US in the WORLD

CONNECTING PEOPLE AND COMMUNITIES TO ENSURE A HEALTHY PLANET

Comparison at same scale

Arizona
Area: 114,000 sq. miles
Population: 4.6 million

Egypt
Area: 386,662 sq. miles
Population: 64.8 million

Largest metropolitan areas by population (1996): Phoenix-Mesa (2,746,703), Tucson (767,873), Yuma (125,142)

Largest urban areas by population (1995): Cairo (9,690,000), Alexandria (3,584,000), Shubra El-Khemia (1,204,000)

The Grand Canyon, a wonder of the natural world, and the Great Pyramids of Egypt, marvels of ancient engineering, attract thousands of tourists to Arizona and Egypt each month. While visitors marvel at these monuments to natural and human powers, residents of Arizona and Egypt face a daily challenge: living in increasing numbers and concentrations in desert ecosystems. Both face surprisingly similar conflicts and issues over managing and using water, balancing protection and use of rural lands, and expanding industry while protecting air, water, and land.

Water is a central issue in the lives of people in both Arizona and Egypt. Large cities are population focal points, but much of the territory of each is sparsely settled compared to other states and countries. Each prizes (and profits from) the remnants of great ancient civilizations, but both have developed new industries in recent decades.

Yet there are critical differences between the two places, with wealth as the most fundamental. Arizonans are about 30 times wealthier than Egyptians are. Arizonans use 13 times as much energy, per person, and their wealth allows lifestyles that include air conditioning, cars, pools, golf courses, and lawns that are demanding on the environment as well as being expensive. Wealth also gives the state greater means to regulate, control, and clean up after a high-consuming population.

Arizona's very rapid recent population growth, mostly due to migration from elsewhere in the United States, has been concentrated in the Phoenix metropolitan area. During the next 20 years, three-fourths of Arizona's growth is expected to occur there as well.

Egypt's population is growing more slowly and remains more than one-half rural, but is highly concentrated along the Nile River. In the 1960s, Egyptian women averaged seven children, a figure that has dropped to 3.6 children in the 1990s. Still, because a large generation of young people are now entering their childbearing years, Egypt's population will continue to grow.

Cairo's population has outgrown the city's capacity to provide clean water and collect garbage. Greater Cairo's 14 million people suffer the worst lead and particulate pollution of the world's megacities. Phoenix, too, is facing problems of growth. Urban sprawl and increasing air pollution are among the most serious worries, and in the summer of 1997 Phoenix had the dubious distinction of being one of only two U.S. cities whose air pollution is rated as "serious" for ozone, carbon monoxide, and particulate matter.

Most of nonurban Arizona is sparsely settled, and about 12 percent

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Arizona

Demographic and Health Trends

■ Since 1940, Arizona's population has increased more than nine-fold—from 499,000 to 4.6 million. In the 1990s alone, the "Grand Canyon State" has grown faster than every state except Nevada.

■ Migration from other states accounted for 57 percent of Arizona's growth between 1996 and 1997. An additional 32 percent came from natural increase with the remaining 11 percent coming from other countries, primarily Mexico.

■ Only four states have gained more people than the 889,000 added to Arizona's population since 1990.

■ Despite being home to retirement communities such as Sun Valley, Arizona actually has one of the country's youngest populations. Although its share of older Americans slightly exceeds the national average (13.2 percent to 12.8 percent), so does its share of preschoolers (7.7 percent versus 7.3 percent).

Natural Resources and Wildlife Issues

■ Arizona, California, and Nevada share rights to more than 2.4 trillion gallons of water annually from the Colorado River. Arizona has begun to store part of its 900 million gallon allotment underground for future use. California, where demand often exceeds water allotment, must compete for scarce water resources.

■ The U.S. Fish and Wildlife Service is reintroducing Mexican gray wolves to the Blue Range area along the Arizona-New Mexico border. A Tuscon-based environmental group is campaigning to reintroduce grizzly bears to the area.

■ Mexican wolves and grizzly bears were driven out or killed off as ranching became established, and ranchers argue that the predators, if reintroduced, would feast on domesticated cattle.

■ Arizona has 51 endangered and threatened species—the seventh highest number in the country. These include the jaguar, ocelot, Mexican spotted owl, and the masked bobwhite quail. Welsh's milkweed and seven species of cacti are among the state's 17 endangered and threatened plants.

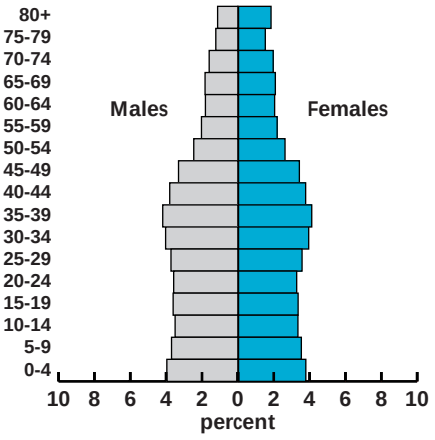
Socioeconomic Factors

■ Since World War II, technology has been a major boon to Arizona's economy. Phoenix is home to such large employers as Intel Corporation, Honeywell Inc., AlliedSignal Inc., and Motorola, Inc.'s semiconductor operation.

■ Despite its postwar prosperity, Arizona has one the country's higher poverty rates—17.5 percent below the poverty level from 1994 to 1996.

■ Poverty is concentrated in areas with large Native American populations. Apache County, with a population that is 78 percent Native American, is one of the poorest counties in the nation, with a 41.4 percent poverty rate in 1993. Over 31 percent of residents in neighboring Navajo County (53 percent Native American) were below the poverty level.

Population by Age and Sex

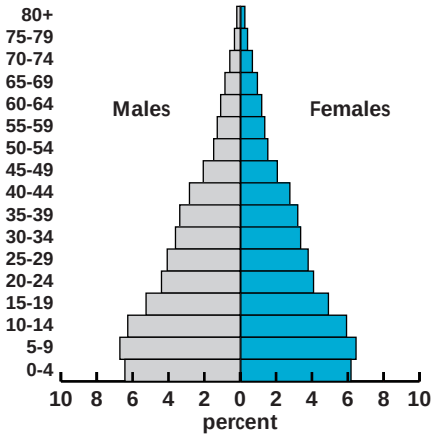


Arizona Facts

Population, 1997: 4.6 million
Projected population, 2025: 6.4 million
Annual growth rate: 2.7%
Doubling time (at current rate): 26 years
Average number of children per woman: 2.4
Infant deaths per 1,000 live births: 7.5
Life expectancy: 73 (male), 80 (female)
Persons per square mile: 40
Percent urban: 87
Endangered/threatened animals: 34 species
Endangered/threatened plants: 17 species
Percent of land protected: 12
Wetlands loss, 1780-1980: 36%
Daily water use per capita: 1,619 gallons
Water use for domestic purposes: 13%
Water use for agriculture: 84%
Water use for industry: 3%
Water use for energy production: 1%
Cropland per capita: 14.4 acres
Energy use per capita: 42.4 barrels of oil equiv.
Persons per motor vehicle: 1.5
Adults who are high school graduates: 84%
Elected officials who are women: 36%
Labor force in agriculture: 3%
Labor force in industry: 16%
Labor force in services: 81%
Gross State Product, 1994: $22,997 per capita

EGYPT

POPULATION BY AGE AND SEX



EGYPT FACTS

Population, 1997: 64.8 million
Projected population, 2025: 97.6 million
Annual growth rate: 1.9%
Doubling time (at current rate): 36 years
Average number of children per woman: 3.6
Infant deaths per 1,000 live births: 62
Life expectancy: 62 (male), 65 (female)
Persons per square mile: 169
Percent urban: 44
Threatened animals: 33 species
Threatened plants: 84 species
Percent of land protected: 0.8
Percent with access to safe water: 79
Percent with adequate sanitation: 32
Daily water use per capita: 690 gallons
Water use for domestic purposes: 6%
Water use for agriculture: 85%
Water use for industry: 9%
Cropland per capita: 0.1 acres
Energy use per capita: 3.3 barrels of oil equiv.
Persons per motor vehicle: 38
Percent of girls in secondary school: 69
Percent of boys in secondary school: 81
Women as % of national legislature: 2
Labor force in agriculture: 31%
Labor force in industry: 25%
Labor force in services: 44%
GDP per capita, 1995: US$765

Demographic and Health Trends

- Egypt is the most populous country in the Arab world and the second most populous in Africa.
- The population is projected to increase 51 percent by 2025 as large numbers of young people enter their childbearing years (see figure).
- While the majority of the population is still rural, high levels of rural-to-urban migration have led to government plans to settle newly irrigated land that has been reclaimed from the desert.
- The urban population is projected to exceed 60 percent by 2025.
- Ninety-nine percent of Egypt's population lives along the banks of the Nile River and its delta, making this area one of the most densely populated in the world.
- Nine out of 10 Egyptians are Muslims.

Natural Resources and Wildlife Issues

- Oil pollution threatens Egypt's coastal and marine resources, including coral reefs, fisheries, birds, and mangrove forests. The coast is coated with tar and petroleum residues from ships, offshore oil facilities, and oil pipelines.
- Egypt's water resources are polluted from many sources, including salinized runoff water from irrigated land, agricultural pesticides, industrial effluents, and untreated sewage.
- Egypt's soils are being damaged and depleted as salinization results from irrigation. Urban sprawl and windblown sands remove some soils from agricultural use altogether.
- Egypt's threatened animals include the slender-horned gazelle, white-headed duck, and greater spotted eagle.

Socioeconomic Factors

- Egypt's sometimes tense relations with Israel have affected the country's economy, influencing both government expenditures and foreign assistance. The United States contributes more funding to Egypt ($2.1 billion in 1997) than to any other country except Israel.
- Attacks on tourists by Islamic extremists have reduced tourism's contribution to the Egyptian economy.
- Cotton earns the largest share of agricultural export earnings. Nearly all of Egypt's agricultural production occurs on just 5 percent of its land, located in the Nile Valley and Delta.
- Only 51 percent of Egyptian adults are literate. The male literacy rate (64 percent) is higher than that of females (39 percent). This disparity is reflected in lower labor force participation among women and is also an indication of the lower status of women in Egyptian society.
- President Mubarak has attributed the country's economic problems to population growth. Family planning programs have been heavily promoted by the government since 1985, and 47 percent of married Egyptian women use some form of contraception.

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of the state's territory is protected in parks, forests, or preserves (less than 1 percent of Egypt's land is protected). Cattle ranchers and conservationists carry on a spirited debate about how that land is best managed. Cattle grazing is allowed on most federal and state lands, and conservationists are generally dissatisfied with fencing and water arrangements that federal and state authorities have used to keep herds away from rivers. Many argue that the desert's lands and rivers cannot support the many cattle that now graze on it.

Managing Egypt's land means managing the Nile's annual floods, which replenish a narrow strip of fertile farmland along the river's banks. A series of dams, including the monumental Aswan High Dam, were built in the 1950s, regulating the river's waters and supporting irrigation to allow cotton and sugar farming. But with the dams and irrigation came saline runoff from desert soils, fertilizer runoff into the river, and a diminished flow to Cairo, in the North. Egypt must negotiate water sharing with Sudan and Ethiopia, which also draw on the upper Nile and its tributaries. Egypt's water pipeline projects, which irrigate lands in the North Sinai and even send water through tunnels under the Suez Canal, have generated concerns in the country that Nile water might be diverted to Israel.

Arizona's water negotiations are also complex: interstate agreements with California and other neighboring states assign Colorado River water rights well into the 21st century.

Responding to Challenges

Environmental actions in Arizona by the Earthjustice Legal Defense Fund sometimes lead to conflict, as in the case of lawsuits filed against the United States Forest Service for its management of forest lands. The Southwest Environmental Equity Project, begun in Scottsdale, works with poor communities affected by pollution and educates churches and parishes on environmental justice issues in the state and region.

The Egyptian government, the U.S. Agency for International Development (USAID), and private agencies cooperate in projects to promote family planning, reduce air pollution in Cairo, and improve educational opportunities for women and girls. USAID's $815 million aid budget for Egypt finances mostly large projects; other agencies, such as Catholic Relief Services, promote neighborhood trash collection and credit schemes to help poor entrepreneurs start small businesses. ■

People in Arizona and Egypt, 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.

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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