

# Population and the Environment

Often, the link between population growth and the environment is reduced to an issue of numbers: too many people and too few resources. But the larger picture is more complex. Interactions between humans and our natural environment are overlapping and interdependent. Our coexistence on this planet necessitates respecting this delicate balance. However, with the 6.1 billion people populating our earth—requiring more space, more food, more air, more water, more natural resources—we disrupt this balance, bringing serious threats to our planet—and ourselves.

To change our future we need to rethink the ways we use our dwindling resources by examining how the complicated and multiplied effects of population, consumption level, and technology are jointly responsible for the impact on our resources and the environmental problems we experience today.

- Our world population has grown more since 1950 than it has in the previous four million years. With these additional people come additional demands on our earth: eighty percent of the original rain forests have been cleared or degraded; one-third to one-half of the Earth's land surface has been transformed.
- We lose one or more entire species of animal or plant life every 20 minutes—some 27,000 species a year. This rate and scale of extinction has not occurred in 65 million years.
- Currently, 505 million people live in countries with water-stress or water-scarce conditions. By 2025, almost 48% of the Earth's population—between 2.4 and 3.4 billion people—will be living in areas of water stress or scarcity. This freshwater shortage could intensify difficulties in meeting human consumption levels, and wreak devastating effects on our delicately balanced ecosystems.
- Only 0.3% of the planet's water is available for human use. Due to mismanagement, over 40% of the groundwater in the U.S. is contaminated by industrial, agricultural, and household pollution, making it extremely difficult and costly to purify.
- It takes 23 times more water to produce

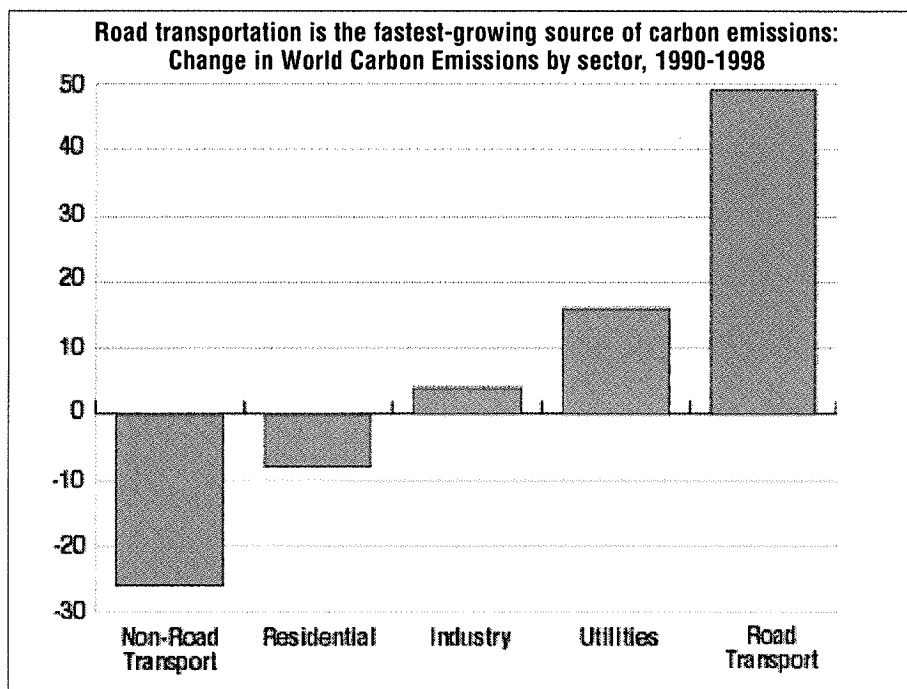
1 ton of beef than it does to produce 1 ton of grain. Only about 2.5 billion people could be fed on a diet comparable to a developed country diet, in which approximately 35% of calories are derived from animal sources.

- Americans are only 5% of the world's population, yet we consume 25% of the world's resources. Resulting social and environmental problems reverberate around the world.
- Six million acres of prime farmland—an area the size of Vermont—were lost in the United States alone between 1982 and 1992. Four of those six million acres were usurped by urban and suburban expansion. The other 2 million acres were lost through erosion caused by deforestation, unsustainable farming practices, and animal over-grazing.
- While the number of people living in 58 US metropolitan areas rose 80% between 1950 and 1990, the land covered by those areas expanded 305%. This urban sprawl not only impinges on wildlife and ecosystems on the encroached land; it affects life everywhere through higher carbon dioxide

levels and increased global climate temperatures due to greater commutes. The continued effects of our sprawling, car dependent cities include rises in sea level, harsher and more frequent heat waves, and more serious and potentially lethal health effects from pollution.

- One U.S. citizen consumes about 30 times as much as a citizen of India. If everyone on earth lived like the average North American, it would require four more earths to provide all the material and energy.
- Although the U.S. accounts for less than 5% of the world's overall population, we produce 25% of all greenhouse-gas emissions. In 50 years the U.S. will add 114 million people and Africa an additional 1.2 billion. Yet, it's expected that the carbon emission for the U.S.'s 114 million will be the same as for Africa's 1.2 billion.

*Sources: National Audubon Society; Population Reference Bureau (PRB); United States Department of Natural Resources Conservation Science; Population Action International (PAI); American Association for the Advancement of Science; New York Times; World Watch Institute; National Wildlife Federation; United Nations Development Program (UNDP); Center for a New American Dream; Paul and Anne Ehrlich*  
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## Population and Women's Empowerment

### Guaranteeing Access to Family Planning

Population growth decreases naturally when women are able to make informed, voluntary decisions about the size and spacing of their families. Presently, millions of women lack access to the contraceptive information and services needed to exercise those choices. Worldwide, less than 20% of women actively desire to become pregnant; yet over 228 million of the women who are not seeking to become pregnant are in need of contraception. In fact, the number of pregnancies in developing countries would reduce by 20 percent if the need for family planning services were met. Worldwide about half of all pregnancies each year are unintended, and about a quarter are unwanted.

### Improving the Health of Women and Children

Lack of access to reproductive health and family planning services endangers the health and lives of both mothers and children. Worldwide over 514,000 women die annually—one woman every minute—of causes related to pregnancy and childbirth.

African women are at greatest risk with a 1 in 16 chance of death from complications arising from pregnancy or birth. Even those who survive are at great risk of suffering serious disability or disease as a result of complications. Birth is also risky for children. Of the 8 million infant deaths worldwide per year, about 3.4 million are a result of inadequate maternal health and delivery care.

### Providing Educational Opportunities

Over 955 million women are illiterate, but studies show that literacy, and especially reading comprehension, profoundly impacts family size. More educated women have smaller, healthier families. Increased education is linked to other quality of life characteristics, such as increased personal autonomy and greater economic and social opportunities.

### Promoting Male Participation and Education

Men play an important role in reproductive decision making. For example, in many countries studies show that men often want more children than their wives. In the African countries of Cameroon, Mali, and

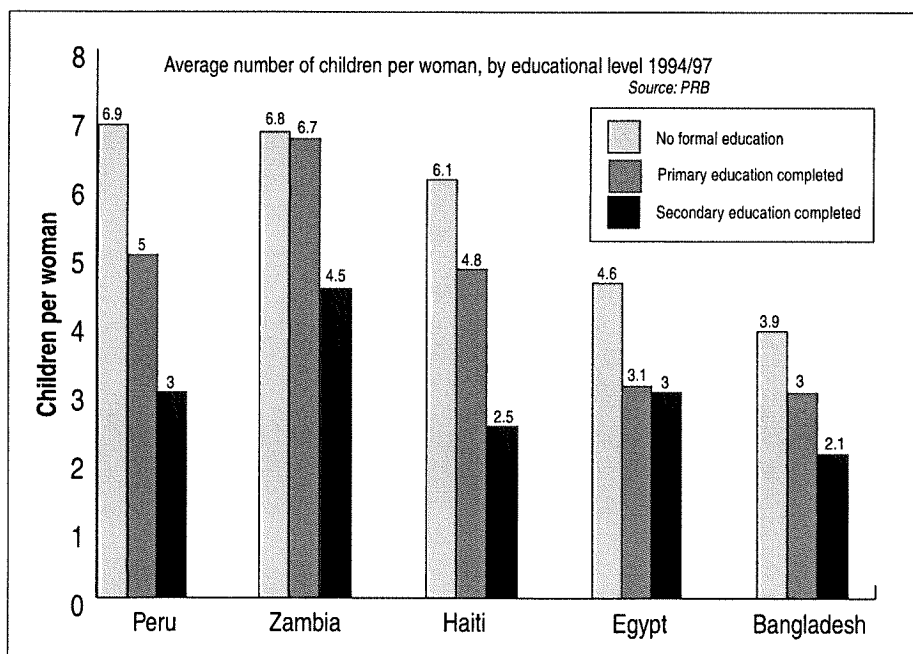
Senegal, less than 50% of men approve of family planning. Changing men's attitudes towards family size and reproductive decision making, as well as increasing male involvement in family planning and child care are important for the well-being of women and families.

### Eradicating Violence Against Women

Violence against women is having a devastating effect on women's health, well-being, and empowerment. Worldwide at least one in three women has been beaten, coerced into sex, or abused in some way, most often by someone she knows. One in four is abused during pregnancy. Abused women tend not to use family planning services for fear of reprisals from their husbands. In a Ghana study, close to half of all women and 43 percent of men said that a man was justified in beating his wife if she used contraceptives without his expressed consent.

### Advocating for Gender Equality

Empowering women requires changes throughout all of society's sectors. Across the globe, women are denied access to education, health services, political participation, and economic opportunities by societal norms and laws. Women are frequently refused the right to own property, earn income, or participate in government. Worldwide, only 14.4% of seats in parliaments or congresses are held by women, ranging from a mere 4.3% in the Arab States to almost 40% in Nordic countries. Increasing women's access to and participation in public and political opportunities is vital to improving quality of life. Women's empowerment in all spheres of life is key to reducing population growth and improving the quality of life for all people.



Sources: Population Reference Bureau (PRB), InterParliamentary Union, United Nations Population Fund (UNFPA); Measure Communication; PAI; United States Agency for International Development (USAID); James E. Rosen and Shanti R. Conly; UNDP

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## Population and Water

**“Man has forgotten his origins and is blind even to his most essential needs for survival, water...has become the victim of his indifference.”**

**--Rachel Carson, *The Silent Spring***

How long can this indifference continue? How long before we turn on the tap, only to discover the well has run dry?

That time has come for much of the world.

1.2 billion people do not have access to safe drinking water  
2.4 billion people lack proper sanitation  
3 million people die every year from diseases caused by unsafe water

How did we reach this point?

Over the past 70 years, the world's population has tripled. During that time, global water use increased by six-fold. We have more people, each using greater and greater amounts of water.

Freshwater resources have remained more or less constant throughout history – there is almost as much water today as there was when dinosaurs roamed the Earth. Is this supply large enough though, if both population and consumption continue to skyrocket?

97% of Earth's water is salt-water, unfit for drinking or agriculture  
2.97% is locked up in icebergs and glaciers  
Only .003% of all the water on Earth is realistically available for our use



**“There is enough water on our planet for every living person, but it is often at the wrong place at the wrong time.”**

**--Joel E. Cohen,  
Rockefeller University Laboratory of  
Populations**

Water distribution is uneven, leaving hundreds of millions of people without adequate access to clean water. Millions of families do not have the necessary water for cooking, sanitation, and agriculture.

500 million people suffer from water stress or serious water scarcity  
By 2025, 2/3 of the world's population may be subject to moderate to high water stress  
2 billion people get less than the 50 liters of water a day considered necessary to meet basic drinking, sanitation, and cooking needs  
By 2050, 4 billion people may have less than 50 liters of water per day

This acute water shortage is compounded by problems of pollution. More than half of the world's major rivers are so polluted that they endanger human health and poison surrounding ecosystems

20% of the fresh water wells in Bangladesh have high levels of arsenic, making the water unfit for human consumption

California has lost over 90% of its wetlands – nearly 2/3 of the native fish are extinct, endangered, threatened, or in decline

In the Southeastern U.S., 40-50% of freshwater snail species are now extinct or endangered due to pollution and the redirecting of rivers

**“No resource, including oil, is a sharper spur to conflict than water.”**

-- Jessica Matthews, *Washington Post*

As the disparity in access to fresh water continues to grow, conflicts over this essential resource will escalate, potentially erupting in both political and violent actions.

**“Water is likely to become a growing source of tension and fierce competition between nations, if present trends continue, but it can also be a catalyst for cooperation.”**

-- Kofi Annan, UN Secretary General

What must be done in this spirit of world cooperation?

Implement low-cost technologies, such as drip irrigation, that could double water efficiency in agriculture

Restore natural flow patterns to river systems

Stop dumping chemical and animal waste in fresh water sources

Curb industrial air pollution

Institute effective pricing policies to cut down on over-consumption in rich countries while allowing poor countries to purchase the water necessary for their survival

**“The problem is simply people—our increasing numbers and our flagrant**

**abuse of one of our most precious and limited resources.”**

-- *National Geographic*

The math is simple: more people means less water for each person. Add in the threat of pollution and unequal distribution and you reach mass conflict.

There may still be time before the well runs dry...before humans become the ultimate victims of their own indifference.

### **What You Can Do...**

You can begin with very simple steps towards conserving water.

\_ Do not let water run in the sink while shaving, brushing teeth, or washing your face and hands

\_ Look for faucets that drip. Constant drips can waste many gallons of water each day

\_ Install low-flow toilets, faucets, and showers. Investigate different designs that are available

\_ Water lawns early in the morning during the hotter summer months. Otherwise, much of the water used on the lawn can simply evaporate between the sprinkler and the grass

\_ Do not water the streets, walks or driveways – they will never grow a thing

\_ Inquire about local water policies and other ways that you can volunteer to help conserve water

### **Sources:**

1. Rachel Carson. *Silent Spring*. Boston: Houghton Mifflin, 1987, p.39.

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3. International Year of Freshwater 2003, United Nations, Press Release, New York, December 2003.

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