

# US in the WORLD

CONNECTING PEOPLE AND COMMUNITIES TO ENSURE A HEALTHY PLANET

## Indiana



Comparison at same scale

**Indiana**  
Area: 36,185 sq. miles  
Population: 5.9 million

**Azerbaijan**  
Area: 33,591 sq. miles  
Population: 7.6 million

Largest metropolitan areas by population (1996):  
Indianapolis (1,492,297), Gary (622,303),  
Ft. Wayne (475,299)

## Azerbaijan



Largest urban area by population (1995):  
Baku (1,848,000)

Indiana's motto, "The Crossroads of America," aptly describes the geographical diversity that characterizes this midwestern state as well as the country of Azerbaijan. Both regions, which have similar geographic and population sizes and are touched by a main body of water, can also be said to stand at the crossroads in their ecological history as they grapple with environmental challenges.

Indiana's geographical diversity encompasses a flat northern region covered with deciduous forests dotted by ferns and bogs, rolling central plains, and a hilly south dominated by prairie, savannah, and heavily wooded river corridors. Likewise, Azerbaijan ranges from the Caucasus Mountains to flatlands in the center and southeast with a diverse vegetation, including meadows, forests, steppes, and swamps.

Women in both regions have, on average, two children, but current projections have Azerbaijan increasing by 29 percent by the year 2025, more than double Indiana's 12 percent projected increase. Additional population pressure in Azerbaijan comes from a quarter million refugees and a half million displaced persons—the result of a territorial conflict with Armenia over the Nagorno-Karabakh region. Azerbaijan is about 1.5 times more densely populated than Indiana.

Indiana and Azerbaijan rely heavily on their agricultural and manufacturing sectors. Farms cover 68 percent of Indiana, but agriculture employs only 3 percent of the work force. Agriculture represents one-quarter of the gross domestic product in Azerbaijan and employs 31 percent of the work force, but slow privatization processes and outmoded irrigation hinder productiv-

ity. Unlike Indiana, Azerbaijan is rich in minerals such as iron, bauxite, and cobalt, as well as vast recoverable oil reserves estimated at 4 billion barrels. Despite its strong agricultural sector, oil wealth, and a trade surplus of \$24 million in 1992, Azerbaijan remains crippled by its dismal environmental record and a staggering 122 percent inflation rate.

Two decades ago, Indiana's foremost ecological issues were threats to air quality from smokestack emissions and automobiles; threats to surface water from untreated sewage, industrial wastewaters, poorly maintained treatment systems and animal feedlots; and threats to the land from inadequately designed landfills and mismanaged hazardous chemicals and waste. Some progress has been made since then, but in recent years the amount of hazard-

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## Demographic and Health Trends

- Between 1990 and 1997, Indiana's population grew nearly 6 percent—slightly less than the nation as a whole, but among the highest percentage increases in the Midwest. Indiana added about 320,000 persons to its population during this period.
- Unlike some other Great Lakes states (such as Illinois, Ohio, and Michigan), Indiana has had a net gain of persons from other states. Between 1990 and 1997, about 74,000 more people moved to the state than moved out. The excess of births over deaths, however, accounted for more than 70 percent of the state's overall population growth.
- The area around Indianapolis provides the epicenter of Indiana's growth. Three Indianapolis-area counties—Hamilton, Hendricks, and Johnson—grew by at least 20 percent between 1990 and 1997.
- According to the Indiana State Department of Health, the percentage of Indiana children with higher than normal lead levels in their blood is greater than the national average. From 1994 to 1996, more than 100,000 Indiana children ages 6 and younger were screened, and 11 percent had elevated levels of lead in their blood.

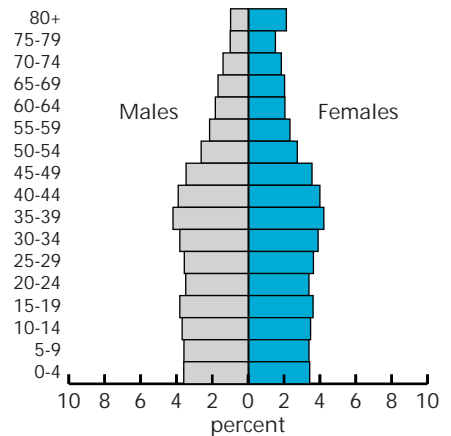
## Natural Resources and Wildlife Issues

- Since the late 1980s, Indiana's air quality has improved noticeably. Levels of sulfur dioxide, carbon monoxide, and particulate matter, for example, have fallen by 60 percent, 29 percent, and 35 percent respectively. Many parts of the state, however, face a challenge in meeting new Environmental Protection Agency standards of ozone concentrations by 2000. Sixty percent of Indiana residents live in areas at risk of not meeting the new standard.
- Most of Indiana's original ecosystems are under increasing pressure from urban and suburban expansion. More than 85 percent of the state's original wetland acreage has been lost. Large tracts of forestland remain in the southern hill country, but development and land use conversion threaten forest remnants elsewhere.
- Indiana's endangered and threatened species include the bald eagle, the peregrine falcon, the least tern, two species each of bats and butterflies, six species of pearlymussel, and Mead's milkweed.

## Socioeconomic Factors

- After some downturns in the early 1980s, Indiana's economy has improved, thanks to the establishment of high-skill, high-tech manufacturing jobs. Twenty-six percent of the state's jobs are in the industrial sector—one of the highest percentages in the nation.
- From 1994 to 1996, 10.3 percent of Indiana's residents were living in poverty—well below the national poverty rate of 14 percent for that period. Median household income in the state—\$33,000 between 1994 and 1996—is also below the national average, however.

## POPULATION BY AGE AND SEX

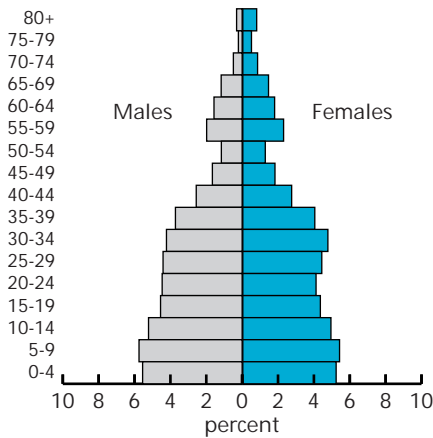


## INDIANA FACTS

- Population, 1997: 5.9 million
- Projected population, 2025: 6.5 million
- Annual growth rate: 0.6%
- Doubling time (at current rate): 117 years
- Average number of children per woman: 2.0
- Infant deaths per 1,000 live births: 8.4
- Life expectancy: 72 (male), 79 (female)
- Persons per square mile: 163
- Percent urban: 65
- Endangered/threatened animals: 21 species
- Endangered/threatened plants: 3 species
- Percent of land protected: 1
- Wetlands loss, 1780-1980: 87%
- Daily water use per capita: 1,576 gallons
- Water use for domestic purposes: 10%
- Water use for agriculture: 2%
- Water use for industry: 26%
- Water use for energy production: 62%
- Cropland per capita: 2.7 acres
- Energy use per capita: 77.1 barrels of oil equiv.
- Persons per motor vehicle: 1.1
- Adults who are high school graduates: 84%
- Elected officials who are women: 19%
- Labor force in agriculture: 3%
- Labor force in industry: 26%
- Labor force in services: 71%
- Gross State Product, 1994: \$24,033 per capita

# AZERBAIJAN

## POPULATION BY AGE AND SEX



## AZERBAIJAN FACTS

Population, 1997: 7.6 million

Projected population, 2025: 9.8 million

Annual growth rate: 0.8%

Doubling time (at current rate): 88 years

Average number of children per woman: 2.1

Infant deaths per 1,000 live births: 23

Life expectancy: 65 (male), 74 (female)

Persons per square mile: 227

Percent urban: 53

Threatened animals: 33 species

Threatened plants: 1 species

Percent of land protected: 2.2

Wetlands loss, through 1980s: n.a.

Percent with access to safe water: n.a.

Percent with adequate sanitation: n.a.

Daily water use per capita: 1,622 gallons

Water use for domestic purposes: 4%

Water use for agriculture: 74%

Water use for industry: 22%

Cropland per capita: n.a.

Energy use per capita: 12.1 barrels of oil equiv.

Persons per motor vehicle: 20.5

Percent of girls in secondary school: 88

Percent of boys in secondary school: 89

Women as % of national legislature: 12

Labor force in agriculture: 31%

Labor force in industry: 29%

Labor force in services: 40%

GDP per capita, 1995: US\$476

## Demographic and Health Trends

■ Today, couples in Azerbaijan have an average of two children. In the 1970s, women averaged about four children and in the 1980s, three children. The relatively small population shown in the graph for ages 45 to 54 reflects the low level of childbearing during World War II and in subsequent years.

■ The proportion of the population that lives in urban areas has been remarkably stable over the second half of the 20th century; 46 percent in 1950 versus 53 percent today. Nearly

one-half of the urban population lives in the capital, Baku.

■ Over 90 percent of infants under age 1 are immunized against tuberculosis, diphtheria, pertussis (whooping cough), tetanus, polio, and measles. Still, Azerbaijani babies are three times more likely to die before they reach their first birthday than are U.S. infants. This difference in mortality between the two countries is even greater for children a few years older. Azerbaijani children are five times more likely to die before age 5 than are U.S. children.

## Natural Resources and Wildlife Issues

■ Azerbaijan has 14 nature preserves where all forms of economic activity are banned. These preserves, however, are threatened by large-scale poaching, cattle grazing (which destroys unique plant life), and large-scale tree cutting.

■ The Apsheron Peninsula (where Baku is situated) and the Caspian Sea are considered by some scientists to be one of the world's most ecologically devastated places because of severe air, water, and soil pollution. Soil pollution resulted from widespread use of DDT in the 1970s and 1980s and highly toxic defoliants

that were used in cotton production. Thirty percent of agricultural land suffers from salinization. Other pollutants have included petroleum products and heavy metals such as copper, zinc, and cadmium.

■ About 20 types of rare birds, in addition to plant and animal species, have disappeared as a result of the destruction of 193 square miles of natural swamps and lakes. The wild goat, marbled teal, white-headed duck, imperial eagle, and great bustard are among the threatened species of Azerbaijan.

## Socioeconomic Factors

■ Petroleum has formed the backbone of Azerbaijan's economy for more than a century, and reserves are extensive enough that they are important to the world market. Per capita use of energy in Azerbaijan is 23 percent of the U.S. level.

■ Adult literacy in Azerbaijan is 100 percent. Until mid-1995 there was only one daily newspaper in the country, which was published by the parliament. There are now several daily newspapers, but buying one of the least expensive papers daily would cost nearly one-quarter of one's average monthly salary.

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ous waste generated increased, even though the number of facilities generating waste decreased. In 1995, for example, 602 Indiana facilities generated 8.4 million tons of hazardous waste. Although most of Indiana's rivers and streams support fish, shellfish, and other aquatic life, between 1994 and 1995, a significant number of stream miles was determined unsafe for swimming due to high levels of *E. coli* bacteria.

Azerbaijan suffers from similar environmental threats, albeit on a greater scale. Air pollution stems from petrochemical plants, refineries, exhaust fumes, and the burning of untreated garbage. Water pollution is the result of oil spills, leaky pipelines and tanks, runoff from fertilizers and pesticides, and improperly treated sewage. Land pollution is due to inadequate waste management. There is a high incidence of waterborne diseases, including cholera, caused by inadequate treatment of drinking water and sewage intrusion into leaky distribution pipes. Overfishing, damming, and pollution have decreased the sturgeon catch. The rising level of the Caspian Sea has led to loss of crops and topsoil, as well as flooding of disposal sites and oil fields. These developments have in turn increased pollution.

## Responding to Challenges

In Indiana, the Healthy Beaches Initiative of the Coastal Coordination Program has prompted an Interagency Technical Task Force on *E. coli* to address the problem of periodic bacteria-induced beach closures along Indiana's Lake Michigan beaches.

The Task Force includes representatives from 18 different local, state, and federal agencies, as well as academia, and has been heralded as a model of success for cooperation on the environment.

In Azerbaijan, the Greater Baku Water Supply Rehabilitation Project, financed by the European Bank for Reconstruction and Development and the World Bank, aims at increasing consumer awareness, improving pipe maintenance, rehabilitating plants and pumping stations, and rationing water use. The environmental benefits include the conservation of water and energy, the improvement of water quality and delivery, and the decrease of waterborne diseases. The vast proportion of U.S.

assistance to Azerbaijan has been for emergency humanitarian programs for refugees and displaced persons. These programs have been administered largely by private voluntary organizations and international organizations such as the United Nations. Most pro-

**P**eople in Indiana and Azerbaijan, 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.

grams involve distribution of food, clothing, and medicines; provision of basic medical services; and construction of shelters as well as water supply and sanitation systems. There are no U.S. Peace Corps volunteers in Azerbaijan. ■

**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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### FACT SHEETS PRODUCED BY:

**PRB** Population Reference Bureau, 1875 Connecticut Ave., NW, Suite 520, Washington, DC 20009; Phone: 202-483-1100; Fax: 202-328-3937; Website: <http://www.prb.org>

National Audubon Society, *Population and Habitat Campaign*; Phone: 303-442-2600; Web site: <http://www.earthnet.net/~popnet>

Population Coalition of *local Leagues of Women Voters*, Phone: 909-625-5717; Website: <http://www.popco.org>