel of the Global Water Policy Project has found that as water availability drops into the stress and scarcity categories, the importation of food dramatically increases in most countries. More than a quarter of all grain imports, for example, go to water-stressed countries in the Middle East, Asia, and

**Table 6–2. Population and Selected Natural Resources**

Resource	Description
Fresh water	Today 505 million people live in countries that are water-stressed or water-scarce; by 2025, that figure is expected to be between 2.4 billion and 3.4 billion people (near the equivalent of roughly half of today's world population).
Cropland	In 1960 there was an average of 0.44 hectare for each human being on the planet; today there is less than one quarter of a hectare, a little more than a half-acre suburban lot. By the most conservative of benchmarks of arable land scarcity, nations need at least 0.07 hectare to be self-sufficient in food. Today about 420 million people live with such little cropland; by 2025, that number could top 1 billion.
Forests	Today 1.8 billion people live in 40 countries with less than a tenth of a hectare of forested land for each person—roughly the size of a quarter-acre suburban lot. By 2025, this number could nearly triple, to 4.6 billion. Women and girls in developing countries will walk farther for fuelwood, and there will be less access for all to paper, which remains the currency of most of the world's information.
Biodiversity	In 19 of the world's 25 biodiversity hotspots, population is growing more rapidly than in the world as a whole. On average, population in the hotspots is growing at 1.8 percent each year, more than the global average.

SOURCE: See endnote 18.

Africa. In some cases in sub-Saharan Africa, good farmland may soon be unproductive simply because there is insufficient renewable water to moisten crops and because nonrenewable water sources are drying up.<sup>20</sup>

Between 2.4 billion and 3.4 billion people are projected to be living in countries in water stress or scarcity by 2025, according to calculations by Population Action International, compared with 505 million today. The people of the Middle East, of northern, eastern, and southern Africa, and of southern and western Asia will be especially vulnerable. When water is scarce, the poor tend to suffer—and pay—the most. In urban areas where settlement has outpaced both freshwater availability and the infrastructure needed to distribute water that is safe to drink, the poor pay from 10 to 100 times more for water brought in bottles by trucks than the wealthy pay to get the same

or higher-quality water from taps. These pressures on water supplies hamper efforts to reduce the numbers of people who lack access to safe water (currently about 1.1 billion) and sanitation services (2.4 billion).<sup>21</sup>

The sorry state of the world's freshwater supply and distribution services is directly responsible for an estimated 4 million deaths annually, mostly of infants and young children. Entire ways of life are disappearing as water shortages alter landscapes and habitats. Most ominous of all, growing shortages of fresh water are leading to tension along the many rivers—the Nile, the Danube, the Tigris and Euphrates, and the Ganges and Brahmaputra are the chief examples—shared by nations. Once these rivers provided more than enough for all, but under today's economic and demographic conditions, development of water resources by upstream countries reduces



levels downstream, which residents of those countries can ill afford to lose. Given the needs of all human beings for water, not to mention those of millions of other species who inhabit land and freshwater bodies, eventually population growth will require reductions in per capita use of water and better conservation practices.<sup>22</sup>

Population is rarely mentioned in debates on a range of other environmental concerns, including climate change. Nonetheless, as world numbers continue to grow, each person has less atmospheric space in which to dispose of carbon dioxide, methane, and other heat-trapping gases. Among the starkest examples of population's impact on greenhouse gas emissions is the United States—the nation with less than 5 percent of world population but 25 percent of all greenhouse-gas emissions. Per capita U.S. emissions of carbon are fairly stable, but over the past decade the emissions total has grown apace with population. The projected carbon emissions of the 114 million people likely to be added to the U.S. population in the next 50 years roughly equal the projected emissions of the 1.2 billion people who could be added to Africa during that period.<sup>23</sup>

As these two examples of environmental linkages suggest, population dynamics cut across all environmental problems, and a host of secondary impacts can themselves affect human health and well-being. As people crowd into popular coastal areas, earthquake-prone urban centers, and floodplains, for instance, the damage to human property and life done by storms, floods, and earthquakes skyrockets. And epidemiologists increasingly see hints of the overarching impact of population growth on the spread of infectious disease, as greater density boosts exposures and shortens transmission distance, making life easier for the

organisms that spread infections. One critically important service that undisturbed ecosystems offer, according to Dr. Eric Chivian at Harvard Medical School's Center for Health and the Global Environment, is maintaining equilibria among hosts, vectors, and parasites and between predator and prey. As people open up new swaths of forests and consume the resources there, they are exposed to new infectious agents capable of evolving into vectors of human disease. Indeed, this is one plausible explanation for the emergence of HIV into human populations in the last few decades.<sup>24</sup>

For years economists have debated the relationship between demographic and economic change without reaching any consensus. This is in part because population growth operates in different ways in different countries, and even at different points of time, making it difficult to untangle cause and effect. Some government officials of developing countries are willing to assert that large and growing populations hamper economic development. In the Philippines, for example, economic planning secretary Dante Canlas announced that the country's new administration would act to slow population growth despite the opposition of the Catholic Church in the country. Noting the nation's rapid population growth, Canlas expressed concern that "high fertility in the rural areas is exported into the urban areas and rural poverty gets transformed into urban poverty."<sup>25</sup>

Recent evidence suggests that under some conditions, falling fertility and slower population growth can powerfully boost some economies. A number of countries in East and Southeast Asia, for example, invested strongly in health—including mother and child health care and family planning services—in the 1970s, specifically

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hoping that smaller families would produce economic and developmental dividends. These governments also committed themselves to education and to helping growing industries that promised to be major employers. The strategies worked. Having fewer children meant that parents could invest more in their schooling and health. And studies indicate that as average family size declines, savings increase, and household savings are among the major sources of internal investment in developing countries. Harvard economists recently calculated that between 1965 and 1990, the slowing of population growth accounted for as much as one third of the rapid growth in per capita income in East Asian countries like South Korea and Taiwan.<sup>26</sup>

**A stable or gradually declining population can be seen as a helpful side benefit of efforts that improve people's lives directly.**

Rapid growth can put an enormous strain on governments and other institutions. From schools and hospitals to low-cost housing and waterworks, growing numbers of people generate a larger demand for public services—a demand that inefficient or heavy-handed governments often cannot meet. The rapid expansion of school-age populations, for instance, puts tremendous pressure on nations to train more teachers and build more schools. This is especially worrisome because many of these nations already lag in meeting educational needs. In sub-Saharan Africa—where only 56 percent of people are literate and secondary education reaches only 4–5 percent of the population—the number of school-age children is projected to expand by over 30 percent in the next three decades. Without additional investments in education, today's average student-teacher

ratio of 39 to 1 in sub-Saharan Africa will balloon to 54 to 1 by 2040.<sup>27</sup>

Many of these demands converge in the mushrooming urban centers of the developing world, which are projected to be home within a few decades to virtually all future population growth. Many of these cities have doubled in population just over the past 12–15 years. One analysis found that young children in the largest cities of Latin America, North Africa, and Asia were less likely than children in smaller cities to have received health care or schooling and were more likely to be suffering from diarrhea because of a lack of clean drinking water, safe food, and sanitation. And the most rapidly growing cities in Latin America and Africa suffered from the highest levels of infant and child mortality. Long-term population growth rates in excess of 5 percent a year raised the odds of infant mortality by 24 percent in North Africa and Asia, by 28 percent in Latin America and the Caribbean, and by 42 percent in tropical Africa. In Mali, where Djenaba is struggling to raise her children and where both birth and death rates are among the highest in Africa, moving to the rapidly growing capital city of Bamako may no longer represent the improvement in life chances it once did.<sup>28</sup>

Bulges in young age groups may precipitate social upheaval or international aggression. Researchers at York University have argued that most of the major wars and conflicts of the past few centuries have been precipitated by nations in which young men predominated. A large cohort of young men does not make aggression inevitable, but it can provide the tinder that despotic leaders can spark for bellicose ambitions when grievances are acute. Along similar lines, other researchers have argued that population-related scarcities of natural resources can also provide fuel for conflict,

especially when the needs of dense and rapidly growing populations strain weak institutions.<sup>29</sup>

## Healthy Reproduction, Healthy Families

In 1994, representatives from international institutions, national governments, and NGOs gathered in Cairo at the International Conference on Population and Development. They sketched a vision of a world in which an end to population growth is one of many outcomes of policies and programs that put individuals, especially women and young people, in control of their own productive and reproductive lives. This was a breakthrough event, bringing to policymakers and the public an intellectual revolution that had been brewing for years within the population and women's health movements. The consensus among governments paved the way for a new people-centered—and ultimately much more effective—way to craft human development and population policies.<sup>30</sup>

Through the lens of Cairo, a stable or gradually declining population can be seen as a helpful side benefit of efforts that improve people's lives directly. That is, greater access to health care and education not only yields personal and community benefits, it also has the effect of reducing the size of families and raising the average age of first pregnancy. When participants from virtually all countries gathered in Cairo, they agreed to adopt precisely this strategy for addressing population change—framing population as an issue of people, especially their capacities and their rights, more than numbers. Such thinking went a long way toward reconciling tensions among ecologists, demographers, and feminists regarding the causes and conse-

quences of high fertility rates and population growth.

The capacity to plan, prevent, and postpone pregnancy is essential to reproductive health, reducing maternal and child deaths and setting the stage for women and men to manage their own sexuality and reproduction. There is much more to this aspect of health, however, than family planning alone. According to Jodi Jacobson of the Center for Health and Gender Equity, in order to address unwanted fertility, HIV/AIDS, and the whole range of women's reproductive needs and concerns, health care systems need to be sensitive to the realities women face on a daily basis. Recent programs in India and South Africa are addressing that challenge by asking difficult—but much needed—questions: Can women negotiate contraceptive use with a partner? And if not, how can services be tailored that allow them to protect themselves in secret?<sup>31</sup>

Young people in all regions of the world also face a variety of challenges related to reproductive health, whether or not they are sexually active at the moment. At the ICPD in 1994, and even more so at the conference's five-year review in New York in 1999, people in their teens and early twenties expressed their desire to be recognized and included in population and reproductive health policies and to be agents of change for implementing those initiatives.<sup>32</sup>

“Wait until you're older” is hardly helpful advice for the millions of adolescents already having sex or preparing to enter into intimate relationships. Research in several countries has demonstrated that access to sound information and guidance on sexuality and reproduction helps young people postpone sexual activity and avoid infection and pregnancy when they do become sexu-

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ally active. The young need adult guidance and support, as well as access to safe and effective contraception and reproductive health services, in order to protect themselves from violence, unplanned pregnancies, and infection from HIV/AIDS and other sexually transmitted diseases. They also need the self-confidence to say no to unwanted sex or to insist that their sexual partners use contraception.<sup>33</sup>

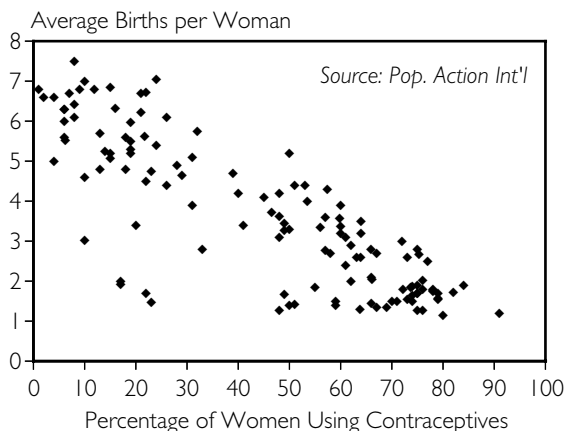
While the mere presence of contraceptive options is hardly sufficient to change women's lives and world population trends, without that access even the most highly motivated women and couples are unlikely to be sexually active for long without a pregnancy. Lack of access to services, lack of knowledge, and opposition of family members are among the most commonly cited reasons for not using contraception. Prohibitively high costs—in some sub-Saharan African nations, condoms and birth control cost 20 percent of the average income—also keep many women from taking action to prevent pregnancy. The correlation is straightforward: where contraceptive use in the world is high, families are smaller. (See Figure 6–2.) In Angola, Chad, and Afghanistan, for example, fewer than one in 20 couples uses contraception, and family size is close to seven children per woman. In Italy, in contrast, contraceptive prevalence exceeds 90 percent and average fertility stands at 1.2 children per woman, close to the lowest fertility level in the world.<sup>34</sup>

If contraception were simply a means of slowing population growth, it is unlikely that most of the world's sexually active couples would be using it. The capacity to experience sex and sexuality without fear of becoming a parent is among the most liberating aspects of contemporary life—especially for

women. By one analysis, the influx of women into U.S. medical, law, and other professional graduate schools in the 1970s was in large part a product of widespread availability and popularity of the oral contraceptive pill starting late in the 1960s. In developing countries, women often express their gratitude to family planning for new opportunities to earn an income, pursue an education, or participate more actively in civic life.<sup>35</sup>

Family planning also directly improves health, especially for mothers but also for their infants and children. In developing countries, children are significantly more likely to die before their fifth birthday if they are born fewer than two years after their next older sibling, whereas a gap of four years or more between births raises infant and child survival chances above the average. Mothers themselves are more likely to survive childbearing if they use family planning to have fewer children, as it gives their bodies time to recover between each birth.<sup>36</sup>

In the past 40 years, most developing countries have launched programs to subsidize or otherwise make more widely available sterilization, condoms, pills, injectable



**Figure 6–2. Cross-Country Analysis of Contraceptive Use and Childbearing**

contraceptives, intrauterine devices, and other methods of avoiding pregnancy. Quantifying the role of different factors in social change is difficult, but by one analysis, the international family planning movement can take credit for just under half the decline in birth rates since 1960, with cultural and social change accounting for the rest. One interesting glimpse of the impact of government-sponsored family planning programs on national fertility comes from a comparison of six nations with strong programs begun before 1980—Bangladesh, Ghana, India, Mexico, South Korea, and Zimbabwe. In each case, the use of contraception rose fairly continuously, with attendant declines in average family size that have helped slow the growth of world population appreciably. For example, after the Zimbabwean government launched its program in 1968, contraceptive use jumped from just 5 percent of the population in 1975 to 50 percent by 1993.<sup>37</sup>

The international community can help to close gaps where government provision of family planning and reproductive health services is constrained by tight budgets, debt, entrenched bureaucracies, or narrow political conflicts. Many industrial countries have contributed funds and technical expertise to such programs. Nongovernmental sources also shoulder a heavy load. Private U.S. foundation expenditures may now rival official U.S. overseas assistance for family planning. In Bangladesh, one quarter of reproductive health services comes from nongovernmental groups. In Colombia, an affiliate of the International Planned Parenthood Federation called Profamilia provides more than 60 percent of family planning services.<sup>38</sup>

Still, the gap between the need for contraception and its availability in developing countries is particularly worrisome, because

supplies for reproductive health appear to be entering a period of scarcity. Two waves are reaching shore simultaneously and reinforcing each other. First, the largest generation of young people in human history—1.7 billion people aged 10–24, projected to approach 1.8 billion by 2015—is now reaching reproductive age. The number of women already aged 15–49 is at an all-time high at 1.55 billion and could increase to 1.82 billion by 2015. At the same time, greater proportions of young women and men want to delay child-bearing and to have at most two or three children.<sup>39</sup>

Today, 525 million women use contraception, and that number is projected to reach 742 million by 2015. In Rwanda, Guatemala, and other developing nations, however, surveys among men have found that between one quarter and two thirds are not using any form of contraception with their partners, even though they do not want any more children. Presumably as this gap between intentions and practice shrinks, demand for contraceptives will rise even faster. For the foreseeable future, it is unlikely that this growth in demand can be satisfied without increased assistance to the developing countries where the growth is most dramatic.<sup>40</sup>

In some countries, the contraceptive shortage has already arrived. In July 2001, Indonesia revealed that its stock of contraceptives needed for 8.3 million low-income couples would run out by the end of the year. Few nations or agencies have developed strategies for meeting the rising demand for contraception, and the gap between demand and supply could simply widen over time. Worldwide, between rising numbers of young people and growing proportions wanting to plan their families, total demand for contraception is expected

to grow by 40 percent between 2000 and 2015. The U.N. Population Fund has estimated that global spending on contraceptive supplies will need to more than double, from \$810 million annually in 2000 to \$1.8 billion in 2015. The cost of making these contraceptives accessible through quality services will also more than double, from \$4 billion in 2000 to \$9 billion in 2015.<sup>41</sup>

The impact of these two waves—more young people, with higher proportions wanting to plan pregnancies—combines with yet another wave: the soaring need for male and female condoms to prevent HIV and other sexually transmitted infections. More than any other single threat, HIV has the potential to turn population growth around for the worst of reasons: increases in death rates.

It appears that AIDS-related deaths could become a major factor in a reversal of population growth rates in at least one country—South Africa—which is something few demographers would have predicted 20 years ago. South Africa combines a 20-percent HIV infection rate for adults aged 15–49 with a fertility rate that is low for Africa, at fewer than three children per woman. Moreover, HIV/AIDS deaths are concentrated in the prime of life, among those who have the most to offer their societies. And women and young people in many countries are disproportionately affected. In South Africa, for example, a recent study indicated that death rates are higher among women in their twenties than among those in their sixties. By hollowing out the core of a nation, HIV/AIDS could cause economic and social havoc unprecedented in the modern world.<sup>42</sup>

The approach most likely to slow the further spread of the infection is the one agreed to in Cairo in 1994: a holistic effort to maximize the prospects of every human

being to enjoy sexual expression and intentional reproduction in good health for themselves and their children. But intervention is not likely to be fully successful in combating HIV/AIDS while prevailing attitudes of sexual and gender relations make women so vulnerable to sexual predation in many societies. “Prevention strategies,” says Noeleen Hayzer, Executive Director of UNIFEM, “must be designed with full recognition of the social factors that leave most women, particularly young women and girls, unable to negotiate safer sex or to refuse unwanted sex.”<sup>43</sup>

## The Politics of Population

After the Earth Summit, the Cairo conference, and the Beijing conference on women, the community of nations knows why and how to slow world population growth. And this work is moving forward. The global fertility rate has fallen almost by half in just 40 years. Yet the promise of reproductive health for all and equality for women remains unfulfilled. As a result, so does the vision of a world moving swiftly toward a population peak based on intended childbearing.<sup>44</sup>

At the ICPD in Cairo in 1994, governments agreed to spend \$17 billion a year (in 1993 dollars) by 2000 to achieve universal access to basic reproductive health services for all by 2015. This was to include \$10.2 billion for family planning services, \$5 billion for maternal health and care at delivery, and \$1.3 billion for prevention of HIV/AIDS and other sexually transmitted diseases. Since Cairo, the emerging deadliness of the HIV/AIDS pandemic has framed it almost as a separate health issue in international dialogue, with agreement that much more will need to be spent than the ICPD envisioned. But so far there is no

consensus on just how much money will be needed in the effort to contain HIV/AIDS, what it will buy, and who will pay for it.<sup>45</sup>

Of the original Cairo sum for family planning and other reproductive health needs, wealthy nations pledged to cover one third of the cost, with the developing world agreeing to pay the remainder. In 1998, the most recent year with comprehensive data, wealthy nations contributed less than 40 percent of their Cairo commitment. By contrast, developing nations have been spending close to 70 percent of their committed levels. (This proportion is somewhat distorted, however, by high spending in China, India, and Indonesia, with much lower spending in sub-Saharan Africa.)<sup>46</sup>

The U.S. contribution to Cairo spending levels has been the most disappointing. The nation with the world's largest economy should be spending, according to calculations by Population Action International, \$1.9 billion annually on family planning and related health programs in developing countries. The current U.S. contribution, however, is \$500 million for reproductive health programs, as appropriated for fiscal year 2001, including \$450 million for family planning and ancillary services and \$50 million specifically for maternal health. Abortion-related restrictions—the “global gag rule” reinstated by the Bush administration—complicate the allocation of these funds. Consistent with greater attention to the HIV/AIDS pandemic, the U.S. government appropriated \$320 million to combat the disease, but so far there is no roadmap for how the money will be spent or whether it will be integrated with any other aspects of reproductive health or with needed changes in gender relations.<sup>47</sup>

For the vision of Cairo to be realized, the ICPD Programme of Action needs to be fully funded to provide reproductive health

services, including contraception, maternal care, and sexually transmitted disease prevention, for all who seek them. Ideally, more generous spending than the Cairo conference foresaw would be forthcoming to improve and fully integrate the entire range of reproductive health services, including HIV/AIDS prevention and basic treatment as well as access to safe abortion. At a minimum, honoring the Cairo spending goal could well be more effective than any other single effort in improving the lives of women and bringing population growth to an early peak based on intentional and healthy childbearing.

Historically, the world's major religions have erected some of the most formidable barriers to increased availability of family planning services and reproductive health care in general. Some Catholic, Islamic, and other religious leaders continue to preach abstinence as the only effective and moral means of controlling births. Nonetheless, from Iran to Italy, nations in which religion plays a major role have made great progress in widening access to family planning and reproductive health care and improving the status of women.<sup>48</sup>

Many religious leaders are coming to realize that there is no inherent conflict between family planning and religion, and that in fact lack of reproductive rights represents a grave social injustice. In Iran, Islamic clerics have even issued *fatwas*, or religious edicts, approving family planning methods—from oral contraceptives and condoms to sterilization. This approval, along with the integration of family planning services with primary health care, the provision of free contraceptives, and the strengthening of men's role in reproductive health, resulted in the total fertility rate in Iran dropping from 5.6 children in 1985 to 2.8 children in 2000—among the most pre-

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cipitous declines in family size in the modern demographic transition.<sup>49</sup>

The influence of religious leaders tends to occur at the level of policymakers—undermining agreements on population and reproductive health, for example, and discouraging government health programs that include effective access to a range of contraceptives. At the household level, in contrast, women and men make the choices that affect their daily lives. In the privacy of their bedrooms, many see contraception not as a sin or a sign of lack of faith, but as an important part of loving, committed relationships.

Where religion continues to hamper efforts to give people greater control over their reproductive lives, the world's religious leaders may need to reconcile their actions with their humanitarian ideals. For instance, Bishop Kevin Dowling recently risked his career when he introduced a proposal at the Southern African Catholic Bishops conference in support of condom use as part of the wider effort to stop the spread of HIV in his region—home to the highest HIV infection rates in the world. Although the proposal was rejected, and the Church remains aggressively opposed to condom use, Bishop Dowling's efforts give some sense of the leadership that will be needed if religions are to work with others in the fight against HIV/AIDS and other public health problems related to reproduction.<sup>50</sup>

The gap between the opinions of church leaders and church members on reproductive issues mirrors a wider chasm between elected officials and their constituencies. According to a recent Gallup poll, for example, over 75 percent of Mexicans believe in a woman's right to choose abortion. Yet Mexico's politicians oppose reforms allowing women and couples greater access to safe abortion procedures.

Conservative U.S. politicians, too, would like to see *Roe v. Wade*, the 1973 Supreme Court decision legalizing abortion in the United States, overturned. And they continue to stymie efforts to fund international family planning programs, even though opinion polls show that the vast majority of Americans support both a woman's right to control her own fertility and U.S. efforts in this area overseas.<sup>51</sup>

From some political and religious organizations, yet another misconception clouds discussion and muzzles debate—the idea that providing choices about pregnancy and childbearing is synonymous with the promotion of abortion. In the United States, a consistent effort by a small number of groups and politicians to promote this point of view has politicized what was once a bipartisan effort to guarantee worldwide access to contraception, and it has created a web of restrictions on U.S. spending to support international family planning. Ironically, demographic research confirms what logic tells us: wider provision of good family planning services reduces the numbers of abortions that would otherwise occur. When researchers looked at two similar areas of rural Bangladesh, one with good family planning services and the other without, they found that abortion rates had increased over the past two decades in the one with poor family planning services but had held steady at low rates in the area with good services.<sup>52</sup>

Just as important as spending levels are the political attitudes that shape and expand population policies and reproductive health programs around the world. In the spirit of Cairo, countries in Africa, Asia, and Latin America are rethinking population policies and programs and looking to the Programme of Action for guidance on new directions related to overall health and



development. Progress is uneven, of course. The governor of the Indian state of Andhra Pradesh, for example, publicly urges the parents of large families to “immediately go” for state-sponsored sterilizations. And China’s central government resists the key principle of reproductive freedom of choice by continuing to insist that most Chinese couples limit their families to a single child. Nonetheless, the government has at least acknowledged the importance of the principles agreed to at Cairo. And India’s federal government is abandoning its decades-long history of targets and quotas for family planning and its reliance on sterilization rather than the contraceptives that are more appropriate for tens of millions of couples.<sup>53</sup>

The overall movement among national governments in developing countries is clearly away from bureaucratic population “control” and toward supporting the choices of couples and individuals to have children, when desired, in good health.

## Correcting Gender Myopia

In the long view of where population policy is heading, the most daunting issues include not only religious obstacles or public division over abortion rights, but also the social and psychological shifts that will occur as women approach equal status with men. The more we learn about the interconnections between population growth, fertility, timing of pregnancy, and reproductive health, the more we see their links to ingrained attitudes about the relative roles and power between females and males.

As long as girls and women are envisioned as less able than boys and men to navigate human experience and decide for themselves how to live, population policy will always be imperfect. When girls go to secondary school free of fear of violence and

sexual coercion and when women approach economic, social, and political parity with men, they have fewer children and give birth later on average than their mothers did—and, assuming good access to health and family planning services, fertility almost invariably reaches replacement level or lower. That slows the growth of population.

Yet this centrality of women to population’s future also introduces discomfort, implying that interest in slowing population growth can turn women into instruments for some “larger” purpose, or into commodities to be counted and valued for the results of their reproductive decisions and actions. Those who work to slow the growth of population and those who work for women’s parity with men sometimes are the same people, aiming at many of the same interim objectives: access to comprehensive and integrated reproductive health care, ending the gender gap in education and in economic opportunities, eliminating violence against women. The fact is that certain changes are essential for women themselves—simply from a perspective of fairness and equal rights for all humans—while simultaneously contributing to broader improvements in population trends and in human and environmental welfare.

The pervasiveness of violence against women around the world—verbal, physical, sexual, or economic—stands as the strongest indictment against current relations between the sexes. (See Box 6–3.) As many as half of all women have experienced domestic violence, according to the World Health Organization. Abuse from an intimate partner is the most common form, and this occurs in all countries—transcending economic, cultural, and religious boundaries. This picture of abuse is a conservative one at best: shame, fear, lack of legal rights, and gender inequality inside

**BOX 6-3. VULNERABLE BY GENDER**

Abuse shadows women from birth. Sex-selective abortions, female infanticide, and neglect of female children are common in India, China, and other nations. By some estimates, today's world population should include more than 60 million girls whose absence can only be explained by the fact that their own parents wanted them only if they were boys. Many girls who survive early childhood experience other abuses, including enforced malnutrition, incest, female genital cutting, denial of medical care, early marriage, prostitution, and forced labor. An estimated 130 million women and girls worldwide have undergone a ritualized cutting of their genitals; another 2 million girls a year still experience this ancient tradition, which can lead to a lifetime of painful urination, menstruation, and sexual intercourse, and which adds to the risk of death in childbirth.

Girls and women are more likely than boys and men to be sold into slavery, and trafficking in women condemns thousands annually to

lives of essentially forced prostitution. In 2000, as many as 5,000 young girls died at the hands of their parents or another relative for shaming their families under prevailing social mores—they were suspected of having had sex or sometimes simply of socializing with the opposite sex. In some cases, the “dishonor” was that they had been raped.

It is tragically no surprise that women in some societies are much more likely than men to take their own lives. Eighty percent of all suicides in Turkey are women, and similarly high rates are found in other repressive societies, such as China, Afghanistan, and Iran. In all these cases, the link to population change is complex but significant: societies that treat women as property, or cause their disappearance because they are not male, or drive them to take their own lives are unlikely to support the conditions needed for planned families and the delay of pregnancy and childbirth.

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SOURCE: See endnote 54.

and outside the household keep many women from reporting their attackers.<sup>54</sup>

Many men consider sex an unconditional right, and fear of reprisal can prevent girls and women from discussing contraception or their sexual rights with partners. The United Nations reports that women in Kenya and Zimbabwe hide their birth control pills for fear that their husbands might discover that “they no longer control their wives’ fertility.” Young girls married off to older men are neither emotionally nor physically prepared for their first sexual experience, which can set them up for years of having no say in when they have sex. In several African countries, most HIV-infected teenagers are female, reflecting the

power of older men—sometimes including teachers—and the relative inability of girls to negotiate whether and under what conditions they have sex.<sup>55</sup>

Used as a weapon, sexual violence in all its forms—coerced sex, rape, incest—inhibits women’s ability to control their own reproductive health. Ending this violence will be first and foremost its own reward. The supplemental benefit for positive demographic change comes from the simple fact that women can scarcely be free to decide for themselves when and with whom to become parents if they cannot even control the security of their persons.

Gender-related violence, however, is simply the most direct form of discrimina-

tion against women. Economies and societies generally undervalue women's work, from the household to the farm, the factory, and the office. Women typically work longer hours than men—nurturing children, caring for elders, maintaining homes, farming, and hauling wood and water home from distant sources. This labor is largely invisible to economists and policymakers, but by some estimates it amounts to a third of the world's economic production.<sup>56</sup>

When women's contributions do emerge from this obscurity, opportunities sometimes open up for broader social development as well as slower population growth. Making sure that girls and young women are in school, for example, can sometimes be even more effective than improved sanitation, employment, or a higher income in helping children survive. The nations in sub-Saharan Africa with the highest levels of female schooling—Botswana, Kenya, and Zimbabwe—are also the nations with the lowest levels of child mortality, despite higher levels of poverty than some of their neighbors. A study from the International Food Policy Research Institute (IFPRI) found that improvements in women's education were responsible for 43 percent of the reduction in child malnutrition in the developing world in the last 25 years.<sup>57</sup>

These benefits across generations appear to result from women's tendency to devote higher proportions of their personal income than men do to the needs of their children. A study in Brazil found that additional income in the hands of mothers was 20 times more likely to improve child survival than the same income earned by fathers. In general, as David Dollar and Roberta Gatti of the World Bank state, "Societies that have a preference for not investing in girls pay a price in terms of slower growth and reduced income." In countries where fewer

than three fourths as many females as males are enrolled in primary and secondary school, for example, per capita income is roughly one fourth lower than in other countries. There can be little doubt that increases in income that have their roots in the education of girls and women also help build societies in which women on average have fewer children and give birth later in their lives.<sup>58</sup>

With the emergence of strong women's NGOs in the decade since Cairo, it seems likely that full political participation by women in national politics may become the last and most important frontier in achieving the gender equity needed for truly sustainable societies. Women remain underrepresented at all levels of government in almost all countries. There has been progress, but it has been slow, with women's share of seats in lower chambers of parliaments growing from 3 percent in 1945 to 14 percent in 2001. Typically, women's leadership is parceled out in less powerful sectors of government, such as health and education, with much smaller numbers of women holding key economic, political, and executive positions. Higher rates of illiteracy, poverty, and other social and economic handicaps conspire against political participation by women. Although sexual and reproductive rights occupy minimal space in debates over democracy, notes Marta Lamas of Mexico, once gained they allow women to achieve self-determination, and are thus intimately linked to the meaning of modern citizenship.<sup>59</sup>

Evidence from Sweden, South Africa, India, and other nations shows that when more women hold political office, issues important to women and their families rise in priority and are acted on by those in power. Over the past decade, the Swedish government—where women currently hold

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almost 43 percent of the seats in Parliament and 82 percent of the cabinet ministries—has passed expansive equal opportunity and child care leave acts. And in South Africa, which established a quota for women candidates to parliament in 2000, women hold 119 of the 399 seats in the National Assembly and 8 of the 29 cabinet positions. These female politicians have played a key role in lobbying for the Choice of Termination of Pregnancy Act and the Domestic Violence Act and in establishing governmental institutions that promote gender equality.<sup>60</sup>

**When women gain rights to land or other resources, they also gain power that reaches well beyond forests or watersheds.**

Despite such progress and the evidence of its benefits, gender myopia continues to cloud the vision needed by development agencies, international lenders, and governments. From agriculture to trade liberalization to health care reforms, policy decisions affect women in quite distinct ways. If their specific concerns are not made part of the policy process, the results can be disastrous. But seeing things through a gender lens requires a very different course for development—one that includes women and other marginalized groups—in planning and decisionmaking. Rachel Kyte, a senior specialist at the International Finance Corporation, argues that even now, a full decade after Rio, “it’s very difficult to talk about the rights of women when the development industry remains truly patriarchal.” Gender, by this view, is still not a central issue in development, perhaps in part because it so fundamentally challenges men’s power.<sup>61</sup>

Gender myopia can be especially damaging in natural resource policy—for example, when development agencies offer technical and agricultural assistance mostly to men in

areas where women are the ones toting the fuelwood and water and tilling the soil. In the past decade, the international development community has made strides in focusing its efforts on women’s stewardship of natural resources. “Since rights to natural resources are so heavily biased against women,” reasons Agnes Quisumbing of IFPRI, “equalizing these rights will lead to more efficient and equitable resource use.” Indeed, when government officials or community leaders fail to recognize the different ways women use natural resources—in the spaces between male-managed cash crops, for example—the resources are easily destroyed.<sup>62</sup>

When women gain rights to land or other resources, they also gain power that reaches well beyond forests or watersheds. By commanding a concrete resource, notes Indian economist Bina Agarwal, women can take more control in existing relations by improving their self-sufficiency, reducing their dependence on men, and boosting their bargaining position within the marriage, including their ability to negotiate contraceptive use with their husbands. All these produce benefits that ripple out into the broader community.<sup>63</sup>

The strong role women play in environmental stewardship points to the opportunity for integrating reproductive health and family planning components into conservation programs. In the 1970s, some western NGOs concerned with improving rural environments and reducing poverty in the Philippines and Nepal began to offer improved access to family planning services. As interest in family planning expanded, other organizations partnered with national and regional family planning organizations to respond to women’s requests for help with avoiding pregnancy. These initiatives demonstrated that incorporating improved

access to contraception and other reproductive health services can increase women's participation in natural resource conservation or functional literacy programs and vice versa—a real-life demonstration that health and family planning cannot be separated from other aspects of people's lives.<sup>64</sup>

More recently, in Madagascar's Spiny Forest Ecoregion—home to the greatest concentration of baobab trees in the world—the World Wildlife Fund (WWF) produced maps showing that where female literacy levels were the lowest, both population growth rates and deforestation were the highest. Based on this, WWF fieldworkers and local stakeholders formed a partnership with Madagascar's regional public health organization to deliver literacy programs, reproductive health information, and family planning services to communities with both the highest population growth and the greatest levels of biodiversity.<sup>65</sup>

As the connections between conservation and population projects become clearer, the environmental community and environment ministers can become an important new constituency for discussions of reproductive health and women's rights. Investments to slow the rate of population growth will significantly reinforce efforts to address many environmental challenges, and considerably lower the price of such efforts.<sup>66</sup>

The river of thought on human rights and development runs inexorably toward the emancipation of women everywhere and equality between men and women. But eddies and rivulets carry the water backwards every day—as when pregnant girls are expelled from school, or when the genitals of young women are cut in a ritual destruction of their capacity for sexual pleasure.

Unfortunately, it is likely that even today people in Djole, the central Malian village

in which teenaged Djenaba was interviewed in the 1990s, have no easy access to the health services that would allow a new mother to wait a few years before being pregnant again. But there are positive signs that such isolation cannot endure much longer. More NGOs than ever consist of women advocating for women's rights, empowerment, and well-being. The gap between the numbers of boys and girls in schools is beginning to close. Governments increasingly acknowledge the principles that were affirmed in 1994 in Cairo—that the capacity to plan a family is a basic right and that population trends should flow from the free decisions of women and couples.<sup>67</sup>

As the growing concerns about population aging and decline in some countries illustrate, it is increasingly possible that world population growth will end within the next 50 years. By the end of this century, there may be few countries whose populations are still growing. For the sake of the environment and healthy human relations, we should encourage this historic process, resisting the urge to try to roll back population aging in some countries by stoking continued population growth. We can work, as well, to make sure that the inevitable end to that growth is driven by intended reductions in births, not by increases in deaths.

If we succeed, history will note that world population growth ended not because governments commanded it to do so, but because the free decisions of women and men made that end inevitable. And the population peak will arrive as one momentous ripple from an equally momentous drop of a stone in a pond—the stone by which women at last gain their full rights, choices, and standing as equal members of the human family.

**WORLD SUMMIT PRIORITIES ON POPULATION AND GENDER EQUITY**

- Meet the goals of the 1994 International Conference on Population and Development, including funding universal access to reproductive health care and closing the gender gap in education.
- Aggressively respond to the global HIV/AIDS pandemic, stressing prevention of further infections as well as treatment of those already infected.
- Change laws and work for social change to ensure that women enjoy equal protection and equal rights.
- Increase female participation in all levels of politics.
- Correct gender myopia in all levels of private and public planning, including international lending, natural resource policy, and globalization.
- Guarantee equal access to economic opportunities for women and men.
- Enact and enforce strong laws to protect women from all gender-based violence.
- Involve men in reproductive health services and discussions, and educate them about the importance of gender equity.
- Ensure that young people have better access to reproductive health care choices and to education on sexuality and the changing roles of men and women.