

US in the WORLD

CONNECTING PEOPLE AND COMMUNITIES TO ENSURE A HEALTHY PLANET



Virginia



Comparison at same scale

Virginia
Area: 40,767 sq. miles
Population: 6.7 million

Guatemala
Area: 42,042 sq. miles
Population: 11.2 million

Largest metropolitan areas by population (1996): Va. counties and cities in the Washington metropolitan area (1,961,262), Norfolk-Virginia Beach-Newport News (1,540,252), Richmond-Petersburg (935,174)



Guatemala

Largest urban area by population (1995): Guatemala (2,205,000)

Guatemala made headlines in 1997. Its lucrative fresh raspberry export business suffered when some 1,300 people in several states were sickened by cyclospora parasites traced to the berries, prompting the U.S. Food and Drug Administration (FDA) to ban the imported berries for a year. During the same year, Virginia's seafood industry was shaken by an equally mysterious parasitic infection, *Pfiesteria piscicida*, in the Chesapeake Bay and nearby Maryland river waters. These outbreaks illustrate people's growing fears about the effects that environmental hazards, domestic and foreign, have on the food we buy.

Virginia and Guatemala both contain valuable mountain and forest resources. Coastal areas threatened by agricultural practices or shifting populations are challenged by problems created by sprawling national capitals—

from poverty and sanitation to traffic congestion and land use. Governments, businesses, and citizens must balance economic development while maintaining these resources.

Consider, however, the dramatic differences between Virginia and Guatemala. Virginians' average income is 20 times that of Guatemalans. Virginians consume 50 times more energy and own 45 times more cars per capita. Guatemala has endured an autocratic and repressive government for most of this century. Women bear an average of 1.9 children in Virginia, while women in Guatemala bear an average of 5.1 children. Population growth increases pressure to farm fragile lands on steep hillsides, to clear land in its northern tropical forests, and to expand Guatemala City's slums and shantytowns beyond already inadequate public health and sanitation services.

Agriculture dominates Guatemala's

economy, with huge tracts in the hands of wealthy Guatemalans or banana plantations owned by international fruit companies. Most of the population barely ekes out a living on tiny plots in the country's mountainous highlands, or as laborers on large farms. Pesticides and other chemicals are an increasing problem, both in fruit plantations and on newer, high-value export crops such as raspberries, broccoli, and snow peas, grown on smaller plots in the highlands.

In Virginia, only 2 percent of the labor force is employed in agriculture, but the heavy use of fertilizers, herbicides, and insecticides to boost yields contaminates water and land. The growing concentration of people around Virginia's cities and waterways places great strains on the state's environment. Population growth near Washington, D.C. and Richmond, Va.,

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Demographic and Health Trends

- Virginia's population grew almost 9 percent between 1990 and 1997—from 6.2 million to 6.7 million persons. This rate was slightly higher than the national average.
- Roughly two-thirds of Virginia's increase of 68,000 people between 1996 and 1997 was the result of natural increase. The state gained 22,000 people through net migration—18,300 from other countries and the remainder from other states.
- Northern Virginia is one of the fastest-growing regions in the state, with much of the growth in the Washington, D.C. suburbs. For ex-

ample, Loudoun County's 43 percent increase since 1990 is the largest in the state. Much of the sprawl has occurred as suburbs closer to Washington become more urban in character.

- Fifteen of the 24 counties and independent cities that lost population between 1990 and 1996 were west of the Blue Ridge Mountains, the result of a decline in mining and related industries. Richmond and Norfolk also have suffered steady population declines, while many surrounding areas have grown rapidly.

Natural Resources and Wildlife Issues

- Northern Virginia's population growth has outpaced the capacity of new facilities (schools, for example) to keep up with demand.
- A recent study cited the Washington area as having the second highest level of traffic gridlock in the country (second only to Los Angeles).
- Since 1987, Virginia has been part of a regional partnership focused on cleaning up the Chesapeake Bay. One goal of the partnership is to reduce the bay's nitrogen and phosphorous

pollution content by 40 percent by 2003.

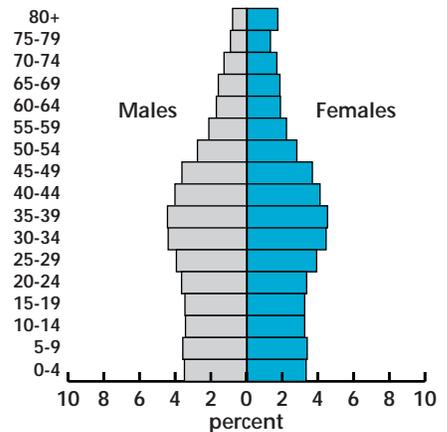
- Environmentalists have been concerned about the level of Virginia's efforts to combat their environmental problems in recent years. A new initiative quadrupled the funding to \$60 million over the next two years.
- Virginia's endangered and threatened species include the bald eagle, peregrine falcon, red-cockaded woodpecker, three species of bats, and eight species of pearl mussel.

Socioeconomic Factors

- The influx of federal government and professional workers in the Washington, D.C. area has been a boon to Northern Virginia's economy. Fairfax, Loudoun, and Prince William counties, and the city of Falls Church, had median household incomes over \$54,000 in 1993, ranking them among the 15 highest household incomes in the United States.

- Many rapidly growing areas of Virginia are wrestling with management of their growth. For example, to slow its annual growth rate, fast-growing Chesapeake has placed restrictions on development that was bringing in more people and traffic than local schools and roads could handle.

POPULATION BY AGE AND SEX

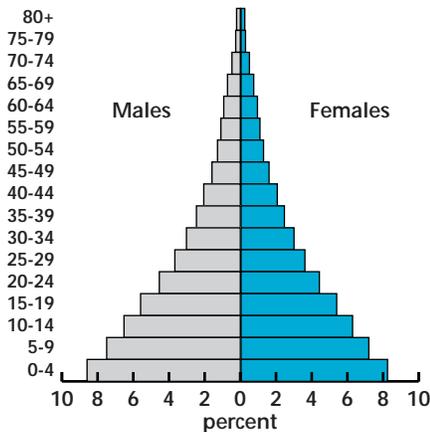


VIRGINIA FACTS

- Population, 1997: 6.7 million
- Projected population, 2025: 8.5 million
- Annual growth rate: 1.0%
- Doubling time (at current rate): 70 years
- Average number of children per woman: 1.9
- Infant deaths per 1,000 live births: 7.8
- Life expectancy: 72 (male), 79 (female)
- Persons per square mile: 170
- Percent urban: 69
- Endangered/threatened animals: 39 species
- Endangered/threatened plants: 10 species
- Percent of land protected: 3
- Wetlands loss, 1780-1980: 42%
- Daily water use per capita: 1,249 gallons
- Water use for domestic purposes: 12%
- Water use for agriculture: 1%
- Water use for industry: 8%
- Water use for energy production: 80%
- Cropland per capita: 1.1 acres
- Energy use per capita: 53.6 barrels of oil equiv.
- Persons per motor vehicle: 1.2
- Adults who are high school graduates: 82%
- Elected officials who are women: 13%
- Labor force in agriculture: 2%
- Labor force in industry: 17%
- Labor force in services: 80%
- Gross State Product, 1994: \$27,132 per capita

GUATEMALA

POPULATION BY AGE AND SEX



GUATEMALA FACTS

Population, 1997: 11.2 million

Projected population, 2025: 21.7 million

Annual growth rate: 2.4%

Doubling time (at current rate): 29 years

Average number of children per woman: 5.1

Infant deaths per 1,000 live births: 51

Life expectancy: 62 (male), 67 (female)

Persons per square mile: 269

Percent urban: 39

Threatened animals: 29 species

Threatened plants: 315 species

Percent of land protected: 12.2

Wetlands loss, through 1980s: n.a.

Percent with access to safe water: 64

Percent with adequate sanitation: 59

Daily water use per capita: 100 gallons

Water use for domestic purposes: 9%

Water use for agriculture: 74%

Water use for industry: 17%

Cropland per capita: 0.5 acres

Energy use per capita: 1.1 barrels of oil equiv.

Persons per motor vehicle: 54

Percent of girls in secondary school: 23

Percent of boys in secondary school: 25

Women as % of national legislature: 13

Labor force in agriculture: 50%

Labor force in industry: 18%

Labor force in services: 32%

GDP per capita, 1995: US\$1,367

Demographic and Health Trends

■ Fertility has dropped by one-fifth since the 1970s, but women in Guatemala still average five children.

Only one Latin American country—Honduras—has higher fertility. This high fertility has produced a population with 45 percent of its people younger than age 15 (see figure).

■ The population is projected to increase 94 percent by 2025 as large numbers of young people enter their childbearing years.

■ Twenty-seven percent of children under age 5 are moderately or se-

verely underweight. This level compares with 11 percent for Latin America and the Caribbean.

■ Guatemala's urban areas have grown much more rapidly than its rural areas, yet Guatemala remains one of the least urban countries in Latin America and the least urban in Central America.

■ Guatemala's indigenous population makes up about one-half of the country's population—more than that of any other Latin American country.

Natural Resources and Wildlife Issues

■ Deforestation, soil erosion, and water pollution are the country's primary environmental problems.

■ Between 1980 and 1990, 18 percent of forests were converted to other uses, such as farms and ranches. Trees are also cut to provide fuelwood for about three-fourths of the population. Deforestation contributes to accelerated erosion and soil loss.

■ Per capita commercial energy consumption in Guatemala increased

only 4 percent between 1973 and 1993, but total commercial energy use increased 88 percent over the same period—almost entirely a consequence of increased population size. Traditional fuels constituted 59 percent of total energy consumption in 1973 and in 1993.

■ Loss of biological diversity is a concern in Guatemala. Threatened animals include the Central American tapir, Caribbean manatee, and golden-cheeked warbler.

Socioeconomic Factors

■ The extreme poverty rate more than doubled from 31 percent in 1980 to 67 percent in 1989.

■ Ten percent of the population receives 47 percent of household income. Agricultural land ownership is also highly concentrated, with 3 percent of landowners possessing 65 percent of the land.

■ Although the country's economy is dominated by agriculture, it is the most advanced of the Central Ameri-

can economies. The manufacturing sector is more developed than in other countries in the region.

■ Constraints to economic development include poverty, the lowest tax revenue in Latin America, and insufficient investment.

■ The literacy rate in Guatemala is 56 percent, compared with an average of 86 percent for Latin America and the Caribbean.

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and recreation and retirement development along the Chesapeake Bay and rivers mean more construction, more runoff, and heavier water use, straining the resources that draw people to the area.

People living in poverty feel the environmental threats most acutely. Erosion and pesticide applications threaten Guatemala's poorest farmers, just as dirty industry and environmental hazards such as lead paint and workplace dangers in mines and factories are most prevalent for lower income residents and workers.

Poverty, race, and ethnicity are closely linked. Indigenous Mayan people make up 45 percent of Guatemala's population, and their poverty contributes to their average life expectancy of 44 years, compared with 63 years for the nation. In the United States more racial and ethnic minorities live in poverty than do whites. According to the 1990 Census, in Virginia 22.4 percent of African Americans live in poverty, compared with 10.2 percent for the commonwealth as a whole.

Responding to Challenges

Across Virginia, citizen organizations and government are working to address natural resource issues. Virginia

is one of three state governments that jointly maintain The Chesapeake Bay Program, which has registered some important successes in cleaning the bay's waters and managing commercially important fish species. Local organizations such as the Alliance to Save the Mattaponi in Central Virginia unite community groups (including the Mattaponi Indians who fish in the area) and environmental organizations in opposing a proposed dam in King William County, which would flood wetland areas.

Even under Guatemala's repressive military governments of the 1970s and 1980s, environmental protection was a banner under which people could unite. Efforts to protect forest areas in the northern Peten province, home of the rare quetzal bird, resulted in creation of a biosphere forest protection area. The Nature Conservancy, based in Virginia, played a role in these protection efforts, as did other U.S.-based environmental groups.

Some projects also address environmental hazards that many Guatemalans face daily. Sanitation and public health programs in Guatemala City are supported by the Guatemalan government, private agencies such as the Richmond, Va.-based Christian

People in Virginia and Guatemala, along with all other living creatures, need clean and healthy air, water, and land, and a stable climate. But as people strive to meet these fundamental needs and improve their lives, they make demands on Earth's resources—and leave footprints. No species demands as much and leaves as many footprints as humans do. The number of people on the planet has a direct impact on the environment and how resources are used. But the level of consumption and the ways in which natural resources are used also directly affect the health of the planet—locally, regionally, globally.

No matter where one lives, the activities of *all* humans will ultimately determine the well-being of *all* humans.

Children's Fund, and international agencies such as UNICEF. In addition to these development efforts, the U.S. Agency for International Development budgeted \$31.3 million for development assistance to Guatemala in 1998. The United States also supported 145 Peace Corps volunteers in Guatemala in 1997. ■

DEFINITIONS: **Doubling Time:** The number of years it will take for a population to double, assuming a *constant* rate of natural increase. **Average Number of Children Per Woman:** Known as the Total Fertility Rate (TFR) or the average number of children a woman would have in her lifetime, assuming that birth rates remained constant throughout her childbearing years. **Endangered Species:** Any species in danger of extinction throughout all, or a significant portion of its habitat. **Threatened Species:** Any species likely to become endangered within the foreseeable future throughout all, or a significant portion of its habitat. **Gross Domestic Product (GDP):** The value of all goods and services produced within a nation in a given year. **Gross State Product (GSP):** The value of all goods and services produced within a state. It is the state counterpart of the nation's GDP.

SOURCES: Major sources are International Labour Organization; National Center for Health Statistics; UNICEF; U.S. Bureau of Economic Analysis; U.S. Department of Agriculture; U.S. Fish and Wildlife Service; U.S. Geological Survey; The World Conservation Union (IUCN); and World Resources Institute. For a complete list of sources, contact PRB.

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