

# US in the WORLD

CONNECTING PEOPLE AND COMMUNITIES TO ENSURE A HEALTHY PLANET



## West Virginia



Comparison at same scale

**West Virginia**  
Area: 24,231 sq. miles  
Population: 1.8 million

**Guinea**  
Area: 94,926 sq. miles  
Population: 7.5 million



## Guinea

**Largest metropolitan areas by population (1998):**  
Huntington-Ashland (W.Va., Ky.) (313,922), Charleston (253,175), Wheeling (152,903)

**Largest urban area by population (2000):** Conakry (1,824,000)

**W**est Virginia and Guinea face the challenge of ensuring the sustainable use of important mineral and timber reserves while preventing urban and industrial growth from adversely affecting the health of their environment and people.

Both West Virginia and Guinea are mostly hilly and extensively forested. West Virginia boasts the highest average altitude east of the Mississippi, with the Allegheny Plateau stretching over two-thirds of its land area. The state has 3,000 explored caves, several of which were found to contain rare invertebrate or bat populations, including 10 endemic species. However, only 3 percent of the land is protected, and 14 animal and six plant species are listed as threatened or endangered.

In the small West African country of Guinea, a coastal plain gives way to a

mountainous plateau and a savanna region dotted with outcrops of rock in the interior, while forested highlands dominate the southeastern part of the country. Population growth has led to extensive deforestation, soil erosion, and desertification. Thirty animal and 35 plant species are currently endangered.

The industrial sector plays an important part in the development of the two economies. Manufacturing is the main industry in West Virginia, with heavy reliance on local energy resources such as coal, oil, and natural gas. The state produces almost one-fifth of the coal mined in the United States and was the first to use natural gas for industrial purposes. Guinea also relies heavily on its mineral wealth. It has a quarter of the world's bauxite reserves and is the leading exporter of this commodity. Iron ore, diamonds, gold,

petrol, platinum, and uranium also contribute significantly to its export earnings. The government is currently encouraging industrial development based on these resources and on the country's hydroelectric potential.

Compared with industry, agriculture and forestry contribute considerably less to the economy but remain the livelihoods of many people in both West Virginia and Guinea. Chicken, cattle, turkey, and eggs are the main commodities produced in West Virginia, and the 11.7 million acres of timberland located in the world-renowned Appalachian Hardwood Belt support a thriving forestry sector. Although only 2 percent of Guinea's land is arable, and a quarter of it is used as permanent pasture, nearly nine out of 10 Guineans make a living from agricultural activities. The main commodities are pineapples, peanuts, palm

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# WEST VIRGINIA

## Demographic and Health Trends

■ Among the 47 states that have increased their population since 1990, West Virginia has added the smallest number of people (13,000) and grown at the slowest rate (less than 1 percent).

■ Between 1990 and 1999, the area around Hampshire, Morgan, Berkeley, and Jefferson grew by 20 percent.

Putnam County, outside Charleston, also has grown rapidly (by 21 percent).

■ West Virginia's rate of abortion among women ages 15 to 44—8.9 per 1,000 women—is considerably lower than the national average of 22.9 per 1,000 women.

## Natural Resources and Wildlife Issues

■ The Virginia northern flying squirrel, the Cheat Mountain salamander, the bald eagle, and three species of bats are among West Virginia's 14 endangered and threatened animals. The harperella and the Virginia spiraea are among the state's six endangered and threatened plants.

■ In 1996, strip mining accounted for 32 percent of the state's coal production. Communities close to the mining operations have complained

that strip mining has damaged air and water quality—and their quality of life.

■ With 78 percent forest cover, West Virginia is the third most forested U.S. state. Timber cut in 1994, however, was more than double 1987 amounts, raising concerns about threats to natural beauty and biodiversity—and to potential tourism activities.

## Socioeconomic Factors

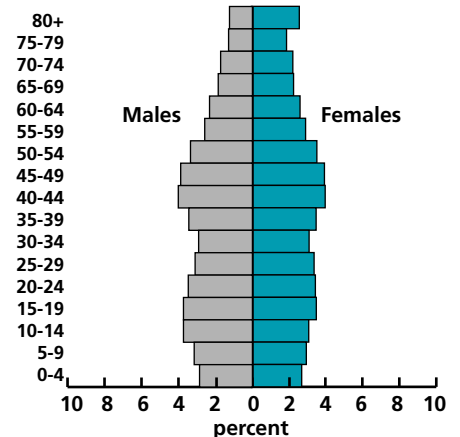
■ Federal projects worth \$1.5 billion have helped offset a drop in coal mining jobs. Since 1988, federal government jobs have increased 20 percent with agencies such as the Federal Bureau of Investigation, the U.S. Fish and Wildlife Service, NASA, and the National Institute for Occupational Safety and Health.

■ Manufacturing and service industries contributed the largest share of West Virginia's gross state product

(GSP) in 1997—18 percent and 17 percent, respectively. Although mining contributed just 8 percent of the state's GSP, that share is significantly higher than in neighboring states.

■ West Virginia's median household income in 1996 (\$25,800) was nearly \$10,000 lower than the national average, and the state's 20 percent poverty rate was significantly higher than the national rate of 13.7 percent.

## POPULATION BY AGE AND SEX



## WEST VIRGINIA FACTS

Population, 1999: 1.8 million

Projected population, 2025: 1.8 million

Annual growth rate: -0.3%

Doubling time (at current rate): n.a.

Average number of children per woman: 1.7

Infant deaths per 1,000 live births: 9.6

Life expectancy: 71 (male), 78 (female)

Persons per square mile: 75

Percent urban: 36

Endangered/threatened animals: 14 species

Endangered/threatened plants: 6 species

Percent of land protected: 3

Wetlands loss, 1780-1980: 24%

Daily water use per capita: 2,526 gallons

Water use for domestic purposes: 6%

Water use for agriculture: 0.4%

Water use for industry: 29%

Water use for energy production: 65%

Cropland per capita: 1.5 acres

Energy use per capita: 76.8 barrels of oil equiv.

Persons per motor vehicle: 1.3

Adults who are high school graduates: 75%

Elected officials who are women: 17%

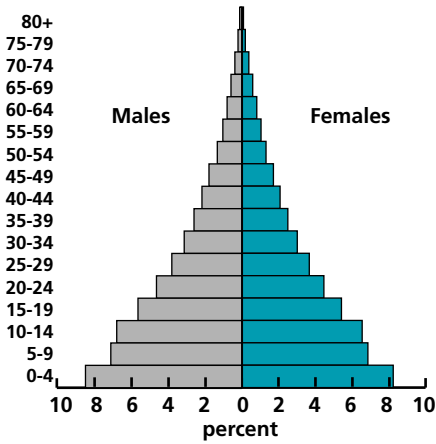
Labor force in agriculture: 3%

Labor force in industry: 21%

Labor force in services: 76%

Gross State Product, 1997: \$21,053 per capita

## POPULATION BY AGE AND SEX



## GUINEA FACTS

<b>Population, 2000:</b> 7.5 million
<b>Projected population, 2025:</b> 12.6 million
<b>Annual growth rate:</b> 2.1%
<b>Doubling time (at current rate):</b> 33 years
<b>Average number of children per woman:</b> 5.5
<b>Infant deaths per 1,000 live births:</b> 98
<b>Life expectancy:</b> 43 (male), 47 (female)
<b>Persons per square mile:</b> 79
<b>Percent urban:</b> 26
<b>Threatened animals:</b> 30 species
<b>Threatened plants:</b> 35 species
<b>Percent of land protected:</b> 0.7
<b>Wetlands loss, through 1980s:</b> n.a.
<b>Percent with access to safe water:</b> 46
<b>Percent with adequate sanitation:</b> 31
<b>Daily water use per capita:</b> 102 gallons
<b>Water use for domestic purposes:</b> 10%
<b>Water use for agriculture:</b> 87%
<b>Water use for industry:</b> 3%
<b>Cropland per capita:</b> 0.5 acres
<b>Energy use per capita:</b> 0.4 barrels of oil equiv.
<b>Persons per motor vehicle:</b> 200
<b>Percent of girls in secondary school:</b> 6
<b>Percent of boys in secondary school:</b> 18
<b>Women as % of national legislature:</b> 8.8
<b>Labor force in agriculture:</b> 87%
<b>Labor force in industry:</b> 2%
<b>Labor force in services:</b> 11%
<b>GDP per capita, 1998:</b> US\$493

## Demographic and Health Trends

■ Guinea's population grew at an average annual rate of over 2 percent from 1950 to 1970. The country has grown from 3.9 million in 1970 to 7.5 million in 2000, but growth rates since 1970 have been unstable as a consequence of migration. The country has offered asylum to over 700,000 refugees since 1990, most from Liberia and Sierra Leone.

■ Guinean women had, on average, seven children each from 1950

through the early 1980s. The government considers today's rate of 5.5 children per woman too high. A large young population (see graph at left), however, will lead to continued population growth as these youths become parents.

■ Sixty-nine percent of infants are immunized against tuberculosis; 56 percent against polio, diphtheria, pertussis, and tetanus; and 58 percent against measles.

## Natural Resources and Wildlife Issues

■ Among Guinea's 409 known species of breeding birds and 190 known species of mammals, those that are threatened include the Diana monkey, Liberian mongoose, pygmy hippopotamus, Rufous fishing-owl, and West African dwarf crocodile.

■ Despite abundant internal renewable water resources (more than three times those available in the United States), the safe water supply is inad-

equate. Nearly half of the population has no access to safe water. Per capita, Guineans use only 8 percent as much fresh water as their U.S. counterparts do.

■ Over 70 percent of the energy consumed in Guinea comes from traditional sources. Energy consumption in Guinea is a tiny fraction—0.06 percent—of that in the United States.

## Socioeconomic Factors

■ Official development assistance from other countries contributes 10 percent of Guinea's gross national product. This assistance amounts to US\$55 per person annually.

■ One half of Guinean men are literate, while just 22 percent of women can read and write. These rates are much lower than sub-Saharan Afri-

can averages of 65 percent male literacy and 47 percent female literacy.

■ In both Guinea and the United States, the richest 20 percent of people receive almost half of the country's total household income, while the poorest 20 percent of people receive less than one-tenth.

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kernels, and coffee. Agriculture, nonetheless, contributes less than 5 percent of the gross national product. By comparison, the service sector, employing roughly one person out of 10, contributes 10 times as much.

Similar overall and urban population densities in West Virginia and Guinea belie different challenges to economic growth and development. West Virginia's urban population is affected by the difficulties associated with reliance on aging industries (such as unemployment and a lack of new jobs). New jobs in the service industry pay lower wages than industrial jobs. The state's median household income is among the lowest in the country. The emigration of its labor force and a low fertility rate (fewer than two children per woman) explain its current decrease in population. Reversing this trend will entail attracting new laborers to burgeoning new industrial ventures. Guinea, on the other hand, is expected to double its population in less than 30 years, despite a very high child mortality rate: Almost one child in four dies before the age of five. The challenge for the government is to decrease the current birth rate, increase health services for mothers and children, and provide

work for this growing population without further depleting natural resources.

## Responding to Challenges

The West Virginia Department of Environmental Protection has launched a pollution prevention program to promote a cleaner environment. The project encourages waste-reduction initiatives such as the adoption of new manufacturing processes and materials substitution. Measures such as these reduce the burden and cost of waste treatment and the impact on the environment.

The Guinean government and the UN World Food Program have launched a food-for-work project in the capital city of Conakry. Women are recruited to help process and dispose of urban waste, and to clean gutters and other areas in exchange for soap, tools, rice, beans, and palm oil. The UN agency helps defray the costs of these

goods. Since 1993, the U.S. Agency for International Development in Guinea has funded several community-based activities aimed at improving natural resource management and sustainable agriculture in three of Guinea's vital watersheds. In 2000, over 100 U.S.

People in West Virginia and Guinea, 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.

Peace Corps volunteers were working on health, environment, and education projects in the country. ■

**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. **Commercial energy** includes energy from solid, liquid, and gaseous fuels, plus primary electricity. **Traditional energy** includes fuelwood, charcoal, bagasse, and animal and vegetal wastes.

**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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