

The mission of the National Audubon Society is to conserve and restore natural ecosystems, focusing on birds, other wildlife, and their habitats for the benefit of humanity and the earth's biological diversity.



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# POPULATION & HABITAT



MAKING THE CONNECTION





# AUDUBON'S POPULATION & HABITAT PROGRAM

For over twenty-five years, the National Audubon Society has worked to educate citizens about the connection between population and the environment.

In the 1980s, Audubon was successful in making sustainable development one of the fundamental tenets of the U.S. foreign assistance.

Since then, Audubon has worked to strengthen U.S. leadership in the arena of international family planning, arguing that modest investments in the delivery of basic contraceptive services can pay real dividends for women, children, wildlife and national economies the world over.

# MAKING THE POPULATION CONNECTION

**The destruction of the natural world we see across the globe today is “fallout” from the human population explosion that has occurred over the course of the last 50 years.** In order to satisfy the needs and wants of ever-increasing numbers of people, humans chop down forests, bulldoze mountains, divert streams, spray poisons, introduce invasive species, overharvest wild animal populations, and pave over land upon which wild creatures depend.

**As bad as things are now, they are likely to get worse in the years ahead.** The reason: At current fertility rates we will add more people to the planet in the next 50 years than we have in the previous 500,000 years.

**Across the globe more than a billion teenagers are now entering their reproductive years** - the largest cluster of teenagers in world history. The choices these young people make in the next decade will determine the fate of thousands of species already pushed to the edge of

extinction by population-fueled habitat destruction.

**As the pages that follow make clear, population growth in the developing world impacts us right here at home.**

Globalization, it turns out, predates the World Bank, the internet, and the stock exchange. For millennia, birds and butterflies have flown across land borders, while the sea has never known division.

**Human population growth is about more than wildlife, of course.** It's also about dizzying rates of infant and maternal mortality, rising rates of unemployment, and escalating social and economic instability in the developing world.

**No single investment in human health, environmental protection, or economic and political stability can ever match investments made in international family planning.** And yet, despite our enormous wealth, the U.S. is last among the top 20 countries contributing to international family planning assistance.



**Audubon hopes that will change,** and that you will join with us in being an agent for change. Please read this publication and pass it on to a friend after taking a few minutes to call or write Congress in support of effective international family planning. You can change human lives around the world with a phone call — while saving wildlife right outside your window.

**Cover:** *The flamingos of East Africa face two kinds of pressure: 1) a soda extraction plant at Lake Natron in Tanzania threatens to change the chemistry of the only breeding ground for lesser flamingos in eastern Africa, and; 2) industrial and agricultural pollution in Lake Nakuru and Lake Bogoria in Kenya has led to dangerous levels of heavy metals in the tissue of birds that feed near sewage pipes that discharge into the lake. It is believed that pollution is killing the cyano-bacteria which are an important food source for the flamingo, even as it increases the chance of a breakout of pseudomonas aeruginosa, a common water-borne bacterium that has killed scores of thousands of flamingos in East Africa. Kenya and Tanzania have some of the most rapid population growth rates in the world with average family sizes of 4-6 children and population doubling times of 33 and 24 years respectively.*

# MEXICO AND MONARCHS

## **The migration predates human existence in the Western Hemisphere.**

For thousands of years, millions of Monarch butterflies from the United States and Canada east of the Rocky Mountains have flown up to 3,000 miles to overwinter in a small forest area in central Mexico.

## **Now, however, the last days of the Monarch may be in sight.**

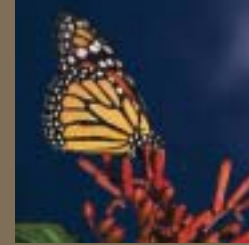
The reason: rapid deforestation of Mexico's high-altitude Oyamel fir stands which provide the rare micro-climate necessary to prevent the butterflies from freezing, but keep them cold enough so that their reproductive systems remain dormant until spring.

**Scientists did not discover the Mexican forest wintering ground of the Monarch until 1975.** By the mid-1980s, scientists realized that rapid deforestation in the Oyamel fir forest was not sustainable, and could drive the Eastern Monarch butterfly to extinction. At that



time, the Mexican government created a monarch reserve of approximately 62 square miles that consisted of no-logging zones at five known overwintering sites. But local residents have largely ignored the restrictions, saying they are too poor to care about the monarch — the trees must fall to put food on the table for hungry mouths. “Maybe it wouldn’t be such a bad thing if the butterflies didn’t come back. At least we could log,” said one campesino.<sup>1</sup>

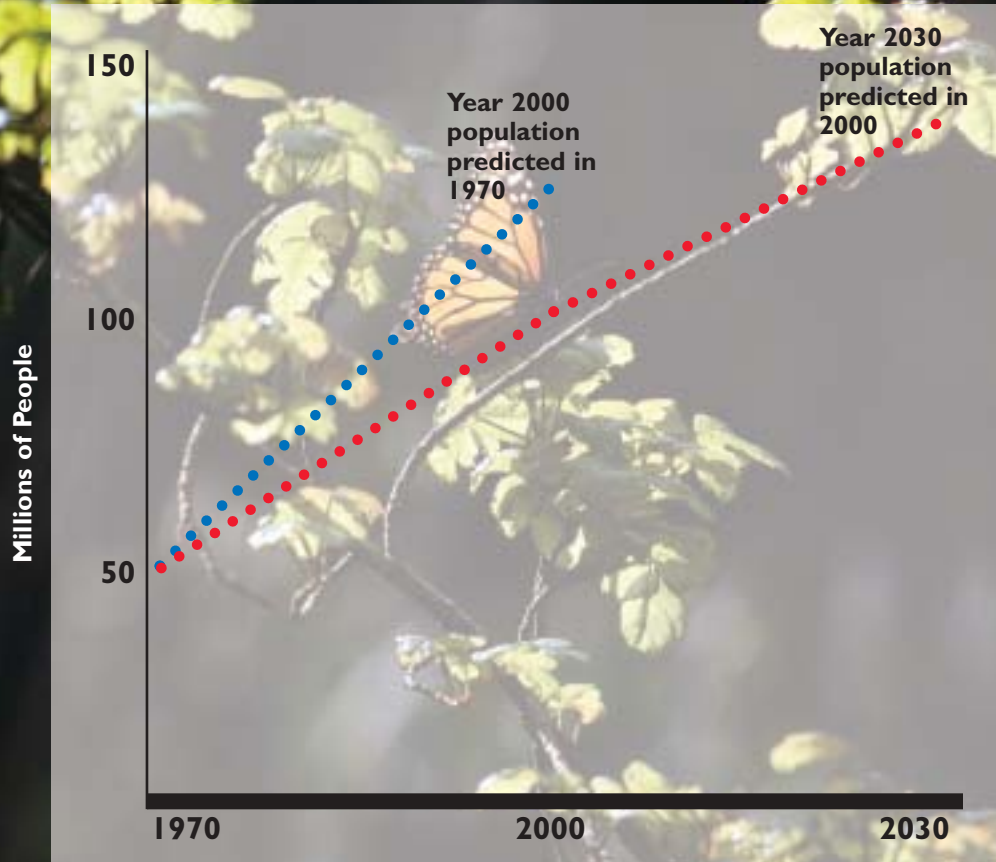
**Ultimately, humans and butterflies are competing for the same forest resources.** Unless population growth is stemmed and alternative economic opportunities are developed, the fate of the Monarch may be sealed. Aerial photographs of the region 30 years ago show a forest of nearly 2,000 square miles. Today, only half of it remains. The largest tract today is 20 square miles, five times smaller than the largest tract 15 years ago.<sup>2</sup>



“I understand more and more how population is the problem. I was asking almost every peasant I met how many children they have. They say ‘I have eight, 12, 15, nine.’ These people are in their 50s. I ask how many children their children have. They say, ‘Oh, señor, there are so many that we can’t count them.’ And most of them are getting their living from the forest. They want to get permits to log in the forest.”

**Homero Aridjis**  
*Mexico’s foremost authority  
on Monarch butterflies<sup>3</sup>*

## REAL AND EXPECTED POPULATION GROWTH IN MEXICO 1970-2030



## FAMILY PLANNING CHANGES EVERYTHING



It wasn't supposed to be this way. It was supposed to be much worse. Back in 1970, demographers predicted Mexico's population would rise from 50 to over 132 million by the year 2000.<sup>4</sup> The good news is that because of a widely accepted family planning initiative, the fertility rate of Mexico has dropped from 6.1 in 1970 to 2.7 today and Mexico's population is 32 million lower than predicted 30 years ago. The bad news is that even with a lower birth rate, Mexico's population is expected to rise past the 135 million mark over the course of the next 30 years.<sup>5</sup>

# SILENT FORESTS

**The forests once rang with the sounds of monkeys.** In Ghana and parts of the Ivory Coast, however, one of the loudest and most flamboyant of those monkeys will never be heard again. Scientists say Miss Waldron's red colobus monkey is now gone — shot into extinction by “bushmeat” hunters seeking to fill increasing numbers of cooking pots with game from rapidly shrinking forests.<sup>1</sup>

**The human population pressure on primates is severe across the globe.**

Anthropologist Jane Goodall notes that when she came to Africa in 1960, there were approximately two million wild chimps left on the continent. Today there are about 120,000, and the numbers are rapidly dwindling.<sup>2</sup>

“As their habitat is destroyed” by an increasing human population, there are “smaller and smaller islands of forest, too small to represent a viable gene pool,” says



Goodall. Goodall's own Gombe Stream Research Center in Tanzania comprises only thirty square miles, surrounded by villages on three sides and a lake on the fourth. The lack of forest land is as much a problem for humans as it is for chimps. “How can we preserve Gombe,” Goodall asks, “when the surrounding people are starving?”<sup>3</sup>

**Habitat destruction driven by human population growth is pushing Gorillas, Chimpanzees, Orangutans, and most smaller monkeys closer to extinction.**

The 600 Mountain Gorillas left in the wild (there are zero in captivity) live in the rainforests of Rwanda, Uganda and the Congo — countries with the fastest population growth rates on earth. The Orangutan, found only on the islands of Sumatra and Borneo in Indonesia, is near extinction due to hunting and habitat lost. Experts now say all the Great Apes may be extinct within the next 20 years.<sup>4</sup>

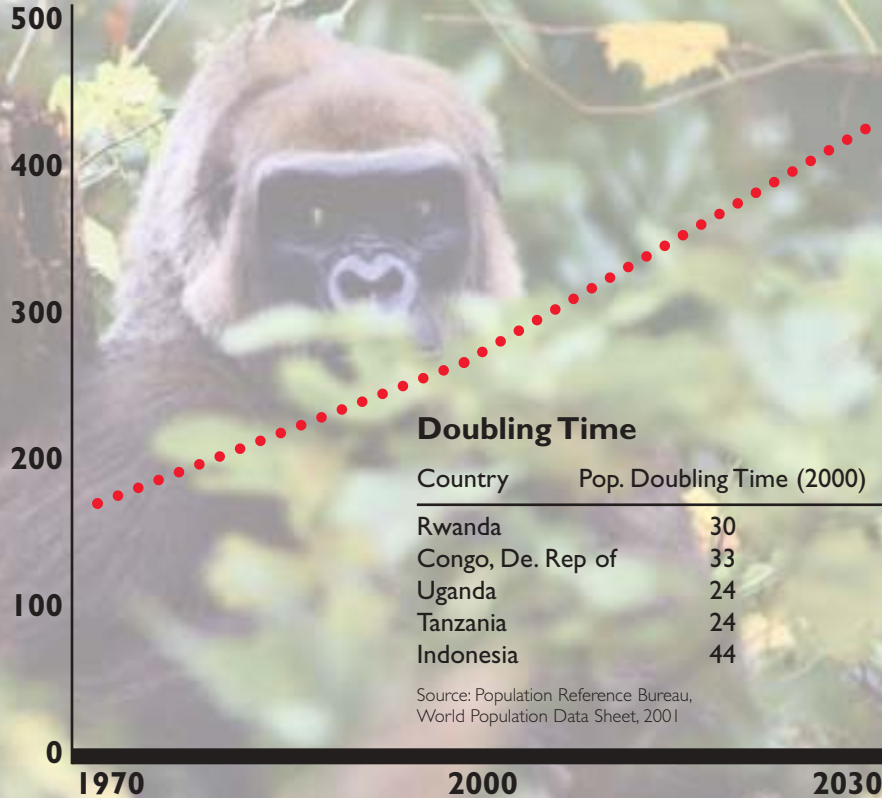


“Chimpanzees lived in what was Africa's great equatorial forest belt, but it's not a belt anymore, just pockets of shrinking forest areas... If things carry on at the present rate in 15 years there will be very, very few chimpanzees left.”

*Jane Goodall*  
primatologist<sup>5</sup>

# HUMAN POPULATION GROWTH, 1970-2030 IN COUNTRIES WITH WILD GREAT APE POPULATIONS

Millions of People



## FAMILY PLANNING CHANGES EVERYTHING



It is a bitter and sad irony that human population growth may wipe out our closest relatives on earth, the Great Apes. The good news is that there is a huge potential for rapid fertility decline in countries where these creatures still reside. The bad news is that even with expected fertility declines, Africa's current population of 820 million is expected to rise to 1.32 billion by 2020 and will continue to grow after that.<sup>6</sup> The fate of the Great Apes is tied to the people. Without family planning, the fate of the people is far from assured.

# CANARY IN THE COAL MINE

**For millennia, birds have served as one of man's most important early-warning systems.** Birds have helped predict the change of seasons, the coming of storms, the presence of land at sea, and the rise of toxic levels of pollution in the food chain. Now birds are telling us that something is terribly wrong in the environment.

**More than 50 percent of Neotropical migrant species monitored in the eastern U.S. and prairie states have been in decline for the last 30 years.**<sup>1</sup>

Scientists now think the decline of these Neotropical songbirds is due, in large part, to habitat destruction caused by rapid rates of population growth both overseas and in the U.S.<sup>2</sup>

**Many of "our" songbirds spend 6 months a year in Latin America and the Caribbean.**

The tropical forests many of these birds are



dependent upon are being cut to the ground at record rates in order to cope with burgeoning rates of population growth. In Central America, for example, where population doubling times range from 25-30 years, over 80% of the original forest canopy is gone.<sup>3</sup> The result: fewer and fewer cerulean, Kentucky and prothonotary warblers are returning to the U.S. every year.

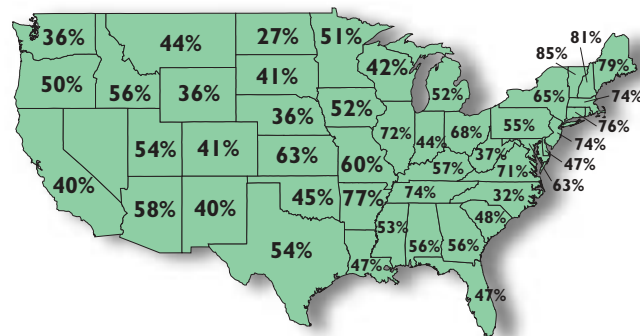
**Population-driven forest destruction in the U.S. has had an equally devastating impact.** The population of the U.S.

has risen from 78 million in 1900 to over 280 million today.<sup>4</sup> As cities have grown, suburban sprawl has taken its toll. Fairfax, Virginia, for example, a suburb of Washington, D.C., saw 69 percent of its forest converted to homes and businesses between 1980 and 1995.<sup>5</sup> Since 1980, the U.S. has converted more than 10 million acres of forest to suburb — an area twice as large as Yellowstone, Everglades, Shenandoah, and Yosemite National Parks combined.<sup>6</sup>



"Human population growth is the most pressing environmental problem facing the U.S. and the world."

*John Flicker, President  
National Audubon Society*

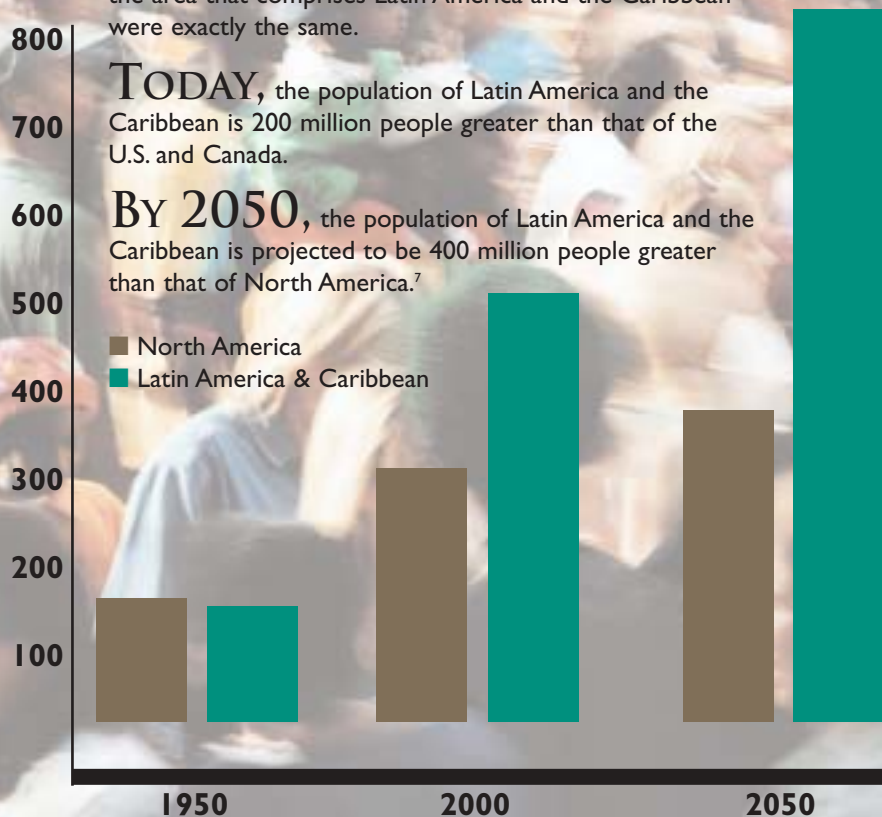


General decline in Neotropical migrant bird species over a 10-year period. Source: Partners in Flight

**IN 1950**, the populations of North America and the area that comprises Latin America and the Caribbean were exactly the same.

**TODAY**, the population of Latin America and the Caribbean is 200 million people greater than that of the U.S. and Canada.

**BY 2050**, the population of Latin America and the Caribbean is projected to be 400 million people greater than that of North America.<sup>7</sup>



## FAMILY PLANNING CHANGES EVERYTHING



It's the largest tract of tropical forest remaining in Central America — and a place where history may soon repeat itself.<sup>8</sup> The Maya Biosphere Reserve was established in 1990 through an agreement between Mexico, Guatemala, and Belize. Scientists say one third of all North American migratory birds pass through the region.<sup>9</sup> Once inhabited by several million Mayans, the area was depopulated in the 9th Century after deforestation, erosion and soil exhaustion brought about agricultural collapse. A thousand years later, this same cycle may again play out as populations double and forests fall. The one hope: family planning.<sup>10</sup>

# TROUBLED WATERS

**Some 60 percent of the world's population now lives within 35 miles of a coastline.** Through a combination of population growth, migration, and urbanization, this figure is likely to rise to 75 percent by the year 2020.<sup>1</sup>

**What this means for the world's oceans is clear —** more pollution and more development along fragile beach fronts the world

over. In many parts of the world, sewage treatment facilities that were adequate only a decade ago are now overflowing and discharging untreated sewage into rivers and oceans.

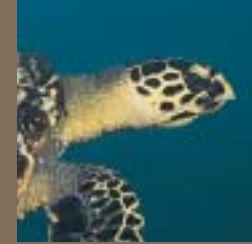
**While beaches are in trouble, the oceans themselves are not doing much better.** Seventeen of the world's major fisheries are being overfished, with coastal fisheries being particularly hard hit.<sup>2</sup>



**One of the species imperiled by coastal development is the sea turtle.** Beach vehicles, poachers and human encroachment destroy millions of turtle eggs each year, while rapid coastal development is driving up the economic and political costs of beach protection. With the population of the Caribbean projected to double in the next 50 years, it will be increasingly difficult to protect sea turtle populations from destruction.

**Like birds, sea turtles roam the world as international citizens that cross vast expanses of the globe.**

Yet today, every species of sea turtle found in U.S. waters — leatherback, hawksbill, Kemp's ridley, loggerhead, and green — is listed as either threatened or endangered.<sup>3</sup>



“The populations of sea turtles of the Caribbean coast of Costa Rica, Nicaragua and Panama, in the absence of adequate protection and management of the same, will not survive commercial exploitation, due to the increasing demand by human populations and other economic activities of the Caribbean coast of the three countries.”<sup>4</sup>

*Tri-Partite Agreement for the Conservation of Sea Turtles of the Caribbean Coast, 1995*



# CARIBBEAN REEFS CONSTITUTE 12 PERCENT OF THE WORLD'S TOTAL REEF SYSTEM.



About 30 percent of the reefs in the Caribbean are considered at high risk due to increased runoff and sedimentation caused by deforestation, nutrient contributions from hotel sewage, coastal construction and mining.

## FAMILY PLANNING CHANGES EVERYTHING



Can the Caribbean accommodate twice as many people? The question is academic: It will have to. Demographic momentum is now so great that the only question now is how soon regional populations will double. At current birth rates, the population of the Caribbean may double in less than 40 years. If basic family planning services are made widely available in the Caribbean, however, population growth may slow to the point that coastal development and environmental protection may no longer be treated as mutually exclusive goals.

# INVESTING IN THE FUTURE

**Family planning enables personal responsibility.** Hundreds of millions of women in the developing world want smaller families but do not have access to — or cannot afford — the kind of basic family planning services that most American men and women take for granted. The result: rapid population growth, crushing poverty, rising political and economic instability, sickening levels of child and infant mortality, and devastating levels of environmental degradation in the developing world.

**Family planning assistance is one of the most effective forms of foreign aid, enabling countries to reduce birth rates and divert funds to the kinds of infrastructure investments needed to build economies, reduce child and maternal mortality, and protect the environment.** In the 28 most populous countries receiving U.S. funds, the average number of children per family has dropped from 6.1 in the 1960s to 4.2 today. In Colombia, Indonesia and Mexico — countries which have received extensive US family planning assistance —

average family size is now down to three children. Taiwan and Thailand, which were early recipients of U.S. assistance, now have an average family size of two children and no longer require U.S. assistance.<sup>1</sup>

**While the U.S. remains the richest nation on earth, we spend very, very little to help stem the tide of human population growth.** Today, less than 0.03 percent of the federal budget is spent on family planning assistance to poor countries in the developing world.

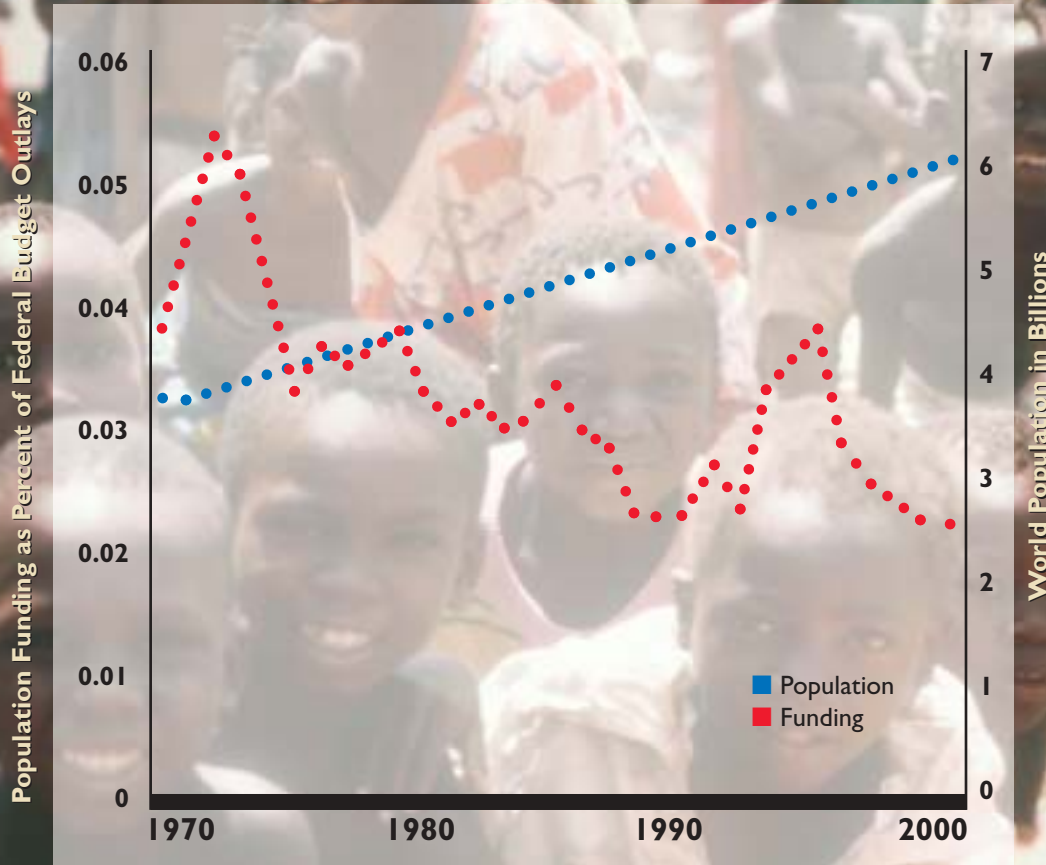
**Simply put, the U.S. is not living up to its promises.** Six years ago, the U.S. joined with 180 other countries in promising to spend 0.7 percent of its Gross National Product on overall development assistance. Since then U.S. family planning funding has actually declined by more than \$100 million, and the U.S. is now last, as a percentage of GNP, among the 20 top contributing countries for overall development assistance that includes family planning programs.<sup>2</sup>



“The Green Revolution has won a temporary success in man’s war against hunger and deprivation; it has given man a breathing space... But the frightening power of human reproduction must also be curbed; otherwise the success of The Green Revolution will be ephemeral only.”<sup>3</sup>

**Dr. Norman Borlaug**  
*Father of the “Green Revolution,”  
and winner of the  
1970 Nobel Prize Peace Prize*

# AS WORLD POPULATION HAS CLIMBED, U.S. FAMILY PLANNING ASSISTANCE HAS FALLEN



## FAMILY PLANNING CHANGES EVERYTHING



**By dedicating just one billion dollars a year to family planning assistance in the developing world, the U.S. can change the course of world history forever.**

- Hundreds of millions of women across the globe would be able to control their future and provide for the children they already have;
- New investments in health care, education, transportation and communication could be made;
- Agriculture and job creation could catch up with population growth in those countries where that no longer occurs.

# FOOTNOTES

## Mexico and Monarchs

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Planet is a public awareness campaign funded by The David and Lucile Packard Foundation and the William and Flora Hewlett Foundation. The goal of Planet is to raise awareness of international family planning in the minds of the American public, and to make it a priority among issues facing the U.S. and the world. The Planet public education campaign is the work of several organizations, including: CARE, National Audubon Society, Save the Children, Planned Parenthood Federation of America, the Communications Consortium Media Center and Population Action International.

