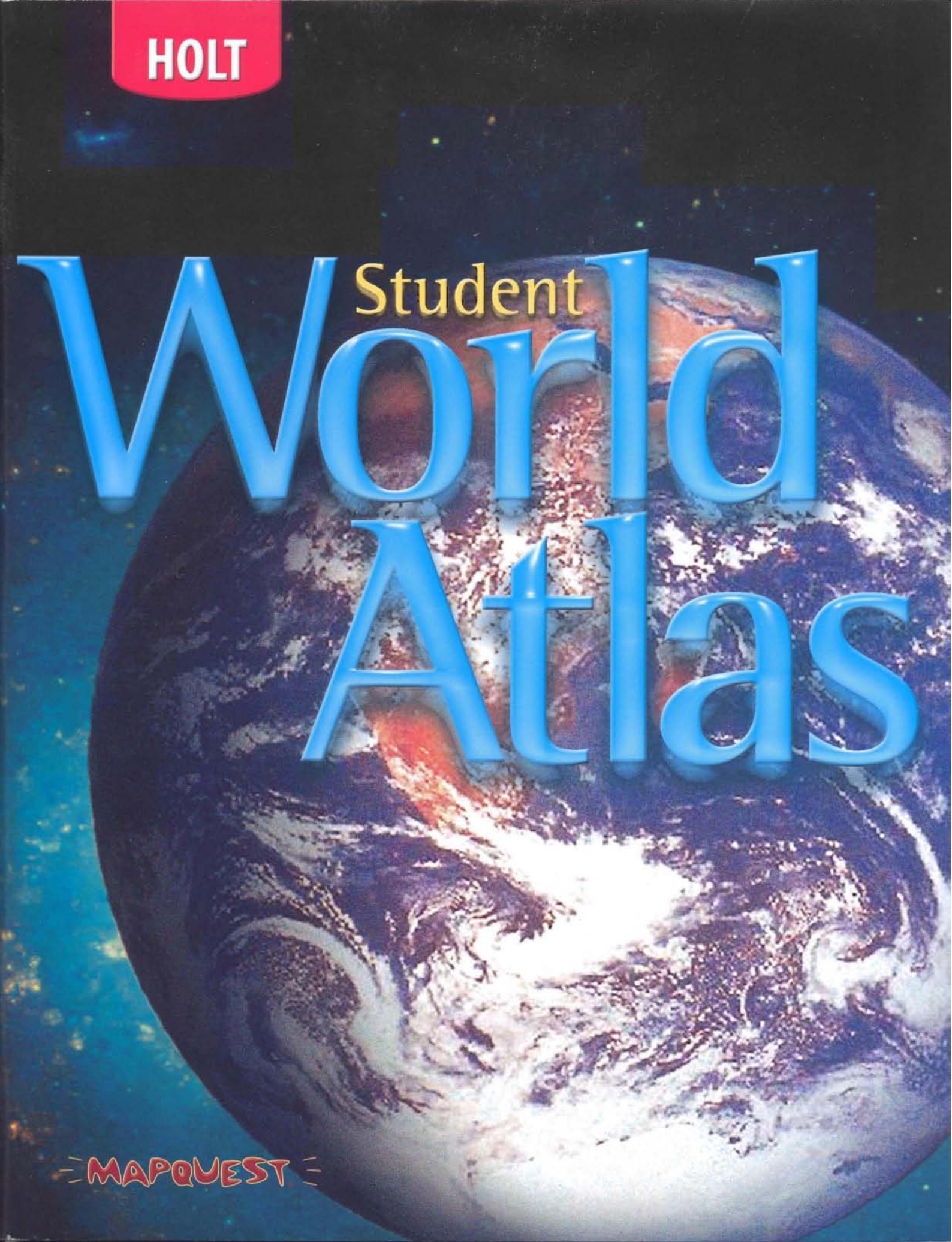
HOLT

Student World Atlas



MAPQUEST

Major Rivers

Name	Continent	Outflow	Total Length (mi.)
Nile	Africa	Mediterranean Sea	4,160
Amazon	South America	Atlantic Ocean	4,000
Chang (Yangtze)	Asia	East China Sea	3,964
Mississippi-Missouri	North America	Gulf of Mexico	3,710

Major Deserts

Name	Continent	Area (sq. mi.)
Sahara	Africa	3,500,000
Gobi	Asia	500,000
Libyan	Africa	450,000
Sonoran	North America	120,000

Oceans

Arctic Ocean

Area:	5,426,000 sq. mi.
Coastline:	28,209 mi.
Average Depth:	3,407 ft.

Atlantic Ocean

Area:	31,736,000 sq. mi.
Coastline:	69,525 mi.
Average Depth:	11,730 ft.

Indian Ocean

Area:	28,410,000 sq. mi.
Coastline:	41,346 mi.
Average Depth:	12,598 ft

Pacific Ocean

Area:	63,838,000 sq. mi.
Coastline:	84,315 mi.
Average Depth:	12,925 ft.

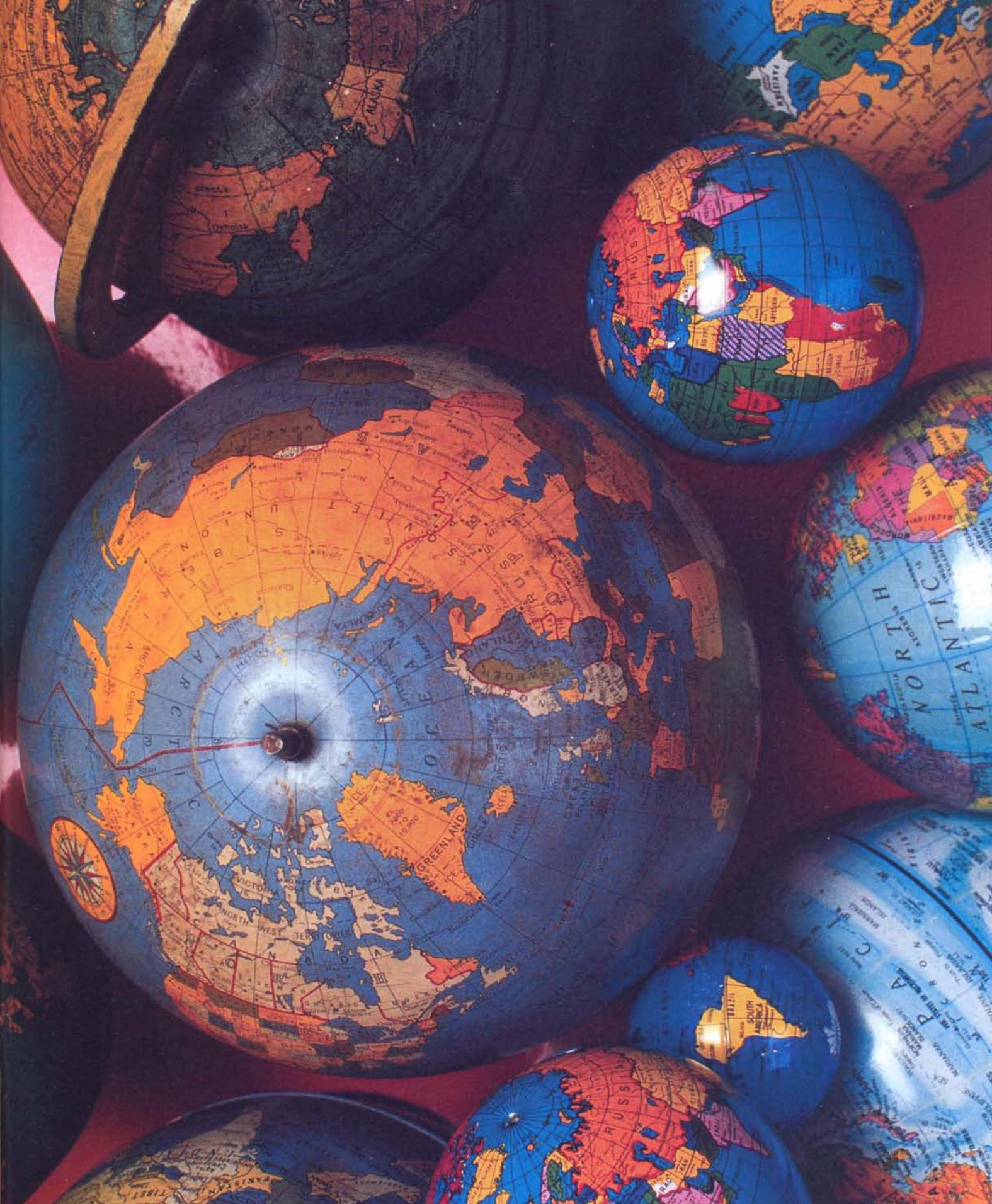
Highest Elevations

Mountain Peak Name	Place	Height (ft.)	Continent
Kilimanjaro	Tanzania	19,340	Africa
Vinson Massif	Antarctica	16,864	Antarctica
Everest	Nepal–Tibet	29,035	Asia
Kosciusko	Australia	7,310	Australia
Elbrus	Russia	18,510	Europe
McKinley	Alaska, U.S.	20,320	North America
Aconcagua	Argentina	22,834	South America

Lowest Elevations

Lowest Point Name	Place	Depth Below Sea Level (ft.)	Continent
Lake Assal	Djibouti	512	Africa
Bentley Subglacial Trench	Antarctica	8,327*	Antarctica
Dead Sea	Israel–Jordan	1,310	Asia
Lake Eyre	Australia	52	Australia
Caspian Sea	Russia–Azerbaijan	92	Europe
Death Valley	California, U.S.	282	North America
Valdes Peninsula	Argentina	131	South America

*Estimated


ALASKA
GREENLAND
NORTH ATLANTIC
SOUTH AMERICA

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Acknowledgements.
"How to use this Atlas" written by Elspeth Leacock

Mexico State coat of arms on page 76. © 2005 mexican-flag.com

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AN ATLAS is a collection of maps that can be used to find information about your world. The very latest data has been collected to make these maps. Hundreds of satellite images were used to map the dramatic shrinking of Earth's forests. The latest census data from each and every country was used to build a picture of Earth's current population. The most recent scientific research was used to create thematic maps of continental drift, the ocean floor, the environment and our natural resources. Look closely and you will see that the information for the maps comes from many different sources such as NASA, the U.S. Department of the Interior or the World Bank. You can use these maps to explore your world, discover connections between places, and see relationships between places and peoples.

But this atlas is more than just a wealth of information. It is fun to look at too. You will find that these maps and photographs can evoke images of far away places. They invite you to pause and to dream. With a map you can journey the world without ever getting wet, cold, tired or hungry. You can imagine great adventures and not leave the comfort of your favorite chair!

To get the most out of this atlas you need to know how to read maps. Just as you learned to read words like the ones on this page, you can learn how to read the language of maps. The map skills you need to know are:

1. locating places
2. measuring distance
3. finding direction
4. reading map symbols

Locating Places

To find places in this atlas, you can begin with the index. To find Dallas follow these steps.


Cuzco, Peru 78 13°32'S 71°56'W
Cyclades, islands 85 37°00'N 25°00'E
Cyprus, country. 96 35°00'N 33°00'E
Cyprus, island 97 35°00'N 33°00'E
Cyrenaica, region 91 25°00'N 24°00'E
Czech Rep., country 84 49°00'N 15°00'E

D

Dakar, Senegal 90 14°42'N 17°27'W
Dallas, TX 50 32°47'N 96°48'W
Dalmatia, region 85 44°00'N 16°00'E
Damaraland, region 91 21°00'S 19°00'E
Damascus, Syria 96 33°31'N 36°18'E
d'Ambre, Cap, cape 91 12°00'S 48°00'E
Da Nang, Vietnam 96 16°03'N 108°12'E
Danube, river 85 49°00'N 10°00'E
Danube Delta, delta 85 45°00'N 29°00'E
Dardanelles, strait 85 40°00'N 27°00'E
Dar es Salaam, Tanzania 90 6°49'S 39°17'E
Darling, river 103 31°00'S 144°00'E

1. Look up Dallas in the index at the end of this book.
2. The index tells you that Dallas is a city in Texas and that it can be found on page 50. You will also learn that Dallas is located at 32°47'N (32 degrees 47 minutes north) and 96°48'W (96 degrees 48 minutes west.)
3. Go to page 50 and find the line of latitude nearest to the number 32°N and the line of longitude nearest to the number 96°W. You will find Dallas close to where those two lines meet. You can learn more about latitude and longitude on pages 8–9.

Measuring Distance

To measure distance most maps have a distance scale. You can learn more about measuring distance on page 7.

Finding Direction

To find directions use the map's compass rose. You can also use lines of latitude and longitude to find direction. Every line of longitude points north and south. Every line of latitude points east and west. You can learn more about latitude and longitude on pages 8–9.

Reading Map Symbols

Every map symbol shows the location of something. It could be something as large as a continent or as small as a bird-house. A dot shows the location of a city. A blue line shows the course of a river. But map symbols are not the same on all maps. One map might show a city with a square. Map legends or keys help explain the symbols used on a map. You can find out more about legends and the map symbols used in this atlas on page 6.

Special Features of this Atlas

This atlas has been designed and organized to be easy for you to use. Here is a "road map" to your atlas.

The Blue Tab Bar

Somewhere along the top blue tab bar of each spread you will see a darker blue tab. It tells you

the subject of the map or maps you are looking at. The light blue tabs tell you the subjects of the surrounding map spreads. If, for example, you are looking at the World Climate map and would like to compare it to the World Vegetation map, you can use the tabs to find that map quickly and easily.

Map Skills

Look at the blue tab bar above and you will see that you are in the map skills section. This section should be called "Read Me First" because it is here that you will find all sorts of helpful information about maps and how to read them. Even if you are a practiced map reader, read this section!

The World

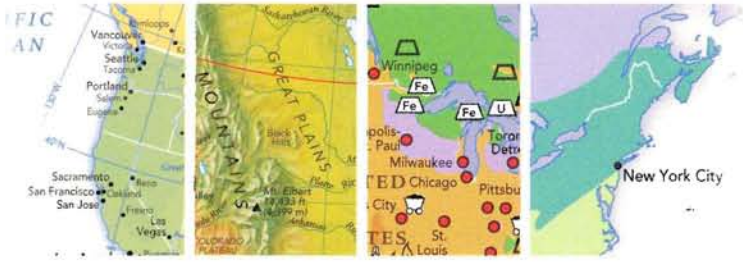
In this section you will find a world political map, a world physical map, and 35 world thematic maps. The world political map shows the most up to date national boundaries. On the world physical map you can see huge deserts,

great mountain ranges, and even the sea ice that covers much of the Arctic. The thematic maps include the most up to date information on everything from the world distribution of computers and televisions to life expectancy, religion and literacy. If you want to see the ocean floor, or to find where in the world volcanoes form, this is the section to look in.

Continents

The continent units are designed to all have the same kinds of maps. This will enable you to compare and contrast one continent with another with ease and accuracy. There is a political map, a physical map, and a total of seven thematic maps per continent.

Used individually each map can provide answers to many questions. But all together, each set of maps can be used to tell a story.



Imagine a journey crossing a continent. You can see the regions visited, the mountains climbed, or the deserts crossed. You can tell if many people are passed along the way or few. You can describe the activities of the people. Will you see miners or ranchers or farmers? And you can tell about the different climates experienced along the way. All of this information and more is on the maps for every continent but Antarctica.

Environmental Issues

There is a special "Environmental Issues" feature for each continent and one for the world. To create these features the latest scientific information was gathered and organized for you. The topics cover the three major environmental issues faced by citizens today, desertification, deforestation, and acid rain.

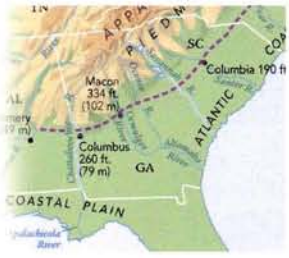
The United States

In the section on the United States you will find a political map with two pages of political facts, a physical map with two pages of physical facts, and seven thematic map spreads.

Canada and Mexico

Canada and Mexico both have their own spreads that include a political and physical map.

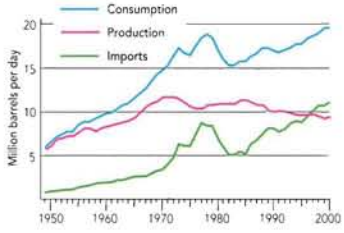
Geographic Features



There are two special "Geographic Features" included in this atlas. To find out how the continents, Earth's greatest land features, have been drifting around the globe, turn to pages 22–23. To take an in depth look at fall lines, divides, and faults turn to the United States Geographic Features spread on pages 58–59.

Charts and Graphs

This atlas is filled with charts, graphs and diagrams. They are used to give more information about subjects shown on the maps. To make these charts and graphs, long lists of the most up to date data was gathered. Then all those numbers were organized into graphic displays that can be read simply and accurately.



Line graphs are used to show change in amounts over time.

Bar graphs are used to compare amounts.

Pie charts show percentages of a total.

Glossary

There are many geographic terms found on maps such as *fjord, isthmus,* or *plateau*. You can find the meaning of these and other terms in the geographic glossary located on the inside back cover.

The staff at Mapquest worked hard to make this atlas a reference book that is both full of information and fun and easy to use. We hope that you enjoy your copy.

MAPQUEST

Legend

The following symbols are used here for general reference maps. Maps with special subjects (thematic maps) have their own unique legends.

General Reference Maps

- National capital
- Other capital
- Other city
- International boundary (political map)
- International boundary in dispute/undefined (political map)
- State or provincial boundary
- International boundary (physical map)
- International boundary in dispute (physical map)
- Nonsubject area
- Mountain peak
- Lowest point
- Perennial lake
- Intermittent lake
- Perennial river
- Falls

Physical Maps Legend

Projections

A globe is the most accurate picture of the Earth. Only a globe can show distance, direction, and the true shape and area of land and sea. Mapmakers struggle with how to show the round world on a flat map.

Imagine the Earth as a large balloon.

Cut it apart, and flatten it to make a map.

To show the round Earth on flat paper, mapmakers used different **projections**, or ways of showing a round shape on a flat surface.

With every projection the shapes of places are changed somewhat. This is called distortion. To find distortion, you can compare the latitude and longitude lines of a map to those same lines on a globe.

Projections – Making the Round World Flat

Robinson Projection

Arthur Robinson, an American mapmaker, wanted to develop a map projection that "looked" right. This projection uses many distortions but none are significant. You can see this by comparing one of the large scale World maps in this atlas to a globe.

Mercator Projection

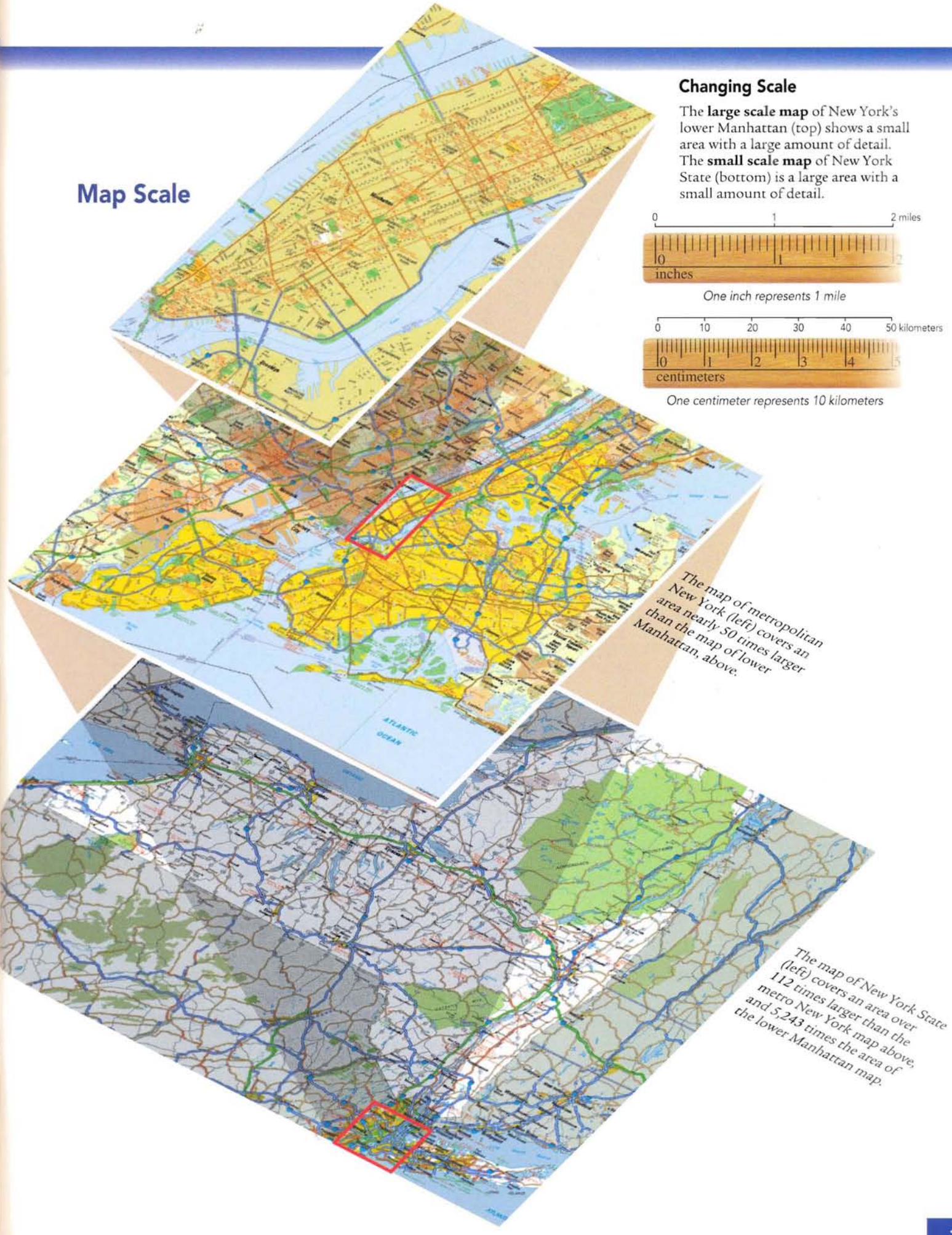
Gerardus Mercator, a Dutch mapmaker, wanted a map projection that showed direction and shape accurately. The problems with distortions are more obvious on this projection. You can see that the land areas are very distorted the closer to the poles that you get. So, this projection ended up greatly distorting distance and size.

This diagram shows how a Mercator projection distorts the sizes of places. Compare Greenland on the map and the globe.

Azimuthal Projection

This is a projection used to show Antarctica and the Arctic. Azimuthal maps show direction and distance accurately, if measured from the center of the map. But, other distances, shape and size are distorted.

Map Scale



Changing Scale

The **large scale map** of New York's lower Manhattan (top) shows a small area with a large amount of detail. The **small scale map** of New York State (bottom) is a large area with a small amount of detail.

One inch represents 1 mile

One centimeter represents 10 kilometers

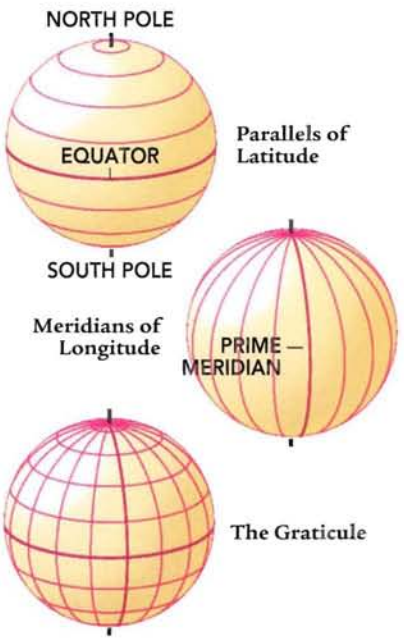
The map of metropolitan New York (left) covers an area nearly 50 times larger than the map of lower Manhattan, above.

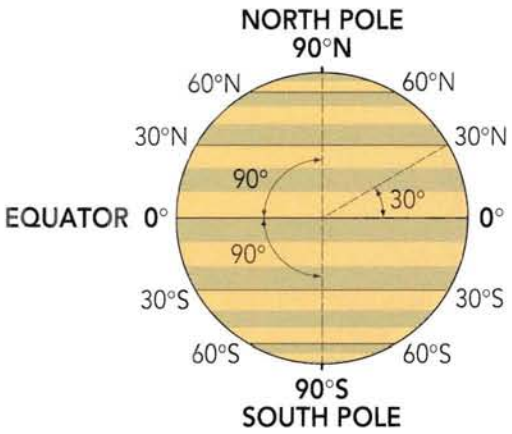
The map of New York State (left) covers an area over 112 times larger than the metro New York map above, and 5,243 times the area of the lower Manhattan map.

Latitude and Longitude

Since ancient times, mapmakers, geographers, and navigators have worked to develop a system for accurately locating places on the Earth. On a sphere, such as the Earth, there are no corners or sides, no beginning or end. But since the Earth rotates on an axis, there are two fixed points: the North Pole and the South Pole. These points make a good starting place for a system of imaginary lines.

These imaginary lines form a grid over the Earth, allowing us to pinpoint the exact location of any spot on the Earth. This spherical grid is called the **graticule**. It is formed by lines called **latitude** and **longitude**.



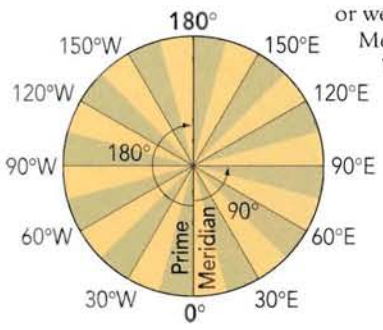


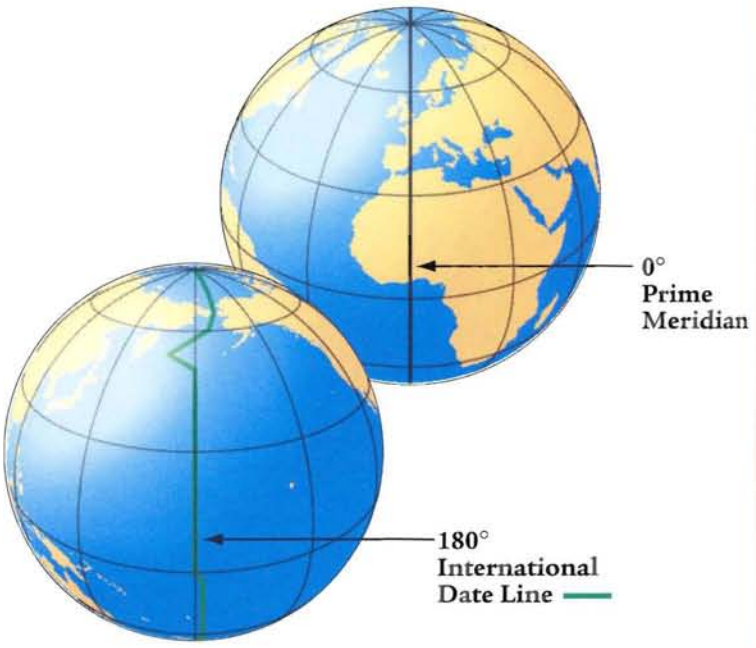
Latitude

Halfway between the poles the equator circles the globe in an east-west direction. Latitude is measured in degrees north or south of the equator, which is 0 degrees (°). Lines of latitude are called **parallels** because they circle the globe parallel to the equator. Parallels are numbered from 0° at the Equator to 90°N at the North Pole and 90°S at the South Pole.

Longitude

Running from pole to pole, lines of longitude—called **meridians**—circle the globe in a north-south direction. As in any circle or sphere, there are 360 degrees (°) of longitude. The meridians are numbered from the Prime Meridian which is labeled 0°. Meridians east or west of the Prime Meridian are labeled E or W up to 180°. The International Date Line generally follows the 180° meridian, making a few jogs to avoid cutting through land areas.

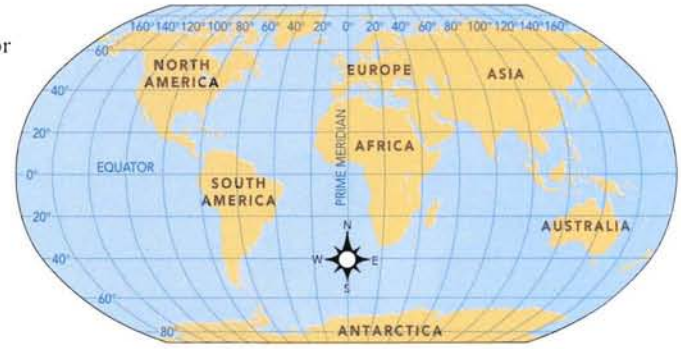




Parallels and Meridians—The Facts

Parallels
- are lines of latitude used to measure location north or south of the Equator
- are always the same distance apart (about 70 miles)
- differ in length
- The Equator, the longest parallel, is almost 25,000 miles long

Meridians
- are lines of longitude used to measure location east or west of the Prime Meridian
- meet at the poles
- are all the same length



Which way north...

The geographic North and South Poles are fixed points located at each end of the Earth's axis. The Earth's magnetic fields cause the needle of a compass to point toward magnetic north, not geographic north. The north magnetic pole is located in the northern territories of Canada. The south magnetic pole is located near the coast of Antarctica. The magnetic poles are constantly moving.

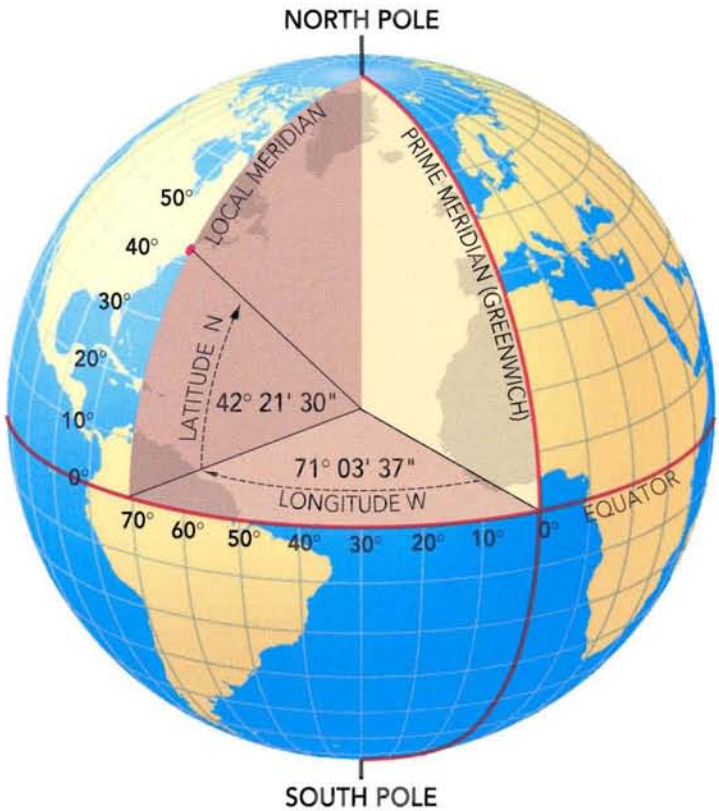
Degrees, Minutes, Seconds

A degree (°) of latitude or longitude can be divided into 60 parts called minutes (′). Each minute can be divided into 60 seconds (″). The diagram at right is an example of a place located to the nearest second.

It is written as:
42° 21′ 30″ N 71° 03′ 37″ W

● This place is city center, Boston, Massachusetts.

The index at the back of this Atlas uses degrees and minutes of latitude and longitude to help you find places.



Different Kinds of Maps

Maps are special pictures of places on Earth.

All maps are alike in these important ways:

- All maps are a view from above
- All maps show selected information using symbols
- All maps are smaller than the real place on Earth that they show.

Because people want to show many different things on Earth, they create many different kinds of maps.

Physical Maps

The purpose of a physical map is to show the physical or natural World. Physical maps show landforms and bodies of water. We use physical maps to locate rivers and mountains, ocean currents and wind patterns.

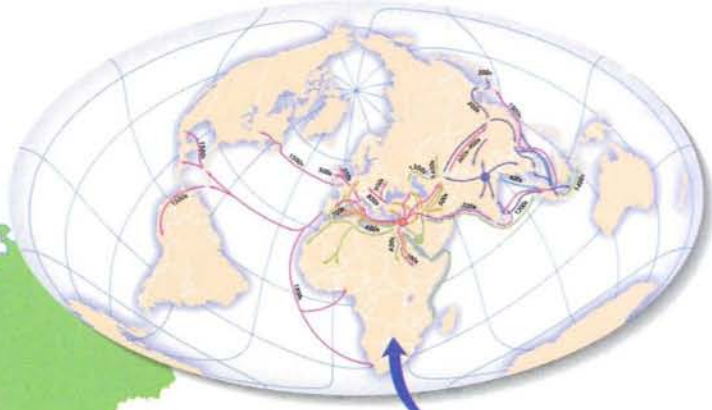
Political Maps

The purpose of a political map is to show the political divisions that people have made on the Earth. Political maps show the boundaries of nations and states and the location of towns and cities. We use political maps to locate places where people live and to understand how human beings have divided up the Earth.

Thematic, or Special Purpose Maps

These maps show a specific subject (theme) or very limited number of subjects (such as population density, climate or historical topics). They can be used to show distributions and relationships among map features. This page contains examples of the many types of maps to be found throughout the *Student Atlas of the World.*

Locator



Historic Route Map

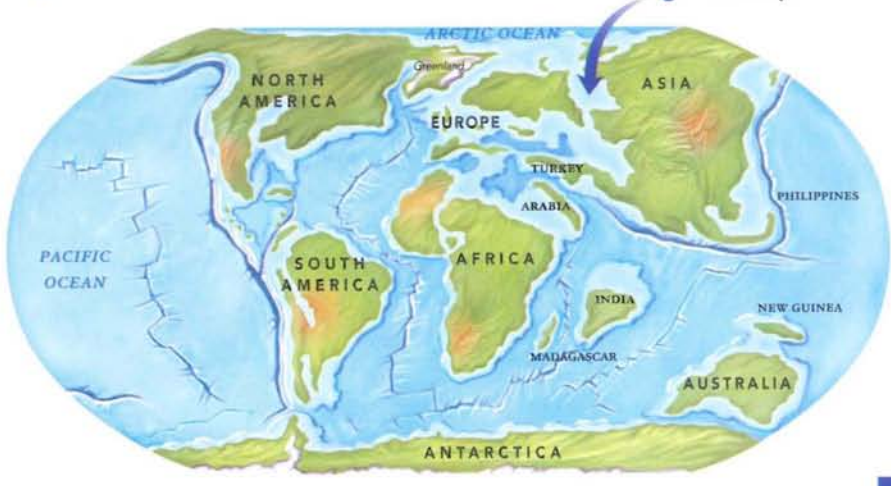
Gross Domestic Product (GDP) Map

Population Density Map

Land Use Map

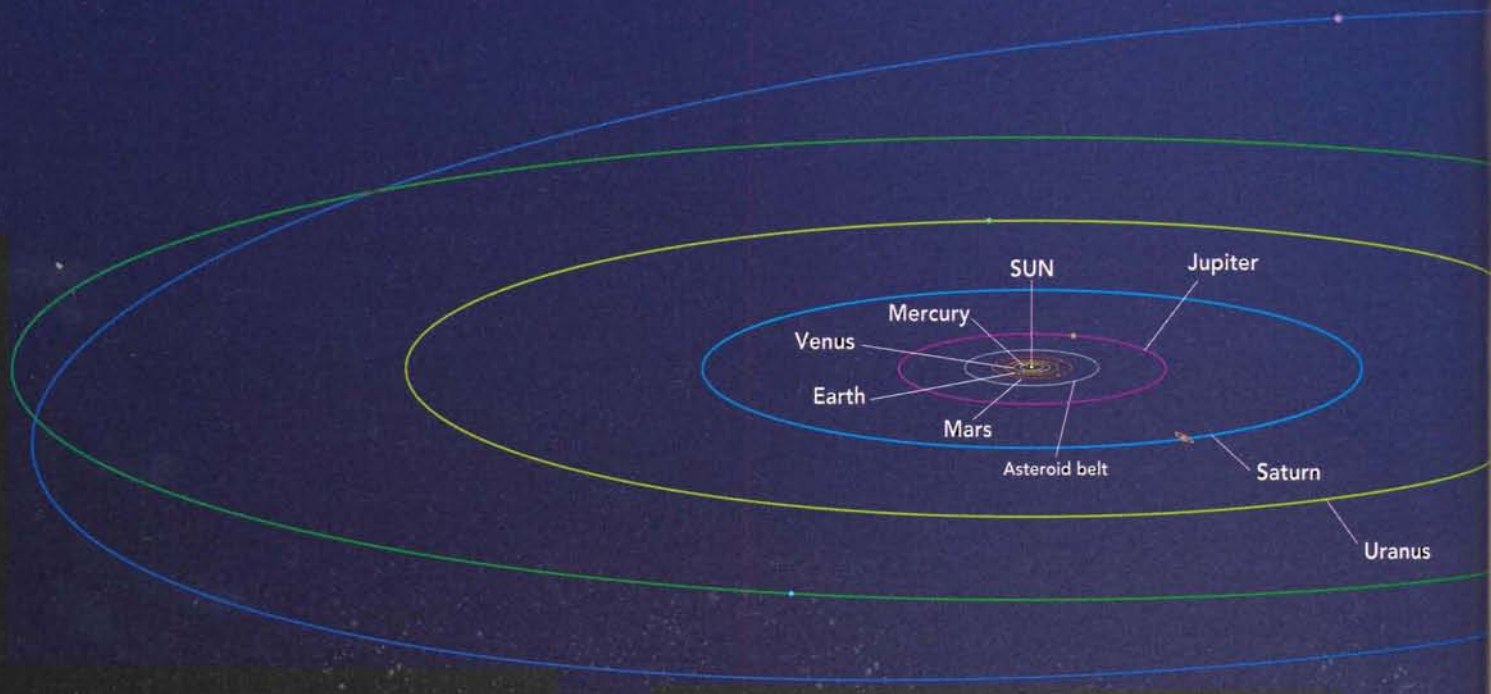
Vegetation Map

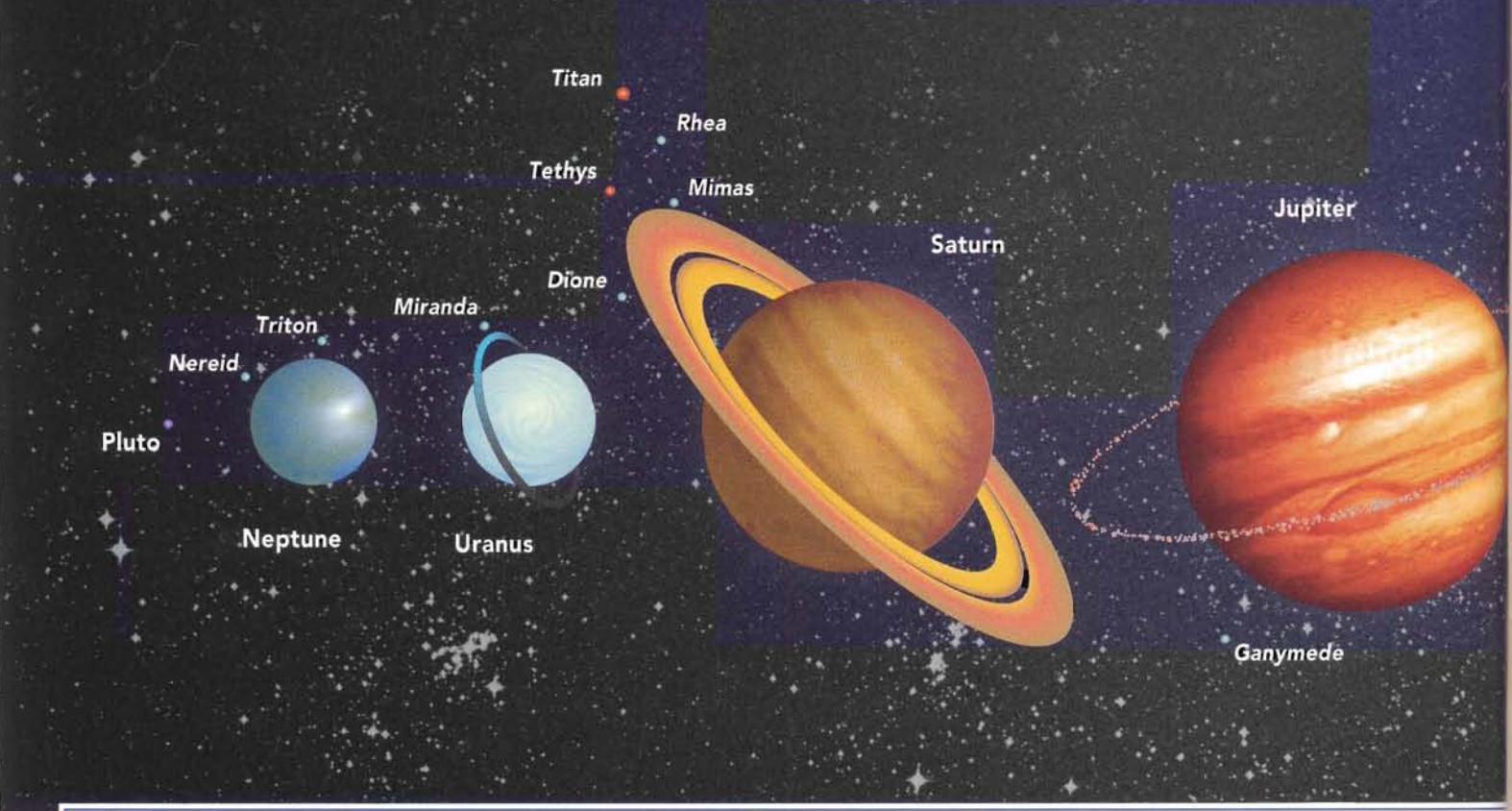
Climate Map



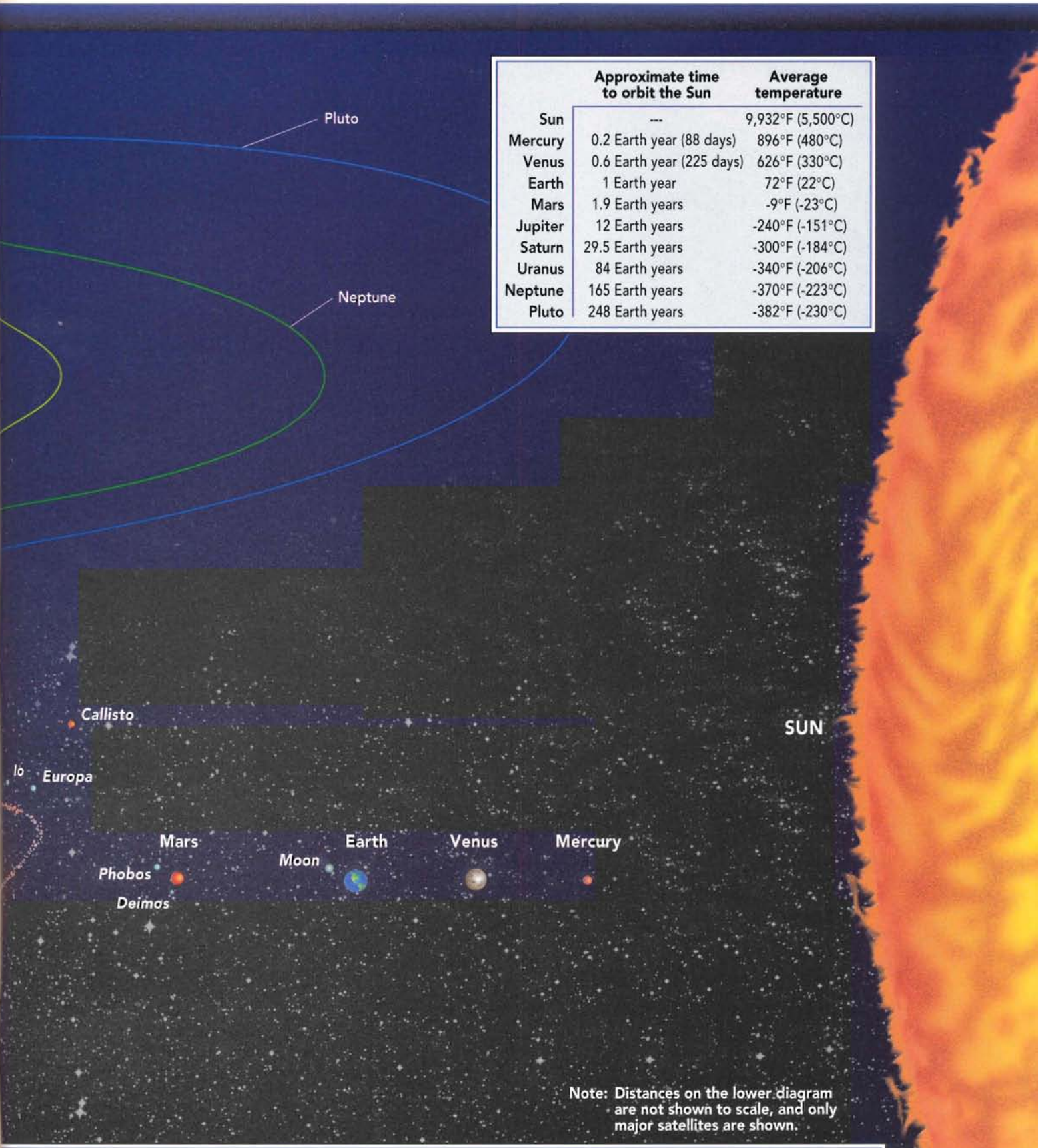
Continental Drift Map

Our Solar System





	Pluto	Neptune	Uranus	Saturn	Jupiter
Diameter	1,485 mi (2,390 km)	30,775 mi (49,528 km)	31,763 mi (51,118 km)	74,897 mi (120,536 km)	88,846 mi (142,984 km)
Mean distance from Sun (millions of miles/millions of km)	3,647 mi (5,870 km)	2,793 mi (4,495 km)	1,785 mi (2,873 km)	891 mi (1,434 km)	484 mi (779 km)



	Approximate time to orbit the Sun	Average temperature
Sun	---	9,932°F (5,500°C)
Mercury	0.2 Earth year (88 days)	896°F (480°C)
Venus	0.6 Earth year (225 days)	626°F (330°C)
Earth	1 Earth year	72°F (22°C)
Mars	1.9 Earth years	-9°F (-23°C)
Jupiter	12 Earth years	-240°F (-151°C)
Saturn	29.5 Earth years	-300°F (-184°C)
Uranus	84 Earth years	-340°F (-206°C)
Neptune	165 Earth years	-370°F (-223°C)
Pluto	248 Earth years	-382°F (-230°C)

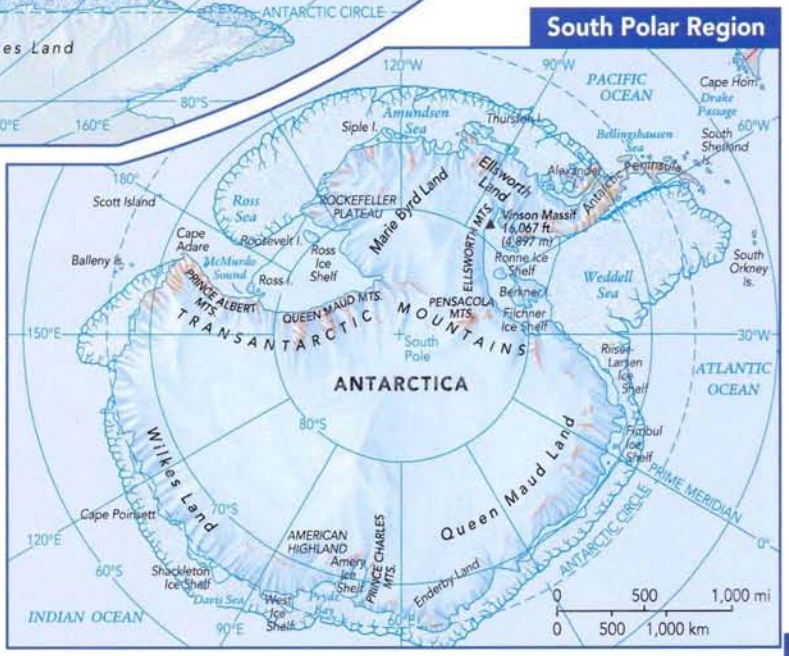
Note: Distances on the lower diagram are not shown to scale, and only major satellites are shown.

Mars	Earth	Venus	Mercury	Sun
4,222 mi (6,794 km)	7,926 mi (12,756 km)	7,521 mi (12,104 km)	3,032 mi (4,879 km)	863,706 mi (1,390,000 km)
142 mi (228 km)	93 mi (150 km)	67 mi (108 km)	36 mi (58 km)	-----

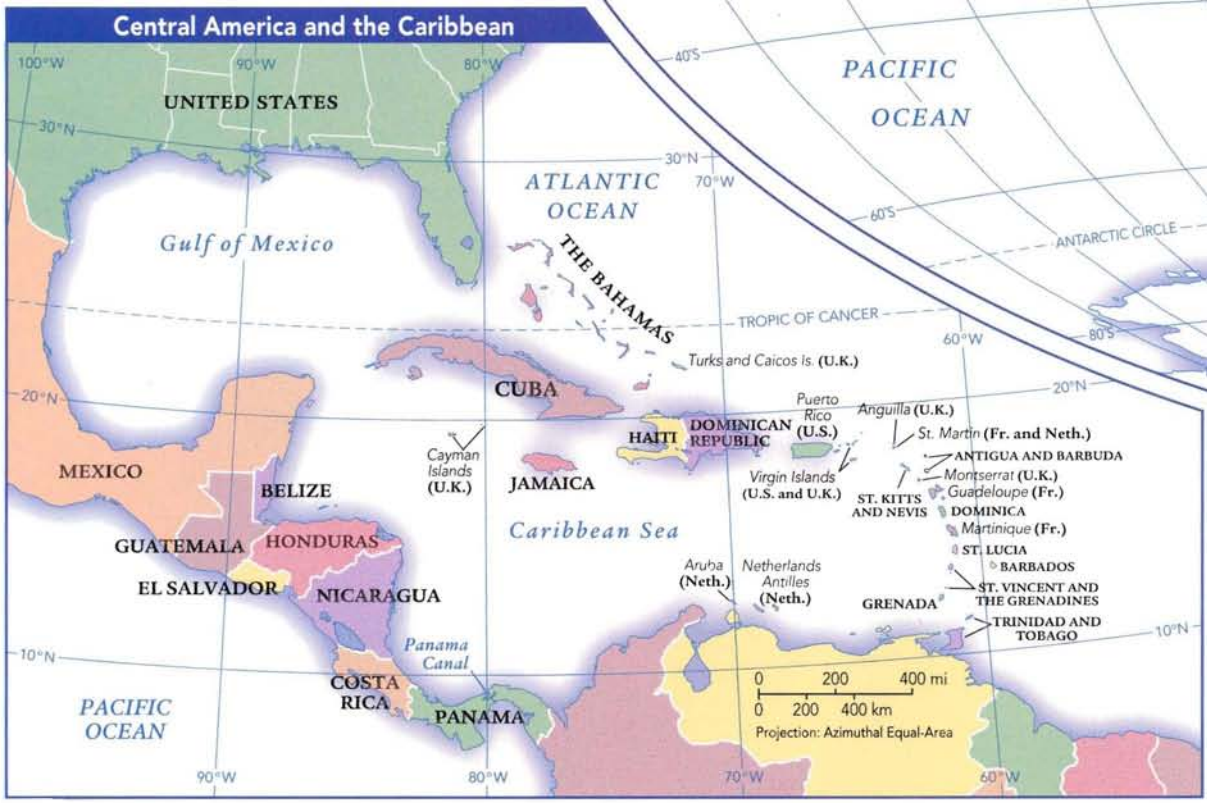
Sources: *JPL/NASA; World Almanac, 2002*

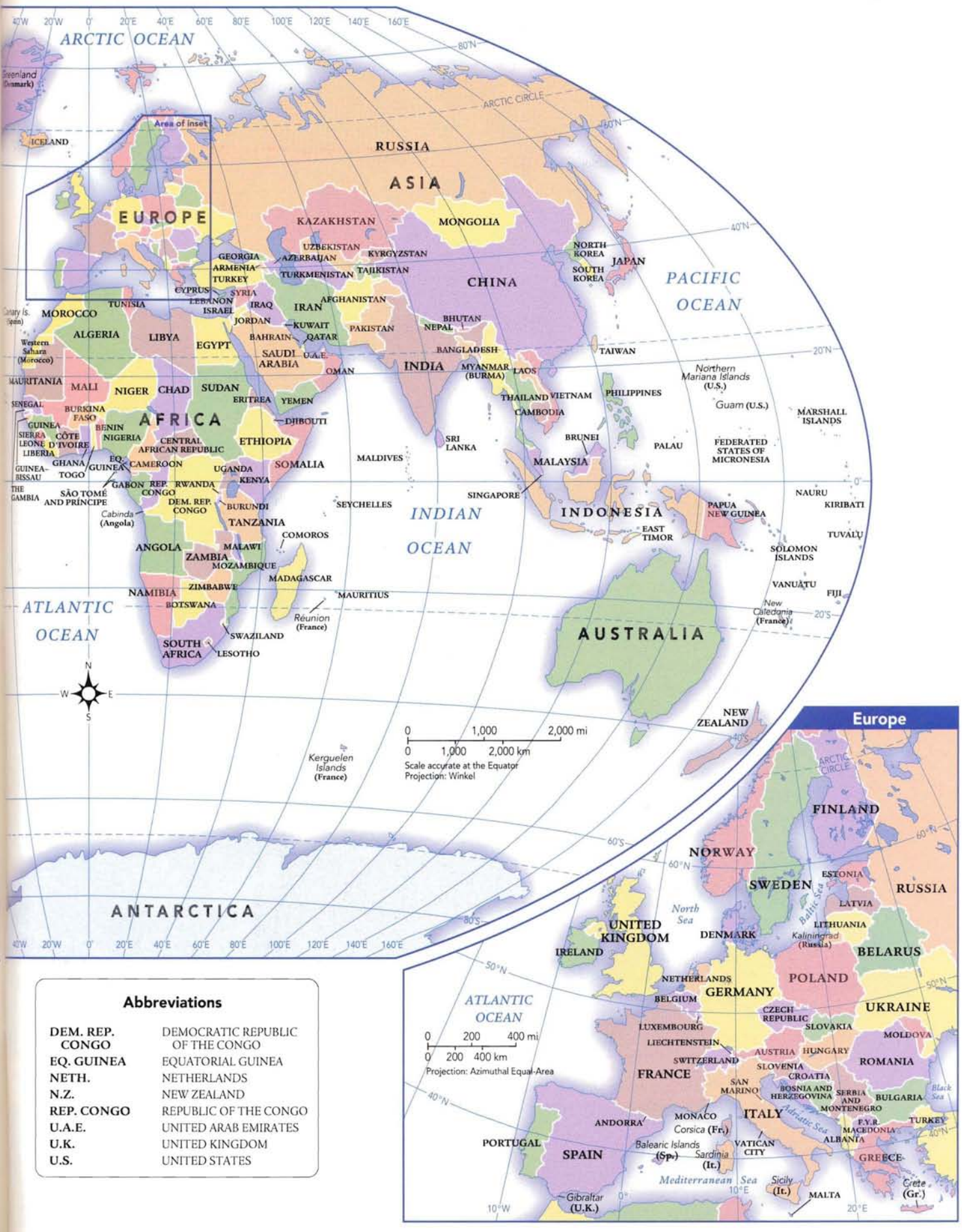
North Polar Region

South Polar Region



Central America and the Caribbean

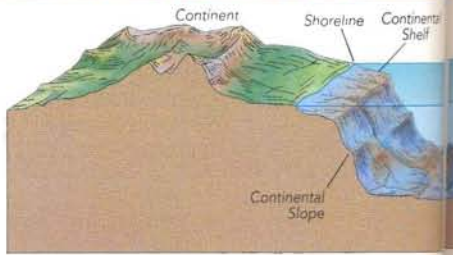




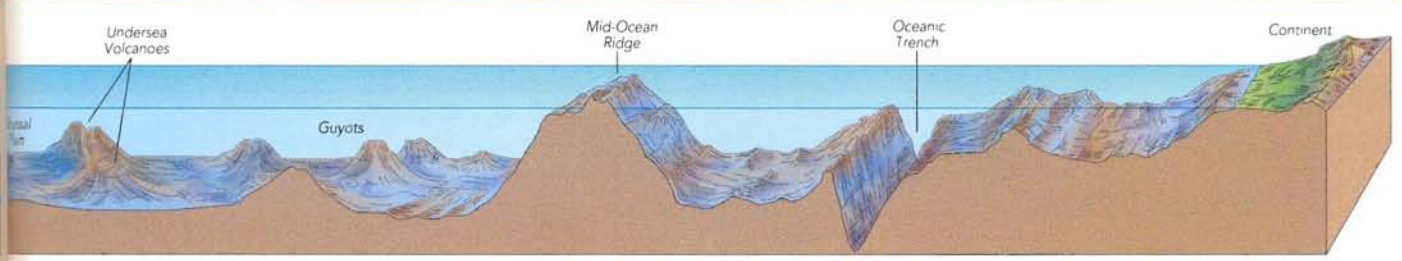
Abbreviations

DEM. REP. CONGO	DEMOCRATIC REPUBLIC OF THE CONGO
EQ. GUINEA	EQUATORIAL GUINEA
NETH.	NETHERLANDS
N.Z.	NEW ZEALAND
REP. CONGO	REPUBLIC OF THE CONGO
U.A.E.	UNITED ARAB EMIRATES
U.K.	UNITED KINGDOM
U.S.	UNITED STATES

Surrounding most of the continents are gently sloping areas called continental shelves, which reach depths of about 650 ft. (200 m). At the edges of the continental shelves lie steeper continental slopes leading down to the deep ocean basin, or abyss. The abyss contains many of the same features we see on land, including plains, mountains ranges (ridges), isolated mountains (known as sea mounts or guyots), and trenches. The Mid-Ocean Ridge system marks the areas where crustal plates are moving apart, and is very active geologically, as molten rock rises and erupts to create new crust. Earthquakes and volcanoes are common along many undersea trenches and ridges.




ARCTIC OCEAN
ARCTIC CIRCLE
NORWEGIAN BASIN
60°N
LABRADOR BASIN
MID-ATLANTIC RIDGE
EUROPE
ASIA
30°N
AFRICA
ARABIAN BASIN
ATLANTIC OCEAN
SOUTH AMERICA
MID-ATLANTIC RIDGE
ANGOLA BASIN
INDIAN OCEAN
NINETYEAST RIDGE
0°
PERU-CHILE TRENCH
WALVIS RIDGE
30°S
SOUTHWEST INDIAN RIDGE
ARGENTINE BASIN
KERGUELEN PLATEAU
ATLANTIC-INDIAN RIDGE
60°S
60°W
30°W
0°
30°E
60°E
90°E
ANTARCTICA


Undersea Volcanoes
Guyots
Mid-Ocean Ridge
Oceanic Trench
Continent

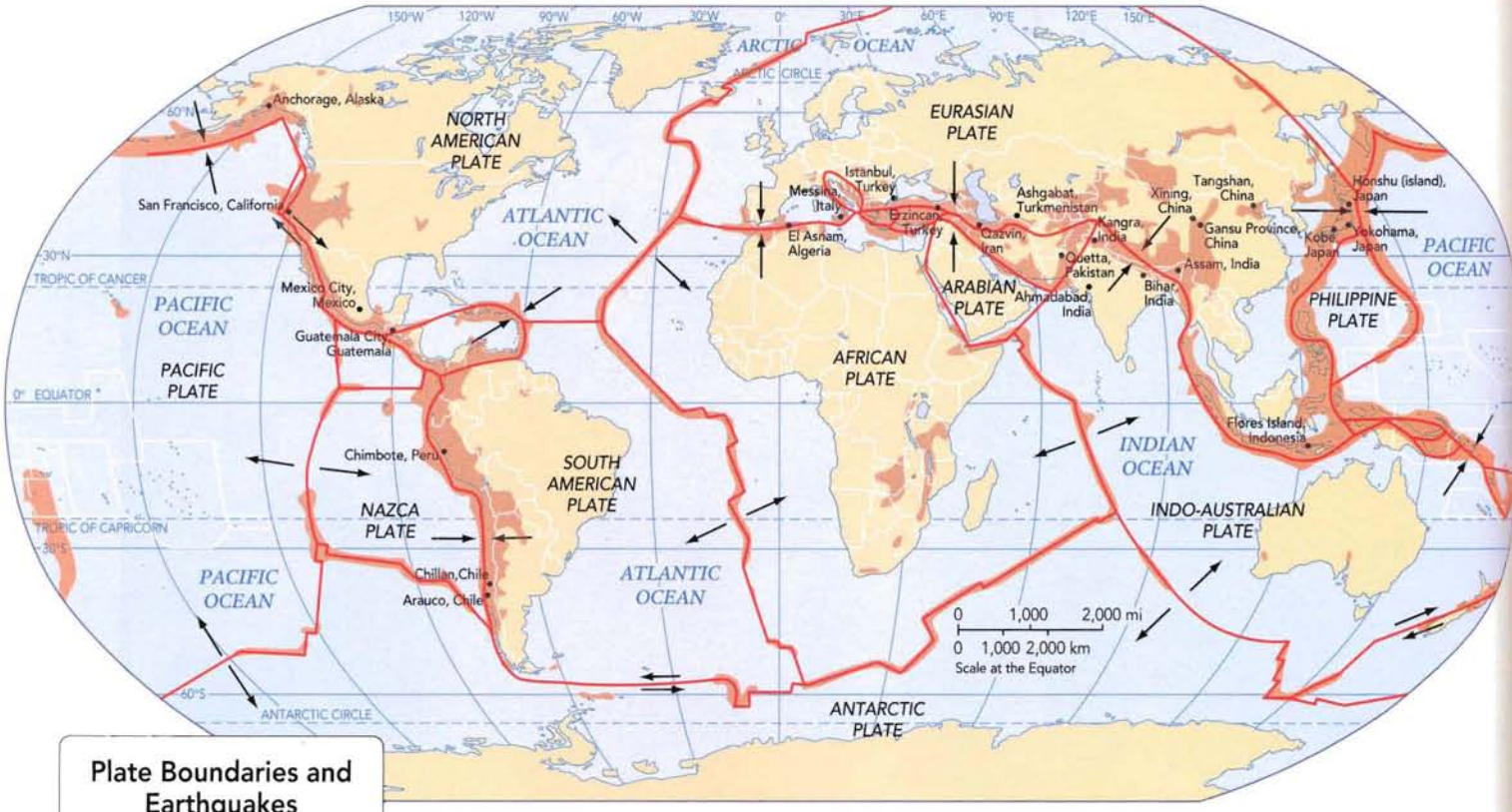


Plate Boundaries and Earthquakes

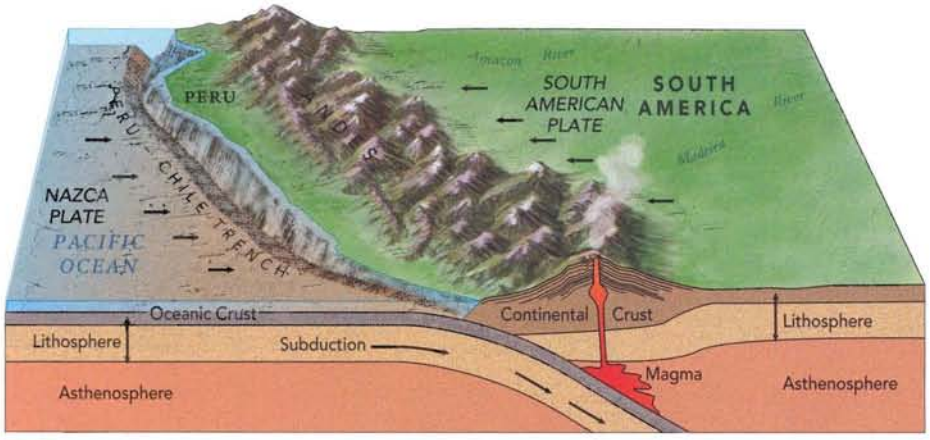
- Earthquake region
- Location of major earthquake
- Plate boundary
- Direction of plate movement

The movement of Earth's crustal plates causes the phenomena known as earthquakes. The surface of the Earth actually moves or quakes. An **earthquake** can have the destructive energy of an atomic bomb. However, thousands of earthquakes occur each day all over the world without most people realizing it.

The majority of earthquakes occur along a **fault.** A fault is usually a weak or broken area in the rocks beneath the surface of the Earth, but some, like the *San Andreas Fault* in California, can be seen on the surface. See pages 58–59 to learn more about faults.

The Richter Scale measures the energy of an earthquake. This measurement is obtained from the focus, or hypocenter, the spot where the first break in the rock layers occurs. The spot on the surface of the Earth, directly above the focus and nearest to the source of energy is called the epicenter.

Earthquake damage is caused by this energy, called seismic energy, moving through the rocks or along the surface. Many geographic factors, both physical and human, determine how much damage is done by these seismic waves of energy.



Major Earthquakes since 1900

Date	Location	Richter Scale Magnitude
April 4, 1905	Kangra, India	8.6
April 18, 1906	San Francisco, California	7.8
Dec. 28, 1908	Messina, Italy	7.5
Dec 16, 1920	Gansu Province, China	8.6
Sept. 1, 1923	Sagami Bay (near Yokohama), Japan	8.3
May 22, 1927	Xining, China	8.3
Dec. 25, 1932	Gansu Province, China	7.6
March 2, 1933	off northeast coast of Honshu, Japan	8.9
Jan. 15, 1934	Bihar, India/Nepal	8.4
May 30, 1935	Quetta, Pakistan	7.5
Jan. 25, 1939	Chillán, Chile	8.3
Dec. 26, 1939	Erzincan, Turkey	8.0
Dec. 21, 1946	Honshu, Japan	8.4
Oct. 5, 1948	Ashgabat, Turkmenistan	7.3
Aug. 15, 1950	Assam, India	8.7
May 22, 1960	Arauco, Chile	9.5
March 27, 1964	Anchorage, Alaska	9.2
May 31, 1970	Northern Peru, near Chimbote	7.8
Feb. 4, 1976	Guatemala City, Guatemala	7.5
July 28, 1976	Tangshan, China	8.0
Oct. 10, 1980	El Asnam, Algeria	7.7
Sept. 19, 1985	Mexico City, Mexico	8.1
June 20, 1990	Western Iran, near Qazvin	7.7
Dec. 12, 1992	Flores Island, Indonesia	7.5
Jan. 17, 1995	Kobe, Japan	6.9
Aug. 17, 1999	Istanbul, Turkey	7.4
Jan. 26, 2001	Ahmadabad, India	7.7

Source: National Earthquake Information Center, U.S.G.S

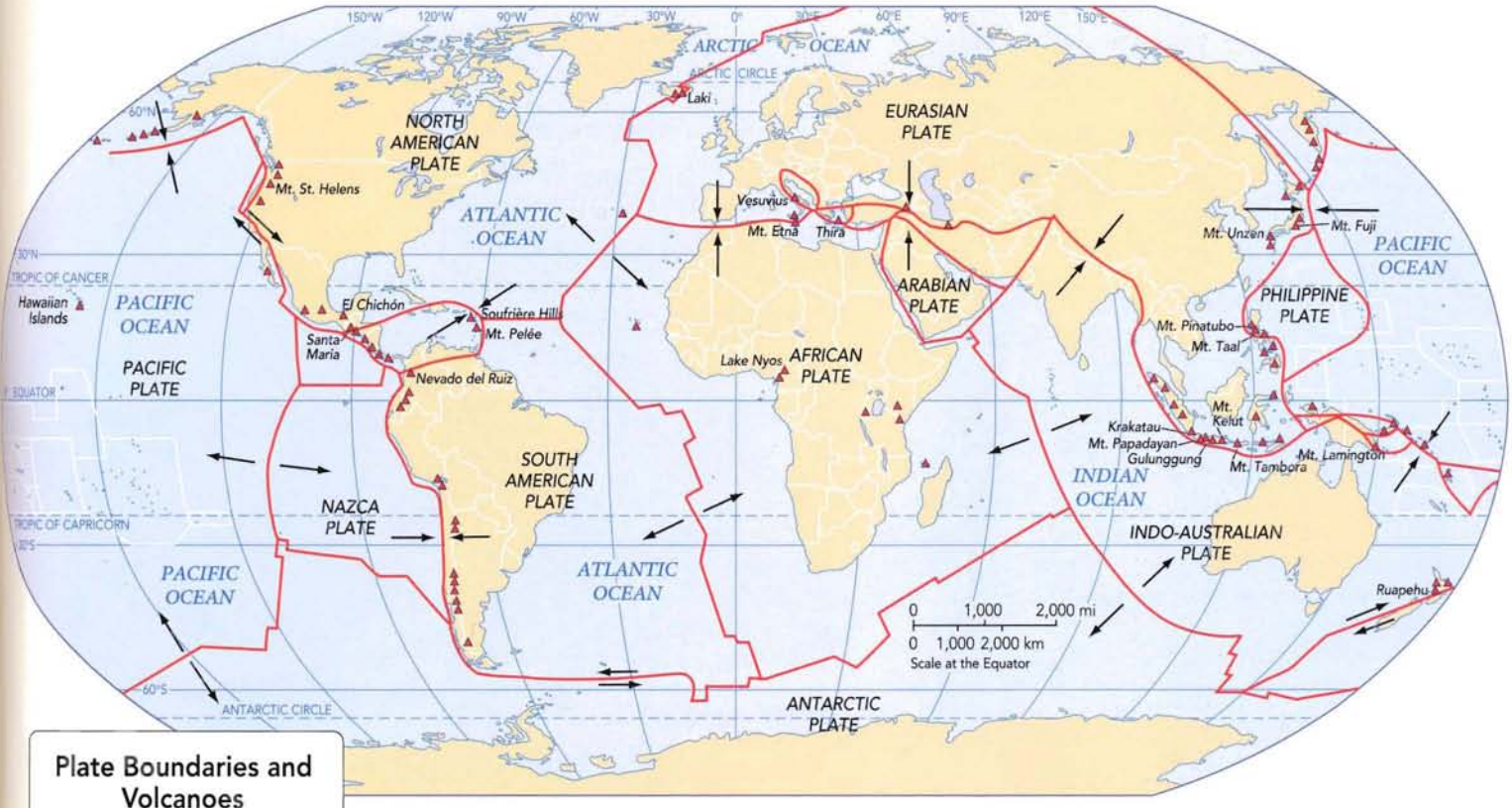


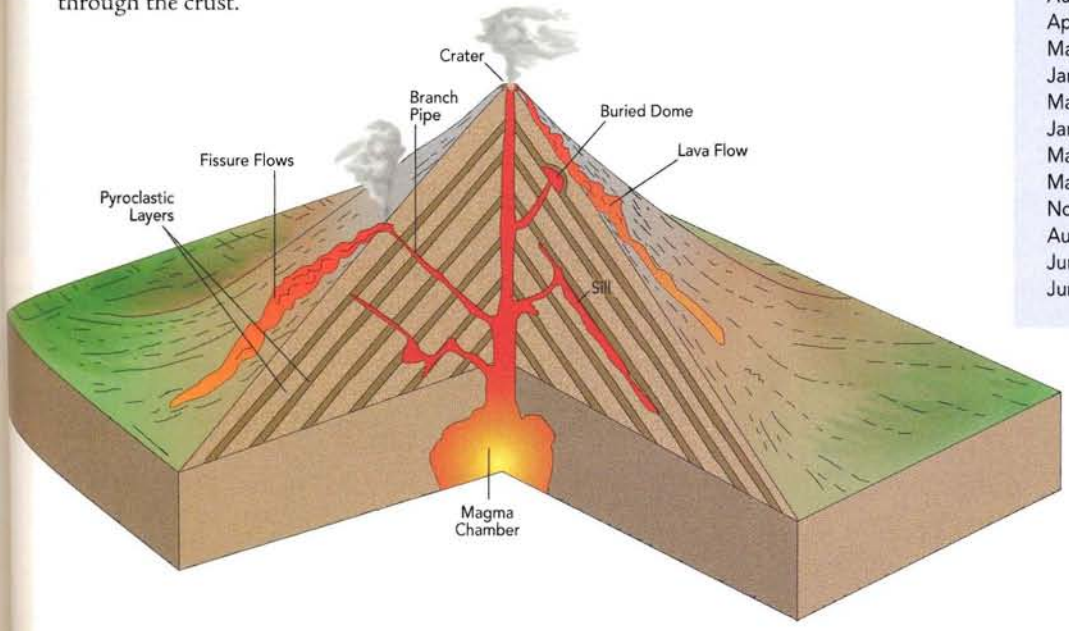
Plate Boundaries and Volcanoes

- Volcano
- Plate boundary
- Direction of plate movement

A **volcano** is an opening in the Earth's crust often capped by a cone-shaped hill or mountain formed from erupted lava and ash.

Volcanoes are associated with plate boundaries. Powerful forces occurring far beneath the surface at the edges of plates cause rock to melt and, at the same time, open cracks in the crust. An eruption occurs when magma (melted rock) flows, and many times explodes, through a weakness, such as a crack in the Earth's crust. Once magma is flowing on the Earth's surface it is called lava. Flowing lava can be several thousand degrees Fahrenheit.

In a few cases, volcanoes exist without being near the edge of a plate. In these cases, such as the Hawaiian Islands, a powerful and persistent flow of magma has broken through the crust.

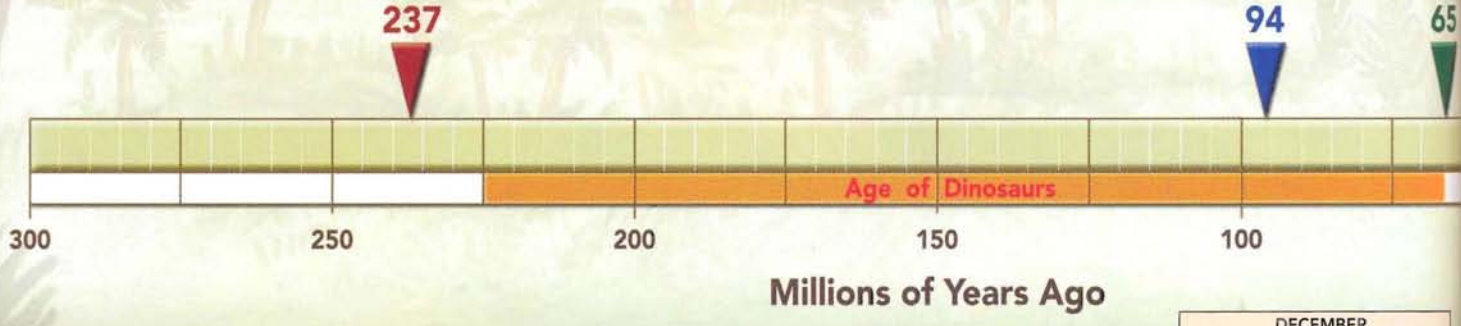


Some Notable Volcanic Eruptions

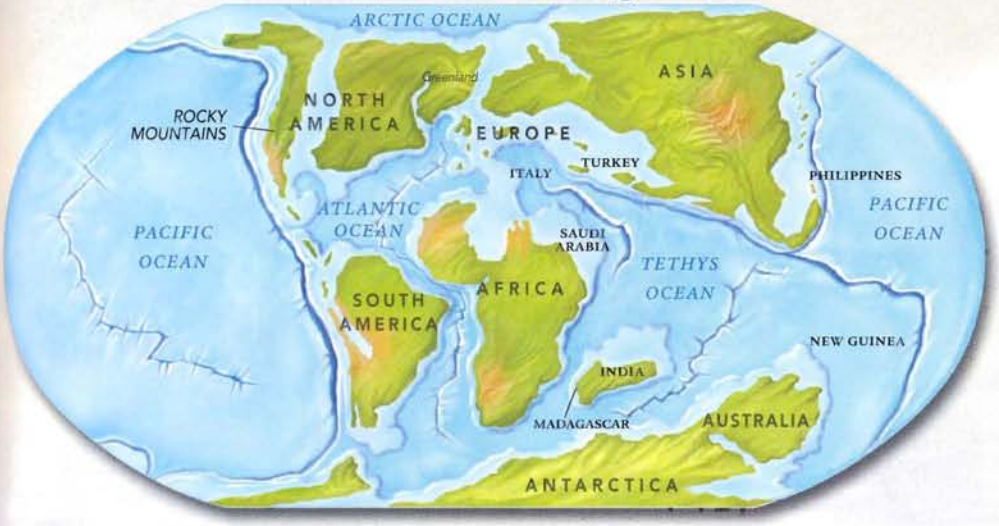
Date	Location
1500 B.C.	Thira (Santorini), Greece
Aug. 24, A.D. 79	Vesuvius, Italy
1169	Mt. Etna, Italy
1586	Mt. Kelut, Java, Indonesia
Dec. 15, 1631	Vesuvius, Italy
March–July, 1669	Mt. Etna, Italy
Aug. 12, 1772	Mt. Papandayan, Java, Indonesia
June 8, 1783	Laki, Iceland
May 21, 1792	Mt. Unzen, Japan
Apr. 10–12, 1815	Mt. Tambora, Sumbawa, Indonesia
Oct. 8, 1822	Galunggung, Java, Indonesia
Aug. 26–28, 1883	Krakatau, Indonesia
Apr. 24, 1902	Santa Maria, Guatemala
May 8, 1902	Mt. Pelée, Martinique
Jan. 30, 1911	Mt. Taal, Philippines
May 19, 1919	Mt. Kelut, Java, Indonesia
Jan. 17–21, 1951	Mt. Lamington, New Guinea
May 18, 1980	Mt. St. Helens, United States
Mar. 28, 1982	El Chichon, Mexico
Nov. 13, 1985	Nevado del Ruiz, Colombia
Aug. 21, 1986	Lake Nyos, Cameroon
June 15, 1991	Mt. Pinatubo, Philippines
June–Sept., 1997	Soufrière Hills, Montserrat

237 Million Years Ago

This peculiar—to our eyes—arrangement of continents with its unfamiliar oceans and seas, mountains and plains, and peninsulas and islands reminds us that the dinosaurs lived in a far different landscape than our own. As the last dinosaurs receded into memory, the future Atlantic Ocean and Mediterranean Sea were becoming more substantial and recognizable, and the continents, except for Australia and Antarctica, were nearing their present latitudes. Within the last 65 million years, most continents nestled unhurriedly into their current positions. However, the Indian sub-continent "sprinted" north, crashing into Asia and bulldozing up the Himalayas, earth's loftiest mountain range.

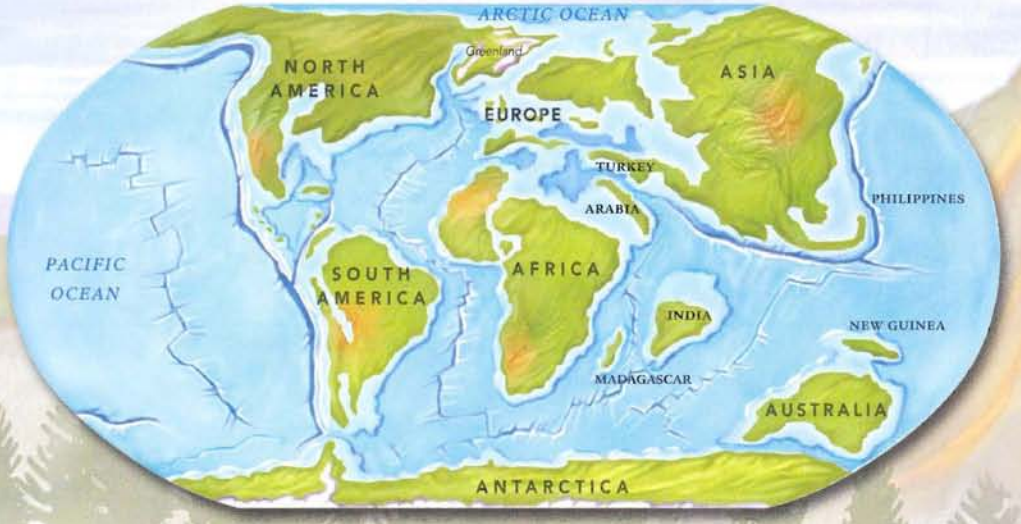


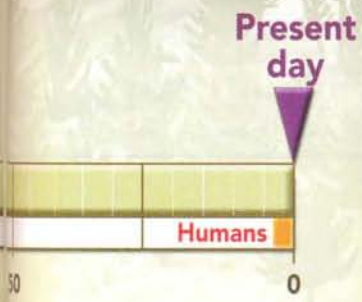
94 Million Years Ago



The highly controversial theory of Continental Drift was proposed in 1915 by Alfred Wegener to explain both geologic and fossil discoveries. Although supported by strong data and seemingly obvious visual evidence—most notably, the close fit of the coastlines of Africa and South America—the theory was rejected by other scientists. By the 1960s, further studies, especially those that discovered that some rocks contained a record of the alignment of the Earth's magnetic field, resurrected the theory, which was redefined under the term Plate Tectonics. Few scientists now dispute its general premise, that continental and oceanic plates move atop a layer of hot and semi-solid rock below them, although many details, particularly the causes and mechanics of the motion, are still not well understood.

65 Million Years Ago





Present Day

If a year (365 days) represented the approximate age of the Earth (4.5 billion years), then the first map which shows the Earth 237 million years ago, would have occurred about December 13th. 94 and 65 million years ago would have occurred about December 25th and 27th respectively.

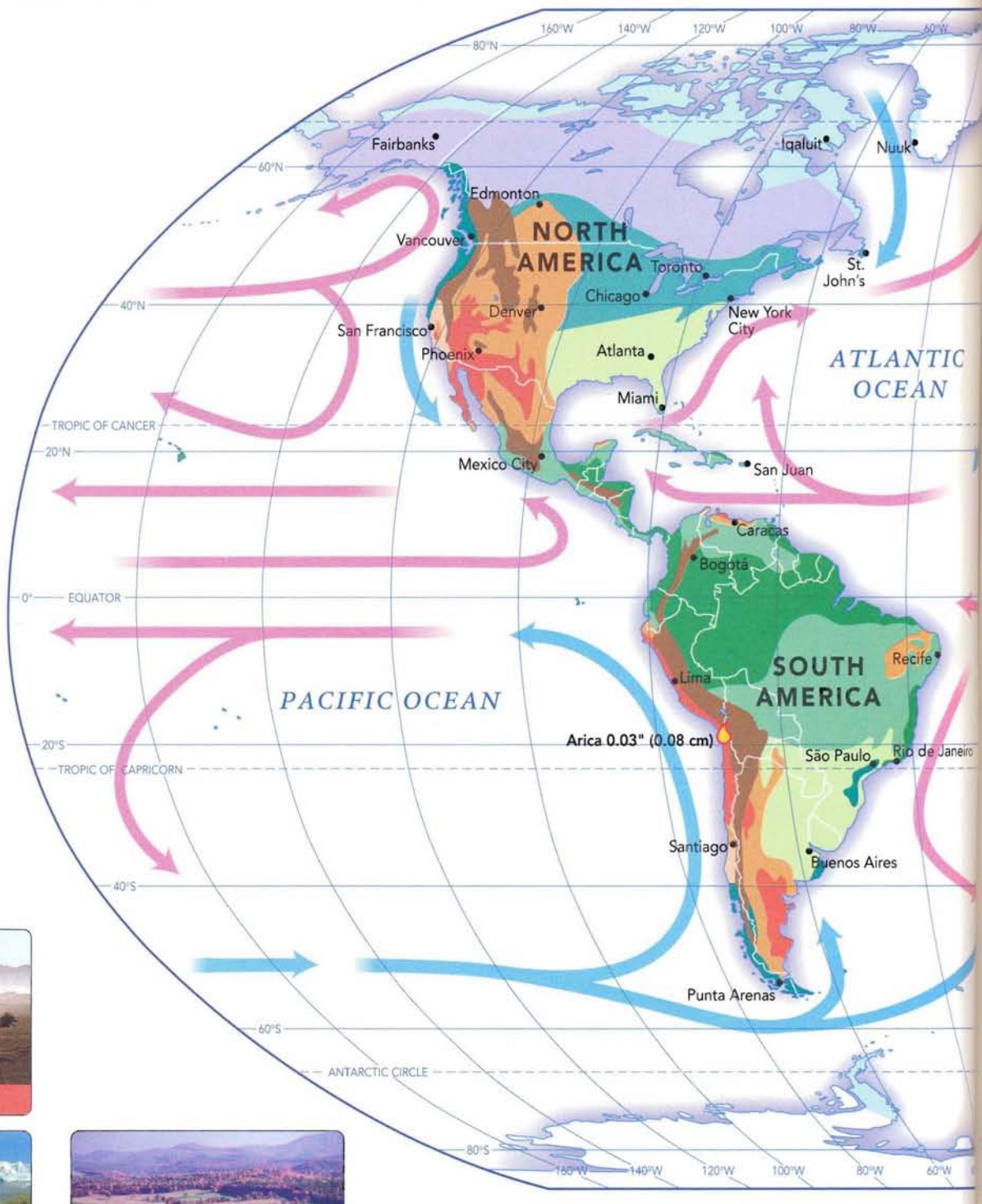
Recorded history started about 5,500 years ago: on this calendar, that would have been about 21 seconds before the New Year

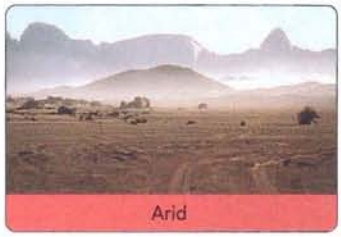
Climate

- Tropical wet
- Tropical wet and dry
- Arid
- Semiarid
- Mediterranean
- Humid subtropical
- Marine
- Humid continental
- Subarctic
- Tundra
- Ice cap
- Highland
- Highest average annual precipitation
- Lowest average annual preciptation
- Highest recorded temperature
- Lowest recorded temperature

Major Ocean Currents

- Cool currents
- Warm currents

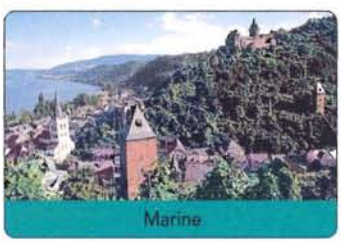



Arid

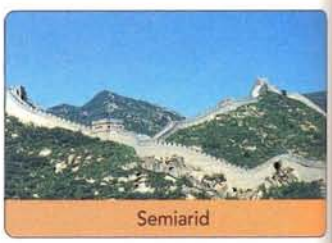

Highland

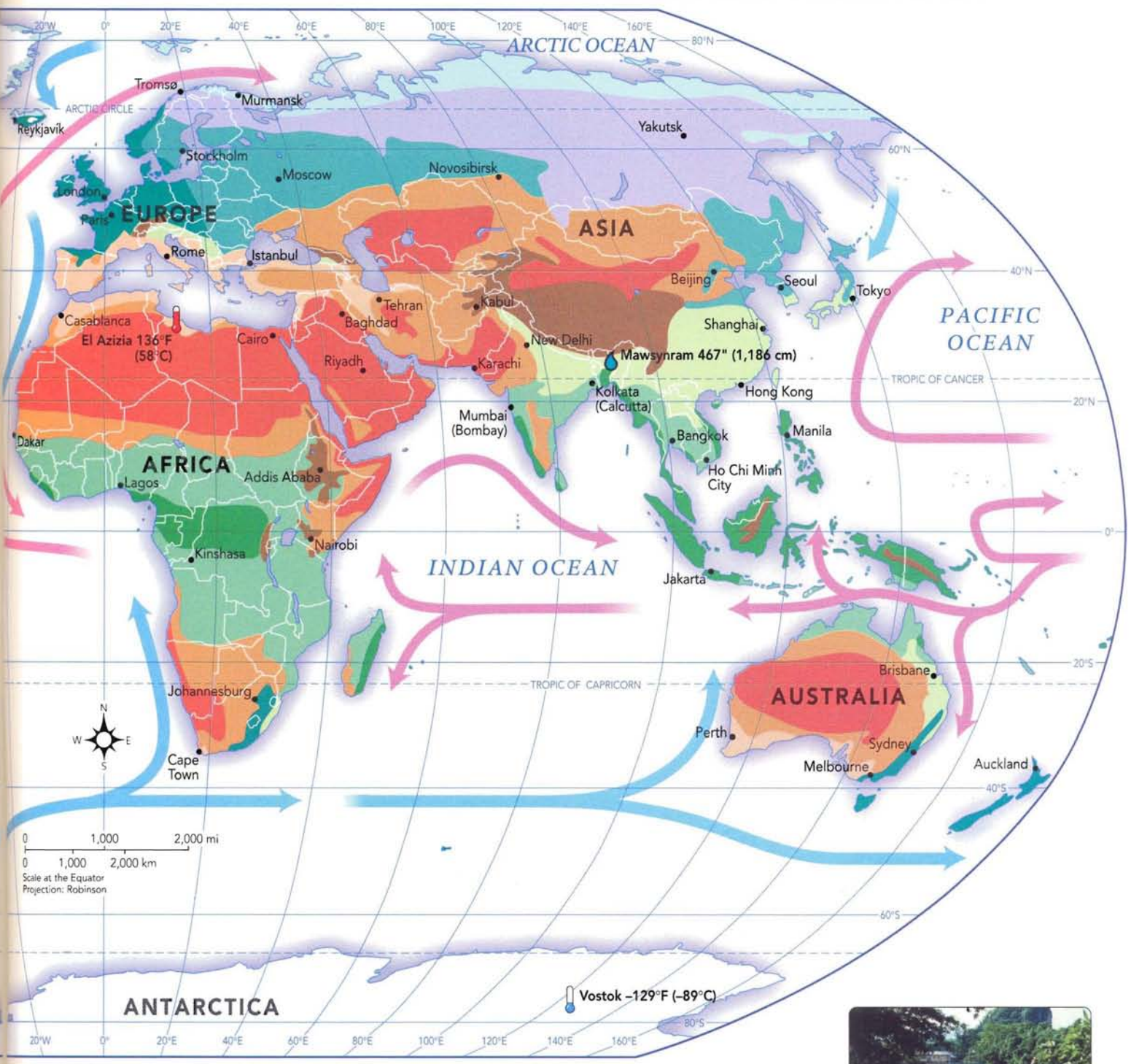

Humid continental


Icecap


Marine


Mediterranean


Semiarid



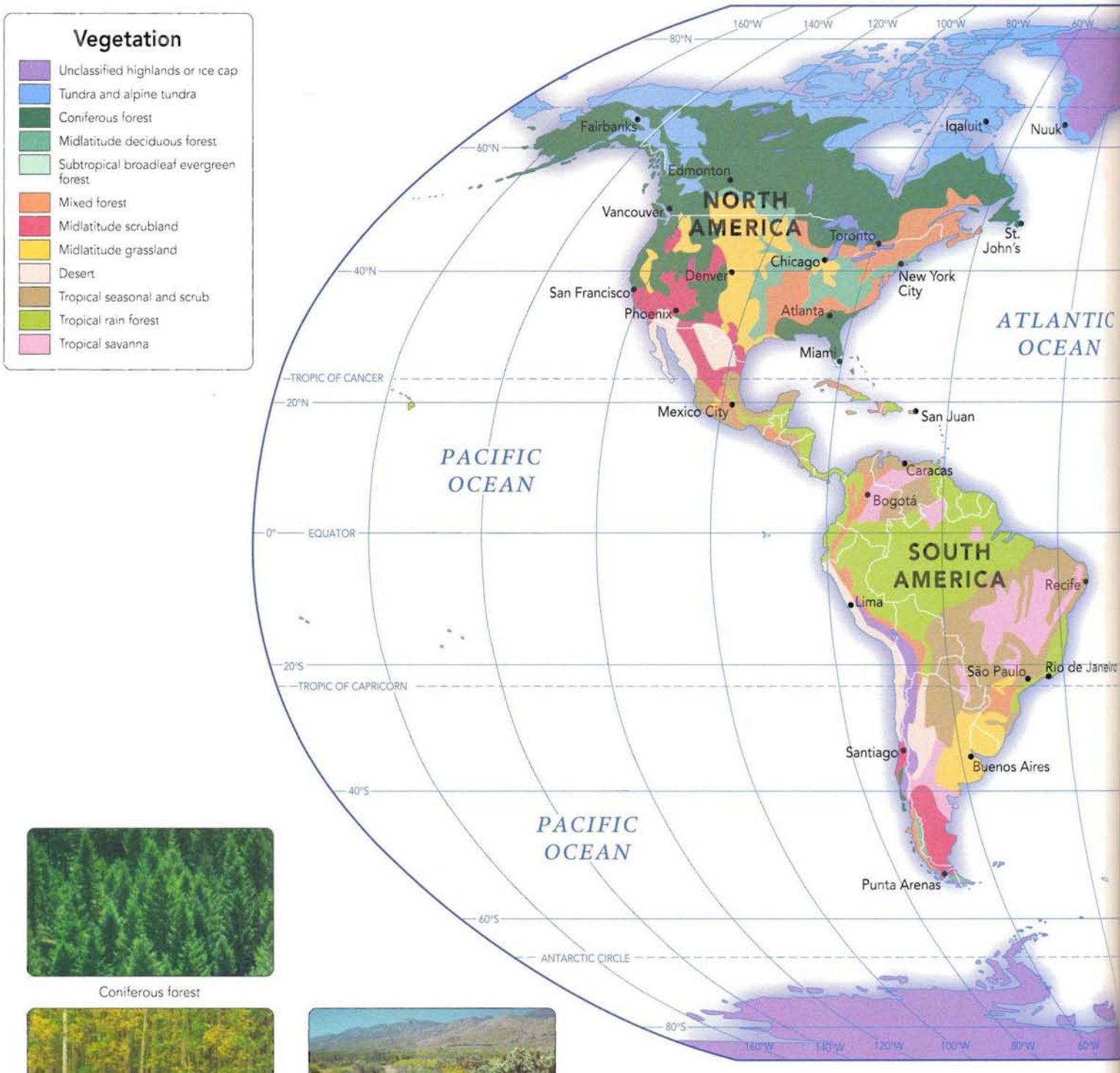

Humid subtropical


Subarctic


Tropical wet


Tropical wet and dry


Tundra



Coniferous forest


Deciduous forest

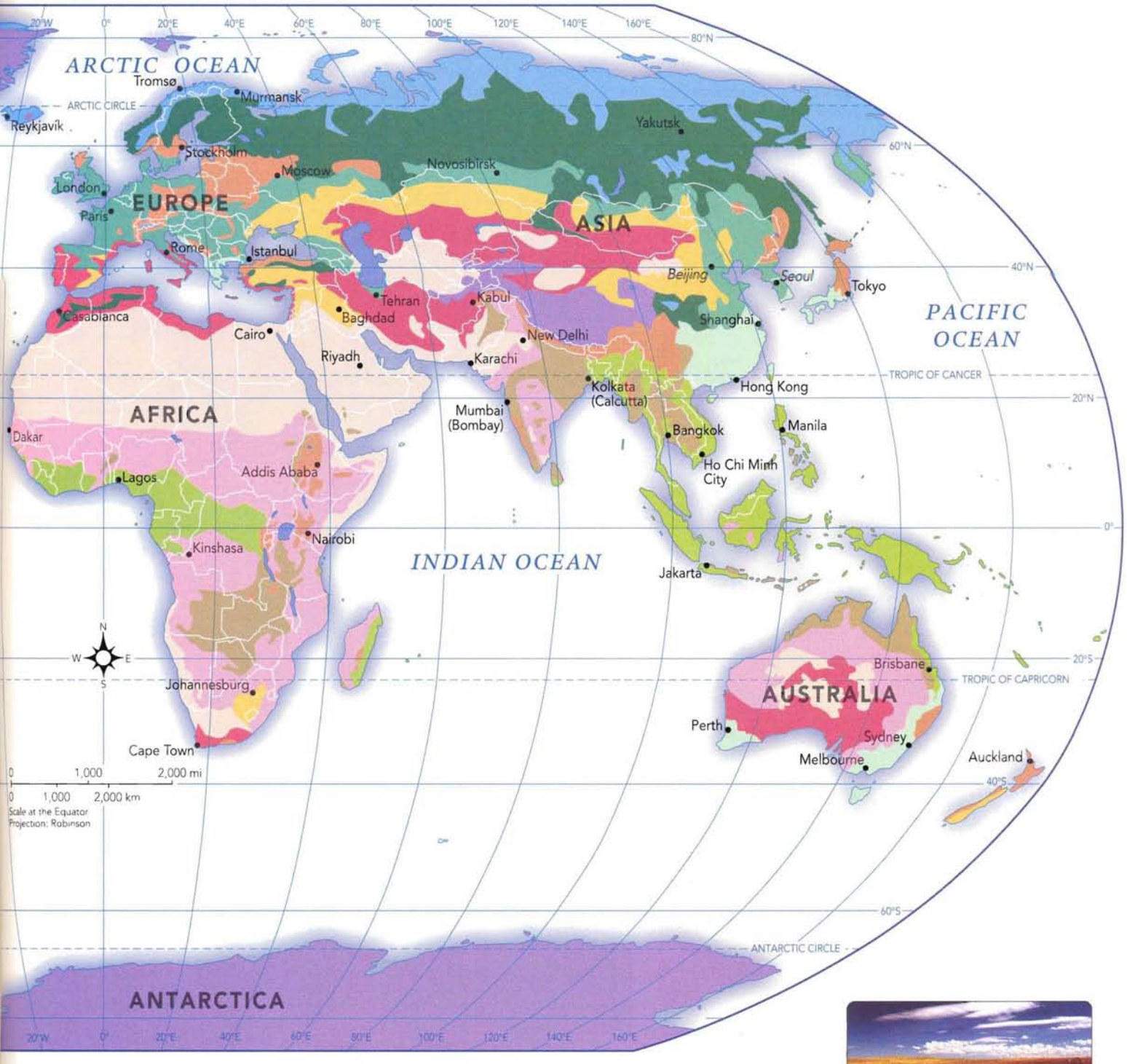

Desert


Midlatitude scrubland


Mixed forest


Subtropical broadleaf evergreen forest


Tropical rain forest




Midlatitude grassland


Tropical savanna

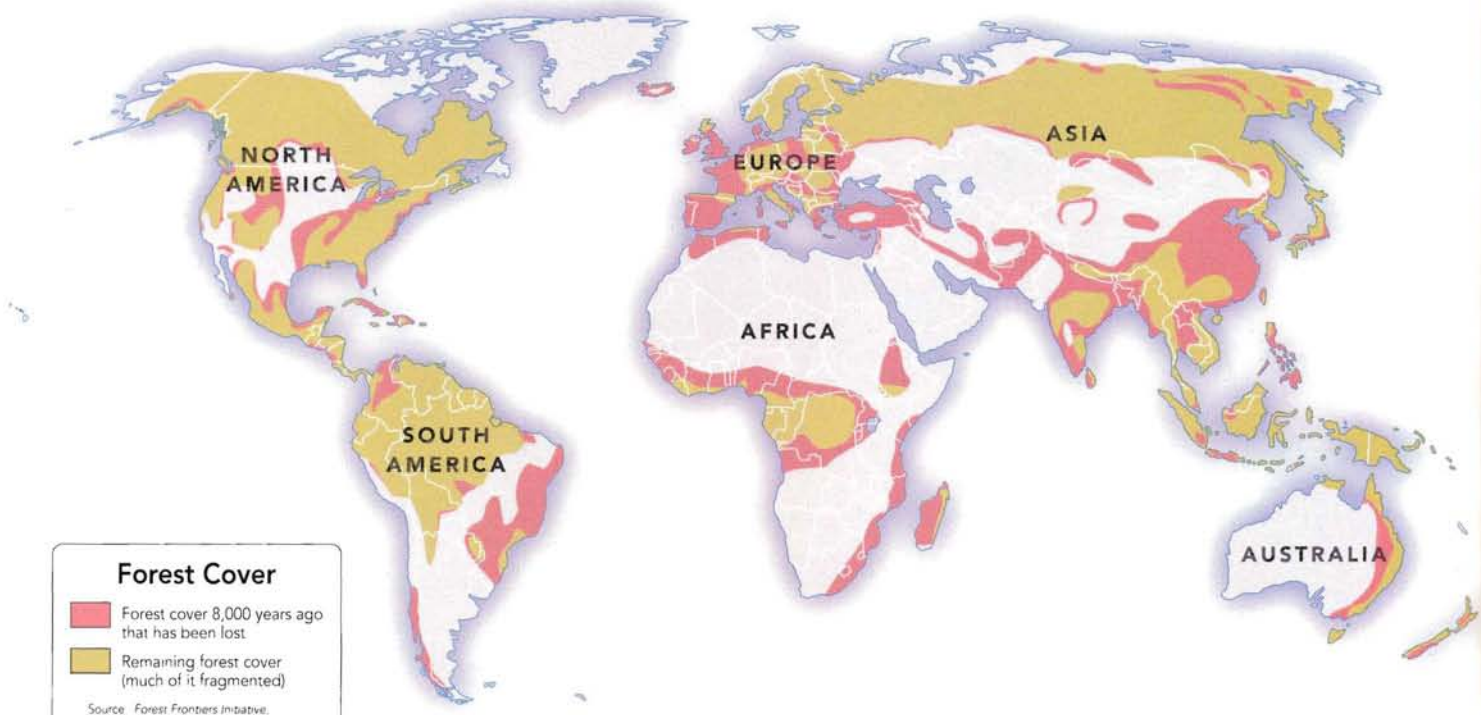

Tropical seasonal and scrub

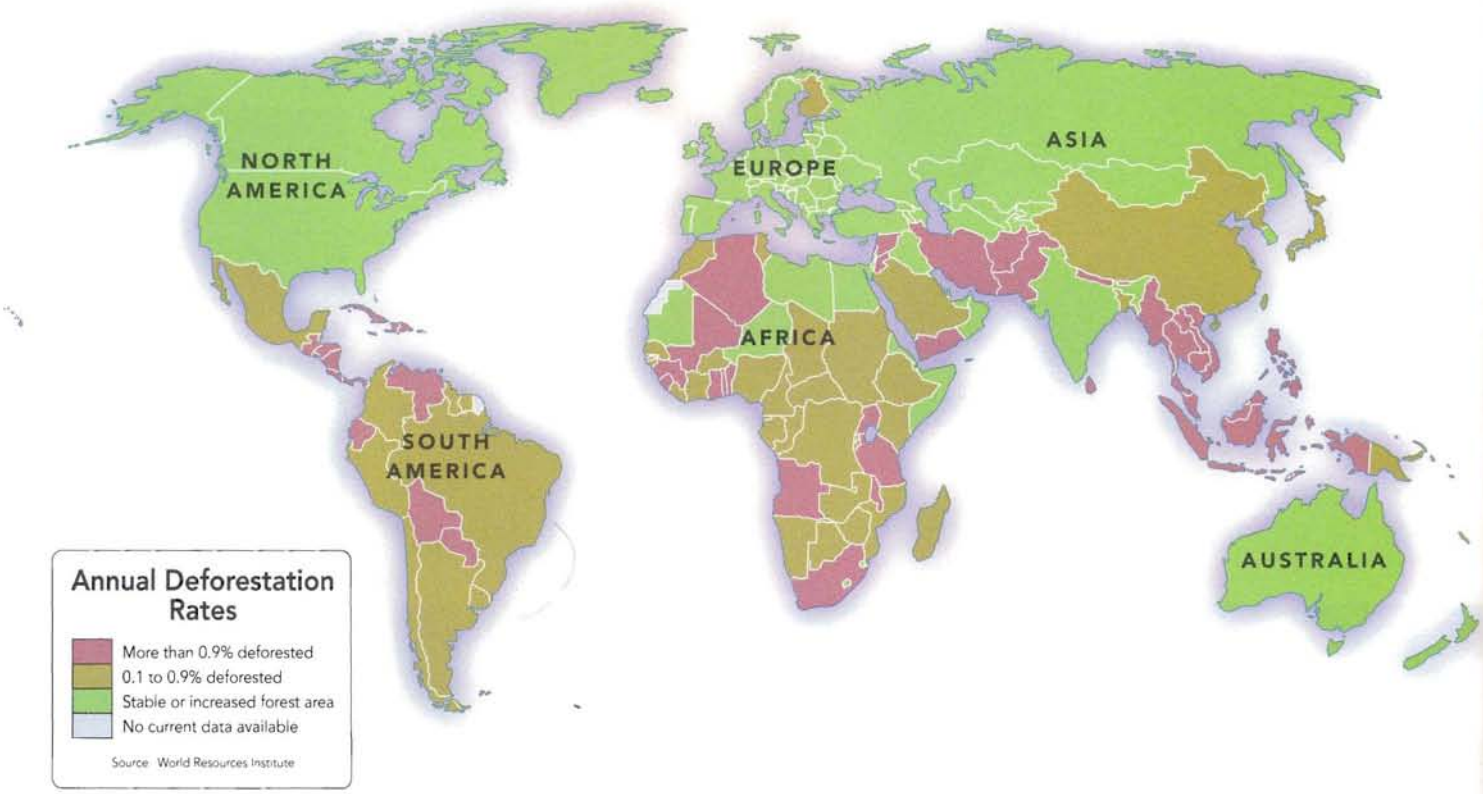

Tundra and alpine tundra


Unclassified highlands or ice cap

World Forest Cover

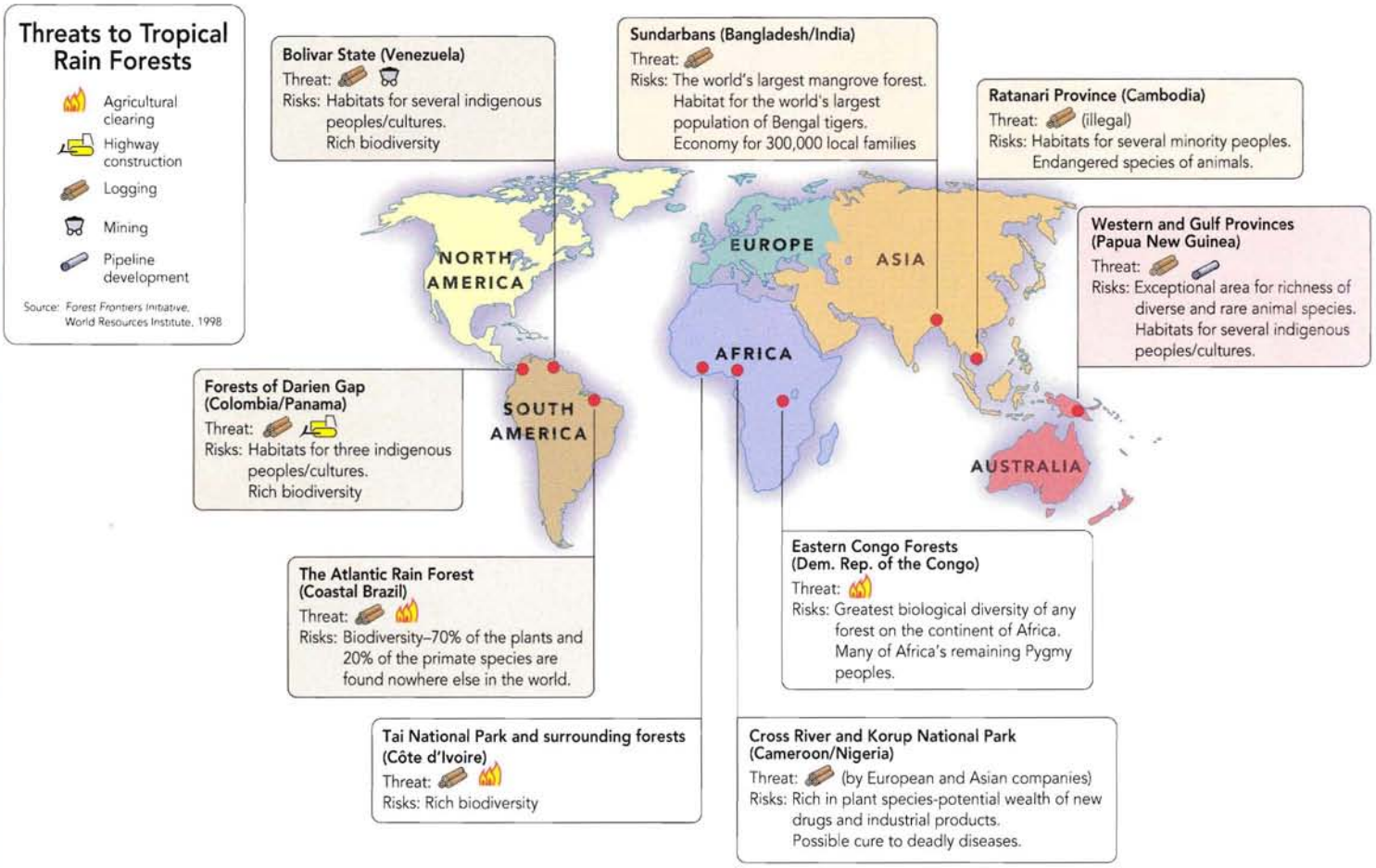
Forests help regulate climate by storing huge amounts of carbon dioxide, while providing habitats for countless animal and plant species. Environmentalists have voiced concern over a long-term decrease in forest cover, as forest lands have been cleared for such purposes as farming, logging, mining, and urban expansion.





Tropical Rain Forests

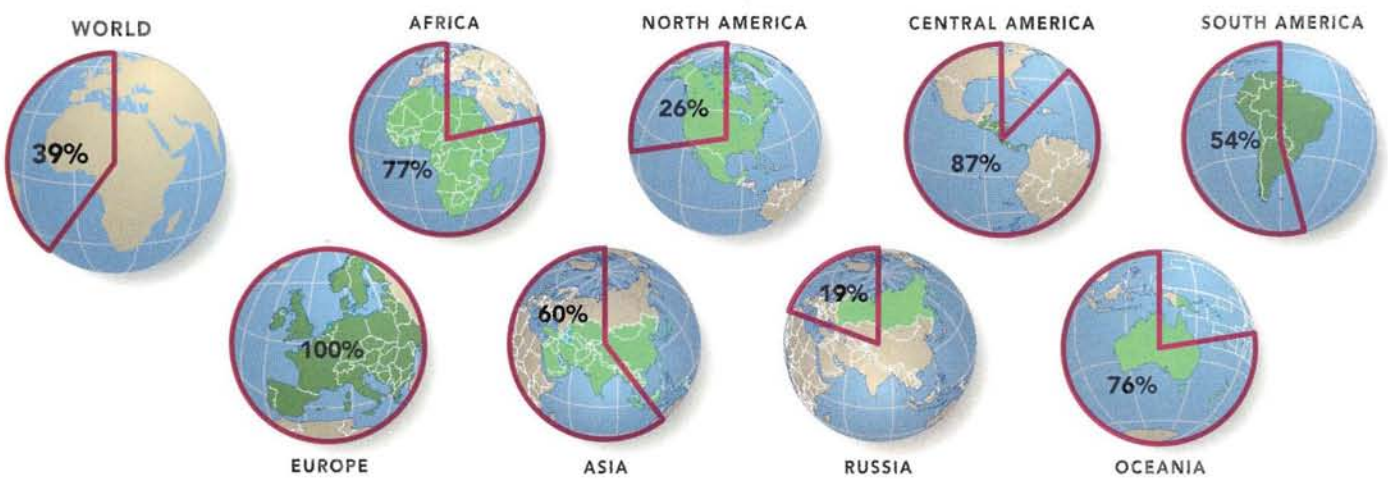
Tropical rain forests, found around the Earth within 10 degrees of the equator, contain more than half of all the world's plants and animal species, besides to being home to many indigenous peoples. They are vital to the balance of nature. In the past 40 years alone, about one-fifth of the acreage has been cleared for logging and other purposes. These rain forests, including the major forests pinpointed here, remain under serious threat.



Percentage of Frontier Forest Under Moderate or High Threat of Destruction (through 2030)

Source: Forest Frontiers Initiative, World Resources Institute, 1998

According to the World Resources Institute, only about one-fifth of the Earth's forest cover of 8,000 years ago survives unfragmented, in the large unspoiled tracts it calls *frontier forests*. These forests are big enough to provide stable habitats for a rich diversity of plant and animal species.



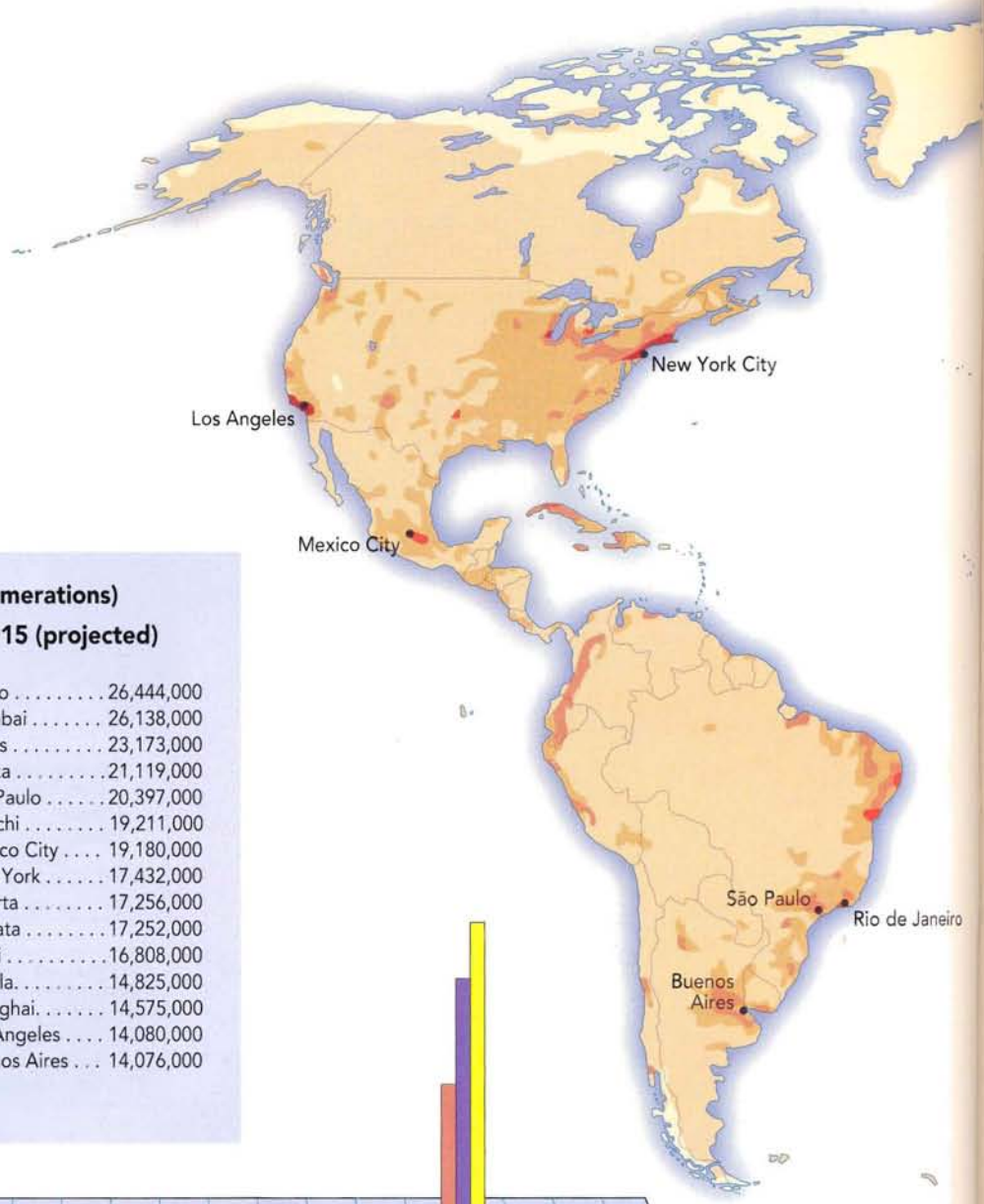
Population Density 2002

Persons per sq. mile	Persons per sq. km
Over 520	Over 200
260 to 519	100 to 199
130 to 259	50 to 99
25 to 129	10 to 49
1 to 24	1 to 9
0	0

• Urban agglomerations with over 10,000,000 inhabitants

World population total as of March 1, 2003: 6,277,603,768
(Every day it increases by about 202,500)

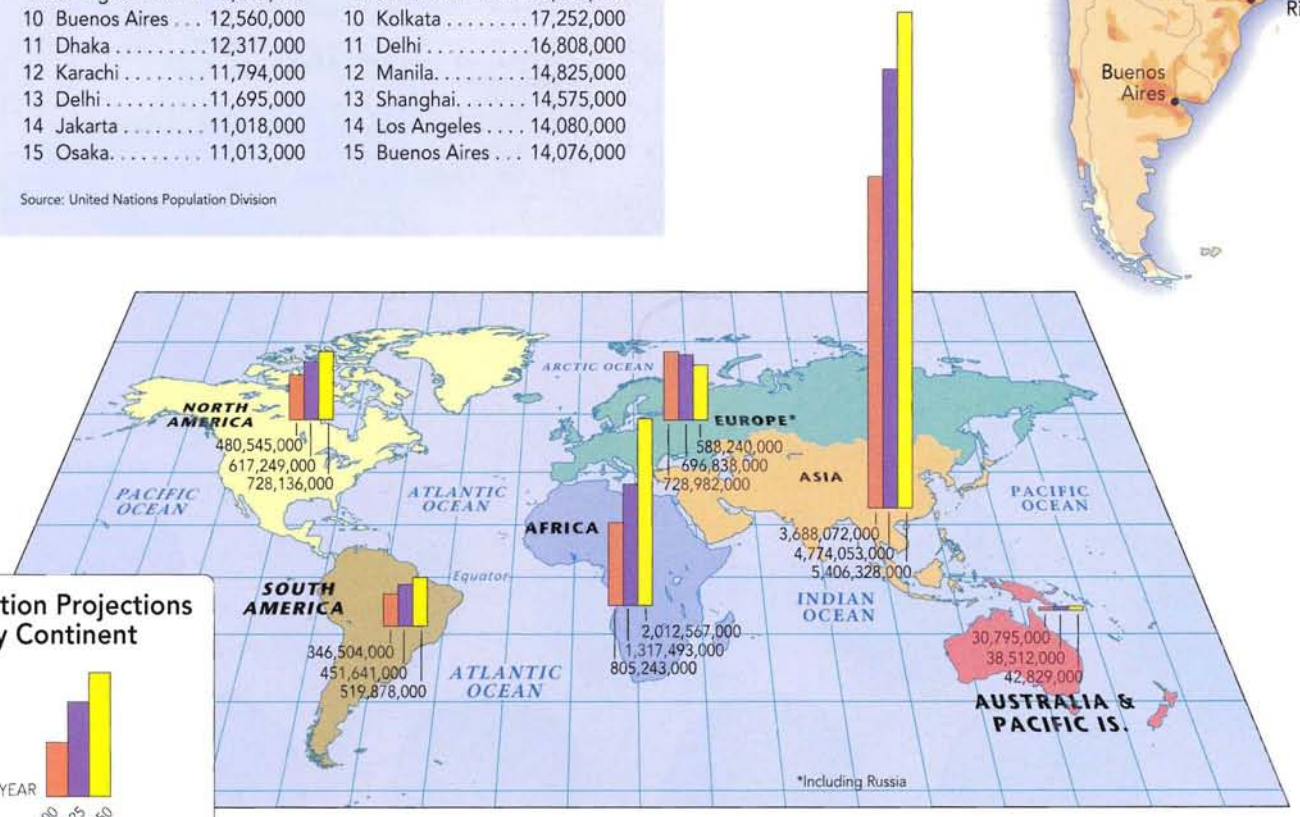
Source: International Programs Center, U.S. Bureau of the Census



Largest Cities (urban agglomerations)

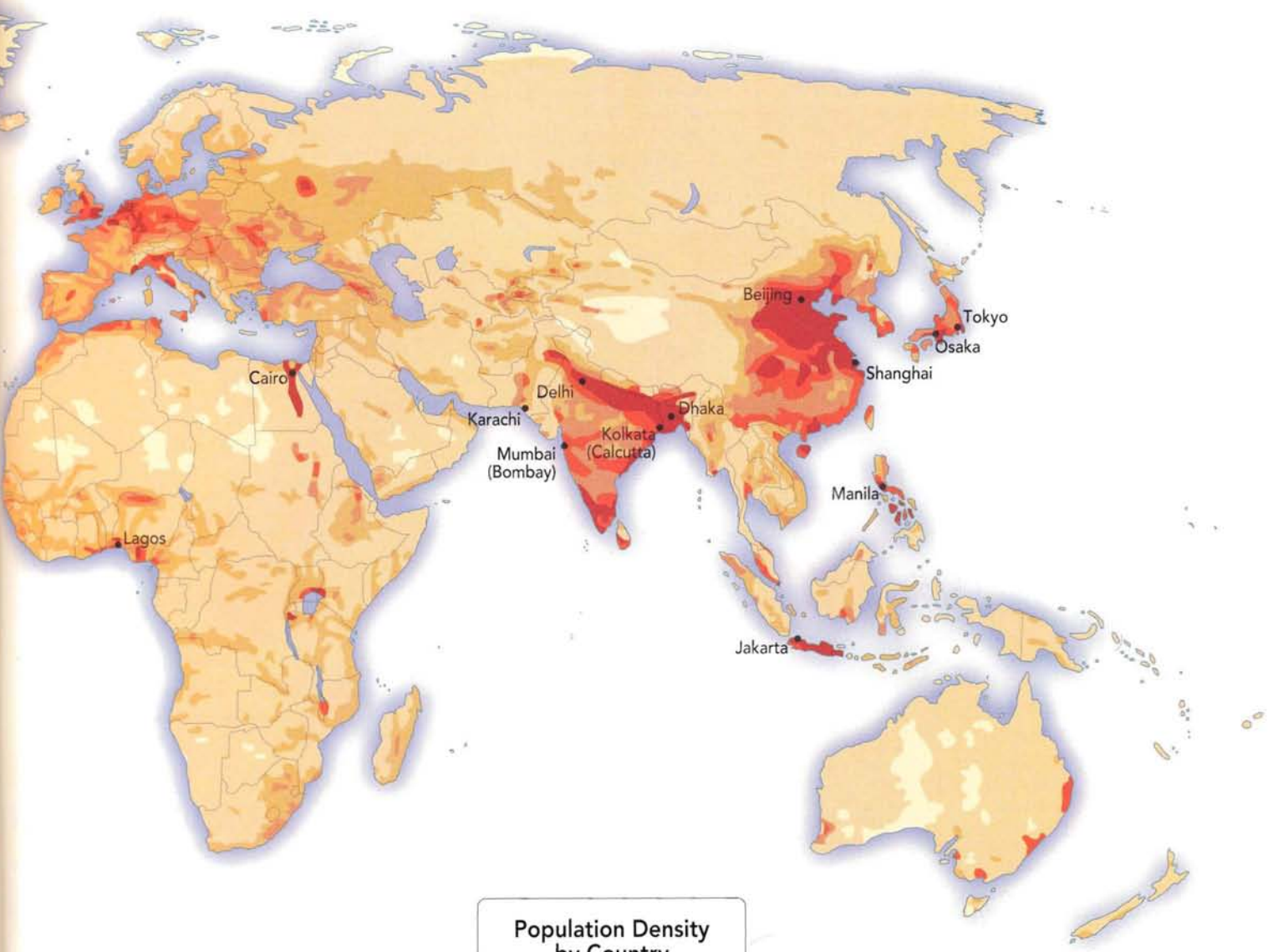
	2000		2015 (projected)
1	Tokyo 26,444,000	1	Tokyo 26,444,000
2	Mexico City 18,131,000	2	Mumbai 26,138,000
3	Mumbai 18,066,000	3	Lagos 23,173,000
4	São Paulo 17,755,000	4	Dhaka 21,119,000
5	New York 16,640,000	5	São Paulo 20,397,000
6	Lagos 13,427,000	6	Karachi 19,211,000
7	Los Angeles 13,140,000	7	Mexico City 19,180,000
8	Kolkata 12,918,000	8	New York 17,432,000
9	Shanghai. 12,887,000	9	Jakarta 17,256,000
10	Buenos Aires . . . 12,560,000	10	Kolkata 17,252,000
11	Dhaka 12,317,000	11	Delhi 16,808,000
12	Karachi 11,794,000	12	Manila. 14,825,000
13	Delhi 11,695,000	13	Shanghai. 14,575,000
14	Jakarta 11,018,000	14	Los Angeles 14,080,000
15	Osaka. 11,013,000	15	Buenos Aires . . . 14,076,000

Source: United Nations Population Division



Population Projections by Continent

Source: U.S. Bureau of the Census, International Data Division



Population Density by Country

Persons per sq. mile	Persons per sq. km
1170 and over	450 and over
780 to 1169	300 to 449
390 to 779	150 to 299
195 to 389	75 to 149
65 to 194	25 to 74
Under 65	Under 25
	Other countries

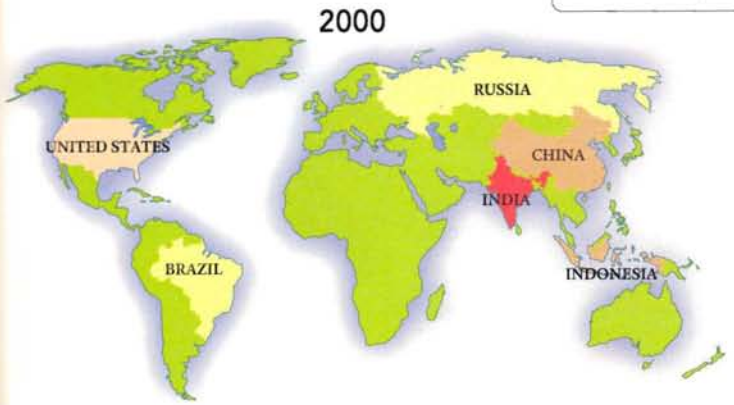
Source: U.S. Bureau of the Census, U.S. Dept. of Commerce

The world will become more crowded in the 21st century. In mid-2000, China already had the highest population in the world, with an estimated 1.3 billion inhabitants, one-fifth of the world total. India had reached 1 billion, while the United States had the world's third-largest population, with about 275 million, followed by Indonesia, Brazil, and Russia.

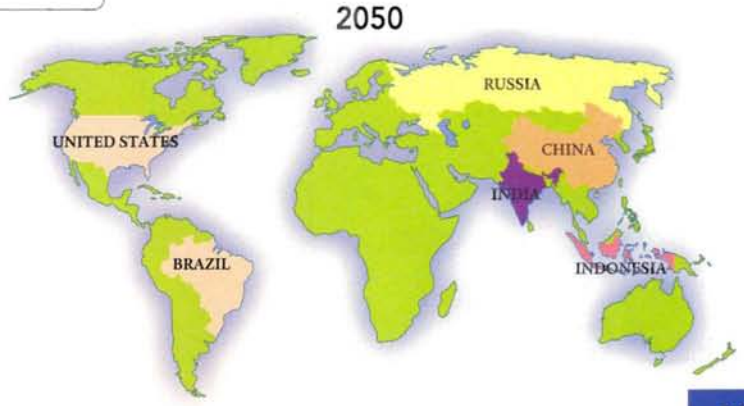
Population Density of the Current Most Populous Countries

2000	Persons per square mile	2050 (projected)	Persons per square mile
China	330	China	360
India	800	India	1,450
United States	70	United States	100
Indonesia	290	Indonesia	450
Brazil	50	Brazil	70
Russia	20	Russia	20

2000



2050



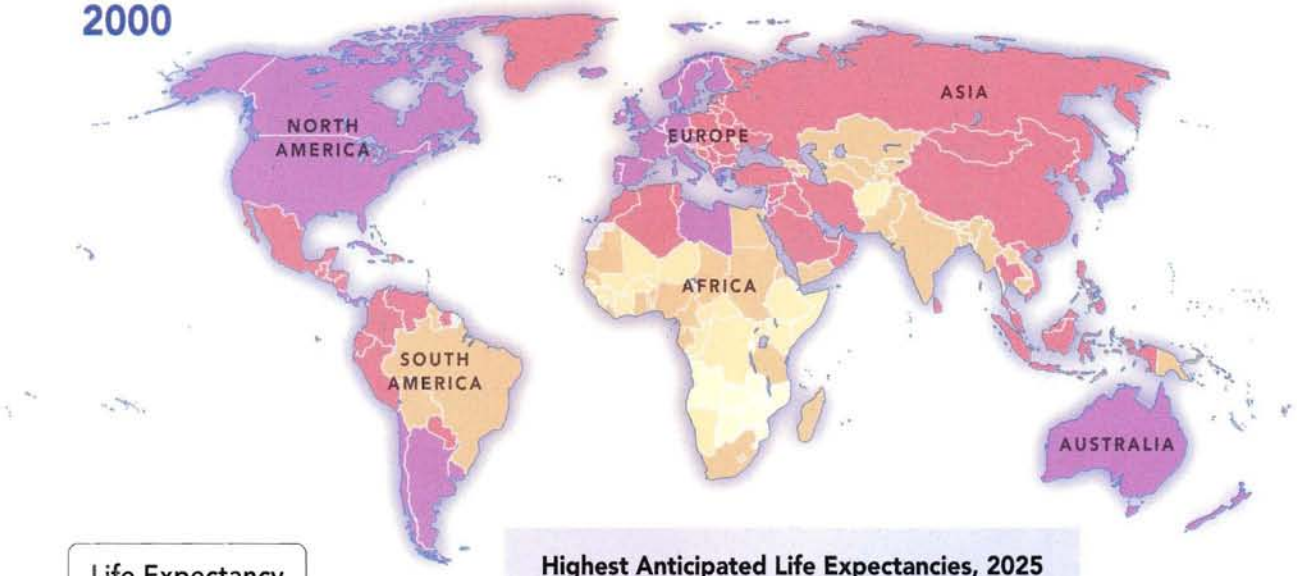
Life Expectancy

Life expectancy at birth is a common measure of the number of years a person may expect to live. There are many factors, such as nutrition, sanitation, health and medical services, that contribute to helping people live longer.

As some of the above factors improve in the developing countries, life expectancy there should increase. But most of sub-Saharan Africa will have less than average life expectancies.

Although it is not included here, females almost always have a longer life expectancy than males.

2000



Life Expectancy (in years)
- 75 to 84
- 65 to 74
- 50 to 64
- 40 to 49
- Less than 40
- No data

Source: U.S. Census Bureau

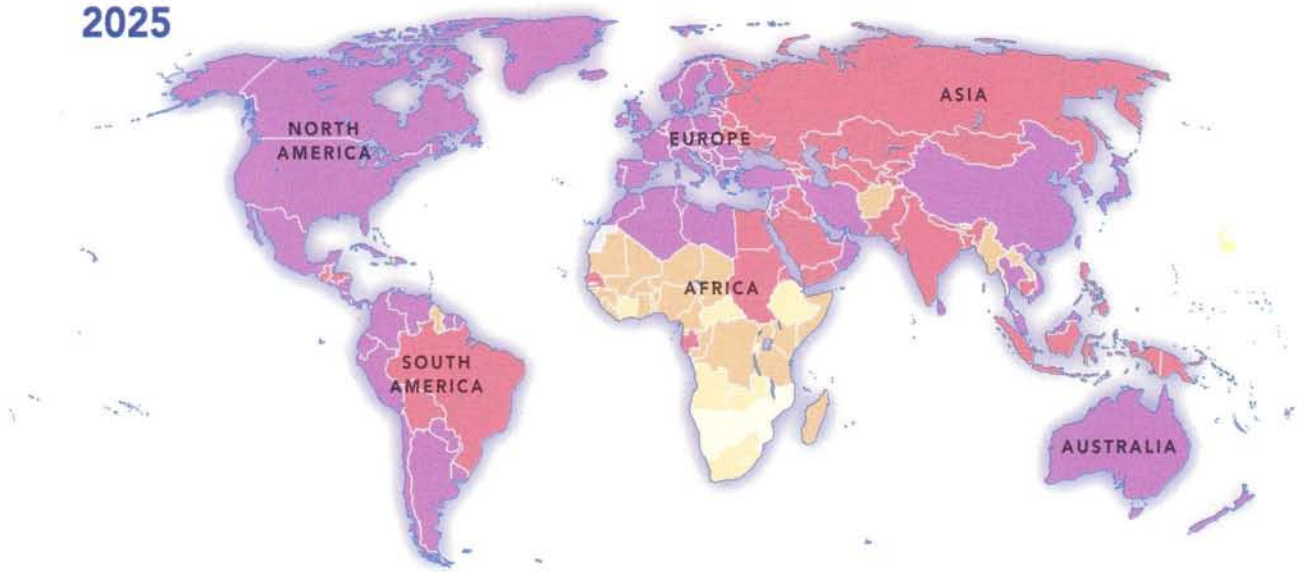
Highest Anticipated Life Expectancies, 2025

World Average 71

1	Andorra 84	11	Italy 82
2	Macau 83	12	Liechtenstein 82
3	Japan 83	13	Monaco 82
4	Singapore. 83	14	Spain 82
5	Australia 82	15	Norway 82
6	Switzerland 82	16	Greece 82
7	Canada 82	17	Israel 82
8	Sweden 82	18	Netherlands 82
9	Iceland 82		
10	France 82	30	United States 81

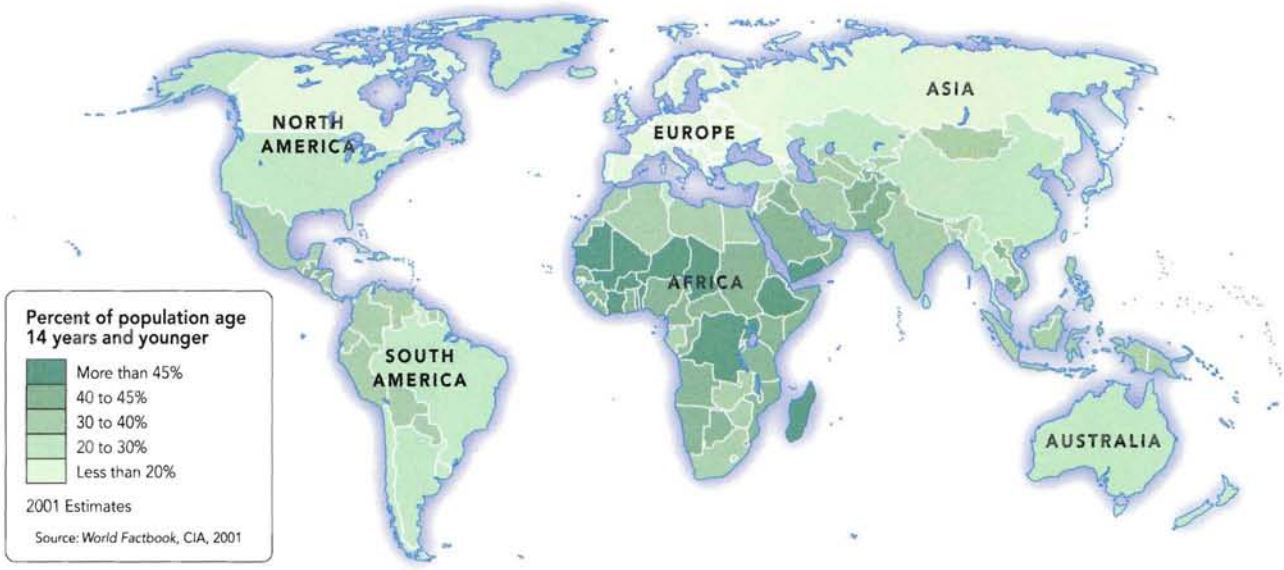
Source: U.S. Census Bureau

2025



Youthful Population

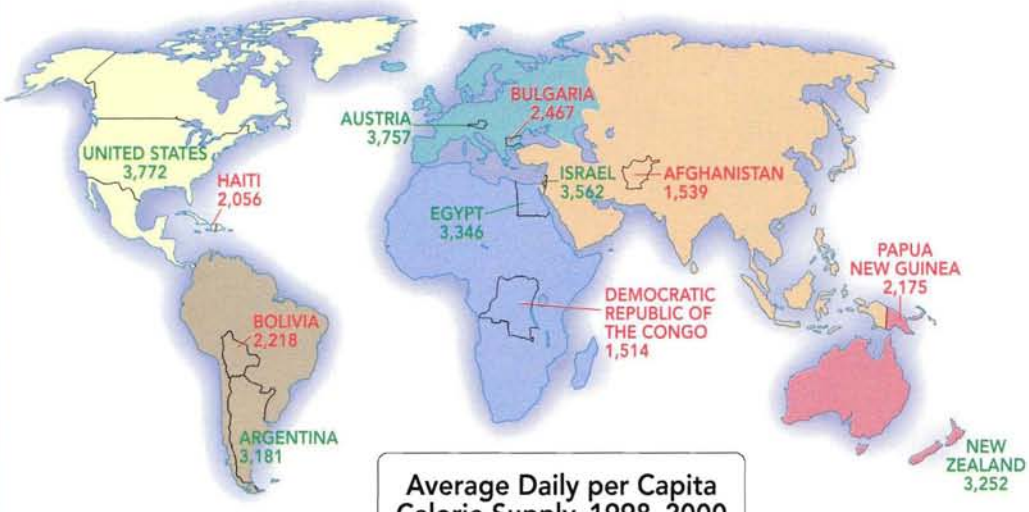
A country with a youthful population often reflects a high birthrate and a short life expectancy. The youthful component of a country's population should be the healthiest and the most energetic. In countries where there is a good system of education, the standards of living can only benefit from a large, educated youthful population. Furthermore, large numbers of young workers offer a means for providing financial and social support for the older members of the population. Unfortunately, a country's economic and physical resources may not be able to absorb a ballooning youthful population. A lack of opportunity in rural regions encourages migration to over-crowded cities where, in turn, a lack of jobs or space in schools leads to swelling numbers of unemployed.



Food and Nutrition

There has been a general trend towards better nutrition, but sub-Saharan Africa remains a problem area: increasing numbers of people will be suffering from undernutrition.

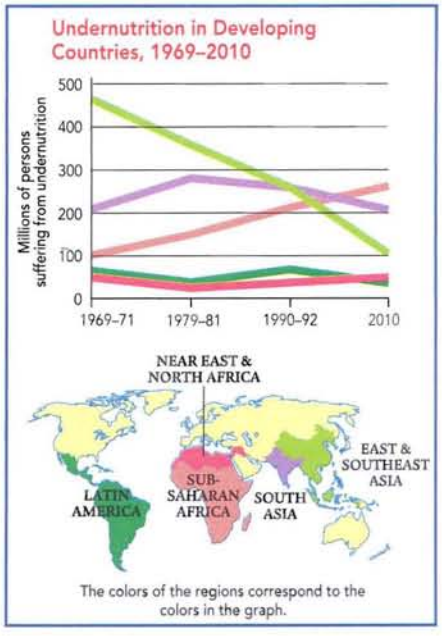
On a worldwide basis, the food supply seems adequate. Unfortunately the availability of food and the distribution of people don't always match up.

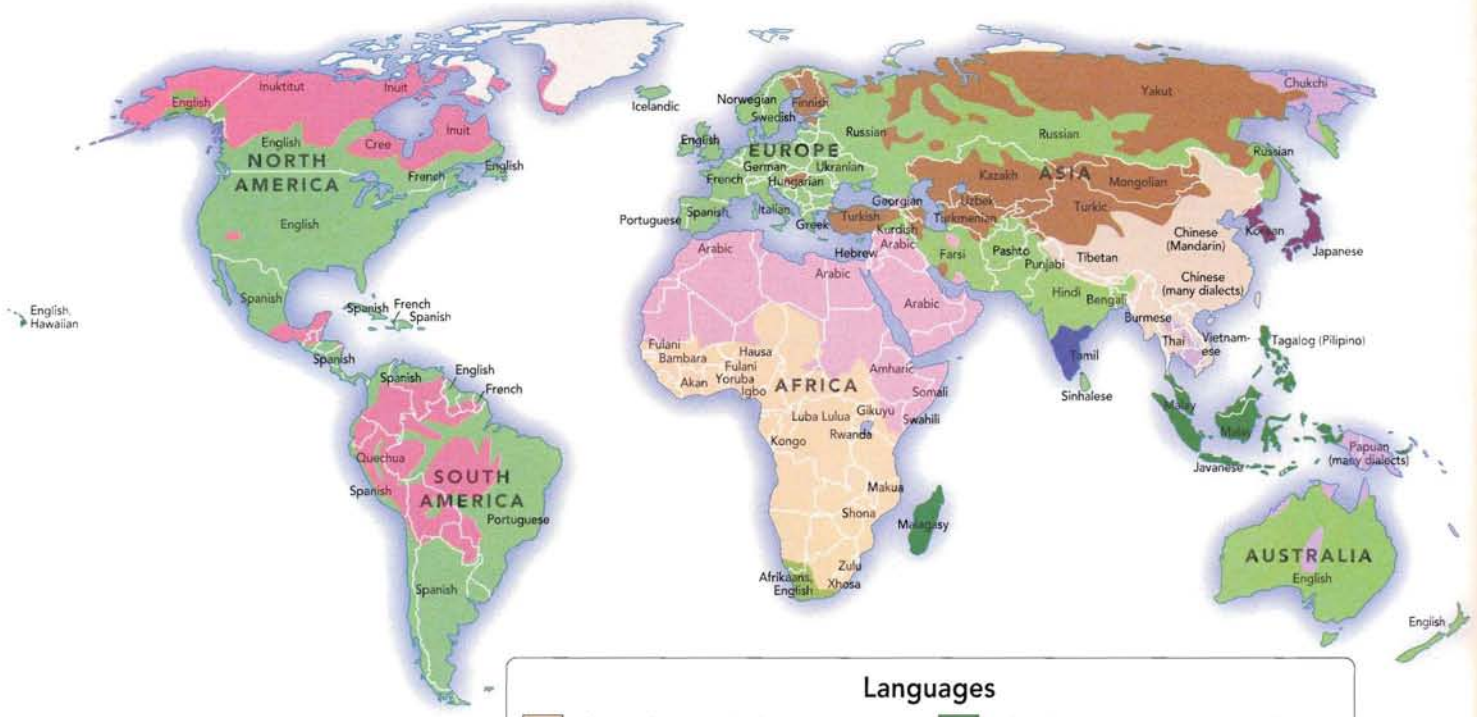


Average Daily per Capita Calorie Supply, 1998–2000

Within each continent, the countries with the highest per capita calorie supply are labeled in green, while the countries with the lowest per capital calorie supply are labeled in red.

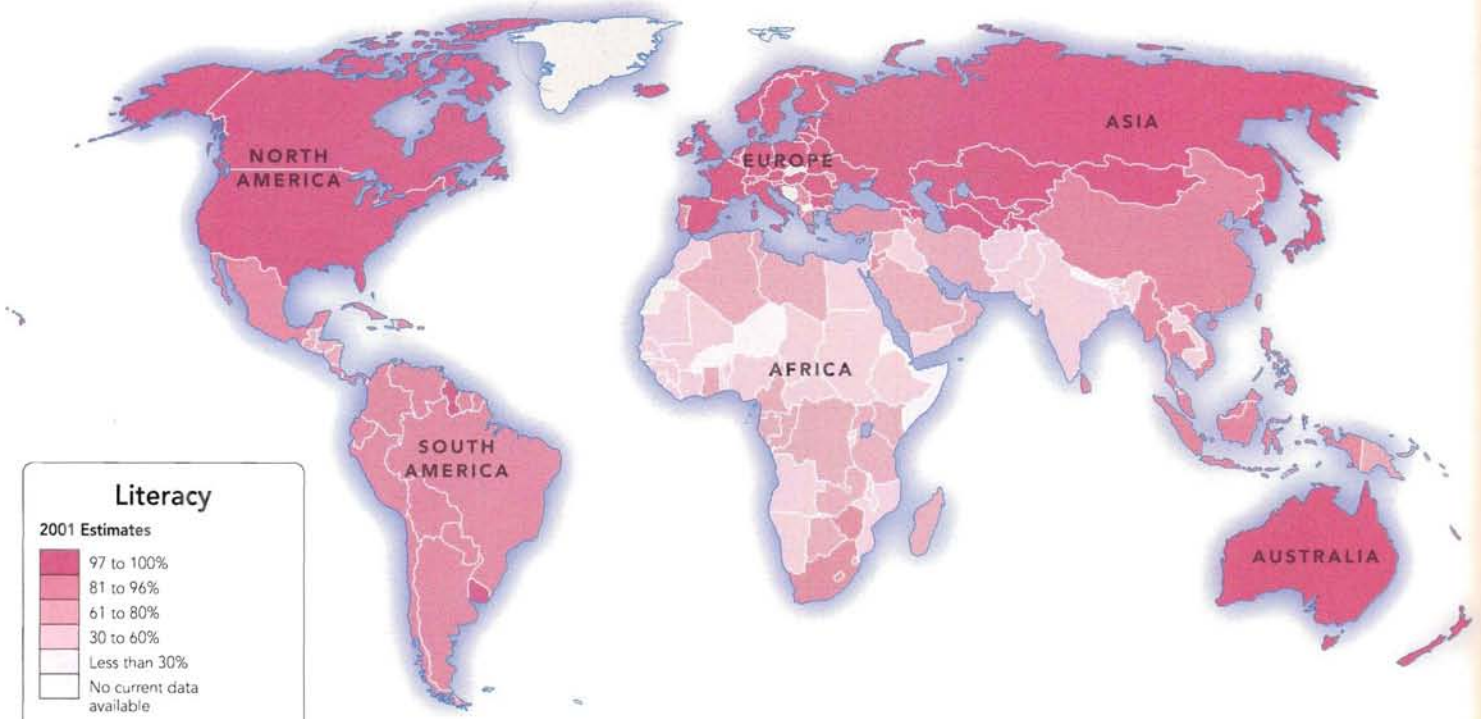
Source: UN Food and Agriculture Organization





Languages

- African (including Yoruba, Swahili)
- Afro-Asiatic (including Hebrew, Arabic)
- Amerindian (including Inuit, Iroquoian, Quechua)
- Dravidian
- Indo-European (including English, Spanish, Hindi)
- Japanese and Korean
- Malayo-Polynesian (including Hawaiian, Pilipino)
- Sino-Tibetan (including Chinese, Burmese)
- Ural-Asiatic (including Finnish, Hungarian, Turkish)
- Other
- Uninhabited
- French — Primary regional language



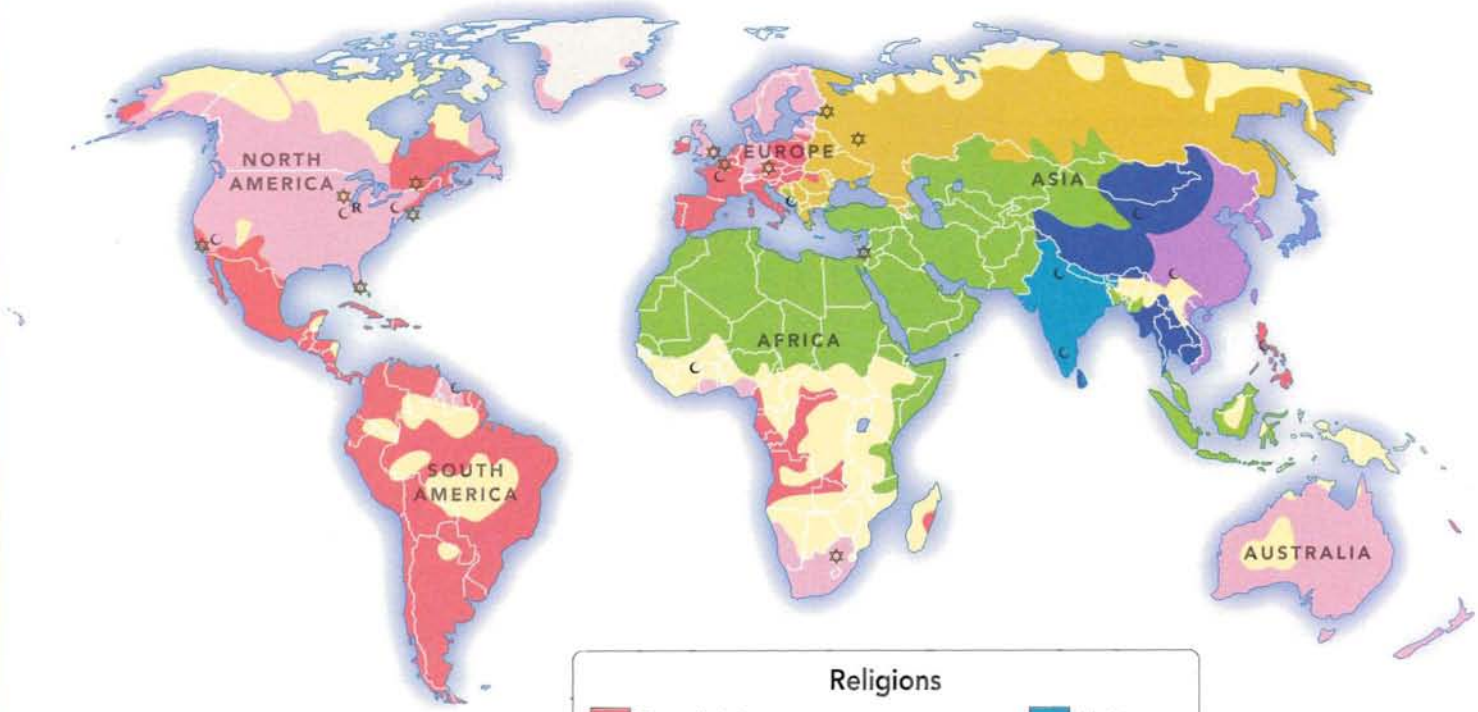
Literacy

2001 Estimates

- 97 to 100%
- 81 to 96%
- 61 to 80%
- 30 to 60%
- Less than 30%
- No current data available

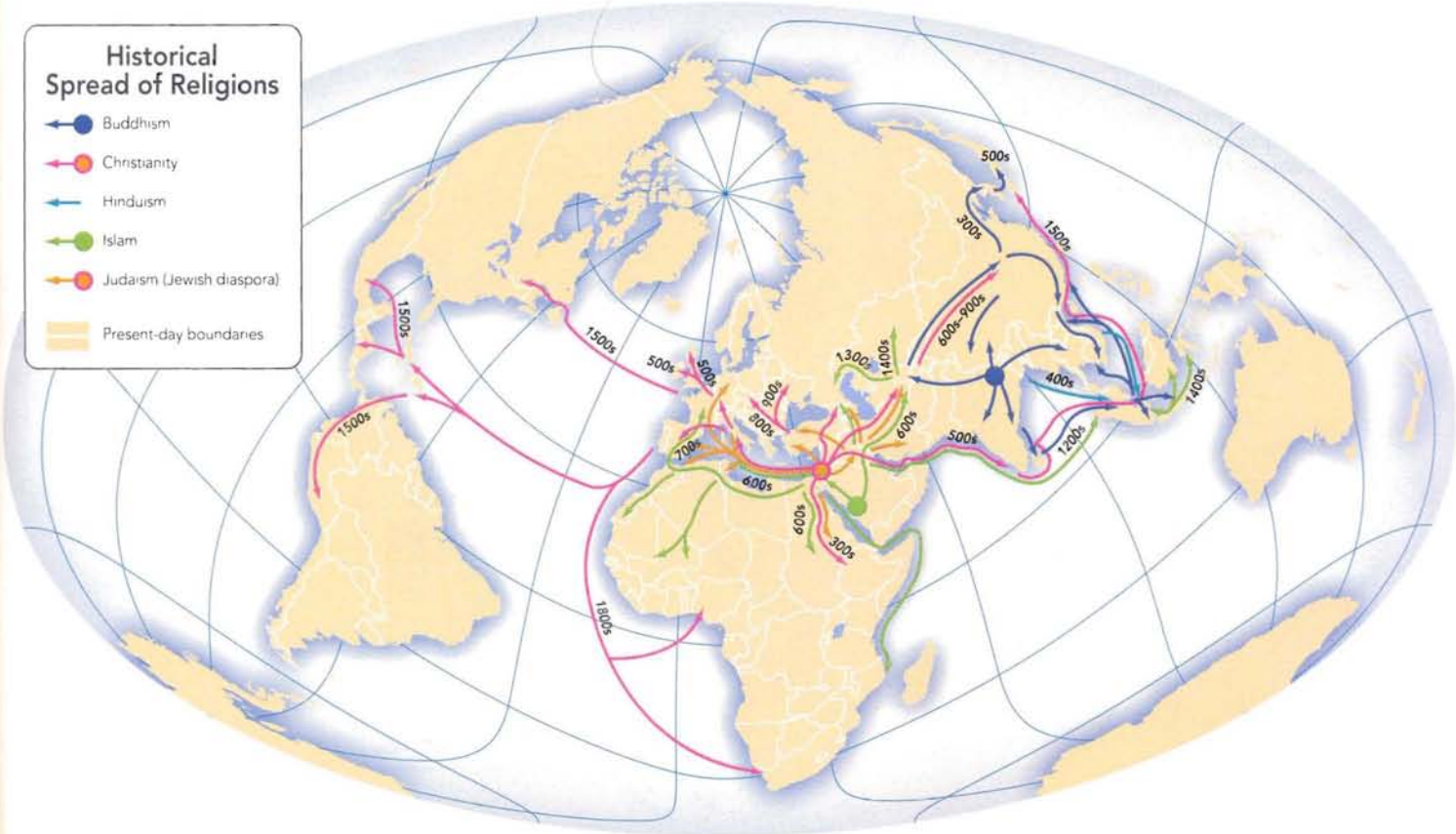
World literacy rates are based on the percentage of the population who can read their native language. The data varies between the years of 1989 to 2000.

Source: *World Factbook*, CIA, 2001



Religions

- Roman Catholic
- Protestant
- Eastern Orthodox
- Islam
- Japanese religions (Shintoism, Buddhism)
- Chinese religions (Buddhism, Taoism, Confucianism)
- Hinduism
- Buddhism
- Judaism
- Local religions
- Uninhabited

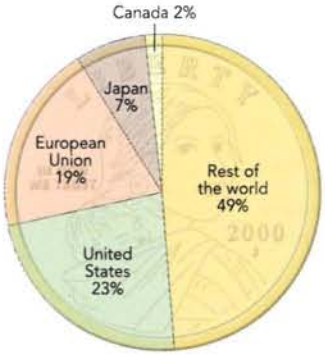


Land Use

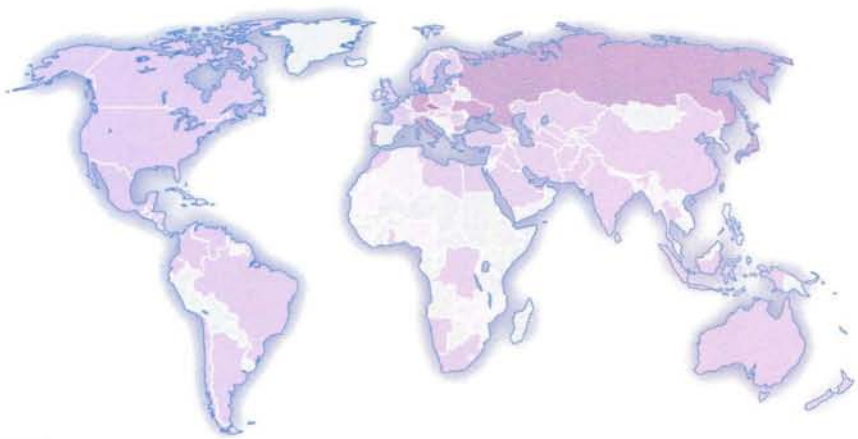
- Commercial agriculture
- Dairying
- Livestock ranching
- Nomadic herding
- Subsistence agriculture
- Primarily forestland
- Limited agricultural activity
- Major manufacturing and trade centers

Shares of the World's GDP 2001

Source: *World Factbook*, CIA, 2001



The Gross Domestic Product (GDP) is the value of goods and services produced by a political entity in any given period. These values help indicate how well the economy is doing.

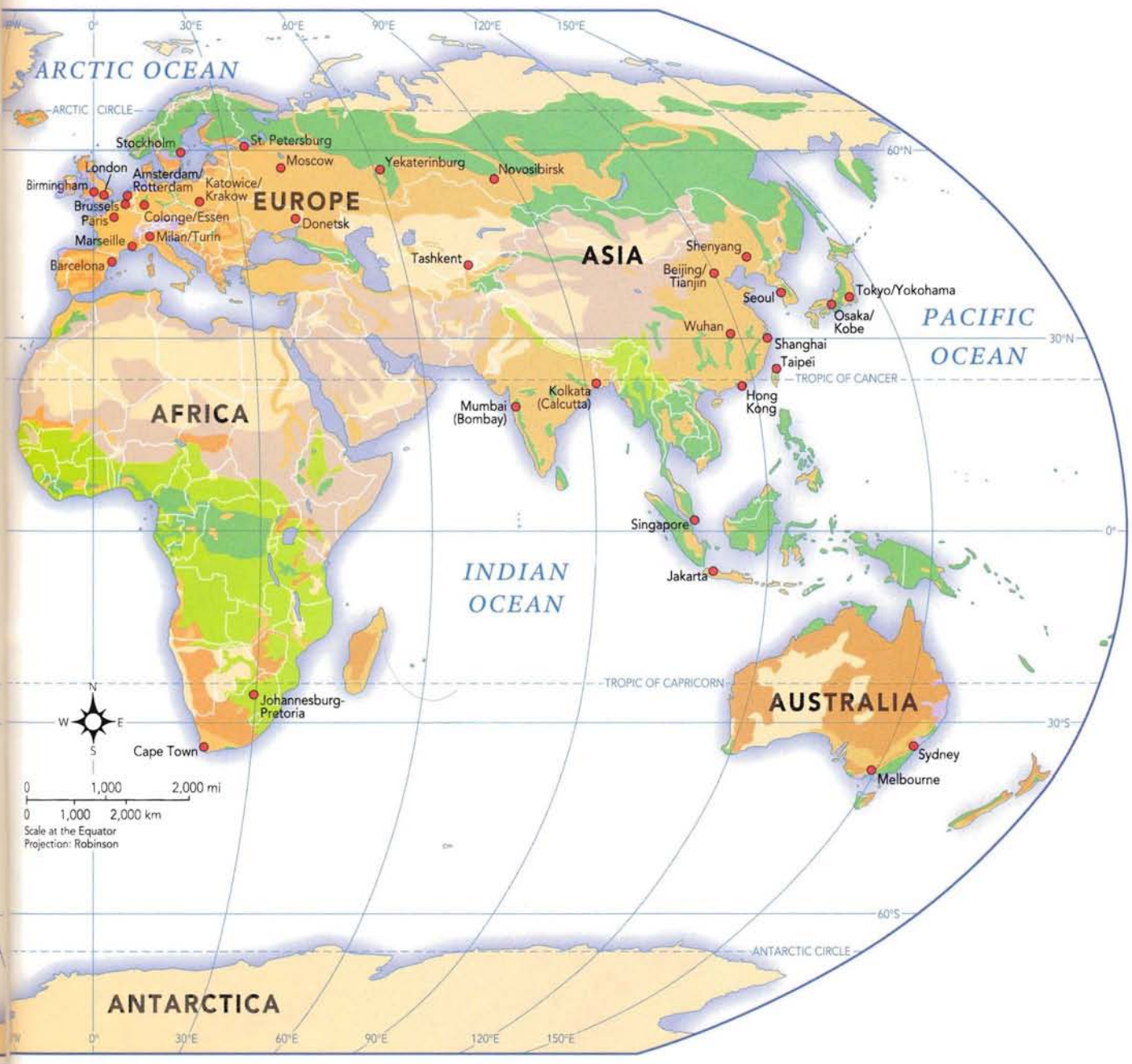


Industrial Employment

- More than 40%
- 30 to 40%
- 15 to 29.9%
- Less than 15%
- No current data available

Percentage of total labor force employed in industry.

Source: *World Factbook*, CIA, 2001

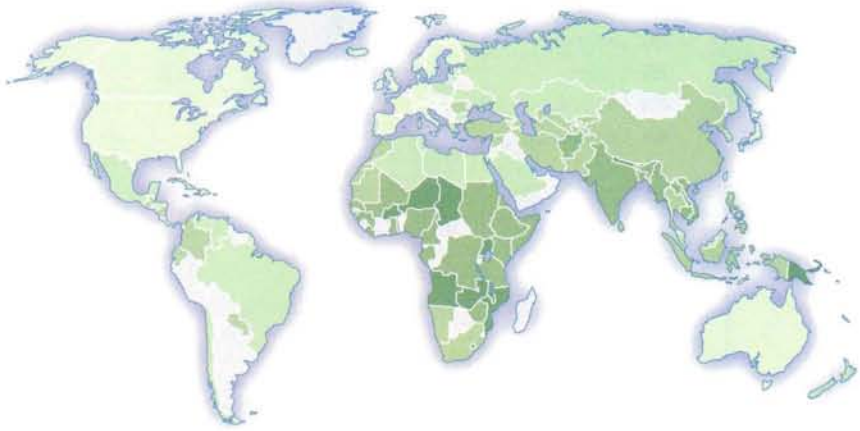


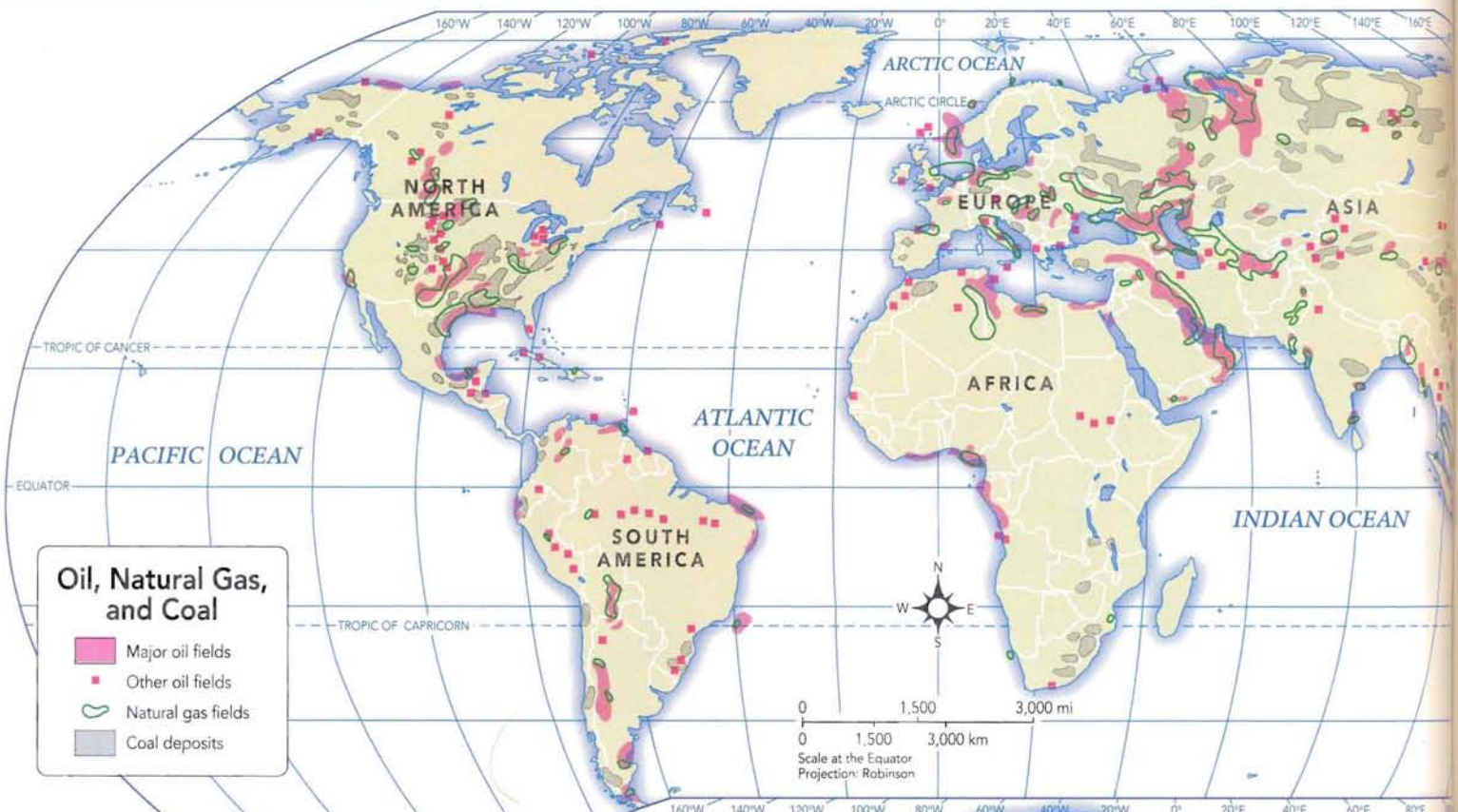
Agricultural Employment

- More than 80%
- 60 to 80%
- 30 to 59.9%
- 10 to 29.9%
- Less than 10%
- No current data available

Percent of total labor force employed in agriculture.

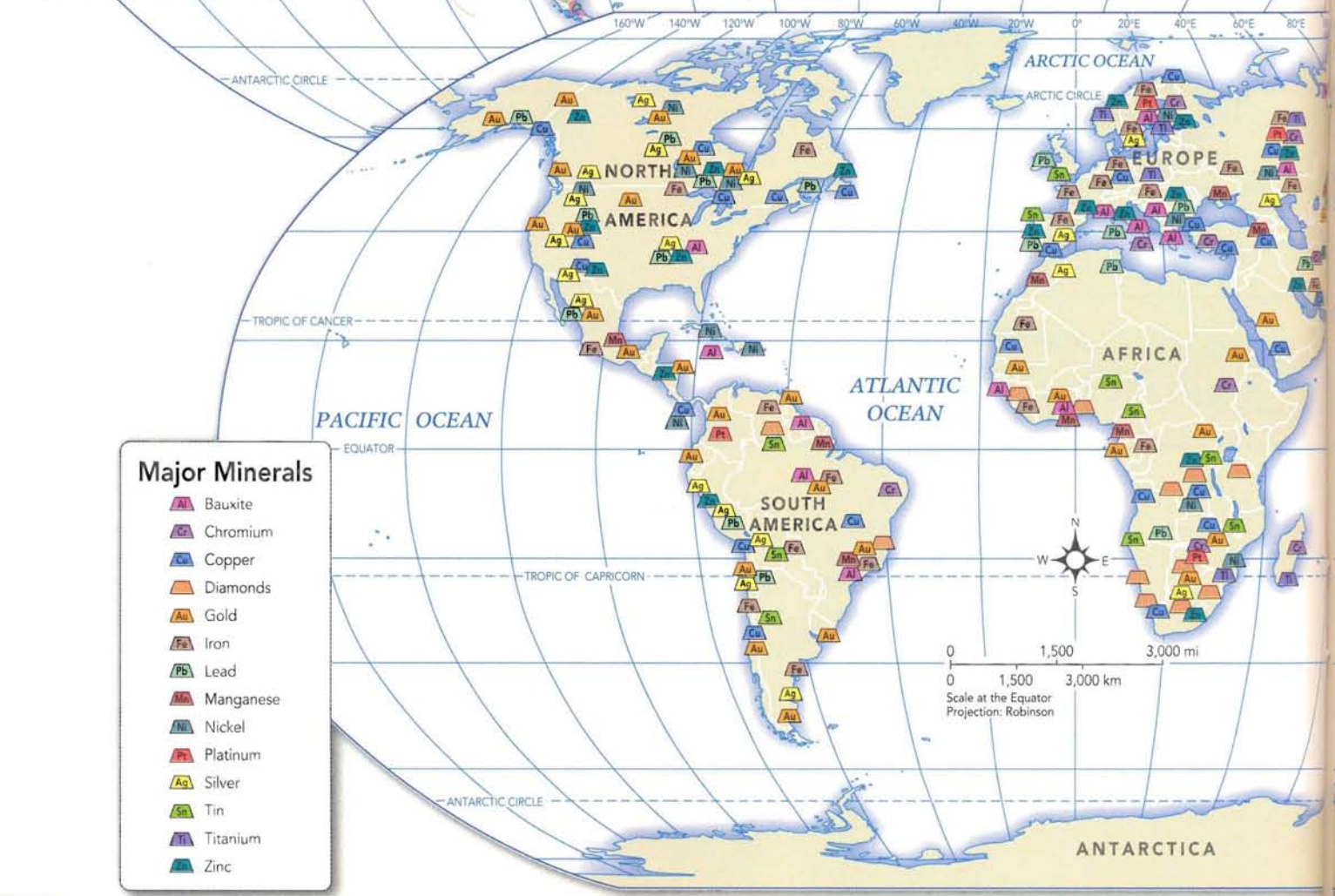
Source: *World Factbook*, CIA, 2001





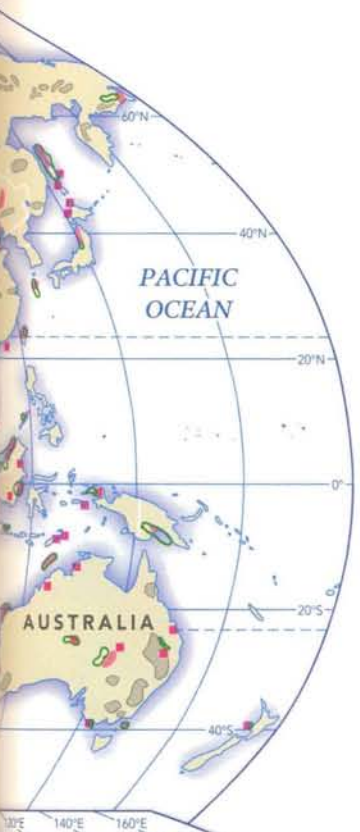
Oil, Natural Gas, and Coal

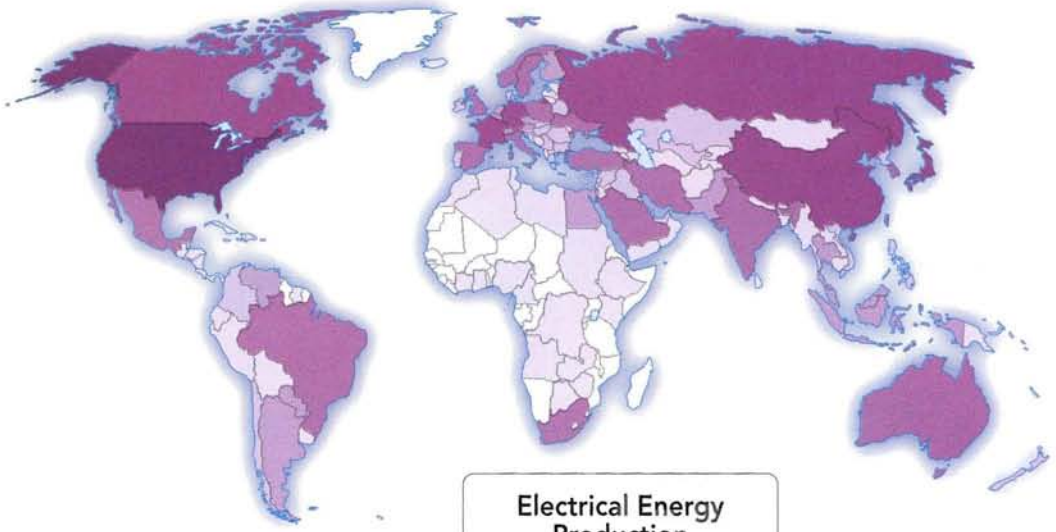
- Major oil fields
- Other oil fields
- Natural gas fields
- Coal deposits



Major Minerals

- Al Bauxite
- Cr Chromium
- Cu Copper
- Diamonds
- Au Gold
- Fe Iron
- Pb Lead
- Mn Manganese
- Ni Nickel
- Pt Platinum
- Ag Silver
- Sn Tin
- Ti Titanium
- Zn Zinc



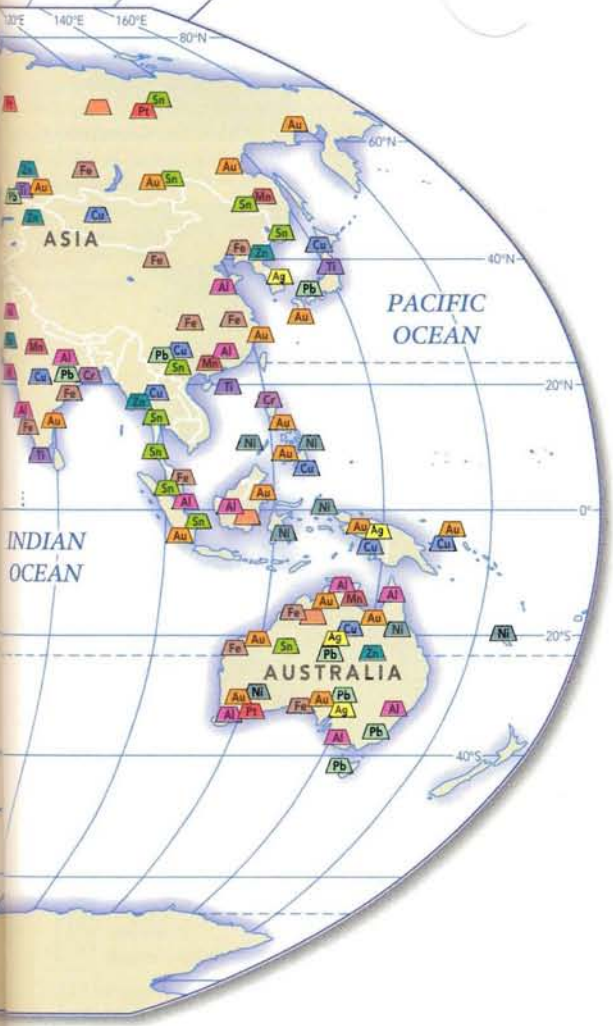


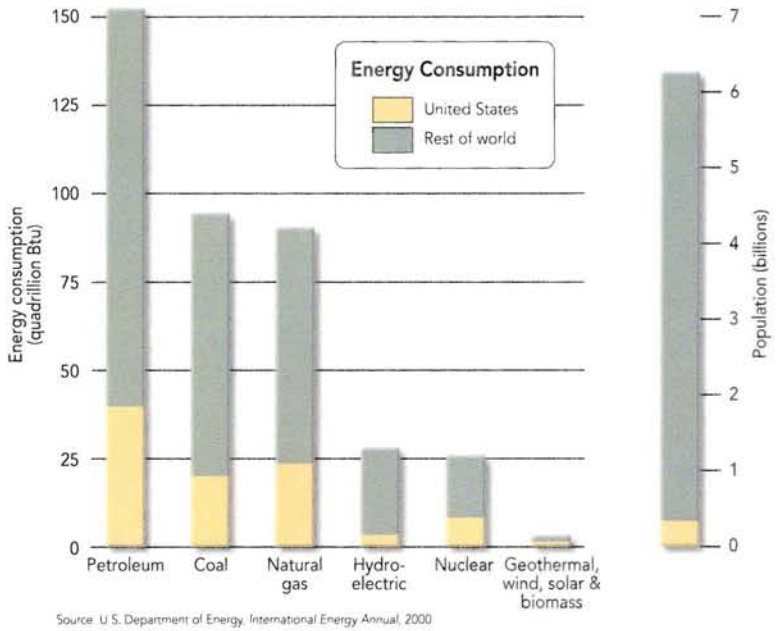
Electrical Energy Production

Billions of kilowatt hours, 1999

- 3,705 (United States)
- 500 to 1,175
- 100 to 499
- 50 to 99
- 20 to 49
- Less than 20
- No current data available

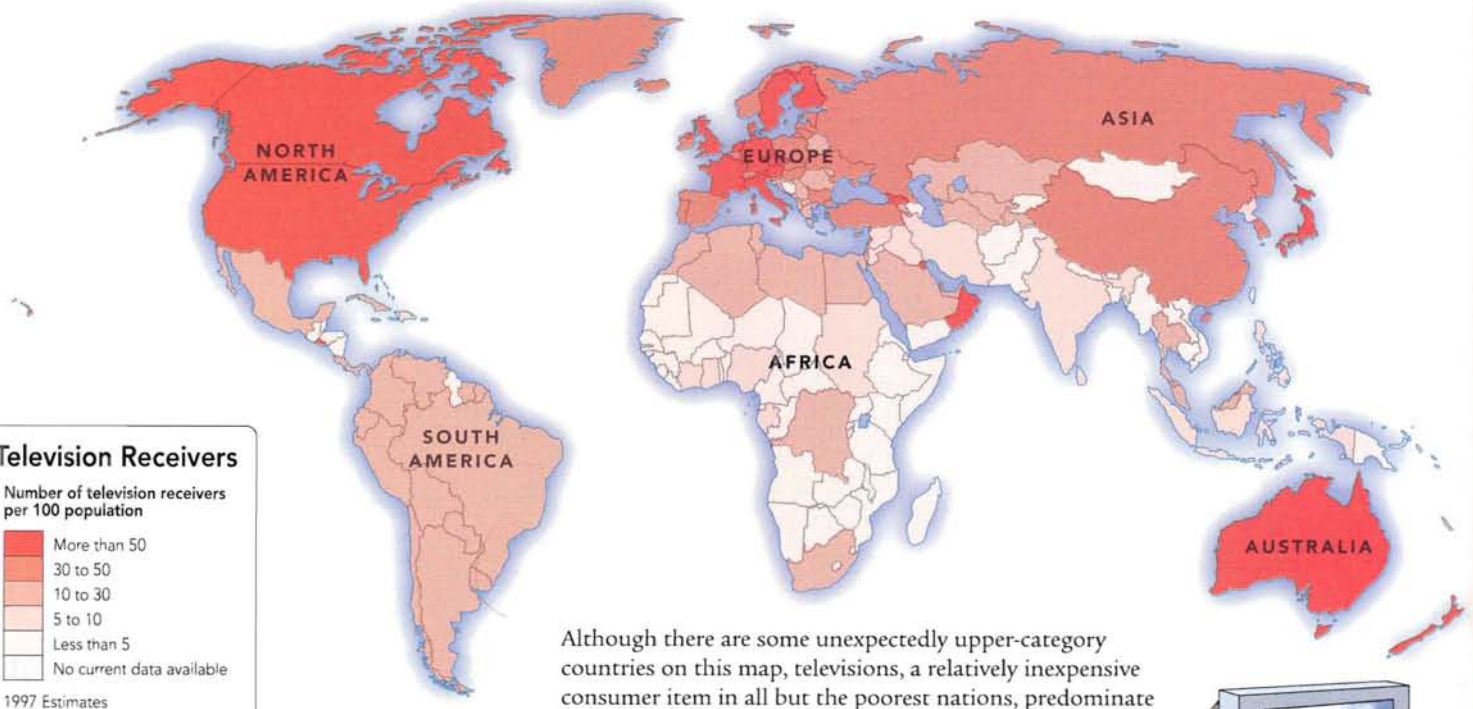
Source: U.S. Department of Energy, *International Energy Annual, 2000*





Source: U.S. Department of Energy, *International Energy Annual, 2000*

Despite having only about 4.6% of the world's population, the United States consumes a disproportionate amount of the world's energy.



Television Receivers

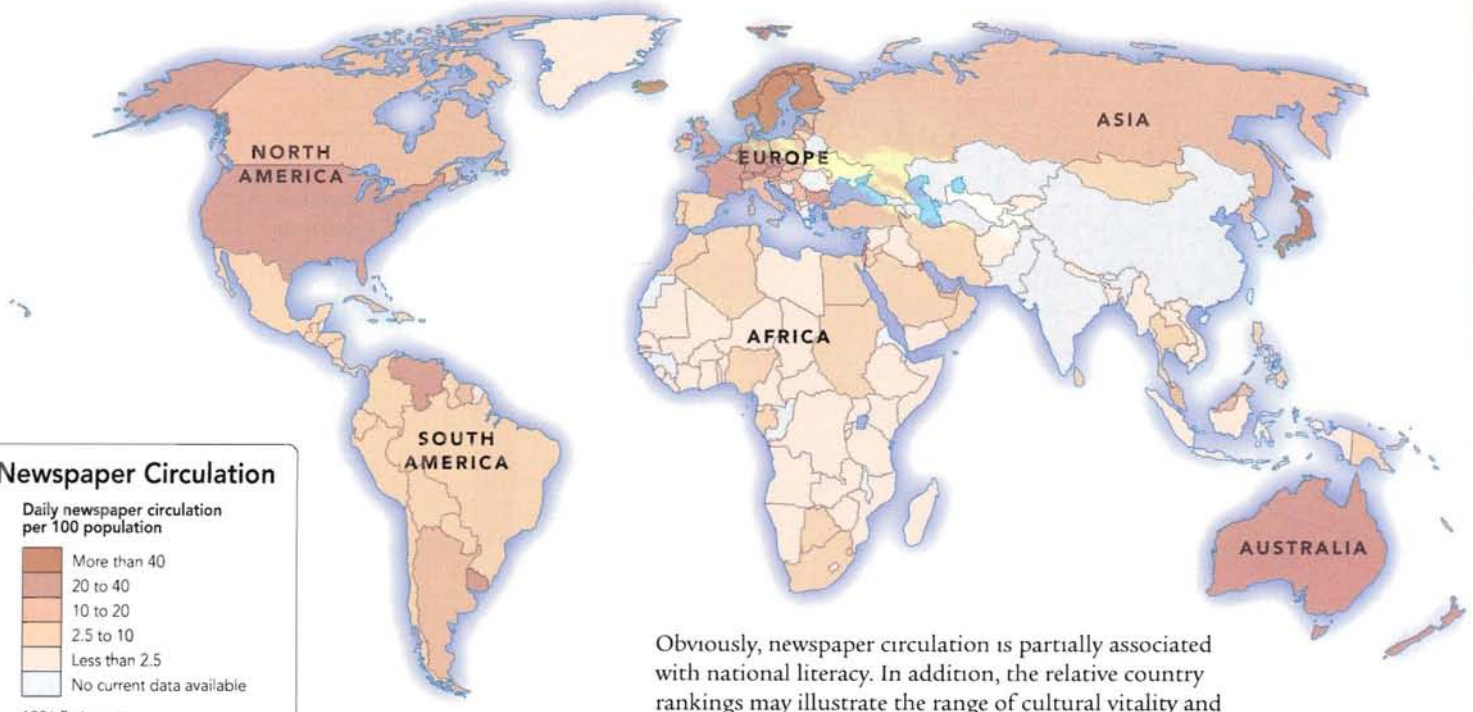
Number of television receivers per 100 population

- More than 50
- 30 to 50
- 10 to 30
- 5 to 10
- Less than 5
- No current data available

1997 Estimates

Source. UNESCO Institute for Statistics

Although there are some unexpectedly upper-category countries on this map, televisions, a relatively inexpensive consumer item in all but the poorest nations, predominate where broadcast and cable technology is modern and available and where popular culture has made television the primary medium of marketing, news, and entertainment.



Newspaper Circulation

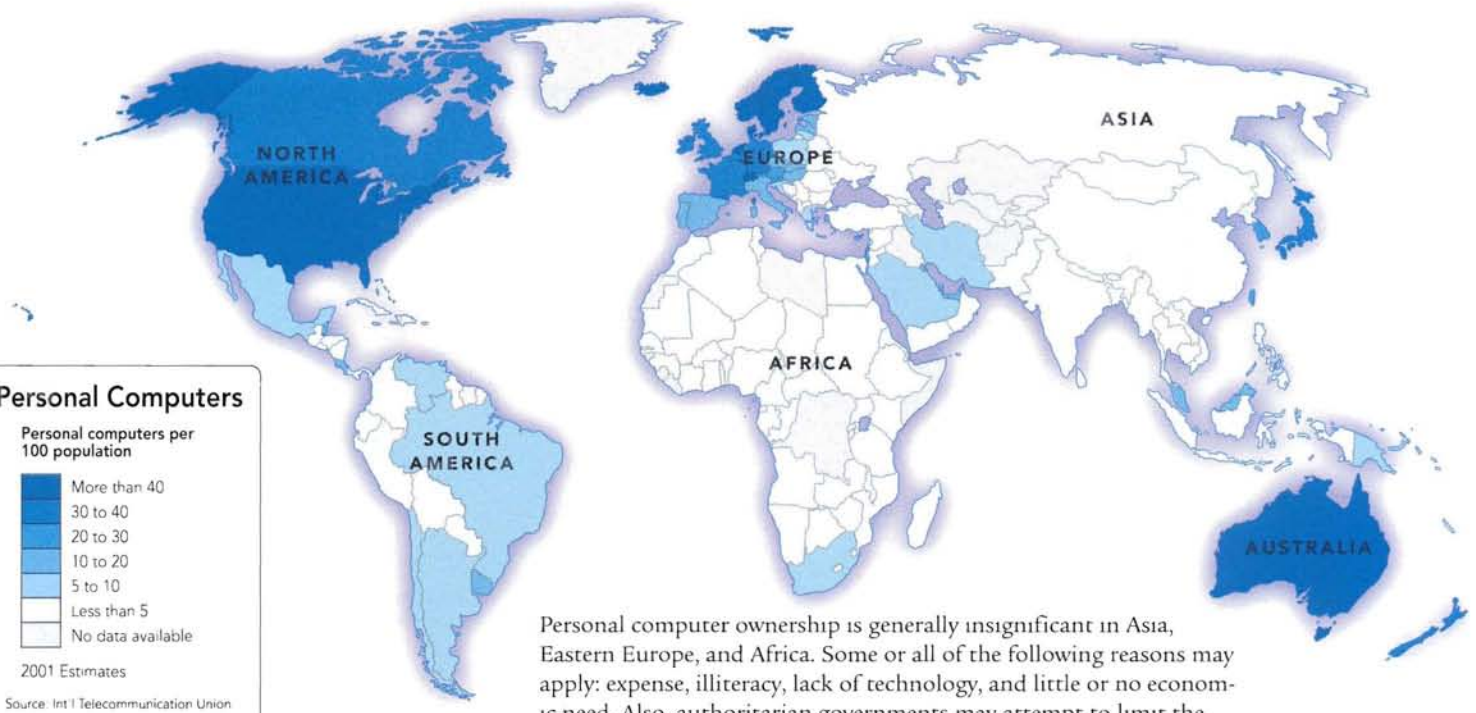
Daily newspaper circulation per 100 population

- More than 40
- 20 to 40
- 10 to 20
- 2.5 to 10
- Less than 2.5
- No current data available

1996 Estimates

Source: UNESCO Institute for Statistics

Obviously, newspaper circulation is partially associated with national literacy. In addition, the relative country rankings may illustrate the range of cultural vitality and the freedom—or lack of— in the ability to express and share ideas, opinions, and critical commentary.



Personal Computers

Personal computers per 100 population

- More than 40
- 30 to 40
- 20 to 30
- 10 to 20
- 5 to 10
- Less than 5
- No data available

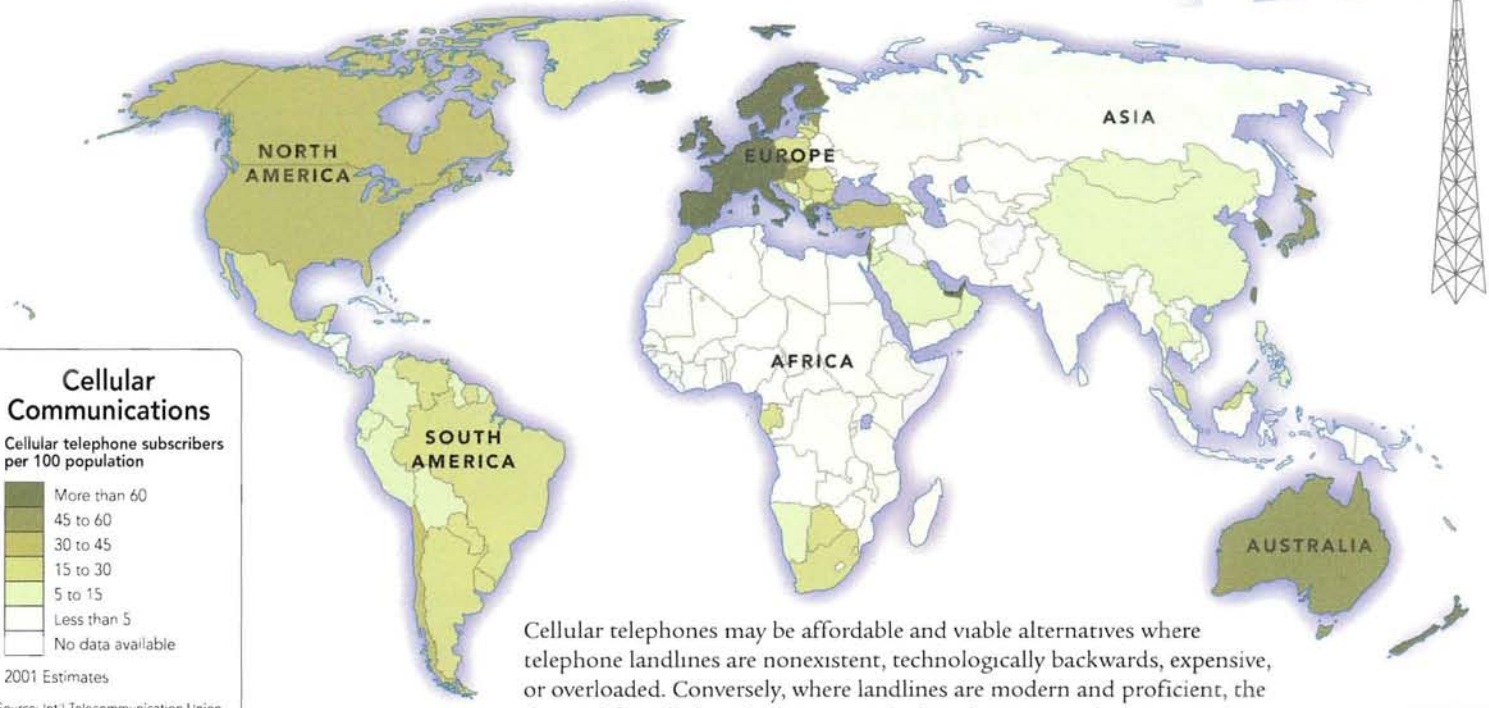
2001 Estimates

Source: Int'l Telecommunication Union

Personal computer ownership is generally insignificant in Asia, Eastern Europe, and Africa. Some or all of the following reasons may apply: expense, illiteracy, lack of technology, and little or no economic need. Also, authoritarian governments may attempt to limit the use of computers, fearing the unrestricted access to global information that email and the Internet offer.

Internet Users, 2001

Source: International Telecommunication Union



Cellular Communications

Cellular telephone subscribers per 100 population

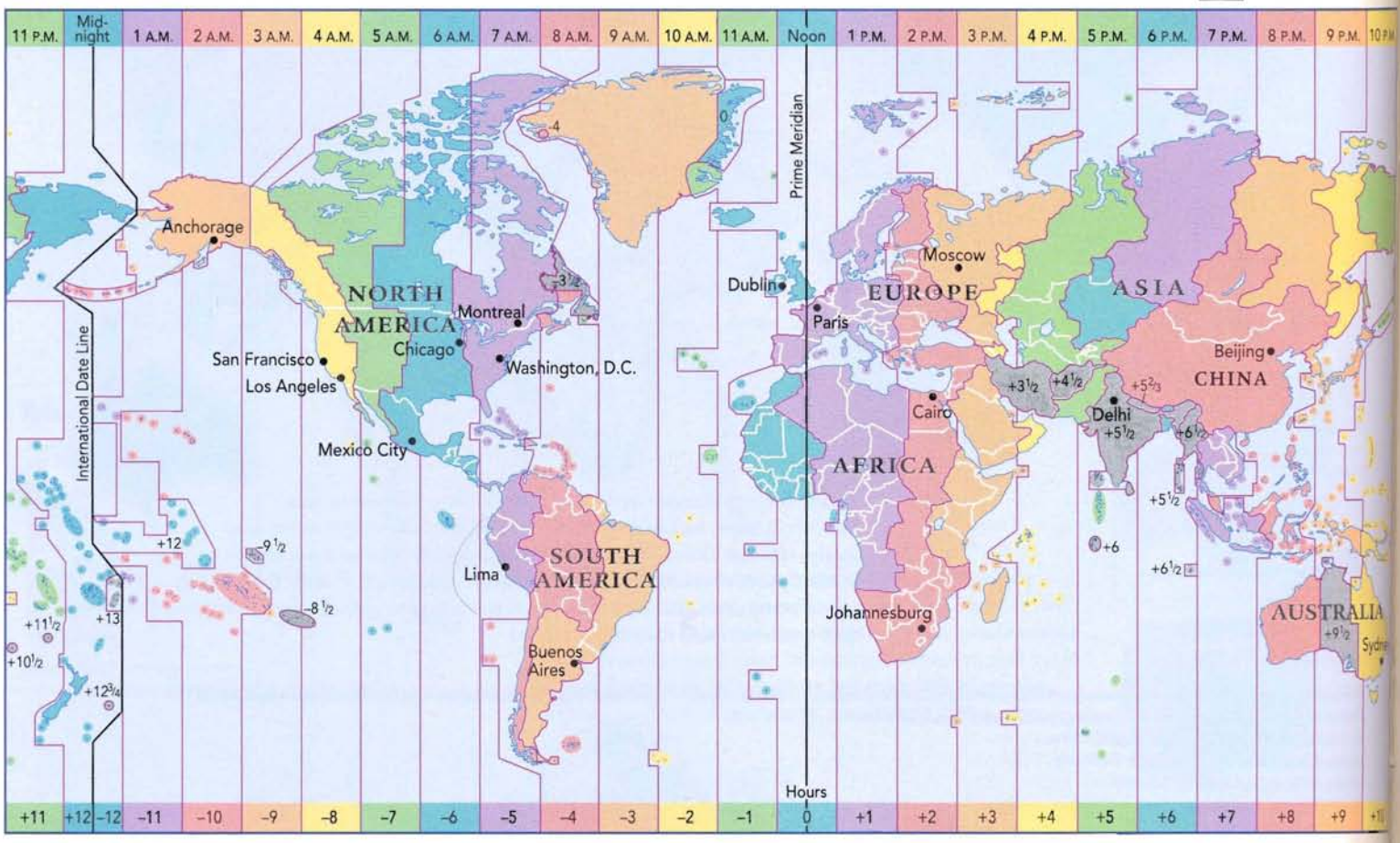
- More than 60
- 45 to 60
- 30 to 45
- 15 to 30
- 5 to 15
- Less than 5
- No data available

2001 Estimates

Source: Int'l Telecommunication Union

Cellular telephones may be affordable and viable alternatives where telephone landlines are nonexistent, technologically backwards, expensive, or overloaded. Conversely, where landlines are modern and proficient, the demand for cellular telephones may be less than expected.

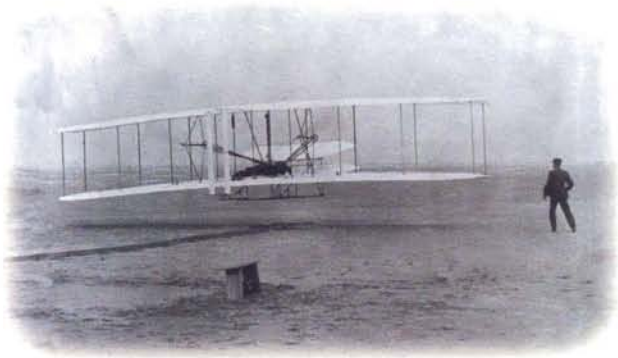
Time Zones



The World is divided into 24 time zones, beginning at the Prime Meridian, which runs through Greenwich, England. The twelve zones east and twelve zones west of the Prime Meridian meet halfway around the globe at the International Date Line.

Traveling in an easterly direction, the time of day moves ahead one hour for each zone crossed. Traveling west, time falls behind one hour per zone. At the International Date Line a traveler gains one day crossing it in an easterly direction, and loses one day traveling west.

Note that the times shown are "standard time." Adjustments are necessary when "daylight saving time" is used.



Average Speeds of Some Passenger Transportation

- Walking 3–4 mph/5-6 kph
- Bicycle 10 mph/16 kph
- Ocean liner, *Queen Elizabeth II* 33 mph/53 kph
- Intercity bus, Greyhound; U.S. 54 mph/87 kph
- Air cushion vehicle, United Kingdom 69 mph/111kph
- Electric train, Amtrak *Acela Express;* Eastern U.S. 150 mph/241 kph (top speed)
- High-speed train, *Shinkansen* (Bullet Train); Japan 164 mph/263 kph (average speed between stations)
- Jet airliner, Boeing 737 500 mph/805 kph

Ocean Travel, New York City to London

1854, Clipper ship 14 days

1883, Steamship 6 days

2000, Ocean liner, *Queen Elizabeth II*, 5 days

Air Travel, New York City to Paris

1927, *Spirit of St. Louis*, single-engine propeller plane 33 hours 30 minutes

1958, Boeing 707, four-engine jet 8 hours 41 minutes

1977, Concorde SST, supersonic jet 3 hours 44 minutes

Famous Airplane Flights

1903
Orville and Wilbur Wright made the first engine-powered flight in a heavier-than-air craft at Kitty Hawk, NC. The flight lasted less than 12 seconds.

1908
Glenn Curtiss made the first official flight of more than 1 kilometer (0.62 miles).

1926
Floyd Bennett (pilot) and Richard E. Byrd (navigator) claimed to have circled the North Pole.

1927
Charles A. Lindbergh made the first solo, nonstop, trans-atlantic flight. He flew from Garden City, NY to Paris in 33 hours 30 minutes.

1929
Richard E. Byrd established an Antarctic base at Little America. On November 28 and 29, Byrd and his pilot, Bernt Balchen, left the base and flew to the South Pole.

1932
Amelia Earhart was the first woman to fly across the Atlantic Ocean. She flew from Harbour Grace, Newfoundland to Northern Ireland, a distance of 2,026 miles (3,260 kilometers) in 15 hours 18 minutes.

1933
Wiley Post made the first solo, round-the-world flight. He flew from Floyd Bennett Field in Brooklyn, NY and covered 15,596 miles (25,099 kilometers) in 7 days 18 hours 49 minutes.

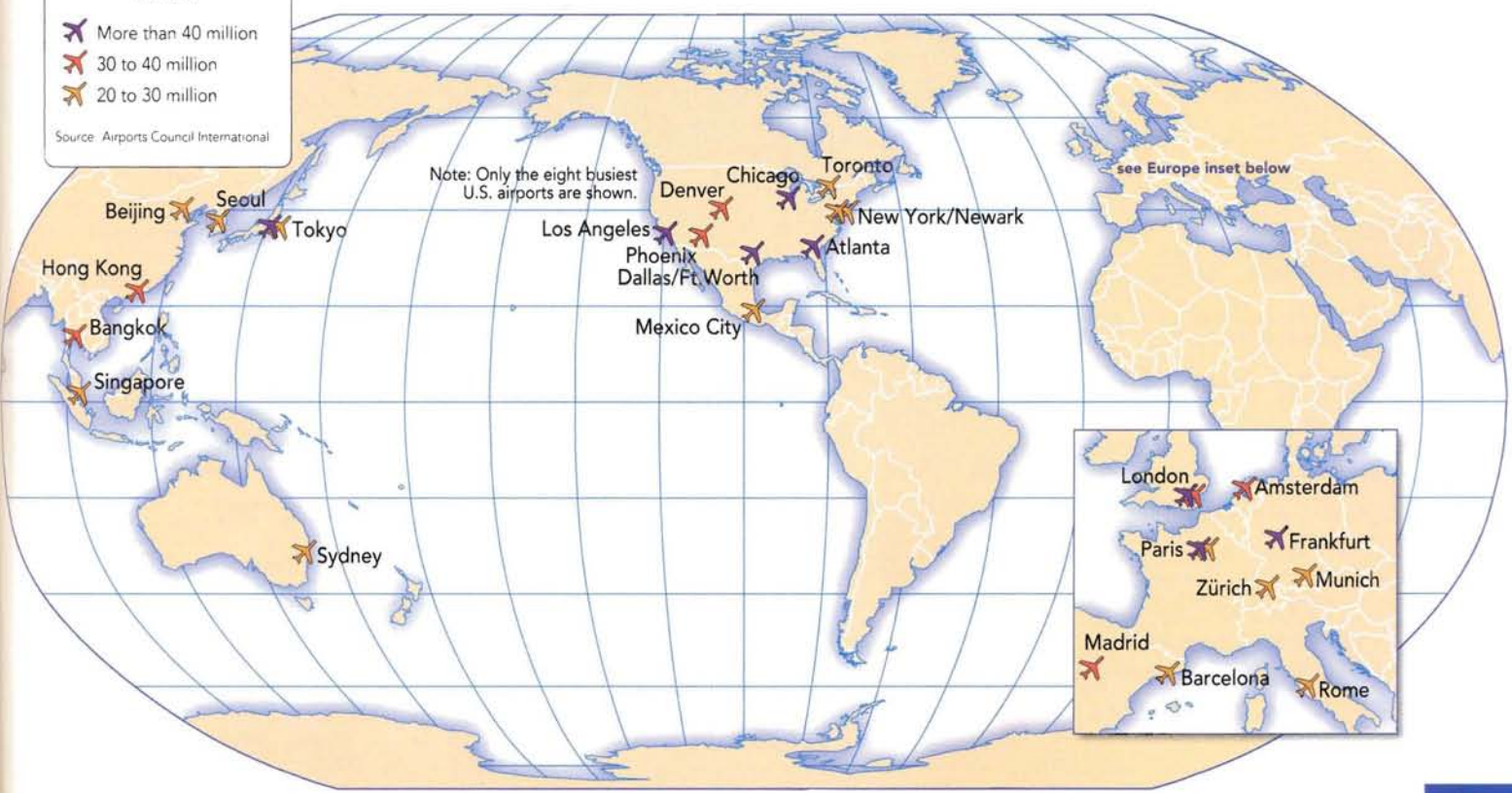
1949
An Air Force crew made the first nonstop, round-the-world flight. Using a B-50A bomber, they traveled 23,452 miles (37,742 kilometers) in 3 days 22 hours 1 minute.

1992
French pilots flew the supersonic Concorde around the world, east-to-west, in a record setting 32 hours 49 minutes 3 seconds.

Passengers at Major Airports 2001

More than 40 million
30 to 40 million
20 to 30 million

Source: Airports Council International



North America

Facts

- Area: 9,361,791 square miles (24,247,038 square kilometers)
- Highest Point: Mt. McKinley, United States, 20,320 ft. (6,194 m)
- Lowest Point: Death Valley, United States, 282 ft. (86 m) below sea level
- Longest River: Mississippi-Missouri-Red Rock, 3,710 mi. (5,971 km)
- Largest Lake: Lake Superior, United States/Canada, 31,700 sq. mi. (82,103 sq. km)
- Largest Country: Canada, 3,851,809 sq. mi. (9,976,140 sq. km)
- Largest City: New York City, United States, 21,200,000 (metropolitan population)

Nations of the Lesser Antilles

Country	Capital	Country	Capital
Antigua and Barbuda	St. John's	St. Vincent and the Grenadines	Kingstown
St. Kitts and Nevis	Basseterre	Grenada	St. George's
Dominica	Roseau	Trinidad and Tobago	Port-of-Spain
St. Lucia	Castries		
Barbados	Bridgetown		

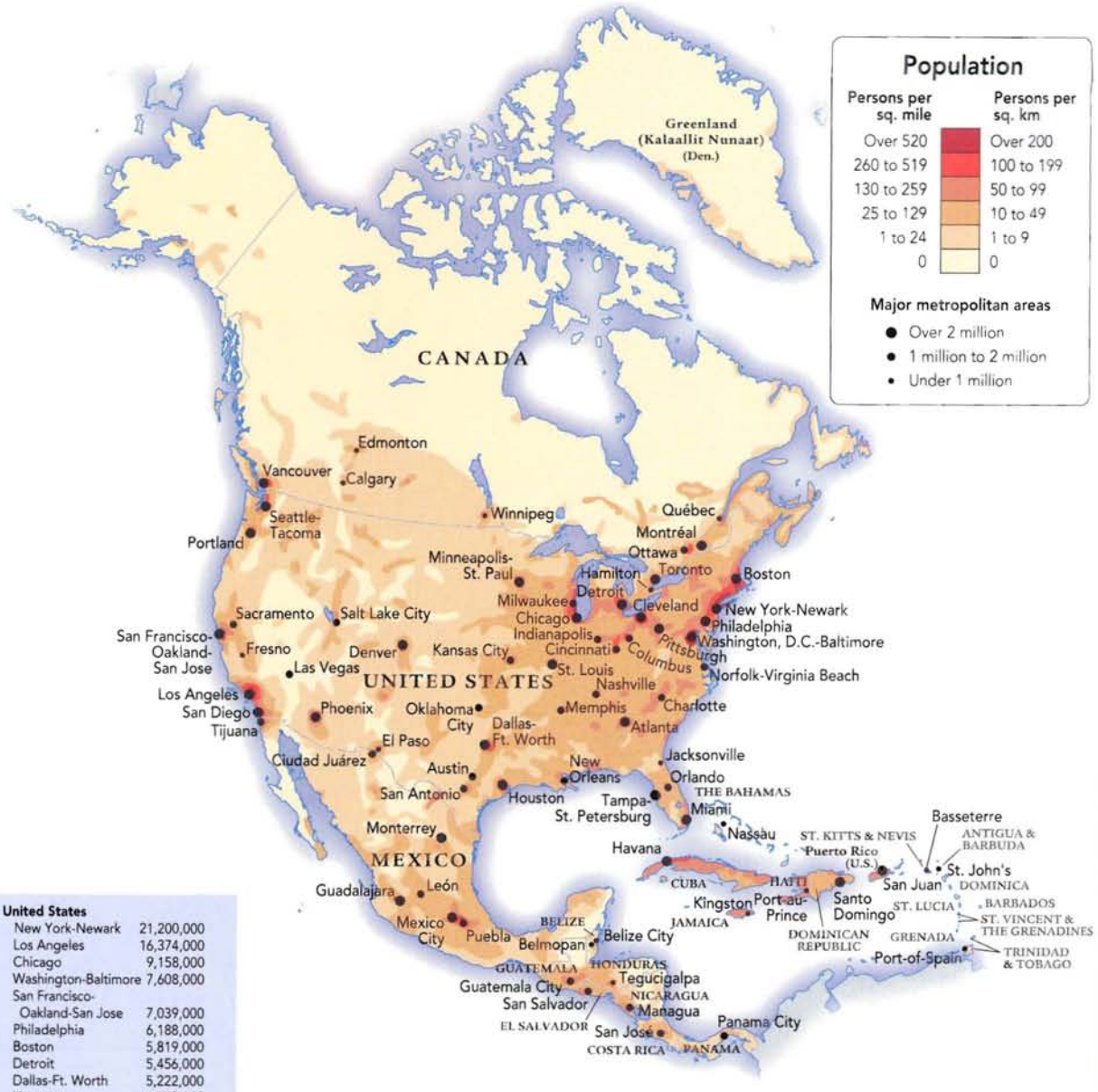

NORTH AMERICA
EUROPE
ASIA
AFRICA
SOUTH AMERICA
AUSTRALIA
ANTARCTICA
ARCTIC OCEAN
ATLANTIC OCEAN
PACIFIC OCEAN
INDIAN OCEAN
Equator
Robinson Projection
ASIA
EUROPE
ARCTIC OCEAN
North Pole
Cape Morris Jesup
Chukchi Sea
Bering Strait
Point Barrow
Bering Sea
Beaufort Sea
Ellesmere Island
Greenland
Queen Elizabeth Islands
Banks Island
Devon I.
Baffin Bay
Denmark Strait
Victoria Island
Baffin Island
Davis Strait
ARCTIC CIRCLE
Cape Farewell
Brooks Range
Yukon River
Mt. McKinley 20,320 ft. (6,194 m)
Alaska Range
Gulf of Alaska
Mt. Logan 19,551 ft. (5,959 m)
Great Bear Lake
Mackenzie River
Mackenzie Mts.
Great Slave Lake
Southampton I.
Labrador Sea
Alexander Archipelago
Coast Mountains
Lake Athabasca
Ungava Peninsula
Hudson Bay
Labrador
Queen Charlotte Is.
Peace River
Athabasca River
Nelson R.
Belcher Is.
PACIFIC OCEAN
Rocky Mountains
Fraser River
Vancouver I.
Saskatchewan River
Lake Winnipeg
Anticosti I.
Newfoundland
Gulf of St. Lawrence
Miquelon Is.
Mt. Rainier 14,410 ft. (4,391 m)
Cascade Range
Columbia River
Great Plains
Canadian Shield
Lake Superior
Lake Huron
Lake Ontario
St. Lawrence River
Cape Breton I.
Cape Sable
Cape Mendocino
Coast Ranges
Sierra Nevada
Shake River
Black Hills
Lake Michigan
Niagara Falls
Cape Cod
Great Basin
Great Salt Lake
Lake Erie
Missouri River
Platte River
Death Valley 282 ft. (86 m) below sea level
Mt. Elbert 14,433 ft. (4,399 m)
Mt. Whitney 14,494 ft. (4,418 m)
Colorado River
Arkansas River
Ohio River
Mt. Mitchell 6,684 ft. (2,037 m)
Appalachian Mts.
Atlantic Ocean
Atlantic Coastal Plain
Cape Hatteras
Bermuda
L. Mead
Colorado Plateau
Ozark Plateau
Tennessee River
Red River
Mississippi
Alabama R.
Brazos River
Colorado River
Gulf Coastal Plain
Gulf of California
Río Grande
Baja California
Sierra Madre Occidental
Sierra Madre Oriental
Gulf of Mexico
Tropic of Cancer
False Cape
Straits of Florida
Bahamas
Cuba
Puerto Rico
Leeward Is.
Lesser Antilles
Windward Is.
Hispaniola
Greater Antilles
Bay of Campeche
Yucatán Peninsula
Cayman Is.
Jamaica
Caribbean Sea
Pico de Orizaba 18,405 ft. (5,610 m)
Trinidad
Aruba
Bonaire
Curaçao
Lake Nicaragua
Panama Canal
Isthmus of Panama
SOUTH AMERICA
0 400 800 mi
0 400 800 km
International boundary
Mountain peak
Lowest point
Falls
N
W
E
S
Elevation Profile
A
B
Baja California
Rocky Mountains
Great Plains
Lake Michigan
Lake Huron
St. Lawrence River
Newfoundland
12,500 ft.
7,500 ft.
2,500 ft.
Sea Level

Major Metropolitan Areas

Antigua & Barbuda	
St. John's	22,000
Bahamas	
Nassau	211,000
Barbados	
Bridgetown	6,000
Belize	
Belize City	49,000
Belmopan	8,000
Canada	
Toronto	5,030,000
Montréal	3,549,000
Vancouver	2,123,000
Ottawa	1,129,000
Calgary	993,000
Edmonton	967,000
Québec	698,000
Hamilton	687,000
Winnipeg	686,000
Costa Rica	
San José	1,305,000
Cuba	
Havana	2,192,000
Dominica	
Roseau	16,000
Dominican Republic	
Santo Domingo	2,677,000
El Salvador	
San Salvador	1,909,000
Grenada	
St. George's	5,000
Guatemala	
Guatemala City	1,007,000
Haiti	
Port-au-Prince	991,000
Honduras	
Tegucigalpa	835,000
Jamaica	
Kingston	578,000
Mexico	
Mexico City	16,203,000
Guadalajara	3,349,000
Monterrey	3,131,000
Puebla	1,272,000
Ciudad Juárez	1,187,000
Tijuana	1,149,000
León	1,021,000
Nicaragua	
Managua	1,148,000
Panama	
Panama City	1,002,000
Puerto Rico	
San Juan	2,450,000
St. Kitts & Nevis	
Basseterre	13,000
St. Lucia	
Castries	11,000
St. Vincent & Grenadines	
Kingstown	15,000
Trinidad & Tobago	
Port of Spain	48,000

United States	
New York-Newark	21,200,000
Los Angeles	16,374,000
Chicago	9,158,000
Washington-Baltimore	7,608,000
San Francisco-Oakland-San Jose	7,039,000
Philadelphia	6,188,000
Boston	5,819,000
Detroit	5,456,000
Dallas-Ft. Worth	5,222,000
Houston	4,670,000
Atlanta	4,112,000
Miami	3,876,000
Seattle-Tacoma	3,555,000
Phoenix	3,252,000
Minneapolis-St. Paul	2,969,000
Cleveland-Akron	2,946,000
San Diego	2,814,000
St. Louis	2,604,000
Denver	2,582,000
Tampa-St. Petersburg	2,396,000
Pittsburgh	2,359,000
Portland	2,265,000
Cincinnati	1,979,000
Sacramento	1,797,000
Kansas City	1,776,000
Milwaukee	1,690,000

International comparability of population data is limited by varying census methods. Where metropolitan population is unavailable, core city population is shown.



Source: U.S. Census Bureau

Gross Domestic Product

GDP per capita

- Over $20,000
- $10,000 to $20,000
- $5,000 to $9,999
- $2,500 to $4,999
- Under $2,500
- No data

Source: World Factbook, CIA, 2001

Gross Domestic Product is a measure of the total goods and services generated by a country. Generally, manufacturing, high-tech services, and specialized agricultural products add more value than raw materials and basic food stuffs.

Mexico profits from oil production and a major manufacturing zone adjacent to the U.S. border, while Costa Rica has become a significant tourist destination. Haiti is the poorest country in the Western Hemisphere.

Electricity Use

Source: World Factbook, CIA, 2001

Land Use and Resources

Predominant land use

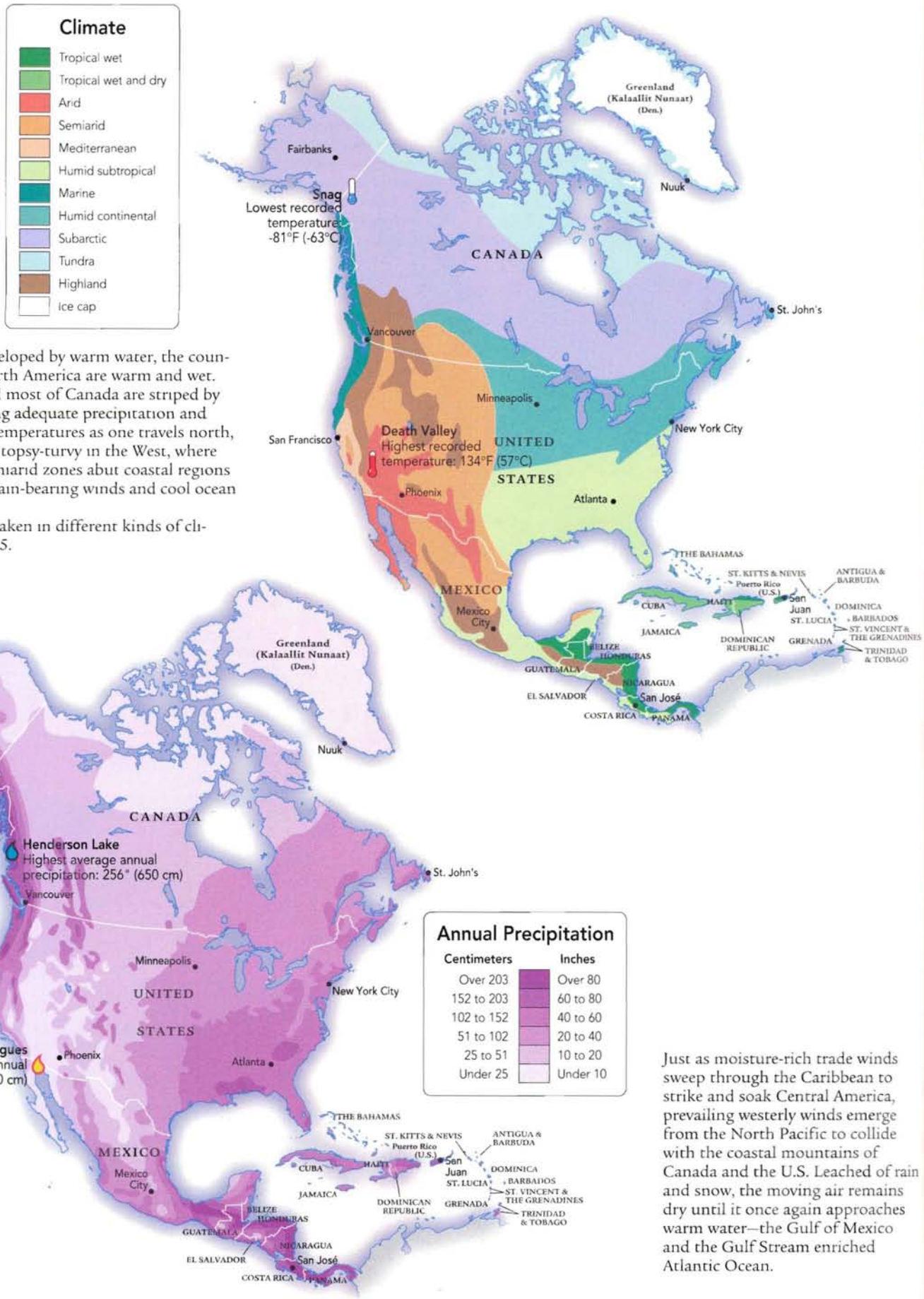
- Commercial agriculture
- Dairying
- Livestock ranching
- Subsistence agriculture
- Primarily forestland
- Limited agricultural activity

Major resources

- Coal
- Natural gas
- Oil
- Forest products
- Gold (Au)
- Silver (Ag)
- Iron ore (Fe)
- Uranium (U)
- Bauxite (Al)
- Other minerals
- Fishing
- Major manufacturing and trade centers

There is a profound north-south difference in North America. Canada and the U.S. are models of high-tech, globally connected economies—largely urban and service oriented societies where a relative handful of farmers produces a surplus of foodstuffs and every land use, from the irrigated fields of the West to the dairy belt of the Northeast to the forests of the North, seems to be molded by market efficiency. Without a doubt, this economic prowess has been encouraged by immense supplies of coal, oil, natural gas, wood, gold, iron ore, and other mineral resources.

Although Mexico has substantial oil and mineral resources and agricultural production that successfully struggles against challenging environmental limitations, much of its growing prosperity is linked to increased trade with the U.S., reflected in a major manufacturing zone along its northern borderlands. Central America and the Caribbean continue to wrestle with the legacy of commercial plantation agriculture and subsistence agriculture, but tourism, especially in the Caribbean, and small-scale assembly and manufacturing have become economic backbones, as well.

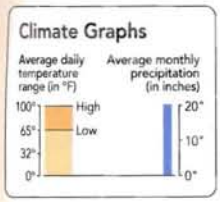


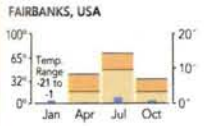
Surrounded and enveloped by warm water, the countries of southern North America are warm and wet. The Eastern U.S. and most of Canada are striped by climate zones offering adequate precipitation and progressively lower temperatures as one travels north, but the pattern goes topsy-turvy in the West, where swirling arid and semiarid zones abut coastal regions influenced by both rain-bearing winds and cool ocean currents.

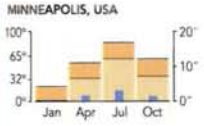
See photographs taken in different kinds of climates on pages 24–25.

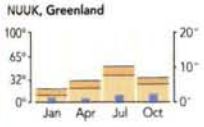
Just as moisture-rich trade winds sweep through the Caribbean to strike and soak Central America, prevailing westerly winds emerge from the North Pacific to collide with the coastal mountains of Canada and the U.S. Leached of rain and snow, the moving air remains dry until it once again approaches warm water—the Gulf of Mexico and the Gulf Stream enriched Atlantic Ocean.

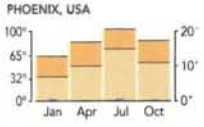
Climate Graphs

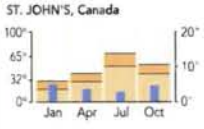


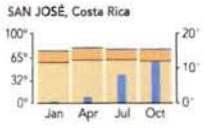


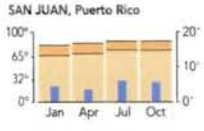






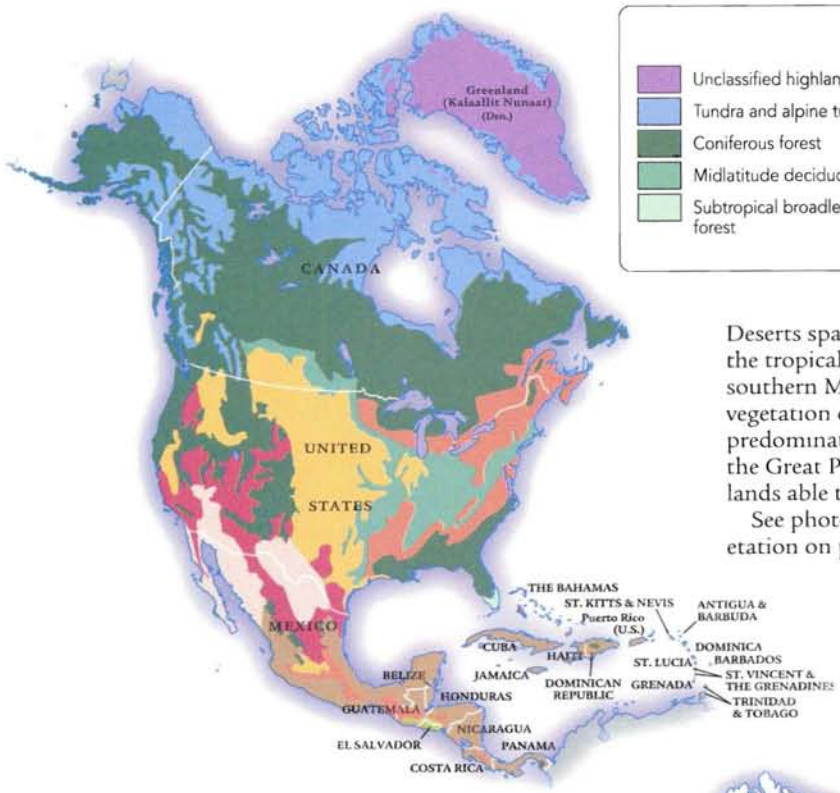






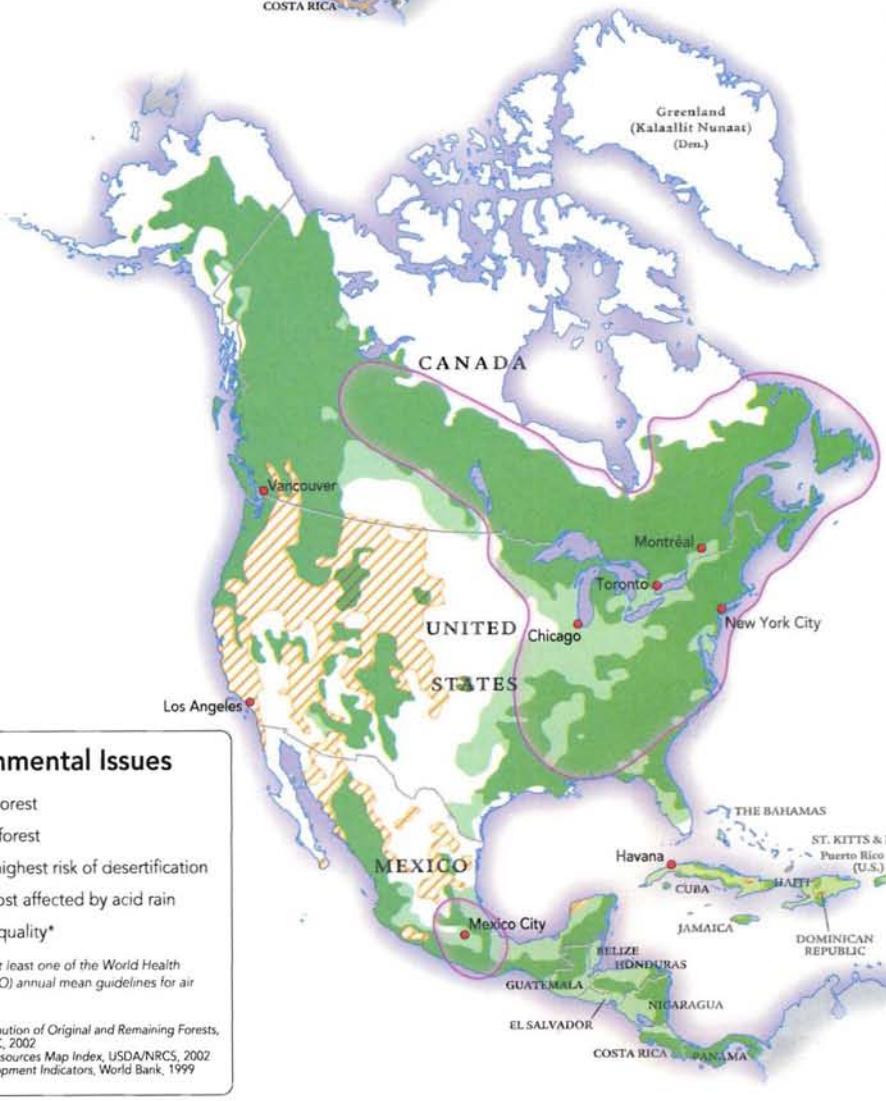
Vegetation

- Unclassified highlands or ice cap
- Tundra and alpine tundra
- Coniferous forest
- Midlatitude deciduous forest
- Subtropical broadleaf evergreen forest
- Mixed forest
- Midlatitude scrubland
- Midlatitude grassland
- Desert
- Tropical seasonal and scrub
- Tropical rain forest



Deserts spanning the U.S./Mexico border join the tropical plant life of Central America and southern Mexico to the temperate and arctic vegetation of Canada and the U.S.—vegetation predominately forest land but split by the arc of the Great Plains and interwoven with scrublands able to endure infrequent rainfall.

See photographs of different the kinds of vegetation on page 26-27.



In the U.S. and Canada, heavy consumption of energy and other resources is a source of many environmental problems. Environmental laws and regulations have helped, but air pollutants and gases continue to cause health problems and may contribute to global warming.

In the western U.S. and parts of Mexico, large areas are susceptible to desertification from overgrazing and agriculture.

Deforestation is a major issue in Latin America and the Caribbean. In Haiti, for example, all the native rain forests have been destroyed, causing irreversible harm to ecosystems.

Environmental Issues

- Current forest
- Cleared forest
- Area at highest risk of desertification
- Areas most affected by acid rain
- Poor air quality*

*Cities exceeding at least one of the World Health Organization's (WHO) annual mean guidelines for air quality

Sources: *Global Distribution of Original and Remaining Forests*, UNEP-WCMC, 2002
World Soil Resources Map Index, USDA/NRCS, 2002
World Development Indicators, World Bank, 1999


United States

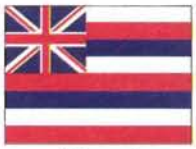

Alabama


Alaska


Arizona

Arkansas

California


Hawaii


Idaho

Iowa

Kansas


Maine


Maryland


Minnesota


Mississippi


Nebraska


Nevada


New Mexico

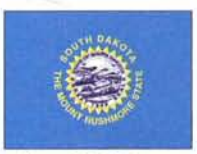

New York


Ohio

Oklahoma


Rhode Island


South Carolina



South Dakota


Tennessee


Texas

Utah

United States

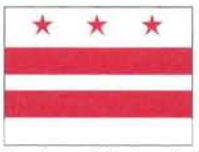
Facts

- Total Area: 3,717,796 square miles (9,629,091 square kilometers)
- Highest Point: Mt. McKinley, Alaska, 20,320 ft. (6,194 m)
- Lowest Point: Death Valley, California, 282 ft. (86 m) below sea level
- Longest River: Mississippi-Missouri-Red Rock, 3,710 mi. (5,971 km)
- Largest Lake (within U.S.): Lake Michigan, 22,342 sq. mi. (57,866 sq. km)
- Largest State: Alaska, 570,374 sq. mi. (1,477,268 sq. km)
- Largest City: New York City, New York, 8,008,028


Colorado


Connecticut


Delaware


District of Columbia


Florida


Georgia

Illinois


Indiana


Kentucky


Louisiana


Massachusetts


Michigan


Missouri

Montana


New Hampshire


New Jersey

North Carolina

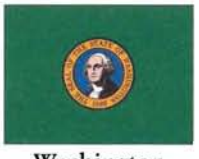

North Dakota

Oregon


Pennsylvania


Vermont


Virginia


Washington


West Virginia

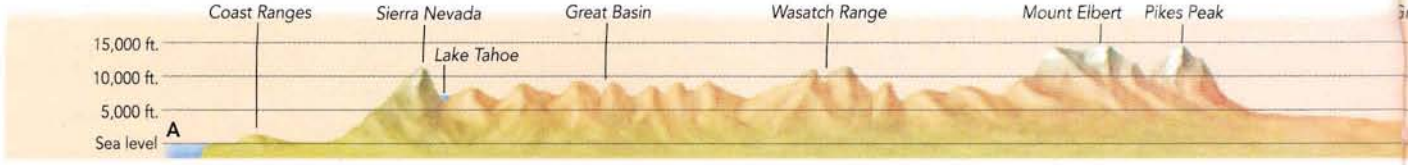
Wisconsin


Wyoming

State	2000 Population and Rank		Capital	Largest City	Abbreviation		Nickname
					Traditional	Postal Service	
Alabama	4,447,100	23rd	Montgomery	Birmingham	ALA.	AL	Heart of Dixie
Alaska	626,932	48th	Juneau	Anchorage	(none)	AK	The Last Frontier
Arizona	5,130,632	20th	Phoenix	Phoenix	ARIZ.	AZ	Grand Canyon State
Arkansas	2,673,400	33rd	Litttle Rock	Little Rock	ARK.	AR	Land of Opportunity
California	33,871,648	1st	Sacramento	Los Angeles	CALIF.	CA	Golden State
Colorado	4,301,261	24th	Denver	Denver	COLO.	CO	Centennial State
Connecticut	3,405,565	29th	Hartford	Bridgeport	CONN.	CT	Constitution State, Nutmeg State
Delaware	783,600	45th	Dover	Wilmington	DEL.	DE	First State, Diamond State
Florida	15,982,378	4th	Tallahassee	Jacksonville	FLA.	FL	Sunshine State
Georgia	8,186,453	10th	Atlanta	Atlanta	GA.	GA	Empire State of the South, Peach State
Hawaii	1,211,537	42nd	Honolulu	Honolulu	(none)	HI	Aloha State
Idaho	1,293,953	39th	Boise	Boise	IDA.	ID	Gem State
Illinois	12,419,293	5th	Springfield	Chicago	ILL.	IL	Prairie State
Indiana	6,080,485	14th	Indianapolis	Indianapolis	IND.	IN	Hoosier State
Iowa	2,926,324	30th	Des Moines	Des Moines	(none)	IA	Hawkeye State
Kansas	2,688,418	32nd	Topeka	Wichita	KANS.	KS	Sunflower State
Kentucky	4,041,769	25th	Frankfort	Louisville	KY. or KEN.	KY	Bluegrass State
Louisiana	4,468,976	22nd	Baton Rouge	New Orleans	LA.	LA	Pelican State
Maine	1,274,923	40th	Augusta	Portland	(none)	ME	Pine Tree State
Maryland	5,296,486	19th	Annapolis	Baltimore	MD.	MD	Old Line State, Free State
Massachusetts	6,349,097	13th	Boston	Boston	MASS.	MA	Bay State, Old Colony
Michigan	9,938,444	8th	Lansing	Detroit	MICH.	MI	Wolverine State
Minnesota	4,919,479	21st	St. Paul	Minneapolis	MINN.	MN	North Star State, Gopher State
Mississippi	2,844,658	31st	Jackson	Jackson	MISS.	MS	Magnolia State
Missouri	5,595,211	17th	Jefferson City	Kansas City	MO.	MO	Show Me State

State	2000 Population and Rank		Capital	Largest City	Abbreviation Traditional	Abbreviation Postal Service	Nickname
Montana	902,195	44th	Helena	Billings	MONT.	MT	Treasure State
Nebraska	1,711,265	38th	Lincoln	Omaha	NEBR.	NE	Cornhusker State
Nevada	1,998,257	35th	Carson City	Las Vegas	NEV.	NV	Silver State
New Hampshire	1,235,786	41st	Concord	Manchester	N.H.	NH	Granite State
New Jersey	8,414,350	9th	Trenton	Newark	N.J.	NJ	Garden State
New Mexico	1,819,046	36th	Santa Fe	Albuquerque	N. MEX. or N.M.	NM	Land of Enchantment
New York	18,976,457	3rd	Albany	New York	N.Y.	NY	Empire State
North Carolina	8,049,313	11th	Raleigh	Charlotte	N.C.	NC	Tar Heel State
North Dakota	642,200	47th	Bismarck	Fargo	N. DAK. or N.D.	ND	Peace Garden State, Flickertail State
Ohio	11,353,140	7th	Columbus	Columbus	(none)	OH	Buckeye State
Oklahoma	3,450,654	27th	Oklahoma City	Oklahoma City	OKLA.	OK	Sooner State
Oregon	3,421,399	28th	Salem	Portland	ORE.	OR	Beaver State
Pennsylvania	12,281,054	6th	Harrisburg	Philadelphia	PA. or PENN.	PA	Keystone State
Rhode Island	1,048,319	43rd	Providence	Providence	R.I.	RI	Ocean State
South Carolina	4,012,012	26th	Columbia	Columbia	S.C.	SC	Palmetto State
South Dakota	754,844	46th	Pierre	Sioux Falls	S. DAK. or S.D.	SD	Mt. Rushmore State
Tennessee	5,689,283	16th	Nashville	Memphis	TENN.	TN	Volunteer State
Texas	20,851,820	2nd	Austin	Houston	TEX.	TX	Lone Star State
Utah	2,233,169	34th	Salt Lake City	Salt Lake City	(none)	UT	Beehive State
Vermont	608,827	49th	Montpelier	Burlington	VT.	VT	Green Mountain State
Virginia	7,078,515	12th	Richmond	Virginia Beach	VA.	VA	Old Dominion
Washington	5,894,121	15th	Olympia	Seattle	WASH.	WA	Evergreen State
West Virginia	1,808,344	37th	Charleston	Charleston	W. VA.	WV	Mountain State
Wisconsin	5,363,675	18th	Madison	Milwaukee	WIS.	WI	Badger State
Wyoming	493,782	50th	Cheyenne	Cheyenne	WYO.	WY	Equality State


International boundary
State boundary
Mountain peak
Lowest point
PACIFIC OCEAN
Strait of Juan de Fuca
Cape Flattery
Puget Sound
Columbia River
Mt. Rainier 14,410 ft. (4,391 m)
Mt. St. Helens 8,366 ft. (2,550 m)
Mt. Hood 11,239 ft. (3,425 m)
COAST RANGES
CASCADE RANGE
COLUMBIA PLATEAU
Clearwater
BITTERROOT RANGE
ROCKY MOUNTAINS
Milk River
Missouri River
Fort Peck Lake
Lake Sakakawea
Little Missouri River
Yellowstone River
Granite Peak 12,799 ft. (3,900 m)
Snake River
Salmon River
Snake River Plain
Owyhee River
Yellowstone Lake
Bighorn River
Powder River
Black Hills
GREAT PLAINS
Cheyenne R.
Niobrara River
Sand Hills
Cape Mendocino
Mt. Shasta 14,162 ft. (4,316 m)
Sacramento River
SIERRA NEVADA
Central Valley
COAST RANGES
San Joaquin River
Great Salt Lake
Great Salt Lake Desert
GREAT BASIN
Lake Tahoe
San Francisco Bay
Monterey Bay
Green River
N. Platte River
Kings Peak 13,528 ft. (4,123 m)
WASATCH RANGE
S. Platte River
Colorado River
Mt. Elbert 14,433 ft. (4,398 m)
FRONT RANGE
Pikes Peak 14,110 ft. (4,629 m)
SANGRE DE CRISTO
Arkansas River
Mt. Whitney 14,494 ft. (4,417 m)
282 ft. (86 m) below sea level
Death Valley
Lake Mead
Lake Powell
COLORADO PLATEAU
San Juan River
Grand Canyon
Humphreys Peak 12,633 ft. (3,850 m)
Wheeler Peak 13,161 ft. (4,011 m)
Point Conception
Mojave Desert
Verde River
Channel Islands
Salton Sea
Sonoran Desert
Gila River
Salt River
Rio Grande
Pecos River
LLANO ESTACADO
Guadalupe Peak 8,749 ft. (2,666 m)
EDWARDS PLATEAU
MEXICO
RUSSIA
ARCTIC OCEAN
Pt. Barrow
BROOKS RANGE
ARCTIC CIRCLE
Bering Strait
Seward Peninsula
Yukon River
St. Lawrence Island
ALASKA RANGE
Mt. McKinley 20,320 ft. (6,194 m)
CANADA
Kenai Peninsula
Gulf of Alaska
Bering Sea
Kodiak Island
ALEUTIAN RANGE
Aleutian Is.
0 250 500 mi
0 250 500 km
PACIFIC OCEAN
Kauai
Niihau
Oahu
Molokai
Lanai
Maui
Kahoolawe
Hawaiian Islands
Hawaii
Mauna Kea 13,796 ft. (4,205 m)
0 100 200 mi
0 100 200 km


Coast Ranges
Sierra Nevada
Great Basin
Wasatch Range
Mount Elbert
Pikes Peak
15,000 ft.
10,000 ft.
5,000 ft.
Sea level
Lake Tahoe
A

eat Plains | Mississippi River | Central Lowland | Appalachian Mountains | Chesapeake Bay | Delaware Bay | B

State	Land Area and Rank		Highest Point		Temperature °F Highest Recorded	Temperature °F Lowest Recorded	Annual Precipitation Highest Recorded	Annual Precipitation Lowest Recorded
Alabama	50,750 sq mi 131,443 sq km	28th	Cheaha Mtn.	2,405 ft 777 m	112°	–27°	106.57"	22.00"
Alaska	570,374 sq mi 1,477,268 sq km	1st	Mt. McKinley	20,320 ft 6,194 m	100°	–80°	332.29"	1.61"
Arizona	113,642 sq mi 294,334 sq km	6th	Humphreys Peak	12,633 ft 3,851 m	128°	–40°	58.92"	0.07"
Arkansas	52,075 sq mi 134,875 sq km	27th	Magazine Mtn.	2,753 ft 839 m	120°	–29°	98.55"	19.11"
California	155,973 sq mi 403,970 sq km	3rd	Mt. Whitney	14,494 ft 4,418 m	134°	–45°	153.54"	0.00"
Colorado	103,730 sq mi 268,660 sq km	8th	Mt. Elbert	14,433 ft 4,399 m	118°	–61°	92.84"	1.69"
Connecticut	4,845 sq mi 12,550 sq km	48th	south slope of Mt. Frissell	2,380 ft 725 m	105°	–32°	78.53"	23.60"
Delaware	1,955 sq mi 5,063 sq km	49th	Ebright Road at DE-PA border	448 ft 137 m	110°	–17°	72.75"	21.38"
Florida	53,997 sq mi 139,852 sq km	26th	Sec. 30, T.6N, R.20W in Walton Co.	345 ft 105 m	109°	–2°	112.43"	21.16"
Georgia	57,919 sq mi 150,010 sq km	21st	Brasstown Bald	4,784 ft 1,458 m	112°	–17°	112.16"	17.14"
Hawaii	6,423 sq mi 16,637 sq km	47th	Pu'u Wekiu, Mauna Kea	13,796 ft 4,205 m	100°	12°	704.83"	0.19"
Idaho	82,751 sq mi 214,325 sq km	11th	Borah Peak	12,662 ft 3,859 m	118°	–60°	81.05"	2.09"
Illinois	55,593 sq mi 143,987 sq km	24th	Charles Mound	1,235 ft 376 m	117°	–35°	74.58"	16.59"
Indiana	35,870 sq mi 92,904 sq km	38th	Franklin Township in Wayne County	1,257 ft 383 m	116°	–35°	97.38"	18.67"
Iowa	55,875 sq mi 144,716 sq km	23rd	Sec. 29, T.100N, R.41W in Osceola Co.	1,670 ft 509 m	118°	–47°	74.50"	12.11"
Kansas	81,823 sq mi 211,922 sq km	13th	Mt. Sunflower	4,039 ft 1,231 m	121°	–40°	67.02"	4.77"
Kentucky	39,732 sq mi 102,907 sq km	36th	Black Mtn.	4,139 ft 1,262 m	114°	–34°	79.68"	14.51"
Louisiana	43,566 sq mi 112,836 sq km	33rd	Driskill Mtn.	535 ft 163 m	114°	–16°	113.74"	26.44"
Maine	30,865 sq mi 79,939 sq km	39th	Mt. Katahdin	5,267 ft 1,605 m	105°	–48°	75.64"	23.06"
Maryland	9,775 sq mi 25,316 sq km	42nd	Backbone Mtn.	3,360 ft 1,024 m	109°	–40°	72.59"	17.76"
Massachusetts	7,838 sq mi 20,300 sq km	45th	Mt. Greylock	3,487 ft 1,063 m	107°	–35°	72.19"	21.76"
Michigan	56,809 sq mi 147,135 sq km	22nd	Mt. Arvon	1,979 ft 603 m	112°	–51°	64.01"	15.64"
Minnesota	79,617 sq mi 206,207 sq km	14th	Eagle Mtn.	2,301 ft 701 m	114°	–59°	51.53"	7.81"
Mississippi	46,914 sq mi 121,506 sq km	31st	Woodall Mtn.	806 ft 246 m	115°	–19°	104.36"	25.97"
Missouri	68,898 sq mi 178,446 sq km	18th	Taum Sauk Mtn.	1,772 ft 540 m	118°	–40°	92.77"	16.14"

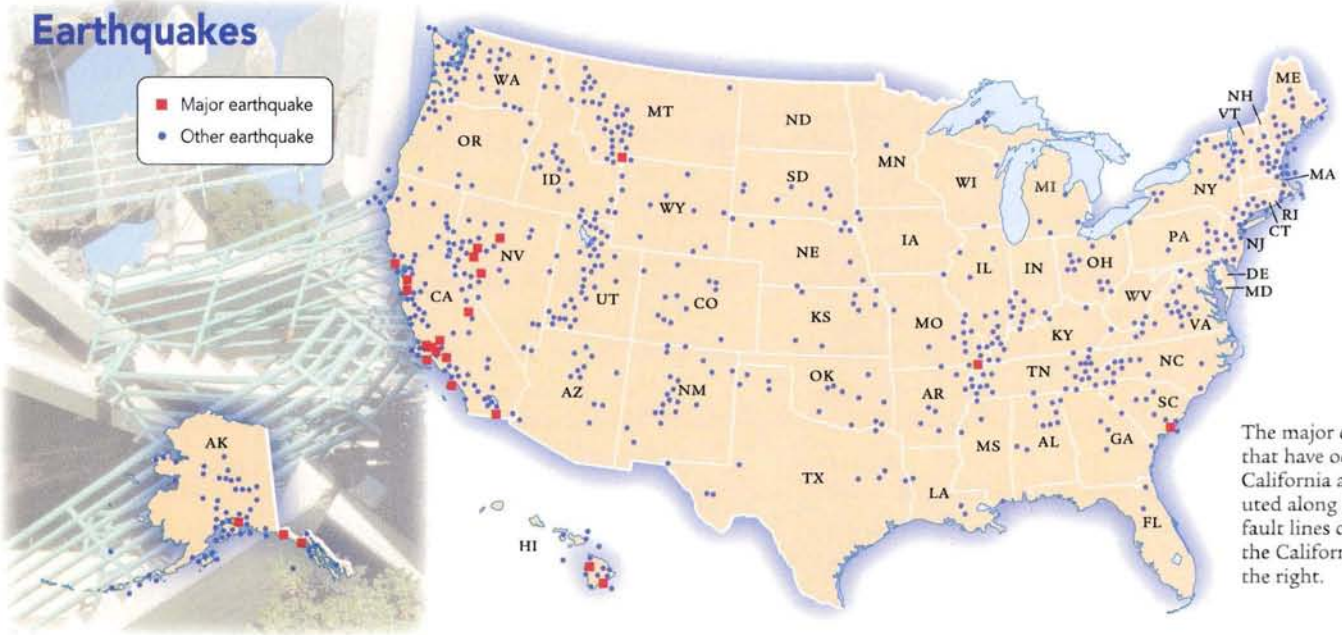
State	Land Area and Rank		Highest Point		Temperature °F Highest Recorded	Temperature °F Lowest Recorded	Annual Precipitation Highest Recorded	Annual Precipitation Lowest Recorded
Montana	145,556 sq mi 376,991 sq km	4th	Granite Peak	12,799 ft 3,901 m	117°	–70°	55.51"	2.97"
Nebraska	76,878 sq mi 199,113 sq km	15th	Johnson Township in Kimball County	5,424 ft 1,653 m	118°	–47°	64.52"	6.30"
Nevada	109,806 sq mi 284,397 sq km	7th	Boundary Peak	13,140 ft 4,005 m	125°	–50°	59.03"	Trace
New Hampshire	8,969 sq mi 23,231 sq km	44th	Mt. Washington	6,288 ft 1,917 m	106°	–46°	130.14"	22.31"
New Jersey	7,419 sq mi 19,215 sq km	46th	High Point	1,803 ft 550 m	110°	–34°	85.99"	19.85"
New Mexico	121,365 sq mi 314,334 sq km	5th	Wheeler Peak	13,161 ft 4,011 m	122°	–50°	62.45"	1.00"
New York	47,224 sq mi 122,310 sq km	30th	Mt. Marcy	5,344 ft 1,629 m	108°	–52°	82.06"	17.64"
North Carolina	48,718 sq mi 126,180 sq km	29th	Mt. Mitchell	6,684 ft 2,037 m	110°	–34°	129.60"	22.69"
North Dakota	68,994 sq mi 178,695 sq km	17th	White Butte	3,506 ft 1,069 m	121°	–60°	37.98"	4.02"
Ohio	40,953 sq mi 106,067 sq km	35th	Campbell Hill	1,549 ft 472 m	113°	–39°	70.82"	16.96"
Oklahoma	68,679 sq mi 177,878 sq km	19th	Black Mesa	4,973 ft 1,516 m	120°	–27°	84.47"	6.53"
Oregon	96,003 sq mi 248,647 sq km	10th	Mt. Hood	11,239 ft 3,426 m	119°	–54°	168.88"	3.33"
Pennsylvania	44,820 sq mi 116,083 sq km	32nd	Mt. Davis	3,213 ft 979 m	111°	–42°	81.64"	15.71"
Rhode Island	1,045 sq mi 2,707 sq km	50th	Jerimoth Hill	812 ft 247 m	104°	–23°	70.21"	24.08"
South Carolina	30,111 sq mi 77,988 sq km	40th	Sassafras Mtn.	3,560 ft 1,085 m	111°	–19°	101.65"	20.73"
South Dakota	75,891 sq mi 196,575 sq km	16th	Harney Peak	7,242 ft 2,207 m	120°	–58°	48.42"	2.89"
Tennessee	41,220 sq mi 106,759 sq km	34th	Clingmans Dome	6,643 ft 2,025 m	113°	–32°	114.88"	25.23"
Texas	261,914 sq mi 678,358 sq km	2nd	Guadalupe Peak	8,749 ft 2,667 m	120°	–23°	109.38"	1.64"
Utah	82,168 sq mi 212,816 sq km	12th	Kings Peak	13,528 ft 4,123 m	117°	–69°	108.54"	1.34"
Vermont	9,249 sq mi 23,956 sq km	43rd	Mt. Mansfield	4,393 ft 1,339 m	105°	–50°	92.88"	22.98"
Virginia	35,598 sq mi 102,558 sq km	37th	Mt. Rogers	5,729 ft 1,746 m	110°	–30°	81.78"	12.52"
Washington	66,582 sq mi 172,447 sq km	20th	Mt. Rainier	14,410 ft 4,392 m	118°	–48°	184.56"	2.61"
West Virginia	24,087 sq mi 62,384 sq km	41st	Spruce Knob	4,861 ft 1,481 m	112°	–37°	94.01"	9.50"
Wisconsin	54,314 sq mi 104,673 sq km	25th	Timms Hill	1,951 ft 595 m	114°	–54°	62.07"	12.00"
Wyoming	97,105 sq mi 251,501 sq km	9th	Gannett Peak	13,804 ft 4,207 m	114°	–63°	55.46"	1.28"

Divide

DIVIDE: *The boundary or high ground between river systems.* Streams on one side of the divide flow in a different direction and into a different drainage basin from the streams on the other side. A continental divide is the boundary that separates the rivers flowing toward opposite sides of a continent.

In North America a continental divide called the **Great Divide** runs along the crest of the Rocky Mountains, dividing rivers that flow to the Gulf of Mexico and the Atlantic Ocean from those that flow into the Pacific Ocean. Another much lower divide separates those rivers that flow north through Hudson Bay to the Arctic Ocean. Triple Divide Peak in Montana is located on both these divides. Water from one side of this mountain flows east to the Atlantic; from another side water flows west to the Pacific; and from the north face, water flows to the Arctic Ocean.

Earthquakes

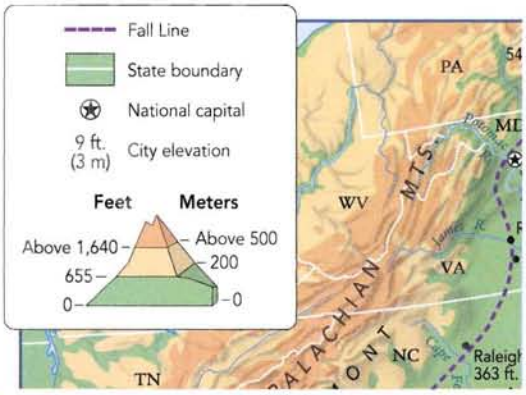


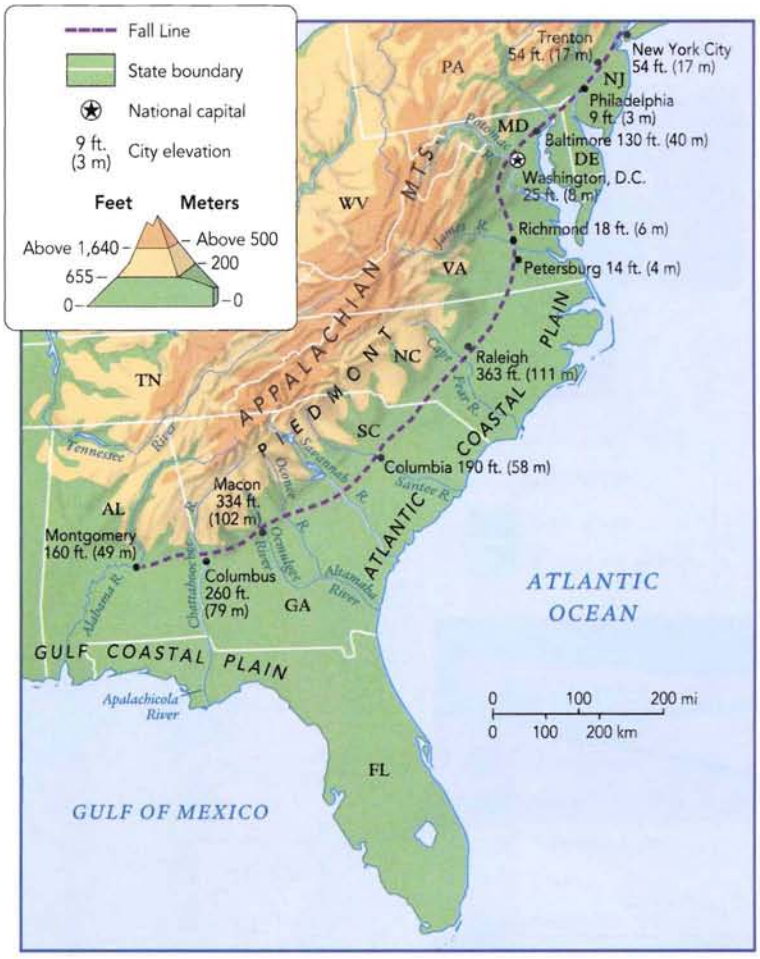
The major earthquakes that have occurred in California are distributed along the major fault lines depicted on the California map to the right.

Fall Line

FALL LINE: *A geologic feature where uplands meet lowlands and a series of waterfalls and rapids occur.* Fall lines are formed where a region of hard rock borders softer rock, and the softer rock has eroded away. The erosion creates a ledge that water flows over.

A major fall line exists in the eastern United States. It marks the boundary between the Coastal Plain and the Piedmont and runs between New York and Alabama. Cities have grown into industrial and commercial hubs around each waterfall on the fall line for two reasons. First, the energy of the falling water can be captured and used by industry. Second, the fall line is often the farthest point reachable by ships carrying goods up river, which means that goods are transferred to land-based transport at that point. Some fall line cities on the East Coast include Trenton, Philadelphia, Baltimore, Washington, D.C., Richmond, Petersburg, Columbia, Macon, and Montgomery. If you draw a line on a map connecting these city dots, you will have drawn the Eastern Fall Line.





Fault

FAULT: *A break in the Earth's crust caused by movement.* Solid rock on one side of the fault no longer matches the solid rock on the other side. The movement may take place in any direction—up, down, or sideways. The movement may be a few inches or thousands of feet.

A fault that moves up or down is called a **dip-slip fault**. Niagara Falls cascades over an escarpment caused by this kind of movement.

A fault that moves sideways is called a **strike-slip fault**. The San Andreas fault is an example of this kind. Horizontal movement along this fault caused the devastating San Francisco earthquake in 1906 and will cause more earthquakes in the future. This happens because this fault marks the boundary between the Pacific Plate and the North American Plate (see page 20).

Where two parallel faults pull away from each other, they create a long, sunken valley between them called a **rift**. The Great Rift Valley in Africa is the world's most visible example (see page 91). Underwater, the huge Mid-Ocean Ridge is the longest rift on Earth (see pages 18–19).

Marine

Highland

Quillayute
Most annual cloudy days: 240

Mt. Baker
Most snow in one season: 1,140" (2,896 cm), 1998–1999

Astoria
Most annual cloudy days: 240

Seattle

WASHINGTON

Portland

OREGON

Helena

MONTANA

NORTH DAKOTA

IDAHO

Boise

SOUTH DAKOTA

WYOMING

Mediterranean

Reno

NEVADA

Salt Lake City

NEBRASKA

San Francisco

Silver Lake
Most snow in 24 hours: 75.8" (192.5 cm), 1921

UTAH

Denver

CALIFORNIA

COLORADO

KANSAS

Death Valley
Highest recorded temperature: 134°F (57°C), 1913

Death Valley
Lowest average annual precipitation, 2.25" (5.7 cm)

Tundra

Los Angeles

ARIZONA

OKLAHOMA

San Diego

Phoenix

NEW MEXICO

Yuma
Daily chance of sunshine: 90%

Dallas

TEXAS

Prospect Creek Camp
Lowest recorded temperature: -80°F (-62°C), 1917

Fairbanks

ALASKA

San Antonio

Anchorage

Arid

Mt. Waialeale
Highest average annual precipitation: 460.0" (1,168 cm)

Honolulu

HAWAII

Subarctic

Tropical wet

Hilo

Hilo
Most days of rain: 277

Semiarid

Humid continental

Humid subtropical

Tropical wet and dry

Climate

- Tropical wet
- Tropical wet and dry
- Arid
- Semiarid
- Mediterranean
- Humid subtropical
- Marine
- Humid continental
- Subarctic
- Tundra
- Highland

Mt. Washington
Highest wind gust:
231 mph (372 kph), 1934

Highest average annual wind speed:
15.4 mph (24.8 kph)

Great Midwest Flood
Costliest flood damage: $18 billion, 1993

Johnstown
Deadliest flood: over 2,200 dead, 1889

Tri-State Tornado
Deadliest tornado: 689 dead, 1925

Alvin
Most rain in 24 hours:
43.0" (109.2 cm), 1979

Galveston
Deadliest hurricane: over 8,000 dead, 1900

Hurricane Andrew
Costliest hurricane damage: $26.5 billion, 1992

Coniferous forest

Midlatitude grassland

Midlatitude scrubland

Tundra

Desert

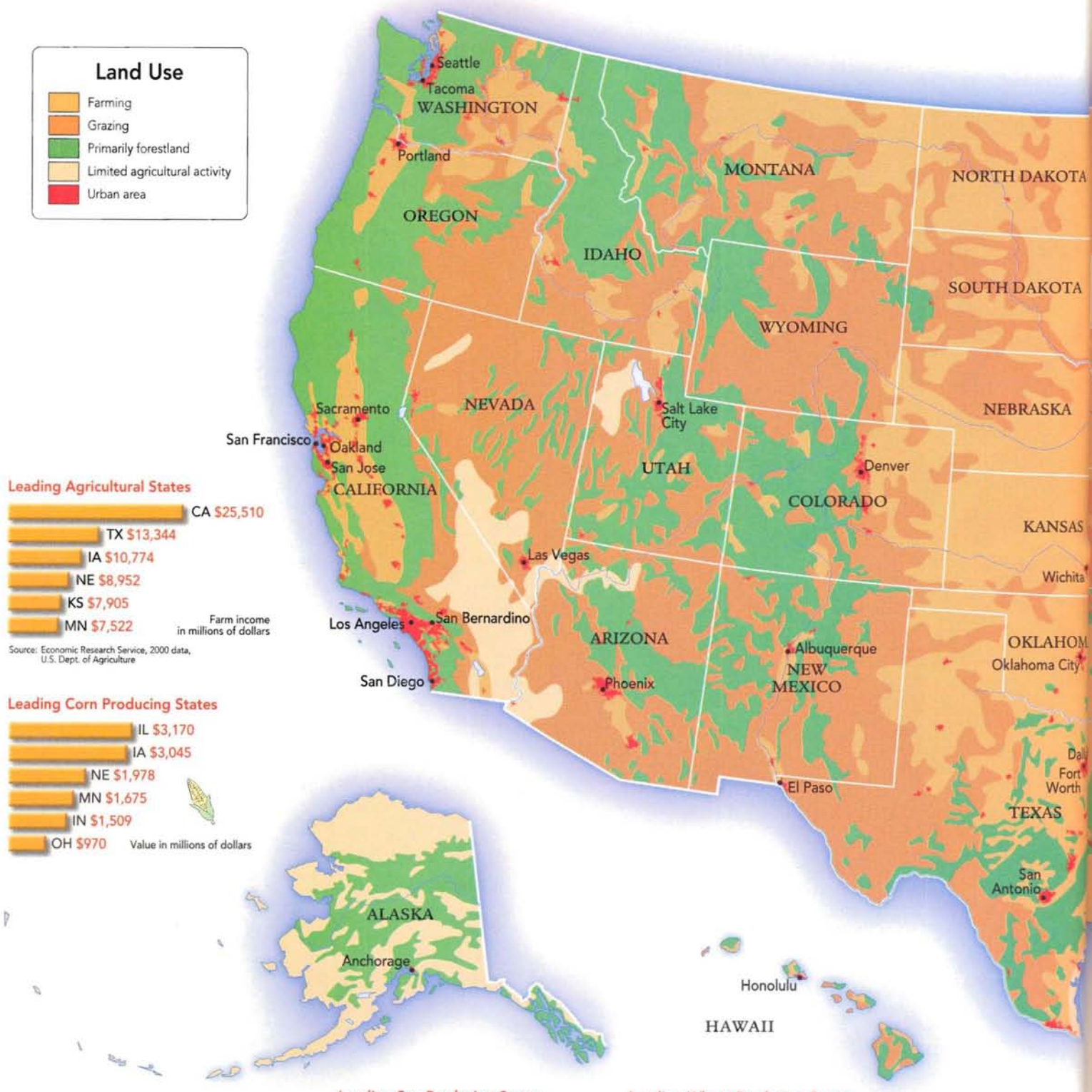
Tropical rain forest

Seattle
WASHINGTON
Portland
OREGON
Helena
MONTANA
NORTH DAKOTA
IDAHO
Boise
SOUTH DAKOTA
WYOMING
Reno
NEVADA
Salt Lake City
NEBRASKA
San Francisco
UTAH
Denver
CALIFORNIA
COLORADO
KANSAS
Los Angeles
ARIZONA
OKLAHOMA
San Diego
Phoenix
NEW MEXICO
TEXAS
San Antonio
ALASKA
Anchorage
Honolulu
HAWAII

Deciduous forest

Mixed forest

Subtropical broadleaf evergreen forest


Land Use
Farming
Grazing
Primarily forestland
Limited agricultural activity
Urban area
Seattle
Tacoma
WASHINGTON
Portland
OREGON
MONTANA
NORTH DAKOTA
IDAHO
SOUTH DAKOTA
WYOMING
NEBRASKA
Sacramento
NEVADA
Salt Lake City
San Francisco
Oakland
San Jose
CALIFORNIA
UTAH
Denver
COLORADO
KANSAS
Las Vegas
Wichita
Los Angeles
San Bernardino
ARIZONA
Albuquerque
NEW MEXICO
OKLAHOMA
Oklahoma City
San Diego
Phoenix
El Paso
Dallas
Fort Worth
TEXAS
San Antonio
ALASKA
Anchorage
Honolulu
HAWAII
Leading Agricultural States
CA $25,510
TX $13,344
IA $10,774
NE $8,952
KS $7,905
MN $7,522
Farm income in millions of dollars
Source: Economic Research Service, 2000 data, U.S. Dept. of Agriculture
Leading Corn Producing States
IL $3,170
IA $3,045
NE $1,978
MN $1,675
IN $1,509
OH $970
Value in millions of dollars
Leading Soy Producing States
IL $2,230
IA $2,181
MN $1,348
IN $1,230
OH $895
MO $831
Value in millions of dollars
Leading Wheat Producing States
KS $939
ND $907
WA $459
MT $438
OK $386
SD $318
Value in millions of dollars

Leading Beef Producing States

Leading Hog Producing States

Leading Poultry Producing States

U.S. Percentage of World Production

Source: *Foreign Agricultural Commodity Circular Series, 2000 data,* Foreign Agricultural Service, U.S. Dept. of Agriculture

Leading Vegetable Producing States

Leading Dairy Producing States

Source: *Crop Production, 2000 data,* National Agricultural Statistics Service, U.S. Dept. of Agriculture

Energy Resources

- Major oil fields
- Natural gas fields

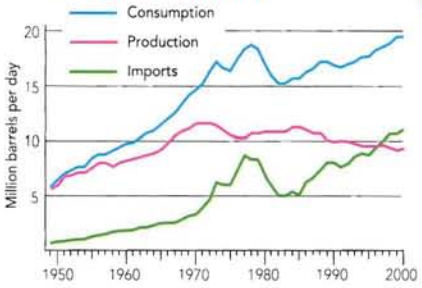
Coal Deposits

- Anthracite
- Bituminous
- Lignite

Mineral Resources

- Bauxite
- Copper
- Gold
- Iron ore
- Lead
- Molybdenum
- Silver
- Tin
- Titanium
- Tungsten
- Uranium
- Zinc

U.S. Petroleum Overview

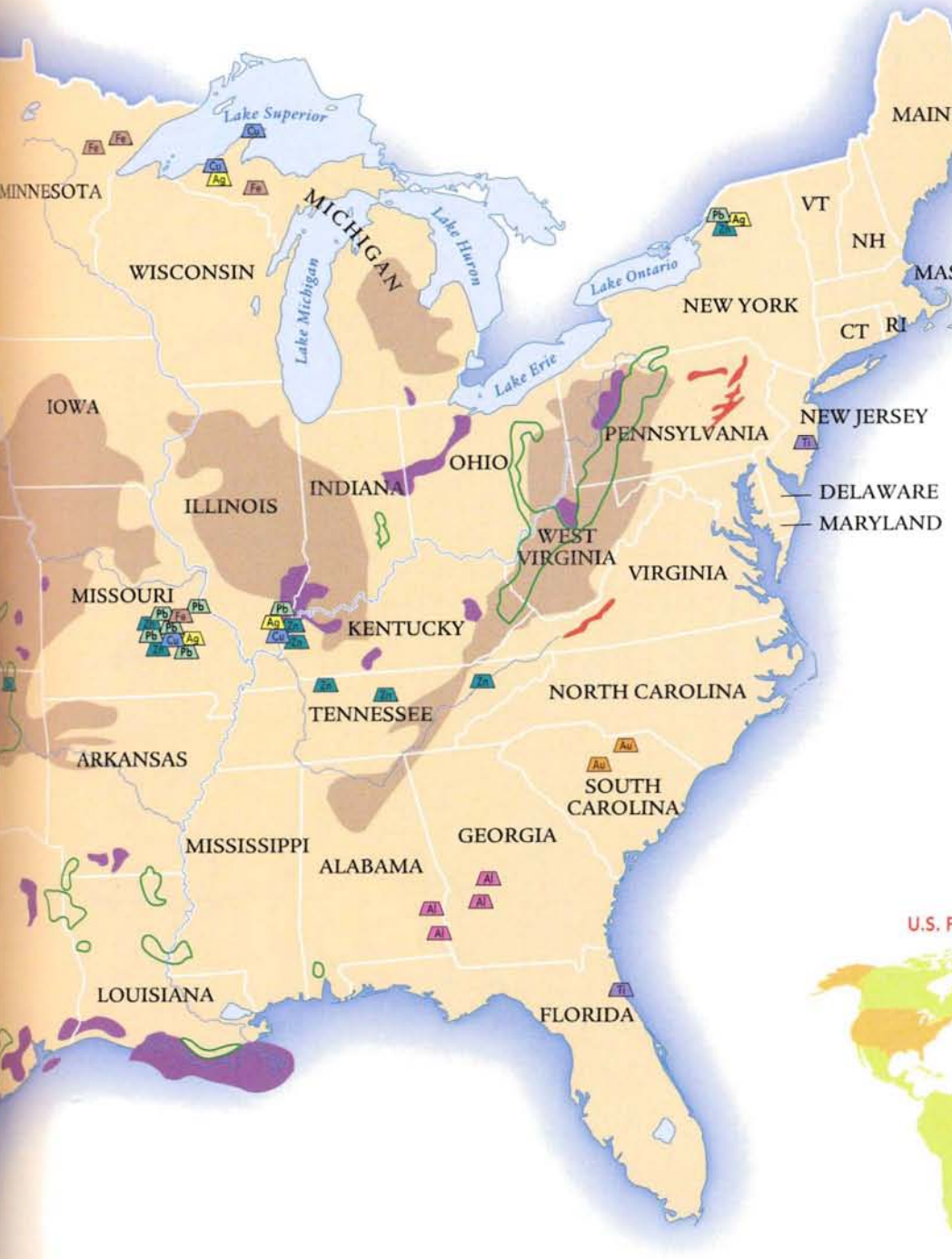


Source: U.S. Energy Information Administration

WASHINGTON
OREGON
CALIFORNIA
IDAHO
NEVADA
MONTANA
WYOMING
UTAH
ARIZONA
COLORADO
NEW MEXICO
NORTH DAKOTA
SOUTH DAKOTA
NEBRASKA
KANSAS
OKLAHOMA
TEXAS
ALASKA
HAWAII

Area of inset

The United States Geological Survey estimates that there is a 50% chance of extracting 5 billion barrels of oil from the coastal plain within the Arctic National Wildlife Refuge. Debate surrounds the issue of drilling and production and its impact on the environment.



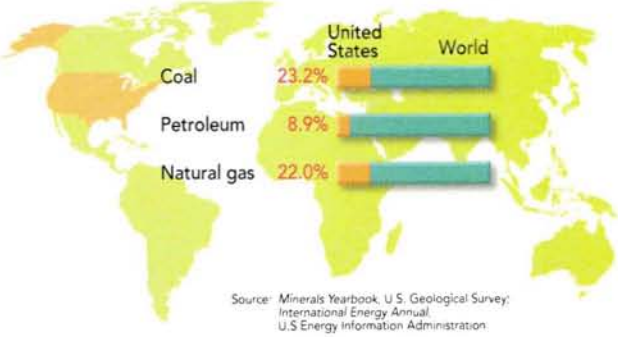
World's Leading Energy Producers, 1999

Source: International Energy Database, U.S. Energy Information Administration

World's Leading Energy Consumers, 1999

Source: International Energy Database, U.S. Energy Information Administration

U.S. Percentage of World Fuel Production, 2000



Source: Minerals Yearbook, U.S. Geological Survey; International Energy Annual, U.S Energy Information Administration

Leading Petroleum Producing States, 1999

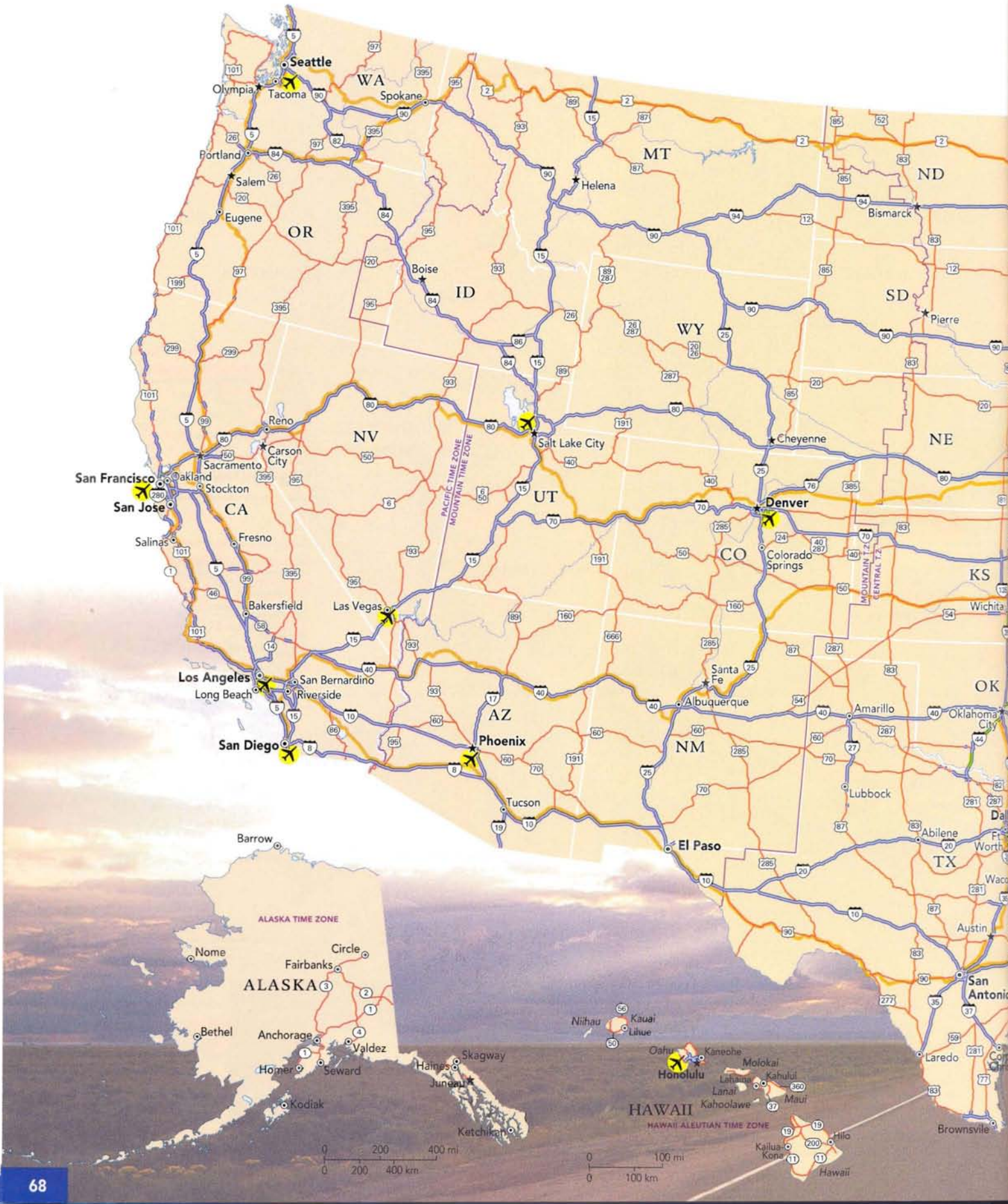
Source: Petroleum Supply Annual, U.S. Energy Information Administration

Leading Natural Gas Producing States, 1999

Source: Natural Gas Annual, U.S. Energy Information Administration

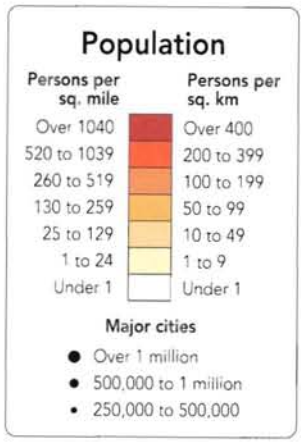
Leading Coal Producing States, 2000

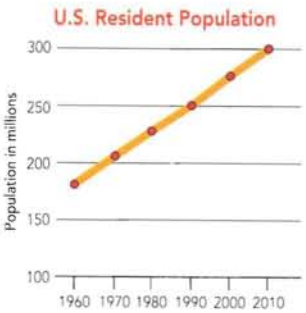
Source: Coal Industry Annual 2000, U.S. Energy Information Administration

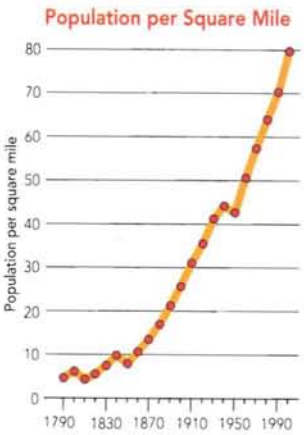

Seattle
Olympia
Tacoma
WA
Spokane
Portland
Salem
Eugene
OR
MT
Helena
ND
Bismarck
Boise
ID
SD
Pierre
WY
Reno
NV
Carson City
Sacramento
San Francisco
Oakland
Stockton
San Jose
CA
Salt Lake City
Cheyenne
NE
PACIFIC TIME ZONE
MOUNTAIN TIME ZONE
UT
Denver
Fresno
Salinas
CO
Colorado Springs
MOUNTAIN T.Z.
CENTRAL T.Z.
KS
Wichita
Bakersfield
Las Vegas
Los Angeles
Long Beach
San Bernardino
Riverside
San Diego
Santa Fe
Albuquerque
Amarillo
Oklahoma City
OK
AZ
Phoenix
NM
Lubbock
Tucson
El Paso
Abilene
Fort Worth
TX
Waco
Austin
San Antonio
Laredo
Brownsville
Barrow
ALASKA TIME ZONE
Nome
Circle
Fairbanks
ALASKA
Bethel
Anchorage
Valdez
Homer
Seward
Skagway
Haines
Juneau
Kodiak
Ketchikan
0 200 400 mi
0 200 400 km
Niihau
Kauai
Lihue
Oahu
Kaneohe
Honolulu
Molokai
Kahului
Lahaina
Lanai
Maui
Kahoolawe
HAWAII
HAWAII ALEUTIAN TIME ZONE
Hilo
Kailua-Kona
Hawaii
0 100 mi
0 100 km

Transportation

- Limited access (free)
- Limited access (toll)
- Primary highway
- Amtrak
- Time zone boundary
- Interstate highway
- U.S. highway
- State highway
- National capital
- State capital
- Other city
- Busiest airports (based on passenger arrivals and departures)

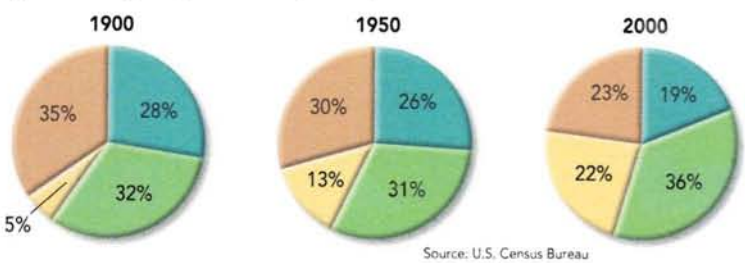




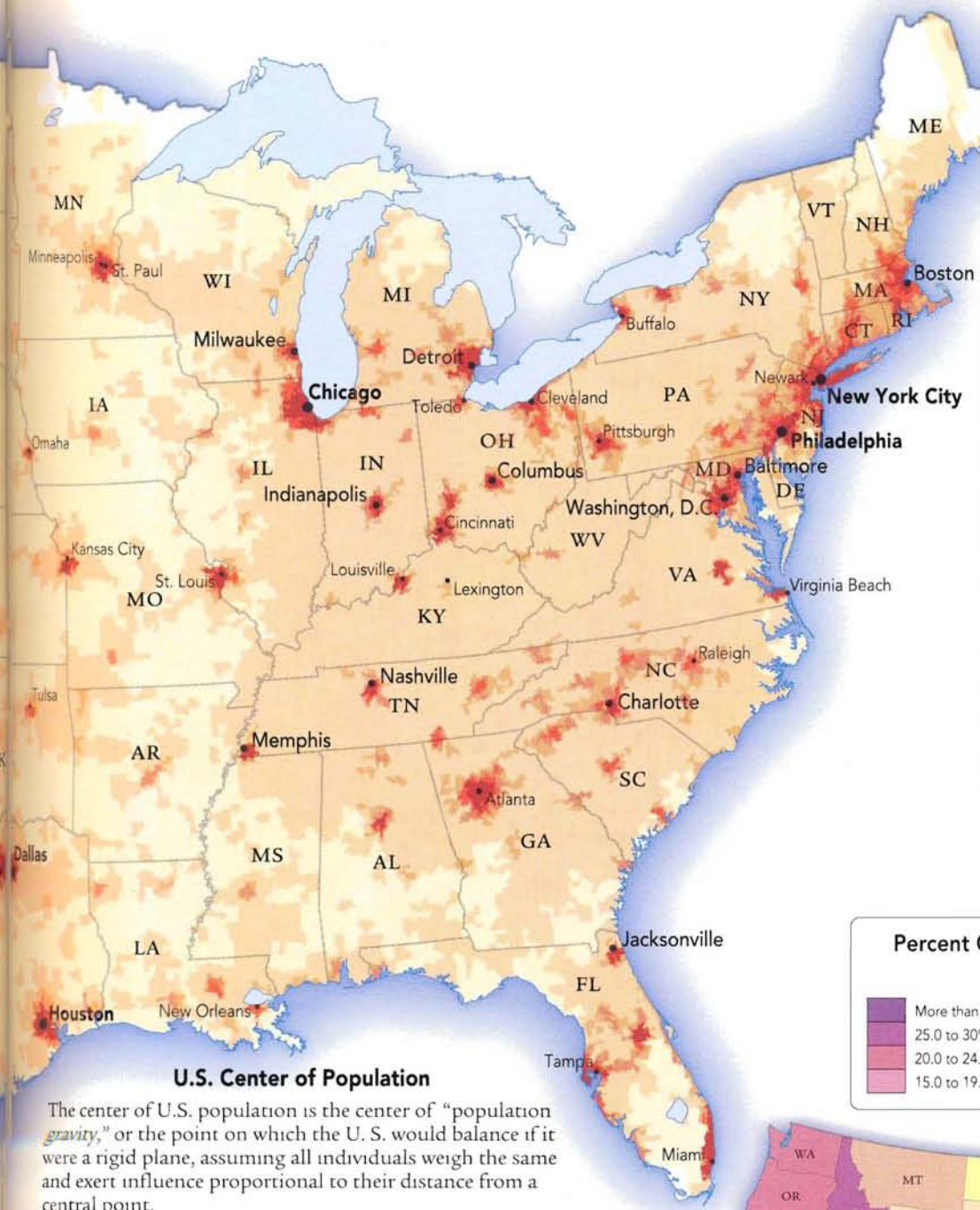


Source: U S Census Bureau

Distribution of Population by Region: 1900, 1950, 2000



Source: U.S. Census Bureau



20 Largest Cities, 2000

Population

	City	2000	1990	Change
1	New York	8,008,278	7,322,564	9.4%
2	Los Angeles	3,694,820	3,485,398	6.0%
3	Chicago	2,896,016	2,783,726	4.0%
4	Houston	1,953,631	1,630,553	19.8%
5	Philadelphia	1,517,550	1,585,577	-4.3%
6	Phoenix	1,321,045	983,403	34.3%
7	San Diego	1,223,400	1,110,549	10.2%
8	Dallas	1,188,580	1,006,877	18.0%
9	San Antonio	1,144,646	935,933	22.3%
10	Detroit	951,270	1,027,974	-7.5%
11	San Jose	894,943	782,248	14.4
12	Indianapolis	791,926	741,952	6.7%
13	San Francisco	776,733	723,959	7.3%
14	Jacksonville	735,617	635,230	15.8%
15	Columbus	711,470	632,910	12.4%
16	Austin	656,562	465,622	41%
17	Baltimore	651,154	736,014	-11.5%
18	Memphis	650,100	610,337	6.5%
19	Milwaukee	596,974	628,088	-5.0%
20	Boston	589,141	574,283	2.6%

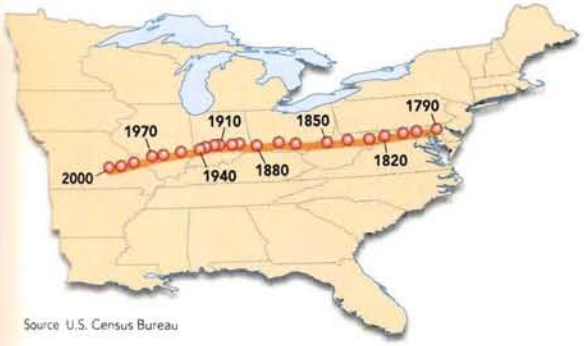
Source: U.S. Census Bureau

Percent Change in State Population 1990–2000

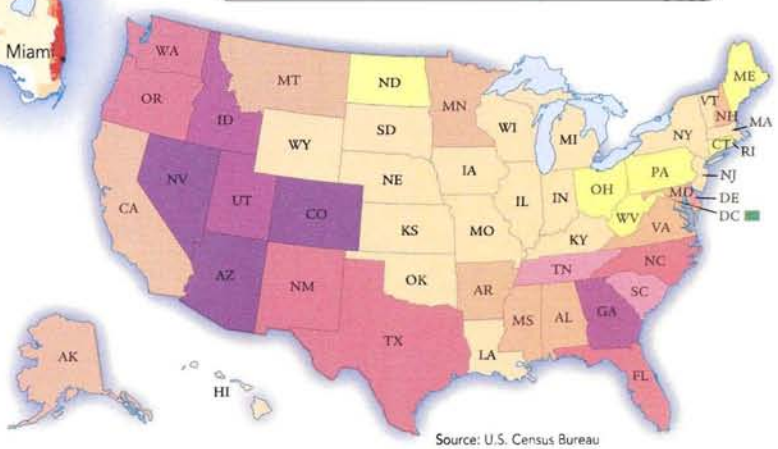
- More than 30% increase
- 25.0 to 30% increase
- 20.0 to 24.9% increase
- 15.0 to 19.9% increase
- 10.0 to 14.9% increase
- 5.0 to 9.9% increase
- 0 to 4.9% increase
- Decrease

U.S. Center of Population

The center of U.S. population is the center of "population *gravity*," or the point on which the U. S. would balance if it were a rigid plane, assuming all individuals weigh the same and exert influence proportional to their distance from a central point.



Source: U.S. Census Bureau



Source: U.S. Census Bureau

Per Capita Income

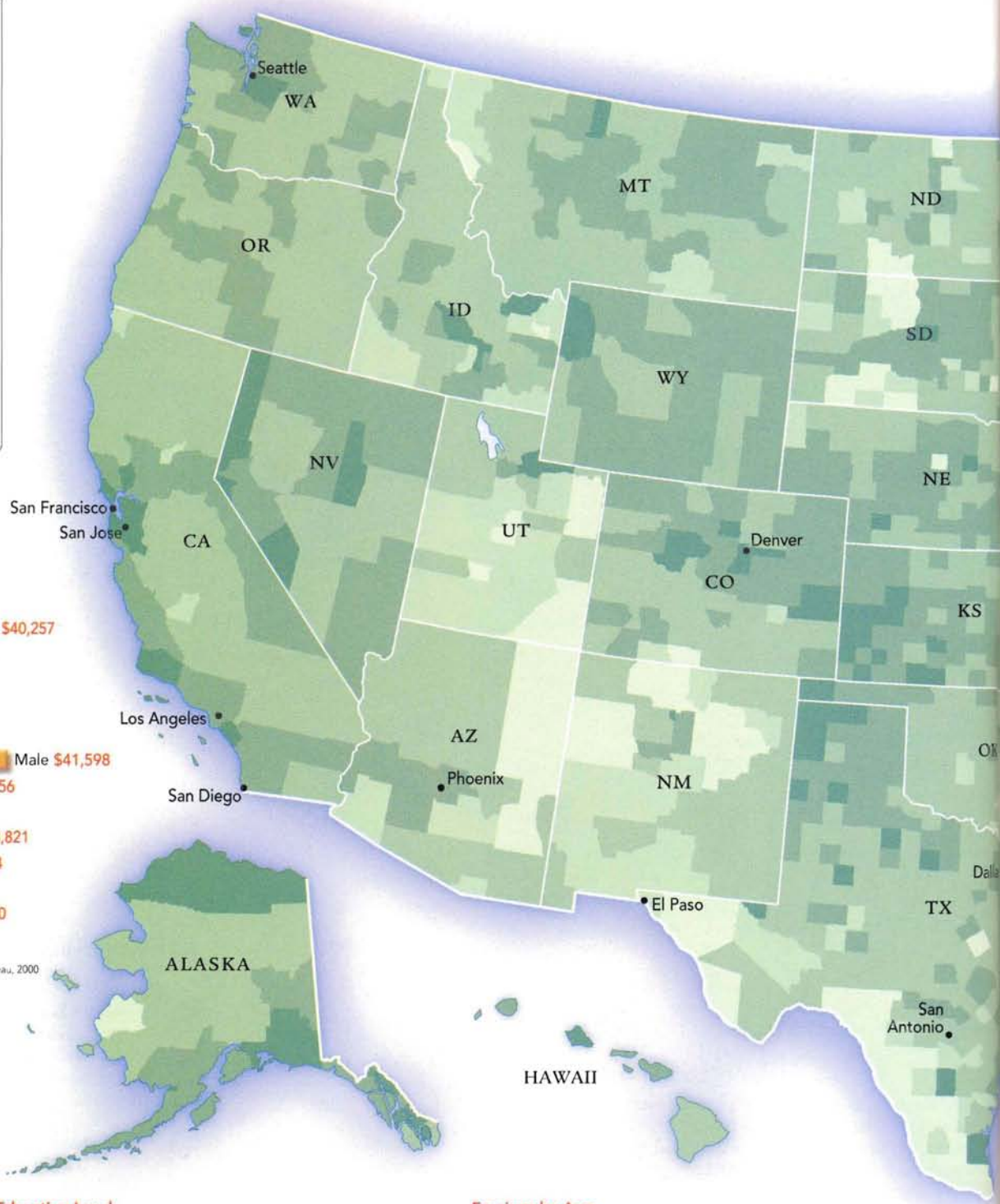
Per capita personal income* in dollars

- $24,000 and above
- $18,000 to $24,000
- $14,000 to 18,000
- $12,000 to $14,000
- $6,000 to $12,000
- Not reporting

*Per capita personal income is the mean average income computed for every man, woman, and child in a particular area. It is derived by dividing the total income of a particular area by the total population of that area. The areas used in this map are the counties and county equivalents.

Based on latest available data.

Source: Bureau of Economic Analysis, U.S. Census Bureau



Earnings by Gender

- Male $40,257
- Female $23,551

Earnings by Race

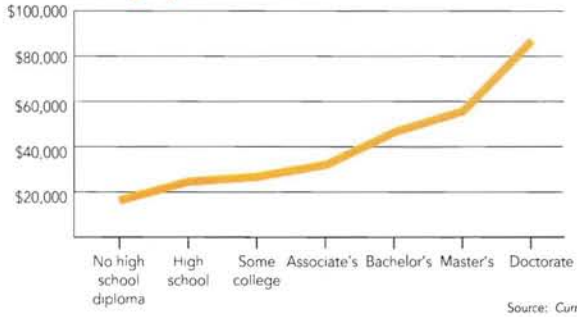
White
- Male $41,598
- Female $23,756

Black
- Male $28,821
- Female $21,694

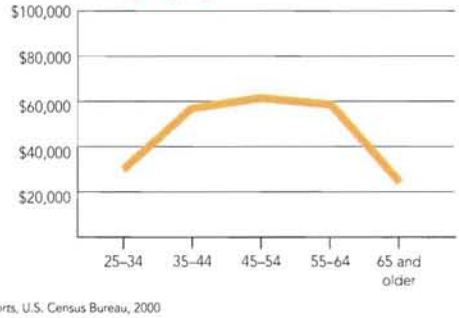
Hispanic
- Male $24,970
- Female $18,187

Source: *Current Population Reports*, U.S. Census Bureau, 2000

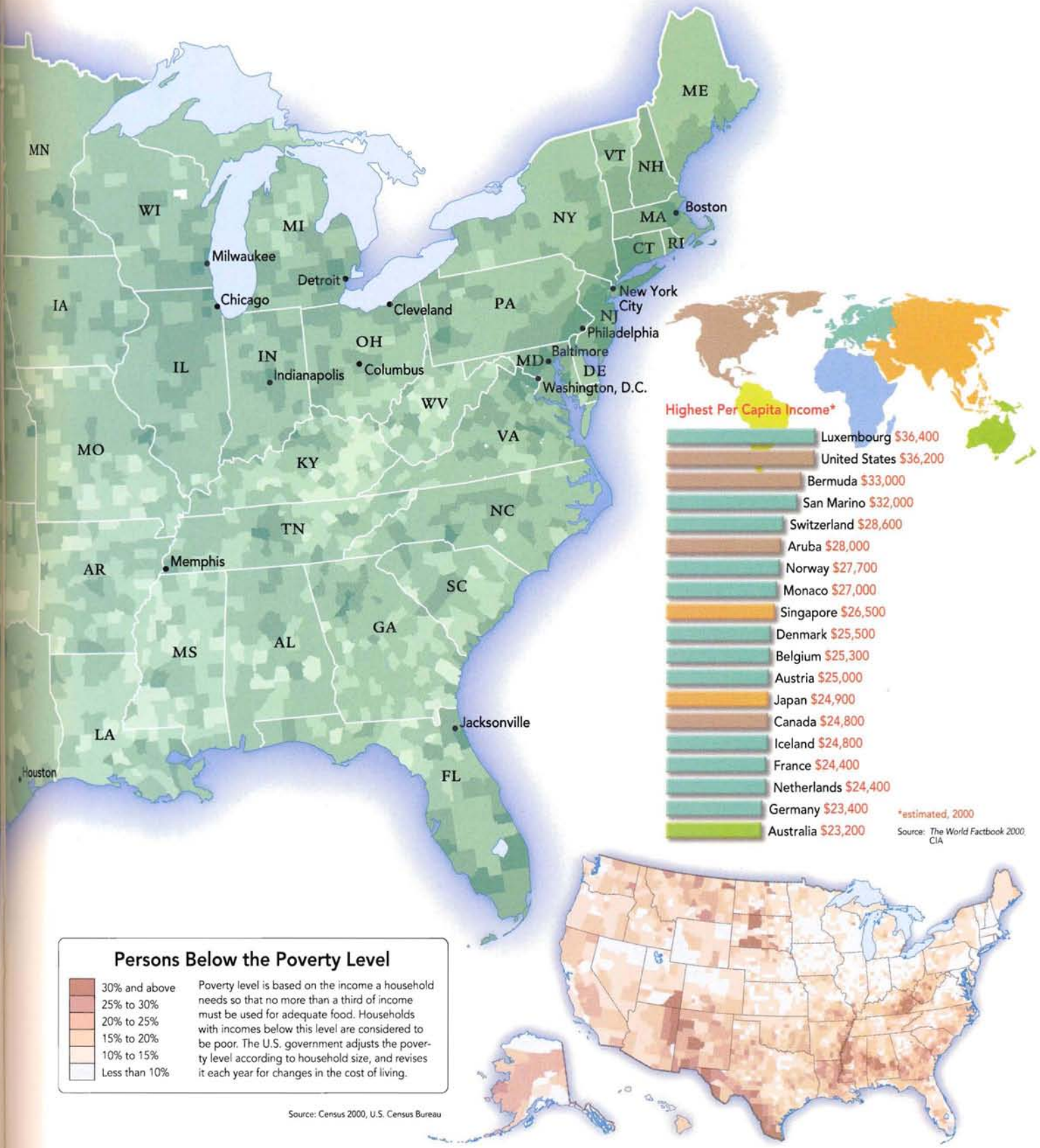
Earnings by Education Level



Earnings by Age



Source: *Current Population Reports*, U.S. Census Bureau, 2000



Highest Per Capita Income*

Luxembourg	$36,400
United States	$36,200
Bermuda	$33,000
San Marino	$32,000
Switzerland	$28,600
Aruba	$28,000
Norway	$27,700
Monaco	$27,000
Singapore	$26,500
Denmark	$25,500
Belgium	$25,300
Austria	$25,000
Japan	$24,900
Canada	$24,800
Iceland	$24,800
France	$24,400
Netherlands	$24,400
Germany	$23,400
Australia	$23,200

*estimated, 2000

Source: *The World Factbook 2000*, CIA

Persons Below the Poverty Level

30% and above
25% to 30%
20% to 25%
15% to 20%
10% to 15%
Less than 10%

Poverty level is based on the income a household needs so that no more than a third of income must be used for adequate food. Households with incomes below this level are considered to be poor. The U.S. government adjusts the poverty level according to household size, and revises it each year for changes in the cost of living.

Source: Census 2000, U.S. Census Bureau

Canada

Facts

- Area: 3,511,022 square miles (9,093,507 square kilometers)
- Highest Point: Mt. Logan, 19,551 ft. (5,959 m)
- Lowest Point: sea level
- Longest River: Mackenzie, 1,023 mi. (1,730 km)
- Largest Lake: Great Bear Lake, 12,096 sq. mi. (31,328 sq. km)
- Largest City: Toronto, Ontario, 2,481,494 (city population)


International boundary
Provincial boundary
Mountain peak
ARCTIC OCEAN
PACIFIC OCEAN
ATLANTIC OCEAN
Hudson Bay
Labrador Sea
Baffin Bay
Beaufort Sea
Gulf of Alaska
Davis Strait
Denmark Strait
Hudson Strait
Greenland (Kalaallit Nunaat) (Denmark)
ALASKA (U.S.)
UNITED STATES
CANADA
Queen Elizabeth Islands
North Magnetic Pole
Ellesmere Island
Axel Heiberg Island
Devon Island
Baffin Island
Victoria Island
Banks Island
Southampton Island
Ungava Peninsula
Newfoundland
Nova Scotia
Vancouver Island
Queen Charlotte Islands
ROCKY MOUNTAINS
COAST MOUNTAINS
MACKENZIE MOUNTAINS
LAURENTIAN MTS.
NOTRE DAME MTS.
LONG RANGE MTS.
COLUMBIA MTS.
GREAT PLAINS
KLONDIKE REGION
Mt. Logan 19,551 ft. (5,959 m)
Mt. Waddington 13,177 ft. (4,016 m)
Mt. Robson 12,972 ft. (3,954 m)
Mt. Jacques-Cartier 4,160 ft. (1,268 m)
Great Bear Lake
Great Slave Lake
Lake Athabasca
Lake Winnipeg
Lake Superior
Lake Huron
Lake Michigan
Lake Erie
L. Ontario
Mackenzie River
Yukon R.
Nelson River
St. Lawrence River
Arctic Circle
Robinson Projection
0 250 500 mi
0 250 500 km

Mexico

Mexico

Aguascalientes

Baja California

Baja California Sur

Campeche

Chiapas

Chihuahua

Coahuila

Colima

Distrito Federal

Guanajuato

Durango

Hidalgo

Jalisco

México

Guerrero

Nayarit

Michoacán

Morelos

Nuevo León

Oaxaca

Puebla

Quintana Roo

Querétaro

San Luis Potosí

Sonora

Tabasco

Tamaulipas

Tlaxcala

Veracruz

Yucatán

Sinaloa

Zacatecas

Facts

- Area: 742,490 square miles (1,923,040 square kilometers)
- Highest Point: Pico de Orizaba, 18,405 ft. (5,610 m)
- Lowest Point: Laguna Salada, 33 ft. (10 m) below sea level
- Longest River: Río Bravo del Norte, 1,240 mi. (1,996 km), along U.S. border
- Largest Lake: Lake Chapala, 417 sq. mi. (1,080 sq. km)
- Largest City: Mexico City, Distrito Federal, 8,489,007

International boundary
State boundary
National captial
Other capital

Symbol and label sizes indicate relative sizes of cities:

- **Mexico City**
- Veracruz
- Cancún

0 200 400 mi
0 200 400 km


UNITED STATES
Laguna Salada
33 ft. (10 m)
below sea level
Colorado River
Altar Desert
Sonoran Desert
SIERRA SAN PEDRO MARTIR
Baja California
Ángel de la Guarda I.
San Antonio Point
Guadalupe I.
Sebastián Vizcaíno Bay
Cedros I.
Eugenia Point
Vizcaíno Desert
Tiburón I.
Gulf of California
Sonora River
Yaqui R.
Álvaro Obregón Reservoir
Bavispe R.
SIERRA MADRE OCCIDENTAL
Fuerte R.
Copper Canyon
Magdalena I.
Cape San Lázaro
Magdalena Bay
Cerralvo I.
Cape San Lucas
TROPIC OF CANCER
Revillagigedo Islands
PACIFIC OCEAN
Marías Is.
Point Mita
Banderas Bay
Cape Corrientes
San Pedro R.
Río Grande de Santiago
Lerma River
Lake Chapala
Infiernillo Reservoir
Balsas River
Point Tejupan
Petacalco Bay
SIERRA MADRE DEL SUR
Verde R.
Atoyac R.
Amistad Reservoir
Río Bravo del Norte
Conchos R.
CABALLOS MESTEÑOS PLAIN
MAPIMÍ BASIN
Chihuahua Desert
SIERRA MADRE ORIENTAL
Falcon Reservoir
Gulf of Mexico
Madre Lagoon
SIERRA AZUL
Pánuco R.
Cape Rojo
Tamiahua Lagoon
Ixtaccihuatl
17,343 ft.
(5,286 m)
Popocatépetl
17,887 ft.
(5,452 m)
Pico de Orizaba
18,405 ft.
(5,610 m)
Miguel Alemán Reservoir
OAXACA PLATEAU
Isthmus of Tehuantepec
Nezahualcóyotl Reservoir
Grijalva R.
Angostura Reservoir
SIERRA MADRE DE CHIAPAS
Gulf of Tehuantepec
Bay of Campeche
Point Zapotitlán
Términos Lagoon
Usumacinta R.
Yucatán Peninsula
Cape Catoche
Yucatán Channel
CUBA
Cozumel I.
Point Allen
Point Herrero
Chetumal Bay
BELIZE
GUATEMALA
0 200 400 mi
0 200 400 km
Robinson Projection
NORTH AMERICA
SOUTH AMERICA
EUROPE
ASIA
AFRICA
AUSTRALIA
ANTARCTICA
ARCTIC OCEAN
ATLANTIC OCEAN
PACIFIC OCEAN
INDIAN OCEAN
Equator
International boundary
Mountain peak
Lowest point

South America

International boundary
National capital
★ Other capital

Symbol and label sizes indicate relative sizes of cities:

- **Rio de Janeiro**
- Santos
- Jatai

Facts

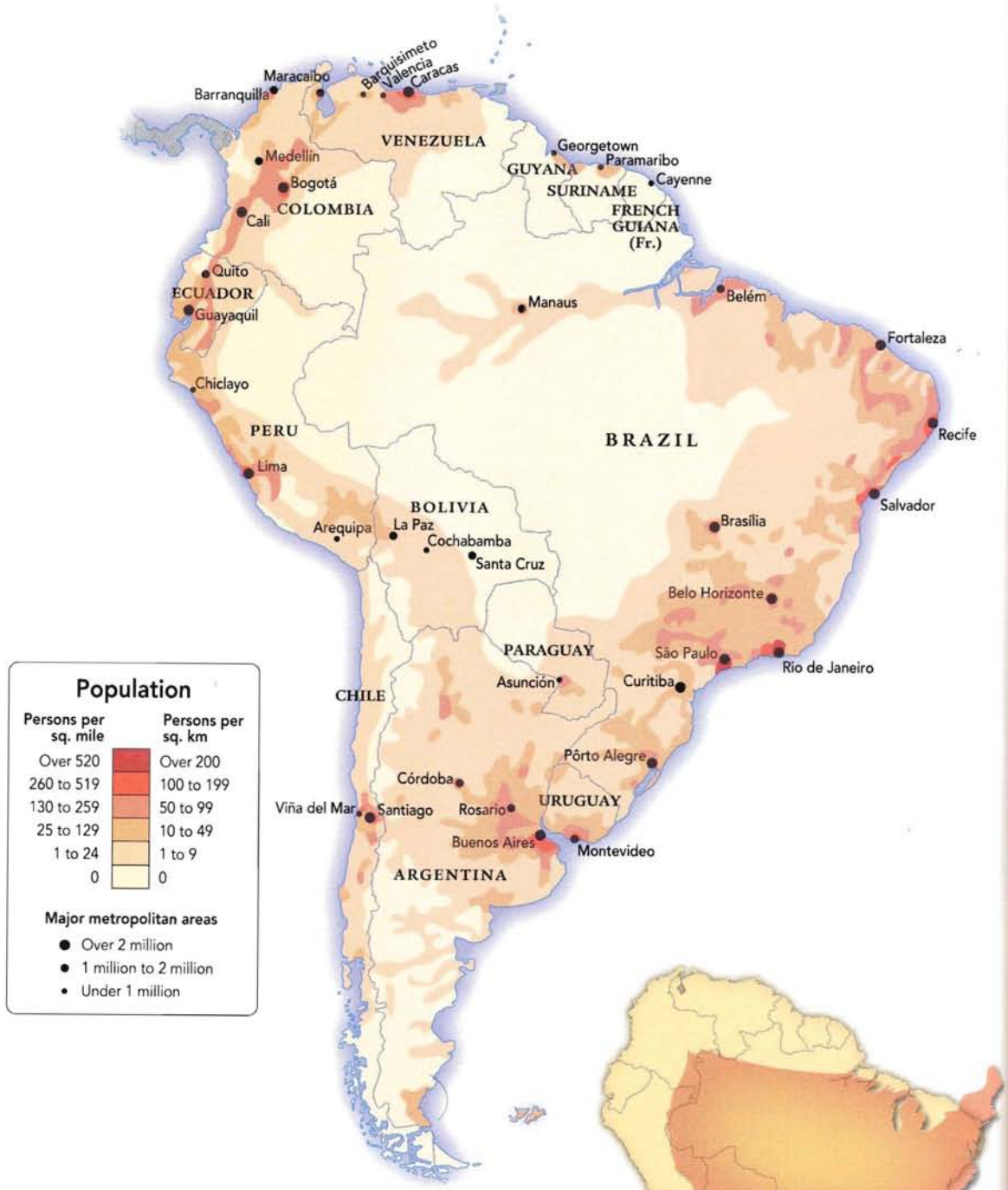
- Area: 6,900,000 square miles (17,800,000 square kilometers)
- Highest Point: Mt. Aconcagua, Argentina, 22,834 ft (6,960 m)
- Lowest Point: Valdés Peninsula, Argentina, 131 ft (40 m) below sea level
- Longest River: Amazon, 4,000 mi (6,400 km)
- Largest Lake: Lake Titicaca, Peru/Bolivia, 3,200 sq. mi (8,300 sq. km)
- Largest Country: Brazil, 6,880,000 sq. mi (17,819,000 sq. km) (slightly smaller than the United States)
- Largest City: São Paulo, Brazil, 17,834,000

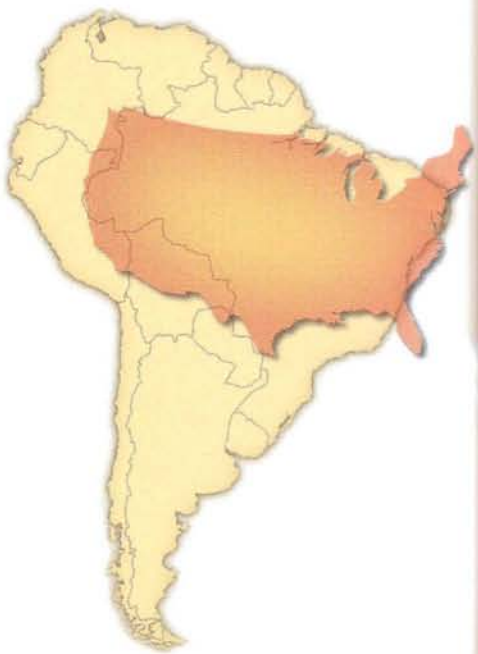

NORTH AMERICA
Caribbean Sea
Gulf of Panama
Lake Maracaibo
LLANOS
Orinoco River
Angel Falls
GUIANA HIGHLANDS
ANDES
Cauca River
Magdalena River
Orinoco River
Rio Negro
EQUATOR
Galapagos Islands
Gulf of Guayaquil
Pariñas Pt.
Putumayo River
Marañón River
Ucayali River
AMAZON BASIN
Amazon (Solimões) River
Amazon River
Japurá River
Purus River
Madeira River
Tapajós River
Xingu River
Teles Pires River
Tocantins River
Parnaíba River
São Francisco River
Cape São Roque
Mt. Huascarán 22,133 ft. (6,746 m)
Guaporé River
Beni River
Paracas Peninsula
Volcán Misti 19,098 ft. (5,821 m)
Lake Titicaca
Mt. Illimani 20,741 ft. (6,322 m)
Mamoré River
MATO GROSSO PLATEAU
Araguaia River
BRAZILIAN HIGHLANDS
PACIFIC OCEAN
ALTIPLANO
Lake Poopó
Atacama Desert
Paraguay River
Paraná River
Grande River
GRAN CHACO
Pilcomayo River
SERRA DO MAR
TROPIC OF CAPRICORN
Iguazú Falls
Salado River
Paraná River
Uruguay River
San Félix I.
San Ambrosio I.
Juan Fernández Is.
Mt. Aconcagua 22,834 ft. (6,960 m)
ATLANTIC OCEAN
Río de la Plata
PAMPAS
Colorado River
Negro River
Gulf of San Matías
Valdés Peninsula 131 ft (40 m) below sea level
Chiloé I.
Los Chonos Archipelago
PATAGONIA
Gulf of San Jorge
Santa Cruz River
Strait of Magellan
Tierra del Fuego
Cape Horn
Falkland Islands (Islas Malvinas)
South Georgia
0 300 600 mi
0 300 600 km
N
W
E
S
International boundary
Mountain peak
Lowest point
Falls
NORTH AMERICA
EUROPE
ASIA
AFRICA
SOUTH AMERICA
AUSTRALIA
ANTARCTICA
ATLANTIC OCEAN
PACIFIC OCEAN
INDIAN OCEAN
ARCTIC OCEAN
Equator
Robinson Projection
Elevation Profile
Paracas Peninsula
Lake Titicaca
Andes Mountains
Mato Grosso Plateau
Brazilian Highlands
20,000 ft.
10,000 ft.
5,000 ft.
Sea level
A
B

Major Metropolitan Areas

Argentina	
Buenos Aires	11,298,000
Córdoba	1,209,000
Rosario	1,119,000
Bolivia	
La Paz	1,484,000
Santa Cruz	1,136,000
Cochabamba	517,000
Brazil	
São Paulo	17,834,000
Rio de Janeiro	10,612,000
Belo Horizonte	4,800,000
Pôrto Alegre	3,655,000
Recife	3,332,000
Salvador	3,018,000
Fortaleza	2,975,000
Brasília	2,942,000
Curitiba	2,726,000
Belém	1,816,000
Manaus	1,011,000
Chile	
Santiago	4,647,000
Viña del Mar	299,000
Colombia	
Bogotá	6,422,000
Cali	2,129,000
Medellín	1,885,000
Barranquilla	1,549,000
Ecuador	
Guayaquil	2,118,000
Quito	1,616,000
French Guiana	
Cayenne	50,000
Guyana	
Georgetown	187,000
Paraguay	
Asunción	513,000
Peru	
Lima	6,988,000
Arequipa	830,000
Chiclayo	766,000
Suriname	
Paramaribo	291,000
Uruguay	
Montevideo	1,303,000
Venezuela	
Caracas	3,061,000
Maracaibo	1,220,000
Barquisimeto	896,000
Valencia	742,000

International comparability of population data is limited by varying census methods. Where metropolitan population is unavailable, core city population is shown.





Source: U.S. Census Bureau

Gross Domestic Product

GDP per capita

- Over $20,000
- $10,000 to $20,000
- $5,000 to $9,999
- $2,500 to $4,999
- Less than $2,500
- No data

Source: *World Factbook*, CIA, 2001

Gross Domestic Product is a measure of the total goods and services generated by a country. Generally, manufacturing, high-tech services, and specialized agricultural products add more value than raw materials and basic food stuffs.

Electricity Use

Source: *World Factbook*, CIA, 2001

Non-manufacturing economic activity is generated primarily by commercial plantation agriculture, livestock raising, and the harvest of forest products, plus the extraction of oil and minerals. Manufacturing, like population, is concentrated in the continent's coastal areas.

Land Use and Resources

Predominant land use

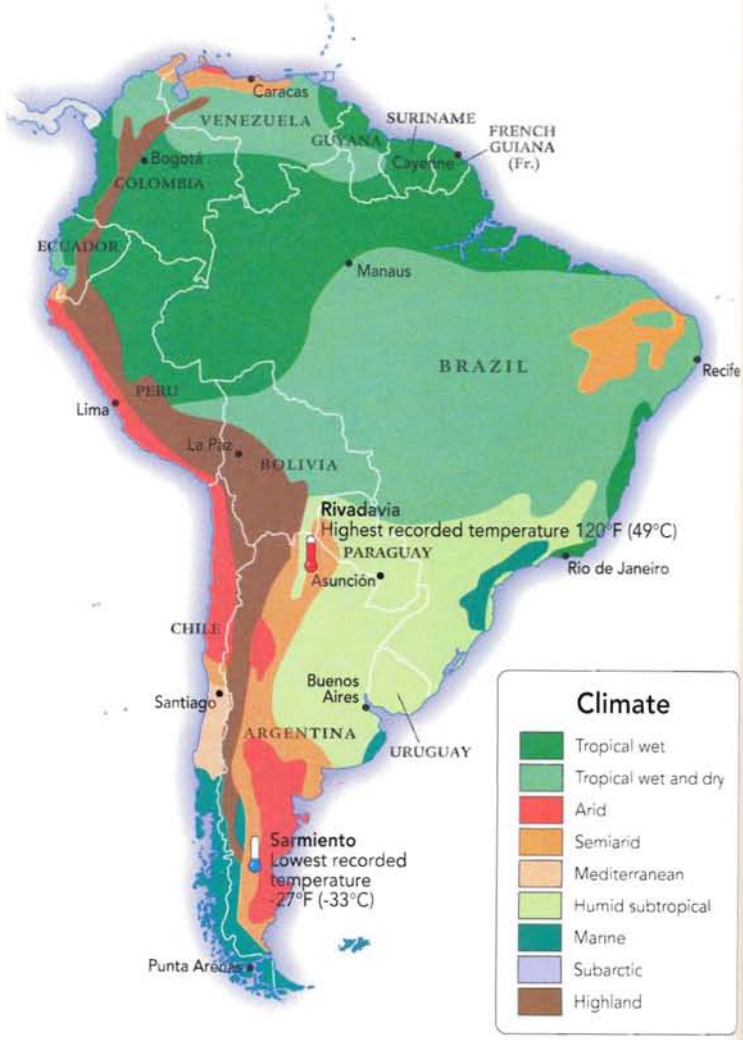
- Commercial agriculture
- Livestock ranching
- Subsistence agriculture
- Primarily forestland
- Limited agricultural activity

Major resources

- Coal
- Natural gas
- Oil
- Forest products
- Gold
- Silver
- Iron ore
- Uranium
- Bauxite
- Diamonds
- Other minerals
- Fishing
- Major manufacturing and trade centers

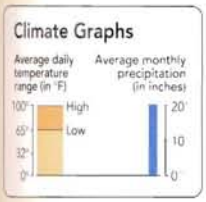
Most of the continent is under the influence of wet and tropical air. Warm currents in the Atlantic Ocean as well as wet lowland elevations lying within the confines of the tropical latitudes directly affect the climate of the majority of the land area. The Andes Mountains and cold currents that hug the Pacific coast keep the Western and Southern regions of the continent temperate but dry.

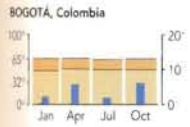
See photographs taken in different kinds of climates on pages 24–25

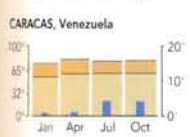


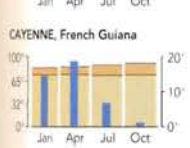
Moist and unstable air above the Equator—as well as highlands that wring out waterlogged clouds—produce heavy rainfall, but along the coast of Chile and elsewhere, cold ocean water and mountainous barriers keep rainfall at a minimum.

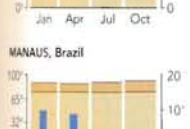
Climate Graphs











South America is dominated by tropical vegetation, including Earth's most extensive rain forest. Farther south, a vast grassland, the Pampa, fades gradually into the dry and meager vegetation of Patagonia.

See photographs of the different kinds of vegetation on pages 26–27.

Vegetation

- Unclassified highlands or ice cap
- Midlatitude deciduous forest
- Mixed forest
- Midlatitude scrubland
- Midlatitude grassland
- Desert
- Tropical seasonal and scrub
- Tropical rain forest
- Tropical savanna

Environmental Issues

- Current forest
- Cleared forest
- Area at highest risk of desertification
- Poor air quality*

*Cities exceeding at least one of the World Health Organization's (WHO) annual mean guidelines for air quality

Sources: *Global Distribution of Original and Remaining Forests*, UNEP-WCMC, 2002
World Soil Resources Map Index, USDA/NRCS, 2002
World Development Indicators, World Bank, 1999

The destruction of forest areas—especially in the Amazon Basin—is one of the leading environmental issues in South America. In Brazil, it is estimated that an average of 15,000 acres of forest are lost each day as people clear land for timber and to grow crops. Human activities have impacted other types of vegetation, as well. For example, overgrazing has caused damage to grasslands in many areas, putting them at risk of becoming infertile deserts. Poor urban air quality is another serious concern in the region, with nearly 80 percent of the population living in cities.

Europe


ICELAND
Reykjavík
Akureyri
ARCTIC CIRCLE
20°W
10°W
0°
10°E
20°E
30°E
40°E
50°E
60°E
70°E
70°N
60°N
50°N
40°N
Novaya Zemlya
Barents Sea
Norwegian Sea
North Sea
ATLANTIC OCEAN
Bay of Biscay
Mediterranean Sea
Balearic Sea
Tyrrhenian Sea
Ionian Sea
Adriatic Sea
Aegean Sea
Black Sea
Sea of Azov
Caspian Sea
Baltic Sea
Gulf of Bothnia
G. of Finland
White Sea
English Channel
Irish Sea
Strait of Gibraltar
L. Ladoga
L. Onega
L. Geneva
Pechora R.
N. Dvina R.
Kama R.
Volga R.
Ural R.
Don R.
Dnieper R.
Dniester R.
Danube R.
Vistula R.
Oder R.
Elbe R.
Rhine R.
Rhône R.
Loire R.
Po R.
Ebro R.
Tagus R.
Faroe Is. (Den.)
Shetland Is. (U.K.)
Orkney Is.
Outer Hebrides
Channel Is. (U.K.)
Corsica (Fr.)
Sardinia (It.)
Balearic Is. (Sp.)
Majorca
Minorca
Sicily
Elba
Pantelleria (It.)
Crete
Rhodes
Cyclades
Gotland
Öland
Åland
NORWAY
SWEDEN
FINLAND
RUSSIA
ESTONIA
LATVIA
LITHUANIA
BELARUS
UKRAINE
MOLDOVA
ROMANIA
BULGARIA
TURKEY
GREECE
ALBANIA
F.Y.R. MACEDONIA
SERBIA & MONTENEGRO
BOSNIA & HERZEGOVINA
CROATIA
SLOVENIA
HUNGARY
SLOVAKIA
CZECH REP.
POLAND
GERMANY
DENMARK
NETH.
BELGIUM
LUXEMBOURG
FRANCE
SWITZERLAND
LIECHTENSTEIN
AUSTRIA
ITALY
SAN MARINO
VATICAN CITY
MONACO
ANDORRA
SPAIN
PORTUGAL
GIBRALTAR (U.K.)
MALTA
UNITED KINGDOM
IRELAND
Northern Ireland
Scotland
England
Wales
GEORGIA
ARMENIA
AZERBAIJAN
Hammerfest
Tromsø
Bodø
Kiruna
Luleå
Oulu
Umeå
Vaasa
Trondheim
Sundsvall
Bergen
Stavanger
Oslo
Uppsala
Stockholm
Linköping
Göteborg
Turku
Tampere
Lahti
Helsinki
Tallinn
Tartu
Riga
Daugavpils
Kaunas
Vilnius
Kaliningrad
Vicebsk
Minsk
Hrodna
Brest
Homel'
Murmansk
Kandalaksha
Arkhangel'sk
Petrozavodsk
St. Petersburg
Velikiy Novgorod
Pechora
Ukhta
Syktyvkar
Perm'
Kirov
Izhevsk
Naberezhnyye Chelny
Kazan'
Yaroslavl'
Ivanovo
Nižnij Novgorod
Tver'
Moscow
Ul'yanovsk
Samara
Orenburg
Kaluga
Tula
Ryazan'
Penza
Smolensk
Bryansk
Lipetsk
Tambov
Saratov
Voronezh
Kursk
Kharkiv
Volgograd
Astrakhan'
Luhans'k
Donets'k
Rostov-na-Donu
Mariupol'
Kiev (Kyiv)
L'viv
Dnipropetrovs'k
Zaporizhzhia
Kryvyi Rih
Mykolaiv
Chernivtsi
Chişinău
Odesa
Simferopol'
Sevastopol'
Krasnodar
Groznyy
Tbilisi
Yerevan
Baku
Iaşi
Bucharest
Ploieşti
Constanţa
Timişoara
Varna
Burgas
Sofia
Plovdiv
Istanbul
Thessaloniki
Larisa
Patras
Athens
Iraklio
Skopje
Tirana
Podgorica
Belgrade
Novi Sad
Sarajevo
Split
Dubrovnik
Zagreb
Ljubljana
Pécs
Budapest
Debrecen
Košice
Bratislava
Vienna
Graz
Linz
Brno
Ostrava
Prague
Kraków
Katowice
Wrocław
Łódź
Warsaw
Poznań
Szczecin
Gdańsk
Berlin
Hamburg
Bremen
Hannover
Essen
Cologne
Bonn
Leipzig
Dresden
Frankfurt
Mannheim
Stuttgart
Munich
Copenhagen
Århus
Odense
Malmö
Amsterdam
Rotterdam
Antwerp
Brussels
Liège
Lille
Luxembourg
Paris
Le Havre
Rouen
Brest
Nantes
Tours
Strasbourg
Dijon
Bordeaux
Lyon
Geneva
Bern
Zürich
Toulouse
Marseille
Nice
Toulon
Milan
Turin
Genoa
Verona
Venice
Bologna
Florence
Rome
Naples
Salerno
Bari
Taranto
Cagliari
Palermo
Catania
Valletta
Corfu
Barcelona
Zaragoza
Madrid
Valencia
Alicante
Palma de Mallorca
Bilbao
Gijón
Valladolid
Vigo
Porto
Lisbon
Badajoz
Seville
Córdoba
Granada
Málaga
Cádiz
London
Birmingham
Bristol
Cardiff
Portsmouth
Manchester
Liverpool
Leeds
Sheffield
Newcastle upon Tyne
Edinburgh
Glasgow
Aberdeen
Belfast
Dublin
Cork
N
S
E
W
0
250
500 mi
0
250
500 km

Facts

- Area: 4,032,000 square mi. (10,443,000 square kilometers)
- Highest Point: Mt. Elbrus, Russia, 18,510 ft. (5,642 m)
- Lowest Point: Caspian Sea 92 ft. (28 m) below sea level
- Longest River: Volga, 2,290 mi. (3,685 km)
- Largest Lake: Caspian Sea, 143,244 sq. mi. (371,000 sq. km)
- Largest Country: Russia (European), 1,663,870 sq. mi. (4,309,400 sq. km)
- Largest City: Paris, France 9,645,000 (metropolitan pop.)

International boundary
National capital
Other capital

Symbol and label sizes indicate relative sizes of cities:

- **London**
- Helsinki
- Varna


International boundary
Canal
Mountain peak
Lowest point
Robinson Projection
NORTH AMERICA
SOUTH AMERICA
ATLANTIC OCEAN
PACIFIC OCEAN
AFRICA
EUROPE
ASIA
INDIAN OCEAN
AUSTRALIA
ANTARCTICA
Equator
ATLANTIC OCEAN
Norwegian Sea
North Sea
Barents Sea
White Sea
Baltic Sea
Bay of Biscay
Mediterranean Sea
Black Sea
Caspian Sea
Adriatic Sea
Aegean Sea
Ionian Sea
Tyrrhenian Sea
Ligurian Sea
Balearic Sea
Alboran Sea
Sea of Azov
Sea of Marmara
Sea of Crete
Irish Sea
English Channel
Strait of Dover
St. George's Channel
Skagerrak
Kattegat
Gulf of Bothnia
Gulf of Finland
Gulf of Riga
Gulf of Lions
Gulf of Taranto
Strait of Gibraltar
Strait of Sicily
Strait of Messina
Bosporus
Dardanelles
ASIA
AFRICA
URAL MOUNTAINS
SCANDINAVIAN MTS.
ALPS
PYRENEES
APENNINES
CARPATHIAN MTS.
TRANSYLVANIAN ALPS
BALKAN MTS.
DINARIC ALPS
CAUCASUS MTS.
LESSER CAUCASUS
CANTABRIAN MTS.
SIERRA MORENA
SUDETEN MTS.
MASSIF CENTRAL
THE PENNINES
NORTHERN EUROPEAN PLAIN
CENTRAL RUSSIAN UPLAND
VOLGA UPLAND
DNIEPER UPLAND
DONETS BASIN
Valdai Hills
Timan Ridge
Caspian Depression
Transcaucasia
Iceland
Vatnajökull
Faroe Is.
Shetland Is.
Orkney Islands
Outer Hebrides
Cape Wrath
Highlands
British Isles
Cape Clear
Land's End
Guernsey
Jersey
Brittany
Frisian Is.
Jutland
Kola Peninsula
Kanin Pen.
Kolguyev I.
North Cape
Lapland
Åland Is.
Hiiumaa I.
Saaremaa I.
Gotland
Öland
Iberian Peninsula
Balkan Peninsula
Peloponnese Pen.
Crimea
Cape Finisterre
Cape St. Vincent
Balearic Is.
Majorca
Minorca
Ibiza
Corsica
Sardinia
Elba
Sicily
Malta
Pantelleria
Kefallinia
Crete
Rhodes
Cyclades
Galdhøpiggen 8,100 ft. (2,469 m)
Mt. Blanc 15,771 ft. (4,807 m)
Pico de Aneto 11,168 ft. (3,404 m)
Mulhacén 11,423 ft. (3,482 m)
Mt. Etna 10,902 ft. (3,323 m)
Mt. Olympus 9,570 ft. (2,917 m)
Musala Peak 9,596 ft. (2,925 m)
Moldoveanu 8,346 ft. (2,544 m)
Mt. Elbrus 18,510 ft. (5,642 m)
Caspian Sea 92 ft. (28 m) below sea level
Ural River
Kama River
Volga River
Volga Delta
Volga-Don Canal
Volgograd Reservoir
Kuybyshev Reservoir
Tsimlyansk Reservoir
Rybinsk Reservoir
Don R.
Donets R.
Oka River
Dnieper R.
Desna R.
Pripet River
Kremenchuk Reservoir
Kakhovka Res.
Dniester River
Prut R.
Danube R.
Danube Delta
Vistula R.
Bug R.
Oder R.
Elbe River
Weser R.
Rhine R.
Rhine Delta
Seine River
Marne R.
Loire R.
Garonne R.
Rhône R.
Po R.
Po Valley
Ebro R.
Duero R.
Douro R.
Tagus River
Guadiana R.
Tisza R.
Sava R.
Pechora R.
Vychegda River
Sukhona R.
Northern Dvina R.
W. Dvina River
Glåma R.
Österdal
Kemi R.
Muonio R.
Tornio R.
Lake Ladoga
Lake Onega
Lake Saimaa
Lake Peipus
Vänern
Vättern
Lake Constance
L. Geneva
Lake Balaton
Lake Sevan
Wallachia
Dalmatia
Kiel Canal
PRIME MERIDIAN
ARCTIC CIRCLE
30°W
20°W
10°W
0°
10°E
20°E
30°E
40°E
50°E
60°E
70°E
40°N
50°N
60°N
70°N
0
250
500 mi
0
250
500 km
N
E
S
W
A
B
Elevation Profile
15,000 ft.
10,000 ft.
5,000 ft.
Sea level
Massif Central
Mt. Blanc
Alps
Carpathian Mountains
Black Sea
Sea of Azov
Caspian Depression
Caspian Sea

Major Metropolitan Areas

Albania
Tirana 244,000

Andorra
Andorra la Vella 21,000

Armenia
Yerevan 1,247,000

Austria
Vienna 1,562,000

Azerbaijan
Baku 1,792,000

Belarus
Minsk 1,681,000

Belgium
Brussels 978,000
Antwerp 449,000

Bosnia & Herzegovina
Sarajevo 529,000

Bulgaria
Sofia 1,191,000

Croatia
Zagreb 692,000

Czech Republic
Prague 1,179,000

Denmark
Copenhagen 1,085,000

Estonia
Tallinn 398,000

Finland
Helsinki 965,000

France
Paris 9,645,000
Marseille 1,350,000
Lyon 1,349,000
Lille 1,001,000

Georgia
Tbilisi 1,399,000

Germany (core city only)
Berlin 3,382,000
Hamburg 1,715,000
Munich 1,210,000
Cologne 963,000
Frankfurt 647,000
Essen 595,000
Dortmund 589,000
Stuttgart 584,000
Düsseldorf 569,000

Greece
Athens 3,073,000

Hungary
Budapest 1,825,000

Iceland
Reykjavík 175,000

Ireland
Dublin 1,123,000

Italy
Rome 2,460,000
Milan 1,183,000
Naples 993,000
Turin 857,000
Palermo 653,000
Genoa 604,000

Latvia
Riga 793,000

Liechtenstein
Vaduz 5,000

Lithuania
Vilnius 578,000

Luxembourg
Luxembourg 77,000

F.Y.R. Macedonia
Skopje 545,000

Malta
Valletta 8,000

Moldova
Chişinău 658,000

Monaco
Monaco 27,000

Netherlands
Amsterdam 1,207,000
Rotterdam 1,161,000

Norway
Oslo 513,000

Poland
Warsaw 1,610,000
Łódź 787,000
Kraków 741,000
Wrocław 634,000

Portugal
Lisbon 1,947,000

Romania
Bucharest 2,009,000

Russia (European)
Moscow 8,538,000
St. Petersburg 4,678,000
Nizhnij Novgorod 1,366,000
Samara 1,183,000
Kazan' 1,092,000
Ufa 1,094,000
Volgograd 1,025,000
Perm' 1,024,000
Rostov-na-Donu 1,004,000

San Marino
San Marino 5,000

Serbia & Montenegro
Belgrade 1,619,000

Slovakia
Bratislava 429,000

Slovenia
Ljubljana 264,000

Spain
Madrid 2,939,000
Barcelona 1,504,000
Valencia 738,000
Seville 685,000

Sweden
Stockholm 1,665,000

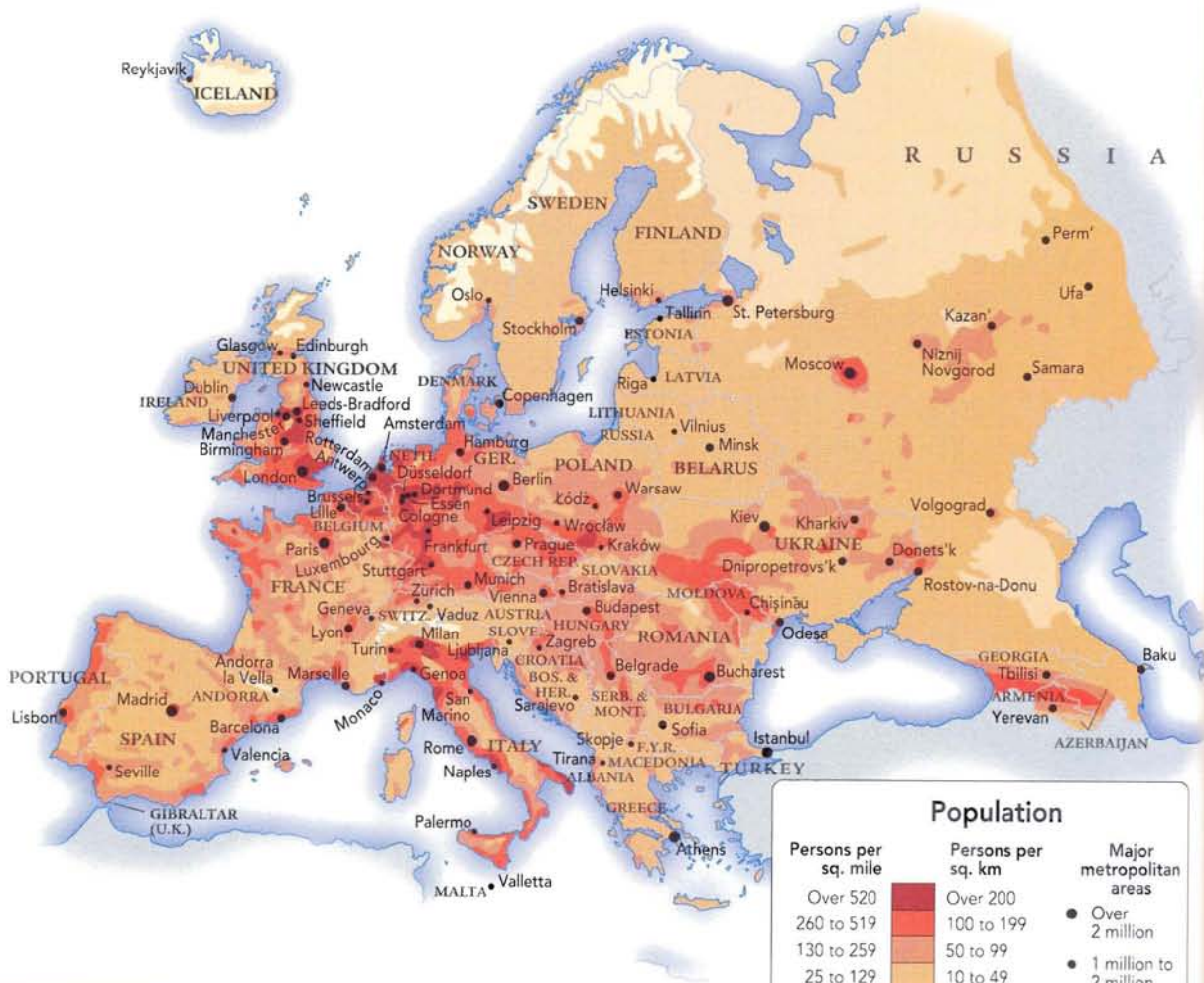
Switzerland
Zürich 933,000
Geneva 451,000

Turkey (European)
Istanbul 8,803,000

Ukraine
Kiev 2,590,000
Kharkiv 1,494,000
Dnipropetrovs'k 1,109,000
Donets'k 1,050,000
Odesa 1,002,000

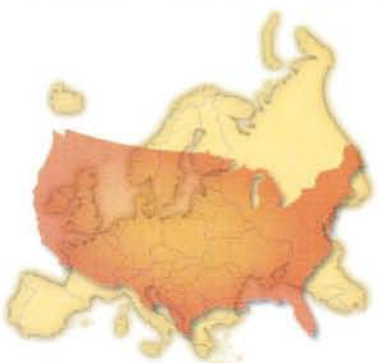
United Kingdom
London 7,652,000
Birmingham 2,296,000
Manchester 2,277,000
Leeds-Bradford 1,446,000
Newcastle 886,000
Glasgow 867,000
Liverpool 838,000
Sheffield 633,000

International comparability of population data is limited by varying census methods. Where metropolitan population is unavailable, core city population is shown.



Population

Persons per sq. mile	Persons per sq. km	Major metropolitan areas
Over 520	Over 200	Over 2 million
260 to 519	100 to 199	1 million to 2 million
130 to 259	50 to 99	
25 to 129	10 to 49	Under 1 million
1 to 24	1 to 9	
0	0	



Estimated 2002 Population (in millions)

Source: U.S. Census Bureau

Gross Domestic Product

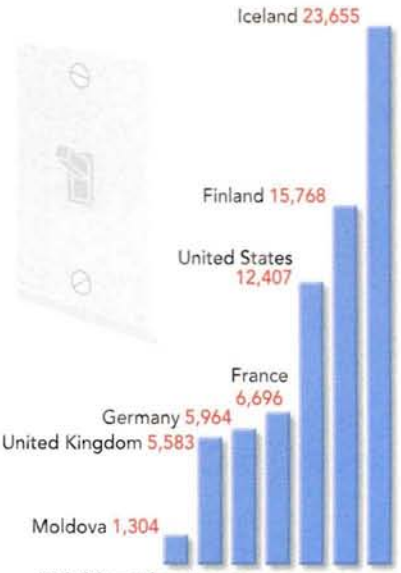
GDP per capita

- Over $20,000
- $10,000 to $20,000
- $5,000 to $9,999
- $2,500 to $4,999
- Under $2,500
- No data

Source: *World Factbook*. CIA. 2001

Gross Domestic Product is a measure of the total goods and services generated by a country. Generally, manufacturing, high-tech services, and specialized agricultural products add more value than raw materials and basic food stuffs.

Electricity Use



Source: *World Factbook*. CIA. 2001

Land Use and Resources

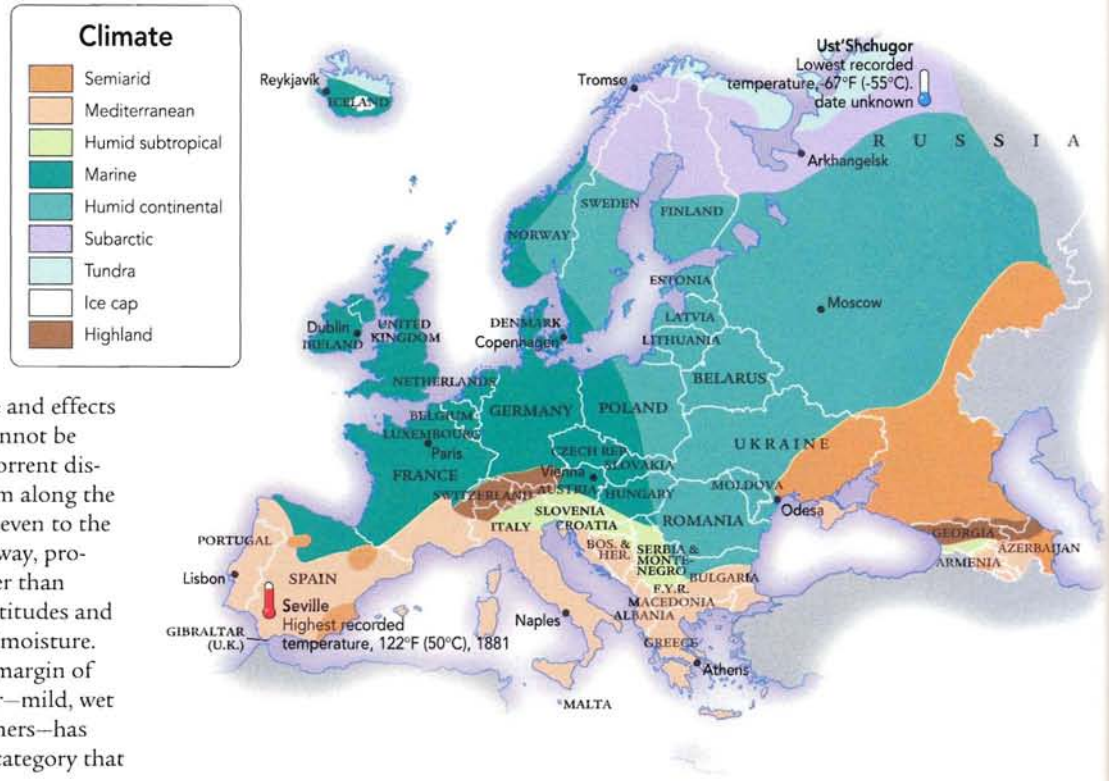
Predominant land use

- Commercial agriculture
- Dairying
- Livestock ranching
- Nomadic herding
- Subsistence agriculture
- Primarily forestland
- Limited agricultural activity

Major resources

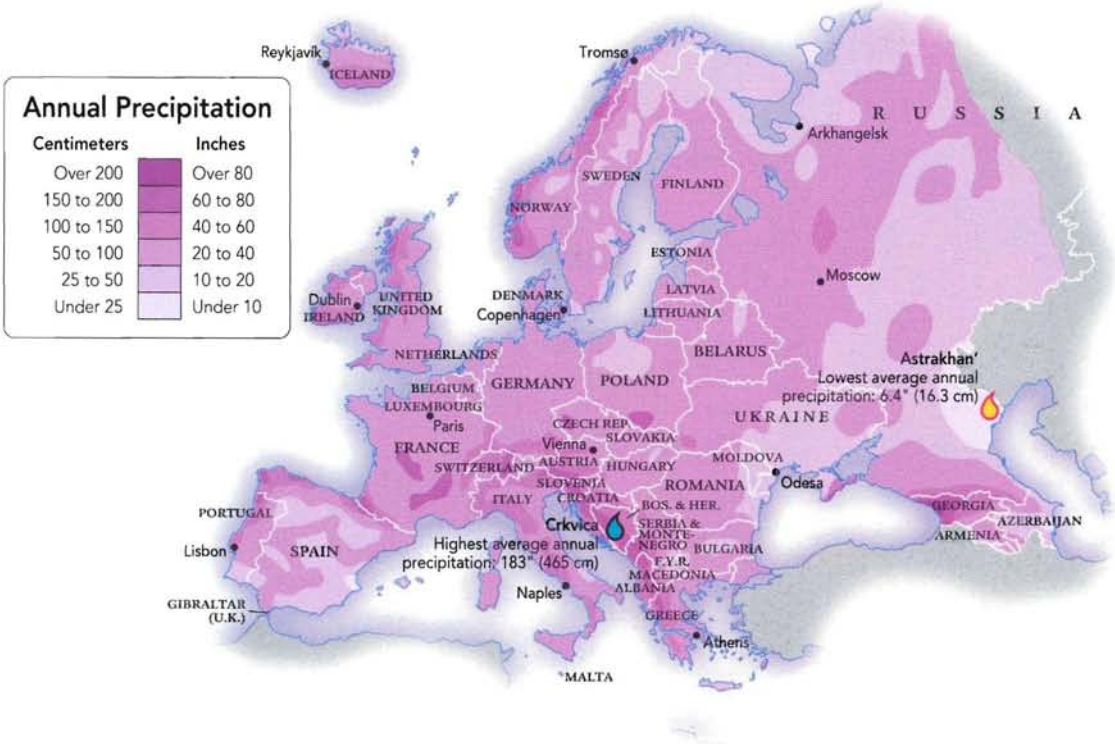
- Coal
- Natural gas
- Oil
- Gold
- Iron ore
- Silver
- Uranium
- Bauxite
- Other minerals
- Fishing
- Major manufacturing and trade centers

Europe, particularly Western Europe, is a consolidation of high-tech, market-driven, globally connected economies, where manufacturing and commercial agriculture predominate. Crucial to continental economic integration is the European Union, a partnership of 15 member nations whose combined economic clout rivals the U.S. Russia and former Soviet-satellite nations are, in large part, reaching harmony with the rest of Europe after an initial and unsettling period of adjusment. Despite centuries of exploration and exploitation, commercially-valuable mineral resources continue to be mined, notably in Russia, the Ukraine, and Scandinavia. The bountiful oil and gas fields of the North Sea are one of the most important and most recent discoveries.



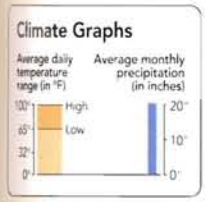
The far-reaching influence and effects of warm ocean currents cannot be overstated. The ceaseless torrent distributed by the Gulf Stream along the coasts of Western Europe, even to the shores of Iceland and Norway, produces much milder weather than would be expected at its latitudes and provides a ready source of moisture. Along the Mediterranean margin of Europe the typical weather—mild, wet winters and hot, dry summers—has been defined as a climate category that is now used worldwide.

See photographs taken in different kinds of climates on pages 24–25.



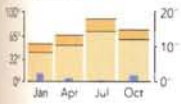
Though regionally formidable mountains rise to extract snow and rain, no continental-scale alpine barrier exists—thereby permitting moisture-laden, westerly winds springing from warm oceanic waters to distribute precipitation uniformly across Europe. However, by the time these currents of air reach the landlocked heart of Eastern Europe, northeast of the Black Sea, much of the moisture has already been spent.

Climate Graphs



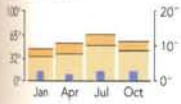
ARKHANGELSK, Russia

ATHENS, Greece

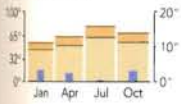


COPENHAGEN, Denmark

DUBLIN, Ireland

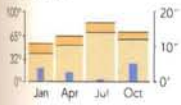


LISBON, Portugal



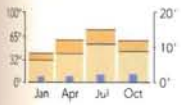
MOSCOW, Russia

NAPLES, Italy

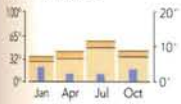


ODESA, Ukraine

PARIS, France



REYKJAVÍK, Iceland



TROMSØ, Norway

VIENNA, Austria

Vegetation

- Unclassified highlands or ice cap
- Tundra and alpine tundra
- Coniferous forest
- Midlatitude deciduous forest
- Mixed forest
- Midlatitude scrubland
- Midlatitude grassland

Forests, nourished by plentiful precipitation, dominate in Europe, but grassland and scrubland thrive where rainfall becomes sparse or is seasonal. Deciduous trees disappear as the winters grow harsh, replaced by vast and hardy stands of coniferous forest that are merely the western end of an immense belt stretching across Russia to the Pacific Ocean.

See photographs of the different kinds of vegetation on pages 26–27.

Environmental Issues

- Current forest
- Cleared forest
- Area at highest risk of desertification
- Areas most affected by acid rain
- Poor air quality*

*Cities exceeding at least one of the World Health Organization's (WHO) annual mean guidelines for air quality

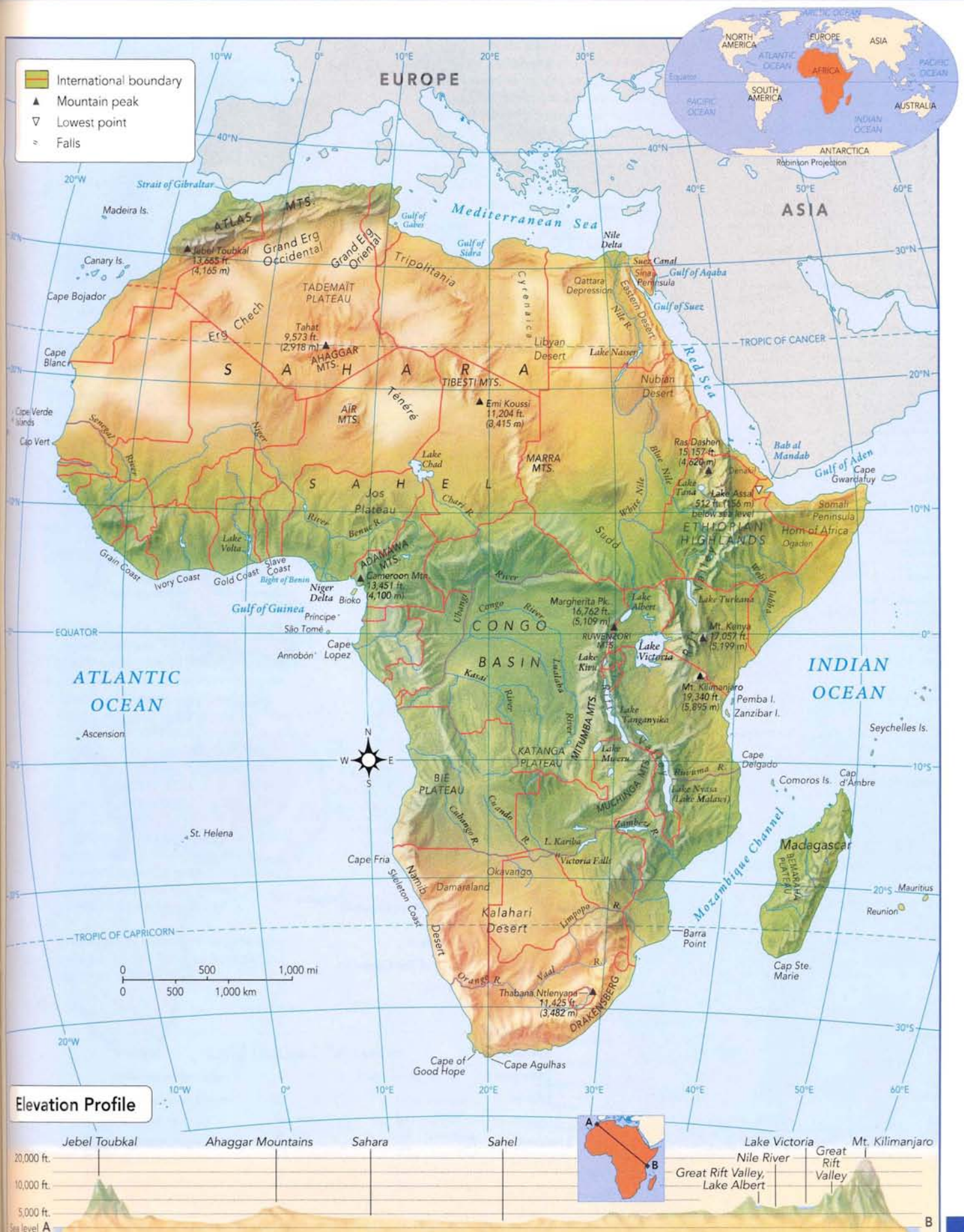
Sources: *Global Distribution of Original and Remaining Forests*, UNEP-WCMC, 2002
World Soil Resources Map Index, USDA/NRCS, 2002
World Development Indicators, World Bank, 1999

Emissions from the many cars, trucks, and factories in Europe have led to problems with air pollution and acid rain over a large part of the continent. Land and water pollution (from fertilizers, pesticides, and industrial waste) is also widespread. Since the 1960's, the amount of forest area in Western and Central Europe has actually increased, but many forests (nearly 60%) are damaged due to acidification, pollution, drought, or fires. Overfishing—especially in the North Sea—is a serious problem for marine ecosystems.

Africa

Facts

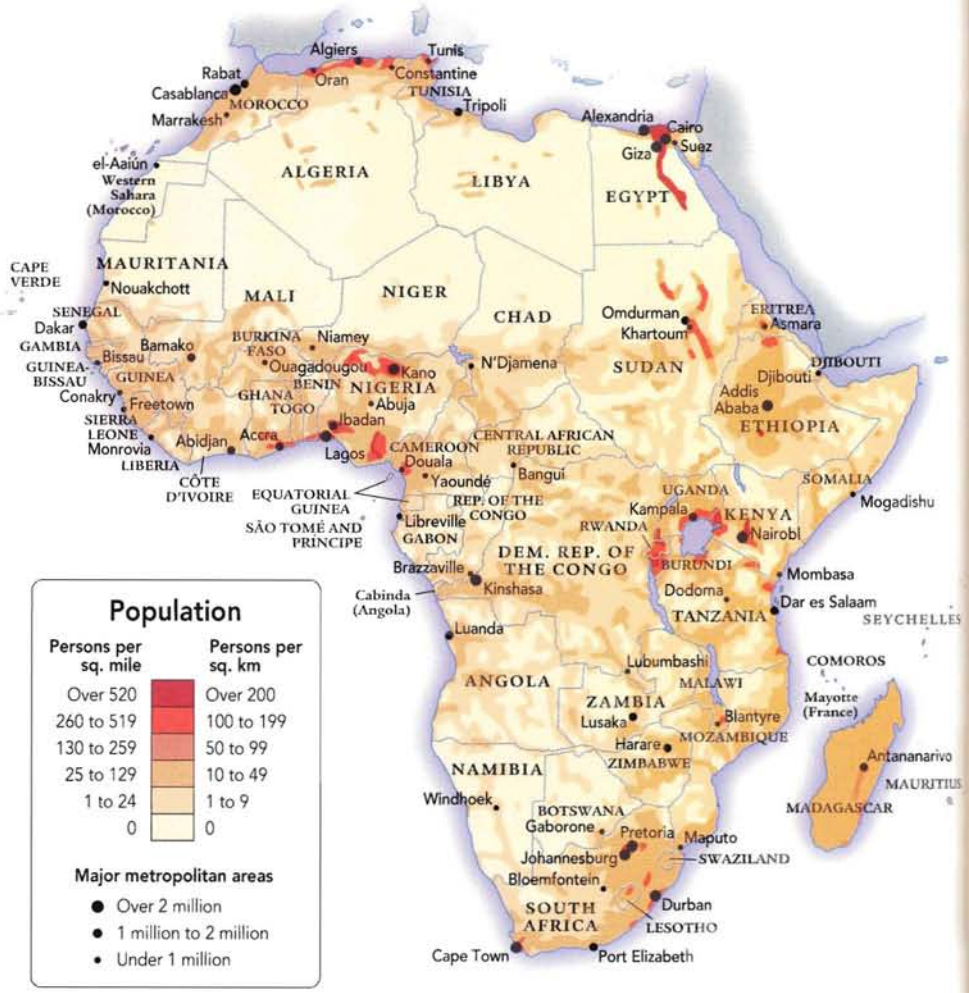
- Area: 11,677,239 square miles (30,244,049 square kilometers)
- Highest Point: Mt. Kilimanjaro, Tanzania 19,340 ft. (5,895 m)
- Lowest Point: Lake Assal, Djibouti 512 ft. (156 m) below sea level
- Longest River: Nile 4,160 mi. (6,695 km)
- Largest Lake: Lake Victoria, Uganda/Kenya/Tanzania 26,828 sq. mi. (69,484 sq. km)
- Largest Country: Sudan 967,500 sq. mi (2,505,813 sq. km)
- Largest City: Cairo, Egypt 6,801,000


International boundary
Mountain peak
Lowest point
Falls
EUROPE
ASIA
NORTH AMERICA
SOUTH AMERICA
AUSTRALIA
ANTARCTICA
ARCTIC OCEAN
ATLANTIC OCEAN
PACIFIC OCEAN
INDIAN OCEAN
Robinson Projection
Strait of Gibraltar
Madeira Is.
Canary Is.
Cape Bojador
Cape Blanc
Cape Verde Islands
Cap Vert
ATLAS MTS.
Jebel Toubkal 13,665 ft. (4,165 m)
Grand Erg Occidental
Grand Erg Oriental
Mediterranean Sea
Gulf of Gabes
Gulf of Sidra
Nile Delta
Tripolitania
Cyrenaica
Qattara Depression
Suez Canal
Sinai Peninsula
Gulf of Aqaba
Gulf of Suez
Eastern Desert
Nile R.
TADEMAÏT PLATEAU
Erg Chech
Tahat 9,573 ft. (2,918 m)
AHAGGAR MTS.
Libyan Desert
Lake Nasser
TROPIC OF CANCER
S A H A R A
TIBESTI MTS.
Emi Koussi 11,204 ft. (3,415 m)
Ténéré
AÏR MTS.
Nubian Desert
Red Sea
Senegal River
Niger River
Lake Chad
MARRA MTS.
Ras Dashen 15,157 ft. (4,620 m)
Bab al Mandab
Gulf of Aden
Cape Gwardafuy
Blue Nile
Lake Tana
Lake Assal 512 ft. (156 m) below sea level
Djenakil
Somali Peninsula
Horn of Africa
Ogaden
S A H E L
Jos Plateau
Chari R.
White Nile
Sudd
ETHIOPIAN HIGHLANDS
Rift Valley
Webi
Lake Volta
Grain Coast
Ivory Coast
Gold Coast
Slave Coast
Bight of Benin
ADAMAWA MTS.
Cameroon Mtn. 13,451 ft. (4,100 m)
Niger Delta
Bioko
Gulf of Guinea
Principe
São Tomé
Cape Lopez
Annobón
Uhangi
Congo River
CONGO BASIN
Margherita Pk. 16,762 ft. (5,109 m)
RUWENZORI MTS.
Lake Albert
Lake Turkana
Mt. Kenya 17,057 ft. (5,199 m)
Lake Victoria
Lake Kivu
Kasai River
Lualaba River
MITUMBA MTS.
Lake Tanganyika
Mt. Kilimanjaro 19,340 ft. (5,895 m)
Pemba I.
Zanzibar I.
EQUATOR
ATLANTIC OCEAN
INDIAN OCEAN
Ascension
Seychelles Is.
KATANGA PLATEAU
Lake Mweru
Cape Delgado
Comoros Is.
Cap d'Ambre
BIÉ PLATEAU
Cuando R.
Cubango R.
MUCHINGA MTS.
Zambezi R.
Rovuma R.
Lake Nyasa (Lake Malawi)
St. Helena
L. Kariba
Victoria Falls
Madagascar
Cape Fria
Skeleton Coast
Namib Desert
Okavango
Damaraland
Kalahari Desert
Limpopo R.
Mozambique Channel
BEMARAHA PLATEAU
Mauritius
Reunion
TROPIC OF CAPRICORN
Barra Point
Orange R.
Vaal R.
Thabana Ntlenyana 11,425 ft. (3,482 m)
DRAKENSBERG
Cape Agulhas
Cape of Good Hope
Cap Ste. Marie
0 500 1,000 mi
0 500 1,000 km
Elevation Profile
Jebel Toubkal
Ahaggar Mountains
Sahara
Sahel
Lake Victoria
Nile River
Great Rift Valley, Lake Albert
Great Rift Valley
Mt. Kilimanjaro
20,000 ft.
10,000 ft.
5,000 ft.
Sea level
A
B

Major Metropolitan Areas

Algeria	
Algiers	1,904,000 (metro)
Oran	745,000
Constantine	564,000
Angola	
Luanda	1,822,000
Benin	
Cotonou	537,000
Porto-Novo	179,000
Botswana	
Gaborone	186,000
Burkina Faso	
Ouagadougou	634,000
Burundi	
Bujumbura	234,000
Cameroon	
Douala	810,000
Yaoundé	649,000
Cape Verde	
Praia	103,000
Central African Republic	
Bangui	452,000
Chad	
N'Djamena	547,000
Comoros	
Moroni	30,000
Congo, Democratic Republic of the	
Kinshasa	4,657,000
Lubumbashi	565,000
Congo, Republic of the	
Brazzaville	596,000
Côte d'Ivoire	
Abidjan	1,929,000
Yamoussoukro	107,000
Djibouti	
Djibouti	62,000
Egypt	
Cairo	6,801,000
Alexandria	3,339,000
Giza	2,222,000
Equatorial Guinea	
Malabo	30,000
Eritrea	
Asmara	358,000
Ethiopia	
Addis Ababa	2,424,000
Gabon	
Libreville	420,000
The Gambia	
Banjul	271,000
Ghana	
Accra	1,155,000
Guinea	
Conakry	705,000
Guinea-Bissau	
Bissau	109,000
Kenya	
Nairobi	2,143,000
Mombasa	465,000
Lesotho	
Maseru	138,000
Liberia	
Monrovia	421,000
Libya	
Tripoli	1,500,000
Madagascar	
Antananarivo	1,103,000
Malawi	
Blantyre	502,000
Lilongwe	440,000
Mali	
Bamako	1,179,000
Mauritania	
Nouakchott	612,000
Mauritius	
Port Louis	128,000
Morocco	
Casablanca	2,943,000
Rabat	1,220,000
Marrakesh	602,000
Mozambique	
Maputo	989,000
Namibia	
Windhoek	147,000
Niger	
Niamey	397,000
Nigeria	
Lagos	5,195,000
Kano	2,167,000
Ibadan	1,835,000
Rwanda	
Kigali	234,000
São Tomé & Príncipe	
São Tomé	6,000
Senegal	
Dakar	1,977,000
Seychelles	
Victoria	25,000
Sierra Leone	
Freetown	470,000
Somalia	
Mogadishu	230,000
South Africa	
Durban	2,992,000
Cape Town	2,898,000
Johannesburg	2,885,000
Pretoria	2,086,000
Port Elizabeth	1,312,000
Sudan	
Omdurman	1,271,000
Khartoum	947,000
Swaziland	
Mbabane	38,000
Tanzania	
Dar es Salaam	1,361,000
Togo	
Lomé	450,000
Tunisia	
Tunis	674,000
Uganda	
Kampala	1,209,000
Western Sahara	
el-Aaiún	90,000
Zambia	
Lusaka	1,270,000
Zimbabwe	
Harare	1,189,000

International comparability of population data is limited by varying census methods. Where metropolitan population is unavailable, core city population is shown.

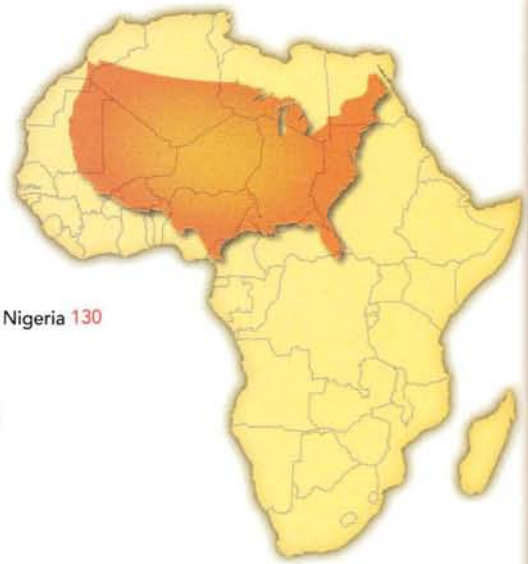


Population

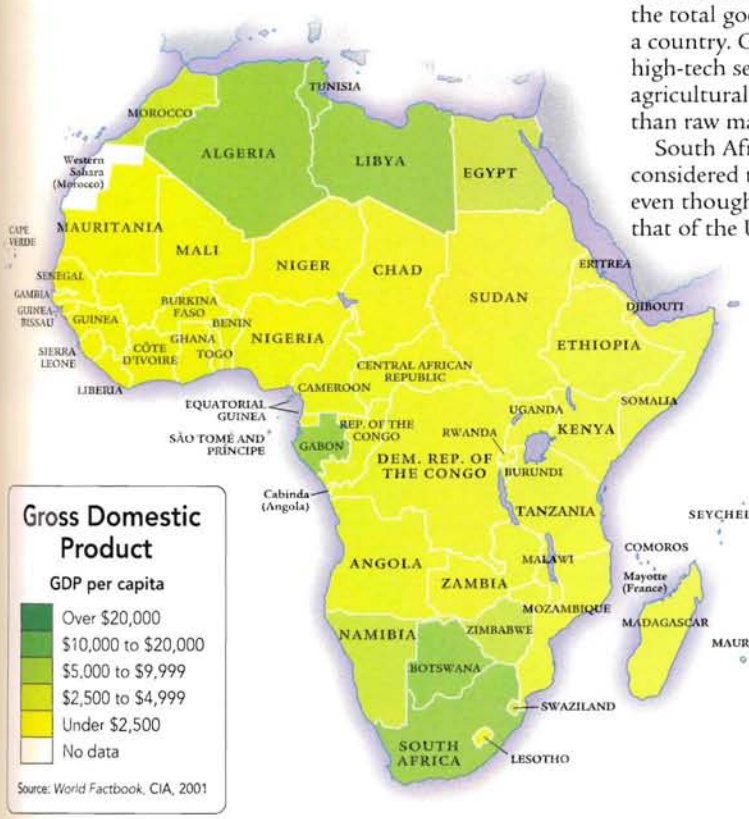
Persons per sq. mile	Persons per sq. km
Over 520	Over 200
260 to 519	100 to 199
130 to 259	50 to 99
25 to 129	10 to 49
1 to 24	1 to 9
0	0

Major metropolitan areas

- Over 2 million
- 1 million to 2 million
- Under 1 million



Source: U.S. Census Bureau



Gross Domestic Product

GDP per capita

- Over $20,000
- $10,000 to $20,000
- $5,000 to $9,999
- $2,500 to $4,999
- Under $2,500
- No data

Source: *World Factbook*, CIA, 2001

Gross Domestic Product is a measure of the total goods and services generated by a country. Generally, manufacturing, high-tech services, and specialized agricultural products add more value than raw materials and basic food stuffs.

South Africa is the only African nation considered to have a developed economy, even though their GDP is less then half that of the United States.

Electricity Use

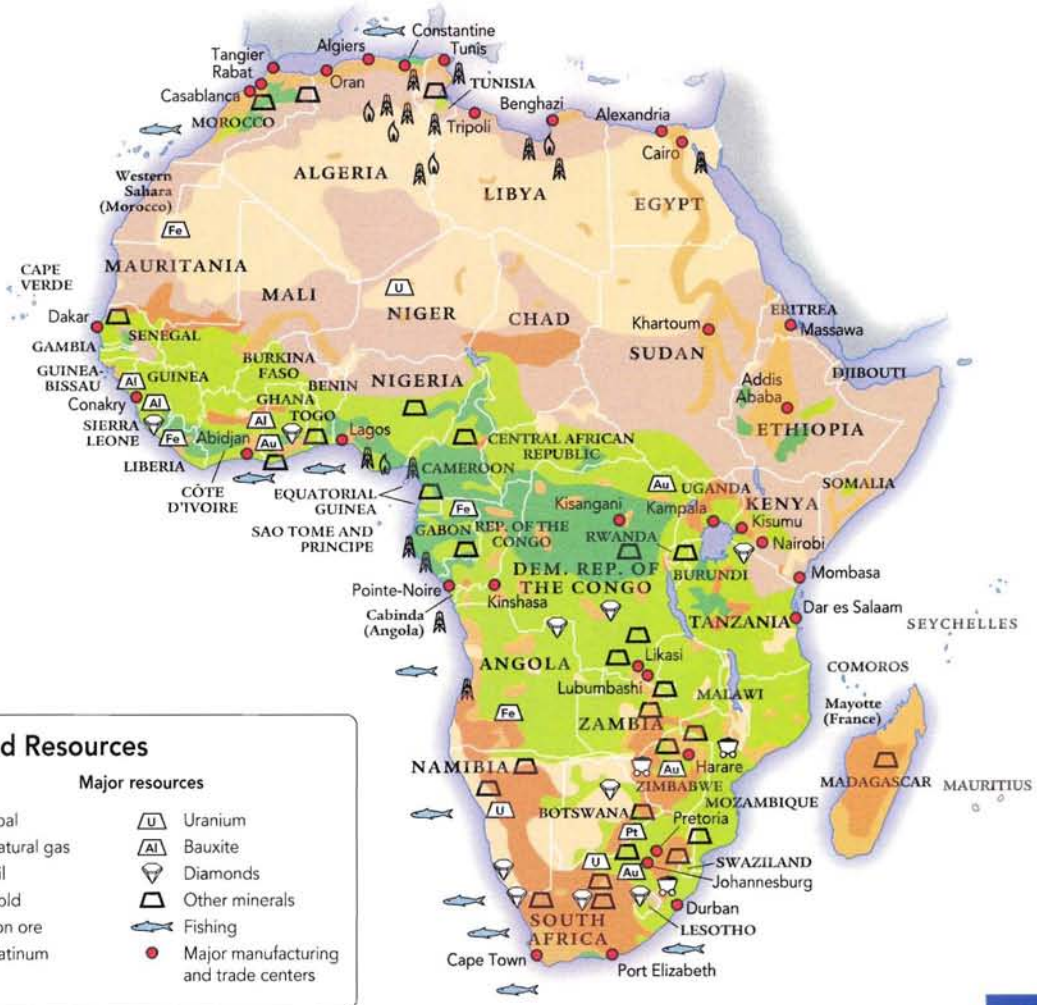
Source: *World Factbook*, CIA, 2001

Agriculture supplies the livelihood for the vast majority of Africans. Agricultural exports include coffee, cocoa beans, peanuts, palm oil, and spices. These important export crops are mainly cultivated on plantations and large farms. Areas of subsistence farming supply the needs of local communities.

Unfortunately, poor soils and unfavorable climate conditions, as well as political unrest and unstable economies, all have an adverse impact on agricultural activity and therefore the standard of living.

Minerals account for more then one half of Africa's exports. Oil, diamonds, gold, cobalt, and several other minerals are leading exports. However, important mineral deposits are limited to a handful of countries.

Manufacturing has been slow to develop on the continent. Lack of money and skilled labor are the main deterrents.



Land Use and Resources

Predominant land use

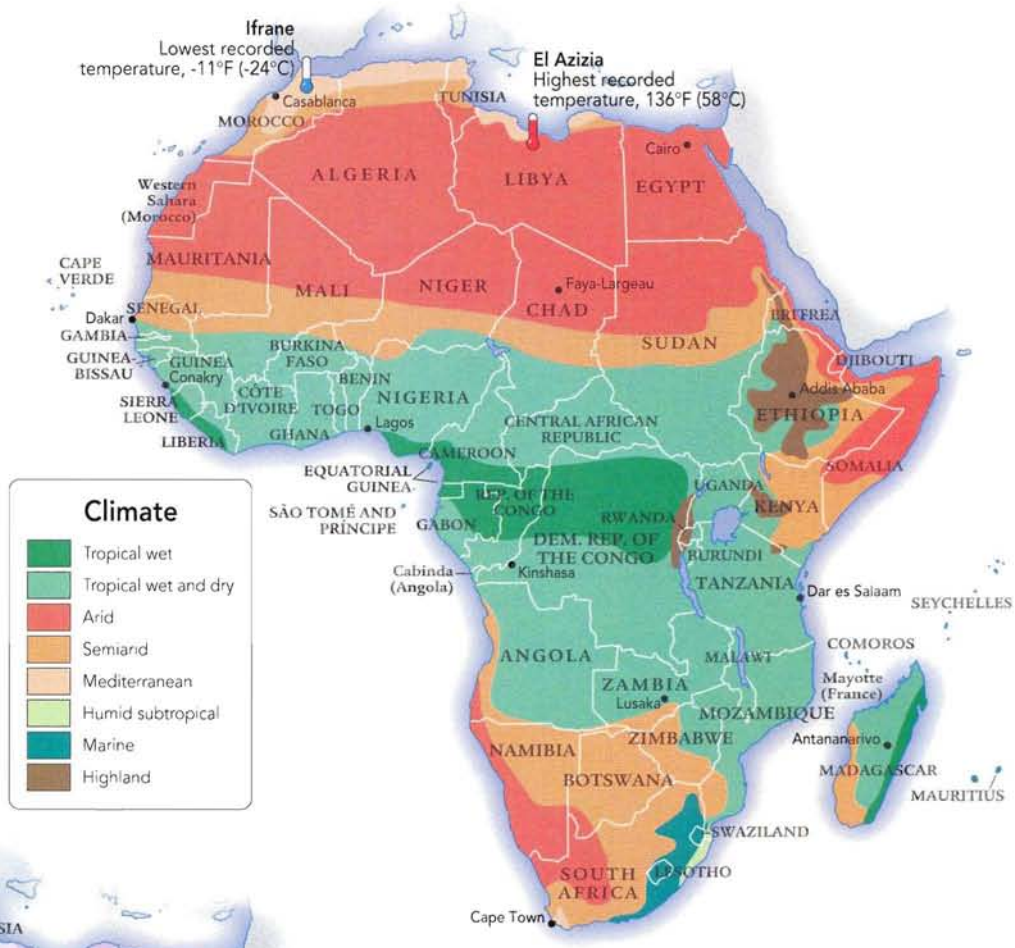
- Commercial agriculture
- Livestock ranching
- Subsistence agriculture
- Nomadic herding
- Primarily forestland
- Limited agricultural activity

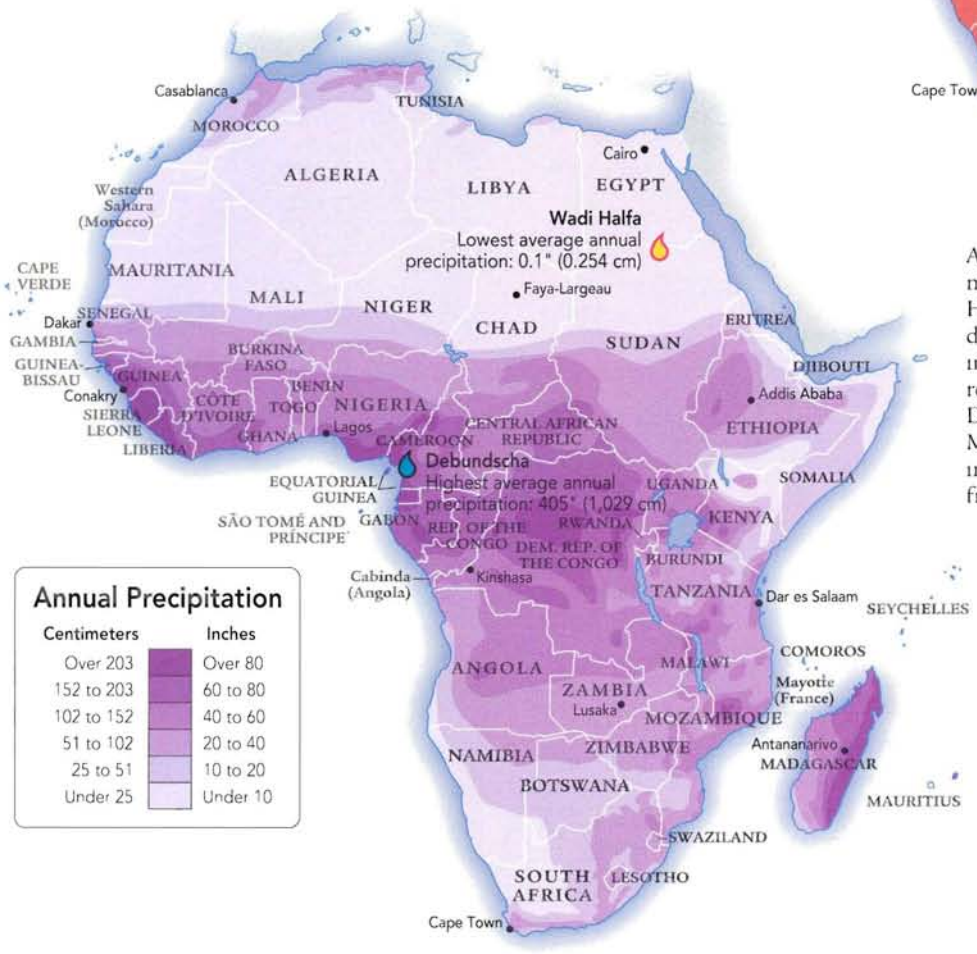
Major resources

- Coal
- Natural gas
- Oil
- Au Gold
- Fe Iron ore
- Pt Platinum
- U Uranium
- Al Bauxite
- Diamonds
- Other minerals
- Fishing
- Major manufacturing and trade centers

The climate of Africa is clearly a study in geographic contrasts. Perpetually wet and tropical areas surrounding the Equator quickly acquire seasonal variety as you move north and south. Roaming even farther leads to the vast, hot and arid zones of northern and southern Africa. The influence of neighboring water bodies is limited to small regions of northern Africa, namely Morocco, Algeria, and Libya, where the mild currents of the Mediterranean Sea temper the climate, and eastern South Africa, where the mixture of warm currents flowing close to shore and the seasonal onshore winds striking the Drakensberg uplands provide for a moist and temperate marine coast climate.

See photographs taken in different kinds of climates on pages 24–25.





Africa's precipitation pattern is determined by its position on Earth's grid. Heavy precipitation near the Equator dwindles both to north, home of the immense Sahara, and to the south, realm of the Namib and Kalahari Deserts. Moist conditions exist on Madagascar as a result of the tropical influences of winds and currents from the Indian Ocean.

Climate Graphs

Average daily temperature range (in °F) — Average monthly precipitation (in inches)

High / Low

ADDIS ABABA, Ethiopia

ANTANANARIVO, Madagascar

CAIRO, Egypt

CAPE TOWN, South Africa

CASABLANCA, Morocco

CONAKRY, Guinea

51.1

DAKAR, Senegal

DAR ES SALAAM, Tanzania

FAYA-LARGEAU, Chad

KINSHASA, Dem. Rep. of the Congo

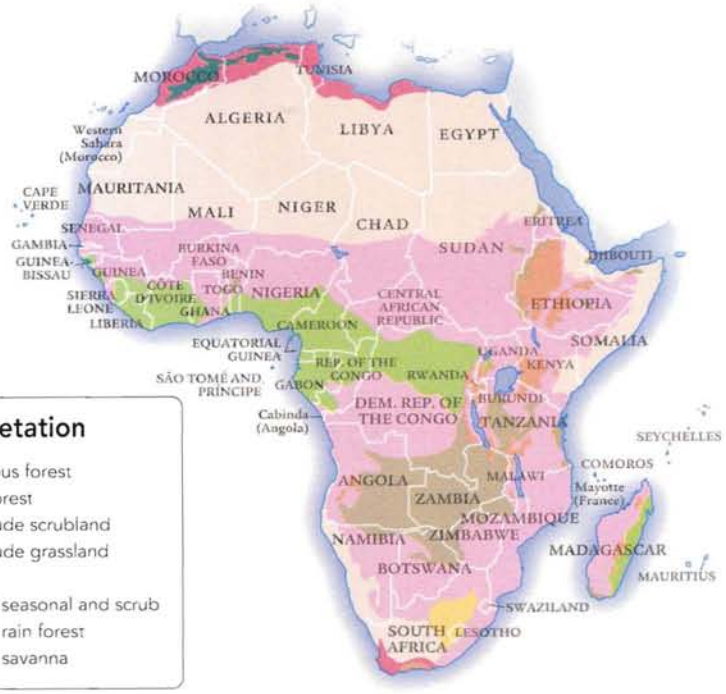
LAGOS, Nigeria

LUSAKA, Zambia

Jan Apr Jul Oct

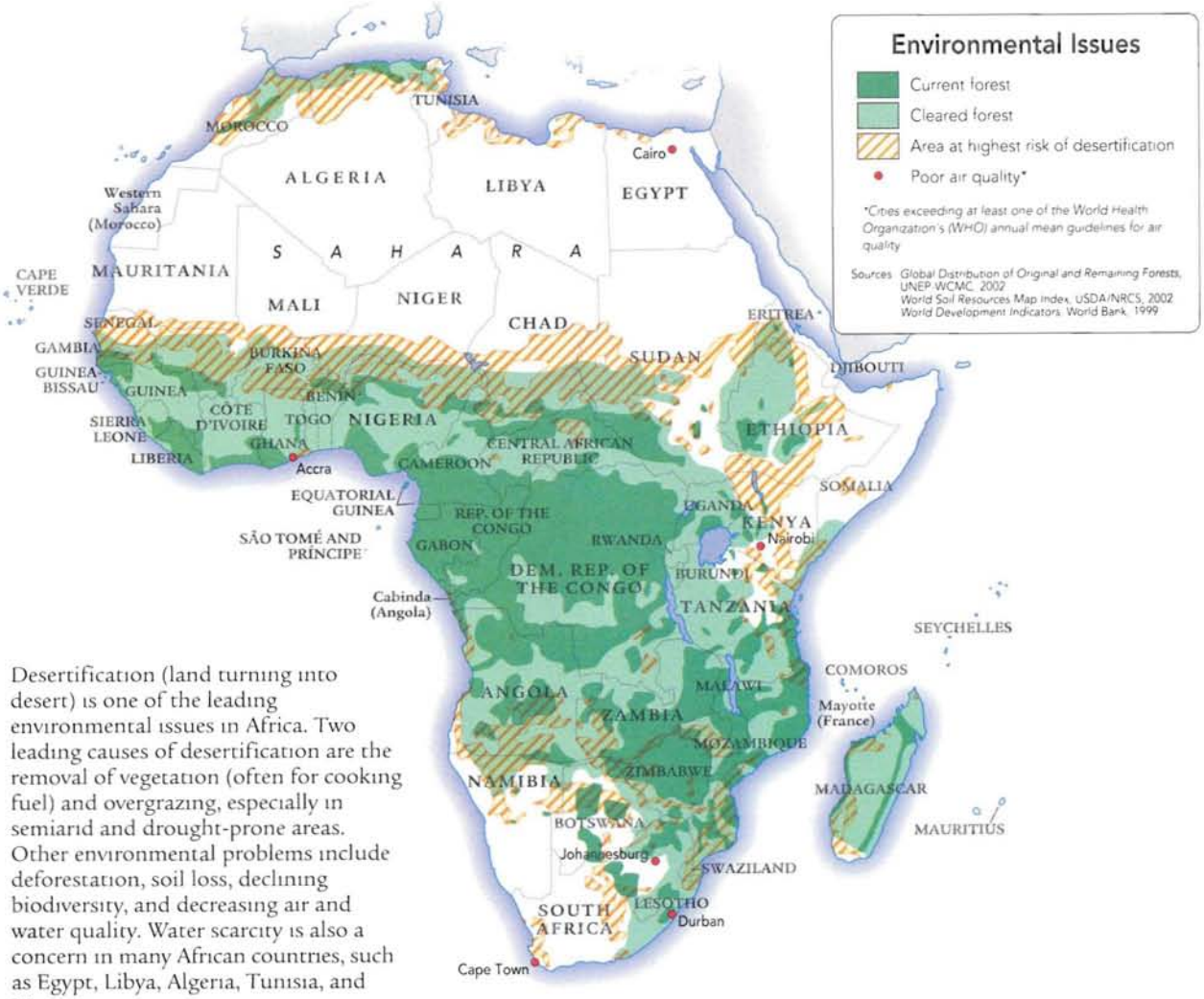
The dense, tropical rain forest surrounding the Equator is offset by the contrastingly sparse vegetation on the rest of the continent. Vast areas consist of grassland and scrub vegetation with trees only occasionally dotting the landscape. Evergreen and mixed forests of more temperate climates are limited to the Mediterranean areas of Morocco and Algeria, the Ethiopian Highlands, and Kenya.

See photographs of the different kinds of vegetation on pages 26–27



Vegetation

- Coniferous forest
- Mixed forest
- Midlatitude scrubland
- Midlatitude grassland
- Desert
- Tropical seasonal and scrub
- Tropical rain forest
- Tropical savanna



Environmental Issues

- Current forest
- Cleared forest
- Area at highest risk of desertification
- Poor air quality*

*Cities exceeding at least one of the World Health Organization's (WHO) annual mean guidelines for air quality

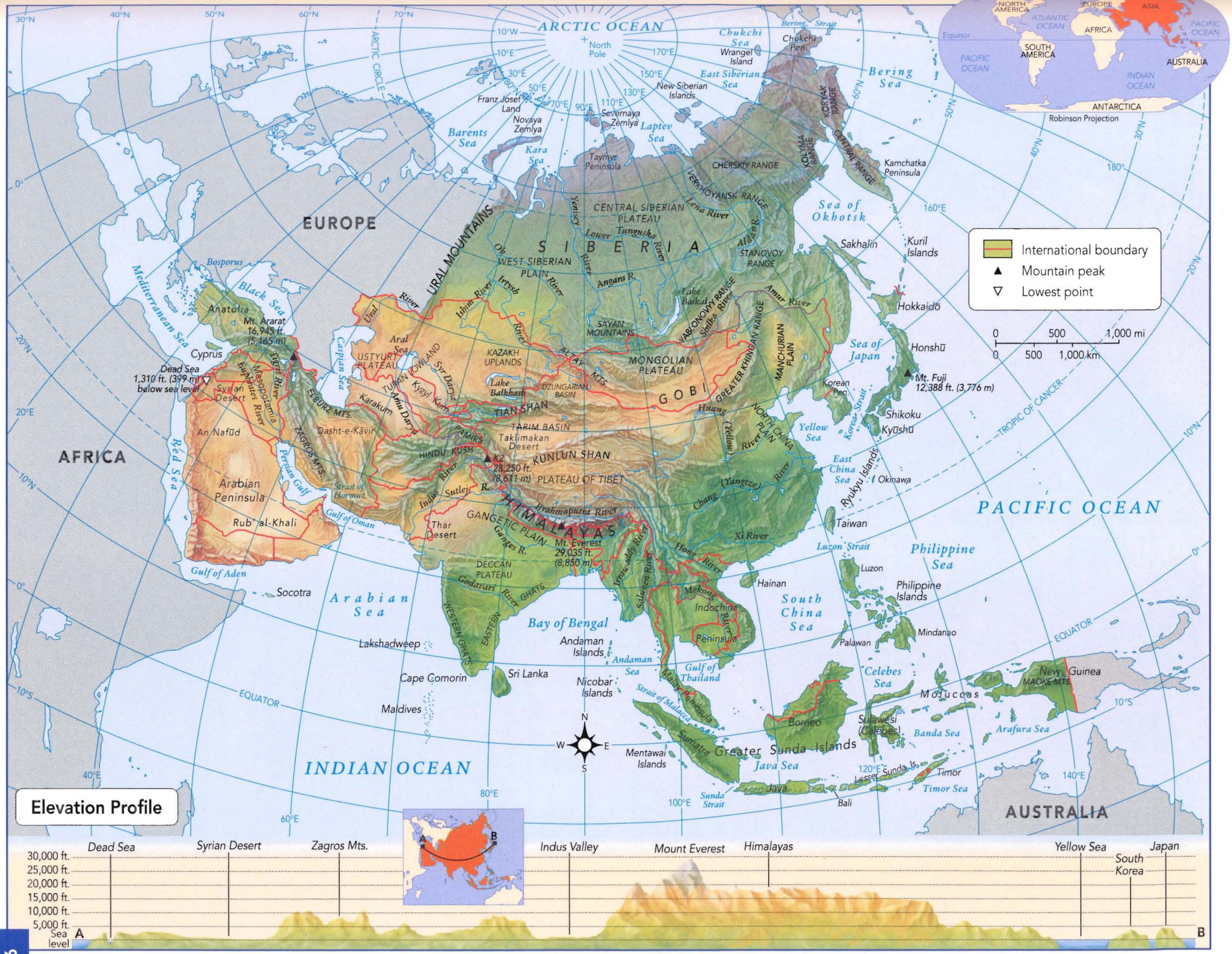
Sources: *Global Distribution of Original and Remaining Forests*, UNEP-WCMC, 2002; *World Soil Resources Map Index*, USDA/NRCS, 2002; *World Development Indicators*, World Bank, 1999

Desertification (land turning into desert) is one of the leading environmental issues in Africa. Two leading causes of desertification are the removal of vegetation (often for cooking fuel) and overgrazing, especially in semiarid and drought-prone areas. Other environmental problems include deforestation, soil loss, declining biodiversity, and decreasing air and water quality. Water scarcity is also a concern in many African countries, such as Egypt, Libya, Algeria, Tunisia, and Morocco.

Asia

Facts

- Area: 17,139,000 square miles (44,390,000 square kilometers)
- Highest Point: Mt. Everest, China/Nepal 29,035 ft. (8,850 m)
- Lowest Point: Dead Sea, Israel/Jordan 1,310 ft. (399 m) below sea level
- Longest River: Chang (Yangtze), China 3,964 mi. (6,379 km)
- Largest Lake: Caspian Sea 143,244 sq. mi. (371,000 sq. km)
- Largest Country: Russia (Asian) 4,928,980 sq. mi. (12,766,000 sq. km)
- Largest City: Mumbai, India 16,368,000


ARCTIC OCEAN
North Pole
EUROPE
ASIA
AFRICA
INDIAN OCEAN
PACIFIC OCEAN
AUSTRALIA
SIBERIA
URAL MOUNTAINS
WEST SIBERIAN PLAIN
CENTRAL SIBERIAN PLATEAU
KAZAKH UPLANDS
MONGOLIAN PLATEAU
GOBI
TIAN SHAN
TARIM BASIN
Taklimakan Desert
KUNLUN SHAN
PLATEAU OF TIBET
HIMALAYAS
K2 28,250 ft. (8,611 m)
Mt. Everest 29,035 ft. (8,850 m)
GANGETIC PLAIN
DECCAN PLATEAU
Thar Desert
Arabian Peninsula
Rub' al-Khali
An Nafūd
Syrian Desert
Dasht-e-Kāvir
Karakum
Aral Sea
USTYURT PLATEAU
TURAN LOWLAND
Dead Sea 1,310 ft. (399 m) below sea level
Mt. Ararat 16,945 ft. (5,165 m)
Anatolia
Cyprus
Socotra
Lakshadweep
Cape Comorin
Sri Lanka
Maldives
Andaman Islands
Nicobar Islands
Mentawai Islands
Greater Sunda Islands
Sumatra
Java
Borneo
Sulawesi (Celebes)
Philippine Islands
Luzon
Mindanao
Palawan
Taiwan
Hainan
Hokkaidō
Honshū
Shikoku
Kyūshū
Okinawa
Ryukyu Islands
Mt. Fuji 12,388 ft. (3,776 m)
Kuril Islands
Sakhalin
Kamchatka Peninsula
Chukchi Pen.
Wrangel Island
New Siberian Islands
Franz Josef Land
Novaya Zemlya
Severnaya Zemlya
Taymyr Peninsula
Bering Strait
Chukchi Sea
East Siberian Sea
Laptev Sea
Kara Sea
Barents Sea
Bering Sea
Sea of Okhotsk
Sea of Japan
Yellow Sea
East China Sea
South China Sea
Philippine Sea
Celebes Sea
Java Sea
Banda Sea
Arafura Sea
Timor Sea
Gulf of Thailand
Bay of Bengal
Arabian Sea
Gulf of Aden
Gulf of Oman
Red Sea
Persian Gulf
Strait of Hormuz
Strait of Malacca
Sunda Strait
Lesser Sunda Is.
Timor
Bali
Java
New Guinea
MAOKE MTS.
Moluccas
Mesopotamia
Euphrates River
Tigris River
ZAGROS MTS.
ELBURZ MTS.
PAMIRS
HINDU KUSH
Indus River
Sutlej R.
Brahmaputra River
Ganges R.
Godavari River
Irrawaddy River
Salween River
Mekong
Chang (Yangtze) River
Huang (Yellow) River
Xi River
Hong River
Indochina Peninsula
Malay Peninsula
Korean Pen.
Korea Strait
Luzon Strait
Lake Baikal
Lake Balkhash
DZUNGARIAN BASIN
TURAN LOWLAND
Kyzyl Kum
Syr Darya
Amu Darya
Caspian Sea
Black Sea
Mediterranean Sea
Bosporus
Ural River
Ishim River
Irtysh River
Ob River
Yenisey River
Lower Tunguska River
Angara R.
Lena River
Aldan R.
Amur River
Shilka River
SAYAN MOUNTAINS
YABLONOVYY RANGE
STANOVOY RANGE
GREATER KHINGAN RANGE
MANCHURIAN PLAIN
NORTH CHINA PLAIN
CHERSKIY RANGE
VERKHOYANSK RANGE
OLYMA RANGE
KORYAK RANGE
CENTRAL RANGE
ARCTIC CIRCLE
TROPIC OF CANCER
EQUATOR
International boundary
Mountain peak
Lowest point
0 500 1,000 mi
0 500 1,000 km
Robinson Projection
Elevation Profile
Dead Sea
Syrian Desert
Zagros Mts.
Indus Valley
Mount Everest
Himalayas
Yellow Sea
South Korea
Japan
30,000 ft.
25,000 ft.
20,000 ft.
15,000 ft.
10,000 ft.
5,000 ft.
Sea level
A
B

Major Metropolitan Areas

Afghanistan
Kabul 2,029,000

Bahrain
Manama 151,000

Bangladesh
Dhaka 6,487,000

Bhutan
Thimphu 8,900

Brunei
Bandar Seri Begawan 50,000

Cambodia
Phnom Penh 1,000,000

China
Shanghai 12,910,000
Beijing 10,820,000
Tianjin 8,970,000
Hong Kong 6,708,000
Shenyang 4,740,000
Wuhan 4,450,000
Chongqing 4,070,000
Guangzhou 3,910,000
Chengdu 3,120,000
Xi'an 2,990,000
Harbin 2,960,000
Nanjing 2,670,000

Cyprus
Nicosia 273,000

East Timor
Dili 140,000

India
Mumbai (Bombay) 16,368,000
Kolkata (Calcutta) 13,217,000
Delhi 12,791,000
Chennai (Madras) 6,425,000
Bangalore 5,687,000
Hyderabad 5,534,000

Indonesia
Jakarta 9,374,000
Bandung 5,919,000
Bogor 5,000,000
Malang 3,174,000

Iran
Tehran 6,759,000
Mashhad 1,887,000

Iraq
Baghdad 4,336,000

Israel
Tel Aviv-Jaffa 2,595,000
Jerusalem 628,000

Japan
Tokyo 12,059,000
Yokohama 3,427,000
Osaka 2,599,000
Nagoya 2,171,000
Sapporo 1,822,000
Kobe 1,494,000
Kyoto 1,468,000
Fukuoka 1,341,000
Kawasaki 1,250,000
Hiroshima 1,126,000

Jordan
Amman 1,147,000

Kazakhstan
Almaty 1,129,000

North Korea
P'yŏngyang 2,741,000

South Korea (core city only)
Seoul 9,854,000
Busan 3,655,000
Daegu 2,474,000

Kuwait
Kuwait 193,000

Kyrgyzstan
Bishkek 753,000

Laos
Vientiane 331,000

Lebanon
Beirut 1,500,000

Malaysia
Kuala Lumpur 1,379,000

Maldives
Male 74,000

Mongolia
Ulaanbaatar 760,000

Myanmar (Burma)
Yangon (Rangoon) 4,101,000

Nepal
Kathmandu 421,000

Oman
Muscat 477,000

Pakistan
Karachi 9,339,000
Lahore 5,143,000
Faisalabad 2,009,000
Islamabad 529,000

Philippines
Manila 9,933,000

Qatar
Doha 264,000

Russia (Asian)
Novosibirsk 1,400,000
Yekaterinburg 1,314,000
Omsk 1,177,000
Chelyabinsk 1,111,000

Saudi Arabia
Riyadh 2,776,000
Jeddah 2,046,000

Singapore
Singapore 4,131,000

Sri Lanka
Colombo 642,000

Syria
Halab (Aleppo) 1,813,000
Damascus 1,394,000

Taiwan
Taipei 2,720,000

Tajikistan
Dushanbe 529,000

Thailand
Bangkok 6,320,000

Turkey (Asian)
Ankara 3,203,000
Izmir 2,232,000

Turkmenistan
Ashgabat 407,000

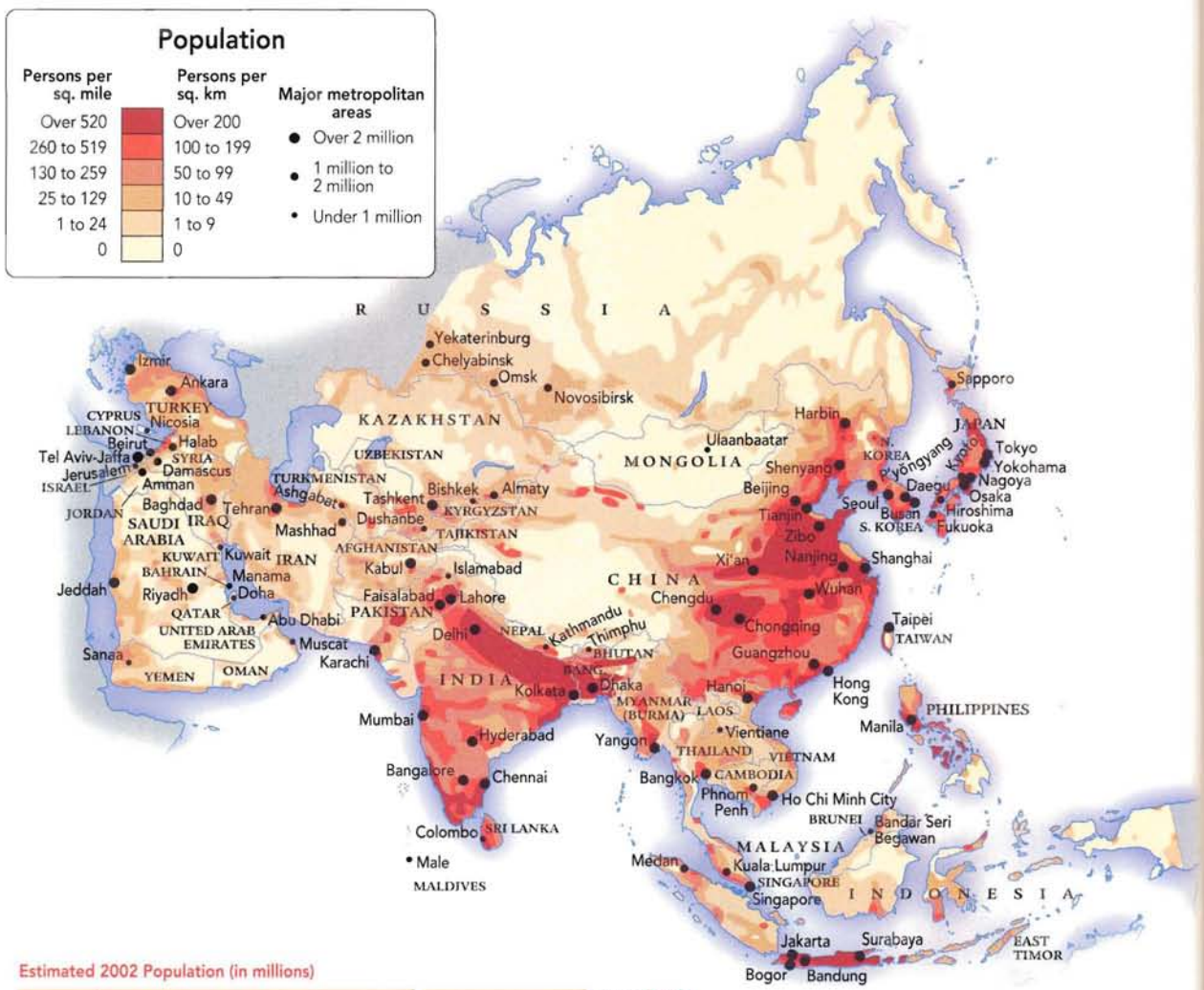
United Arab Emirates
Abu Dhabi 904,000

Uzbekistan
Tashkent 2,142,000

Vietnam
Ho Chi Minh City 4,990,000
Hanoi 2,464,000

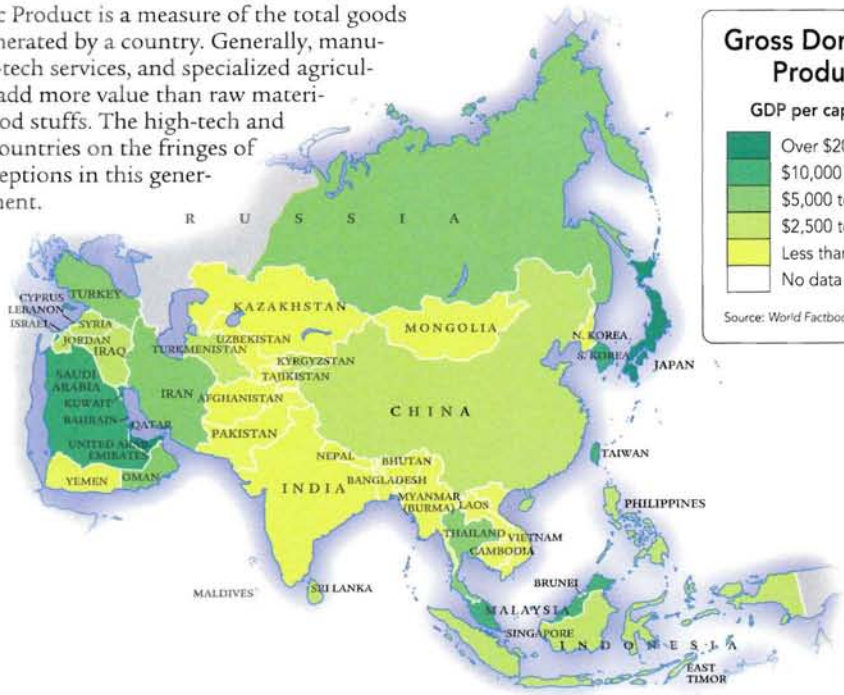
Yemen
Sanaa 927,000

International comparability of population data is limited by varying census methods. Where metropolitan population is unavailable, core city population is shown.

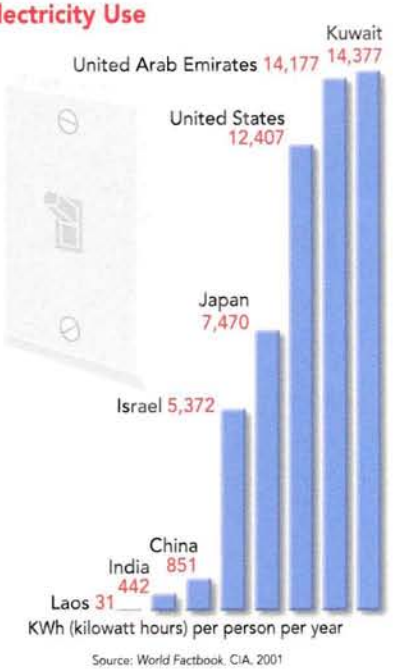


Source: U.S. Census Bureau

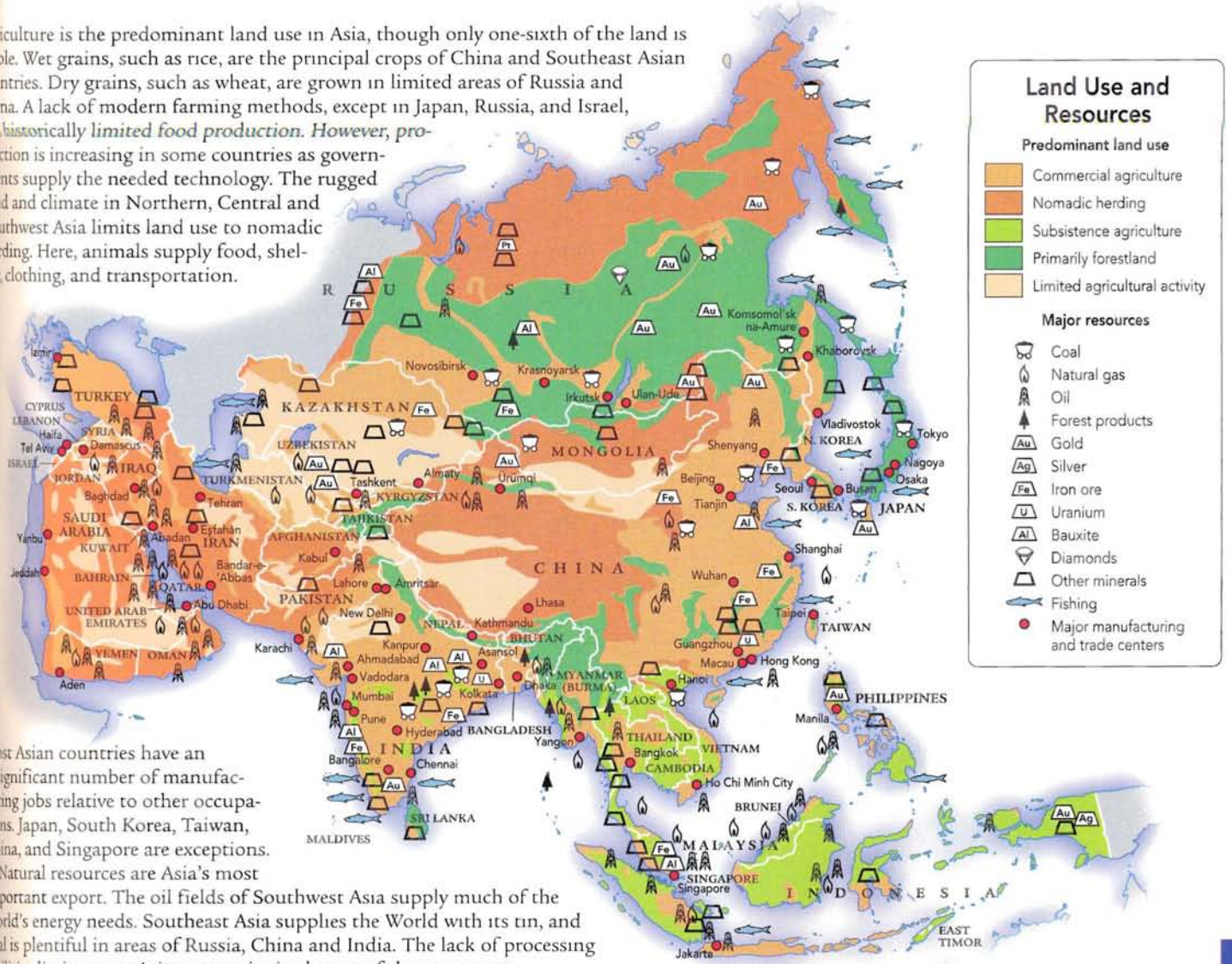
Gross Domestic Product is a measure of the total goods and services generated by a country. Generally, manufacturing, high-tech services, and specialized agricultural products add more value than raw materials and basic food stuffs. The high-tech and oil producing countries on the fringes of Asia are the exceptions in this generally poor continent.



Electricity Use



Agriculture is the predominant land use in Asia, though only one-sixth of the land is arable. Wet grains, such as rice, are the principal crops of China and Southeast Asian countries. Dry grains, such as wheat, are grown in limited areas of Russia and China. A lack of modern farming methods, except in Japan, Russia, and Israel, has historically limited food production. However, production is increasing in some countries as governments supply the needed technology. The rugged land and climate in Northern, Central and Southwest Asia limits land use to nomadic herding. Here, animals supply food, shelter, clothing, and transportation.



Most Asian countries have an insignificant number of manufacturing jobs relative to other occupations. Japan, South Korea, Taiwan, China, and Singapore are exceptions.

Natural resources are Asia's most important export. The oil fields of Southwest Asia supply much of the World's energy needs. Southeast Asia supplies the World with its tin, and coal is plentiful in areas of Russia, China and India. The lack of processing facilities limits many Asian countries in the use of their resources.

Asia has many climates. This can be expected on a landmass that covers an area from below the Equator to the Arctic Ocean and from the Mediterranean Sea to the Pacific Ocean. Weather conditions fluctuate from the sub-freezing temperatures and snow of the tundra climate in Northern Russia, through the more temperate humid continental climate, past the arid conditions of Southwest and Central Asia, and finally to the warm and wet zones of South and Southeast Asia.

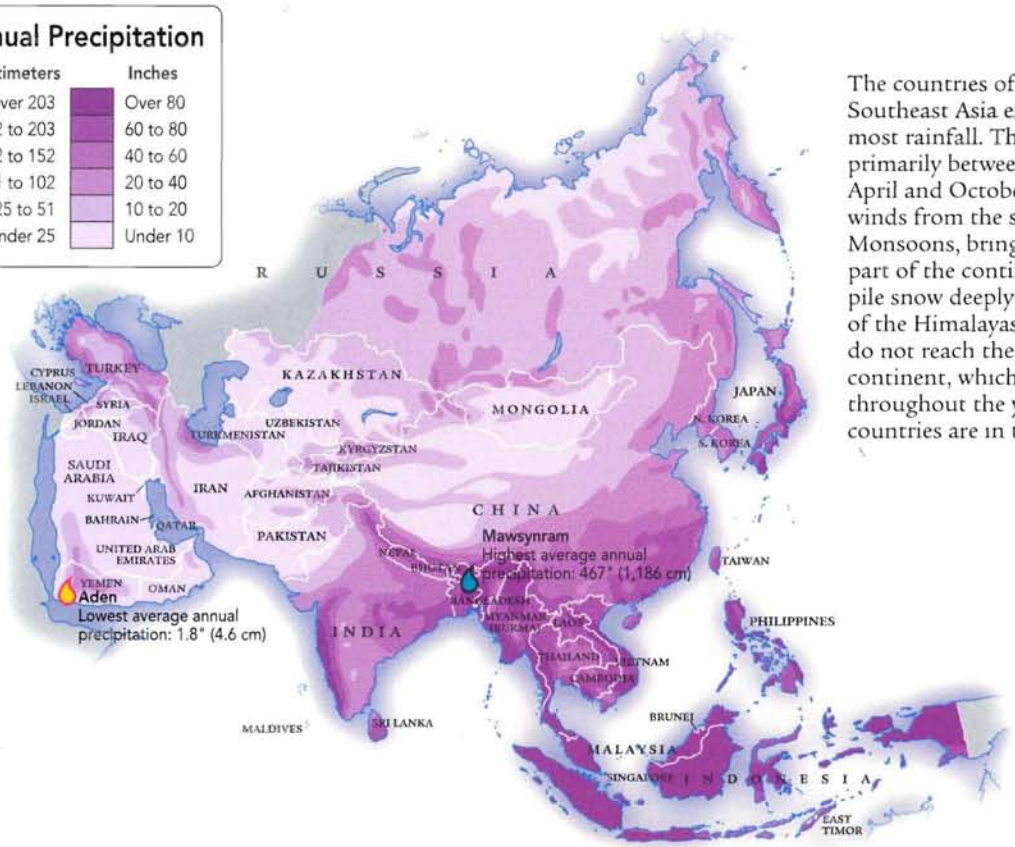
See photographs taken in different kinds of climates on pages 24–25.

Climate

- Tropical wet
- Tropical wet and dry
- Arid
- Semiarid
- Mediterranean
- Humid subtropical
- Humid continental
- Subarctic
- Tundra
- Highland

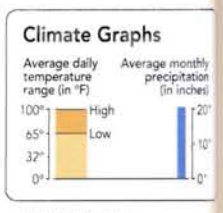
Annual Precipitation

Centimeters	Inches
Over 203	Over 80
152 to 203	60 to 80
102 to 152	40 to 60
51 to 102	20 to 40
25 to 51	10 to 20
Under 25	Under 10



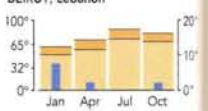
The countries of South and Southeast Asia experience the most rainfall. This rainfall occurs primarily between the months of April and October. Warm, moist winds from the south, called Monsoons, bring the rain to this part of the continent and also pile snow deeply upon the peaks of the Himalayas. The Monsoons do not reach the interior of the continent, which remains dry throughout the year. The driest countries are in the southwest.

Climate Graphs

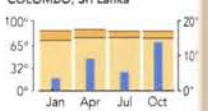


ALMATY, Kazakhstan

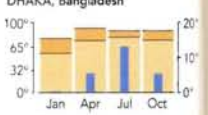
BEIRUT, Lebanon



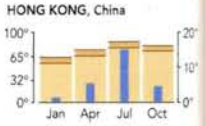
COLOMBO, Sri Lanka



DHAKA, Bangladesh



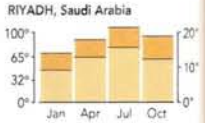
HONG KONG, China



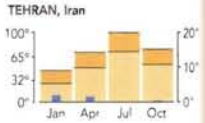
JAKARTA, Indonesia

NEW DELHI, India

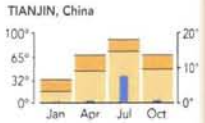
RIYADH, Saudi Arabia



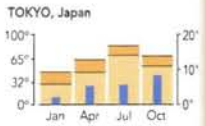
TEHRAN, Iran



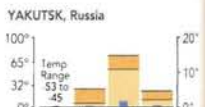
TIANJIN, China

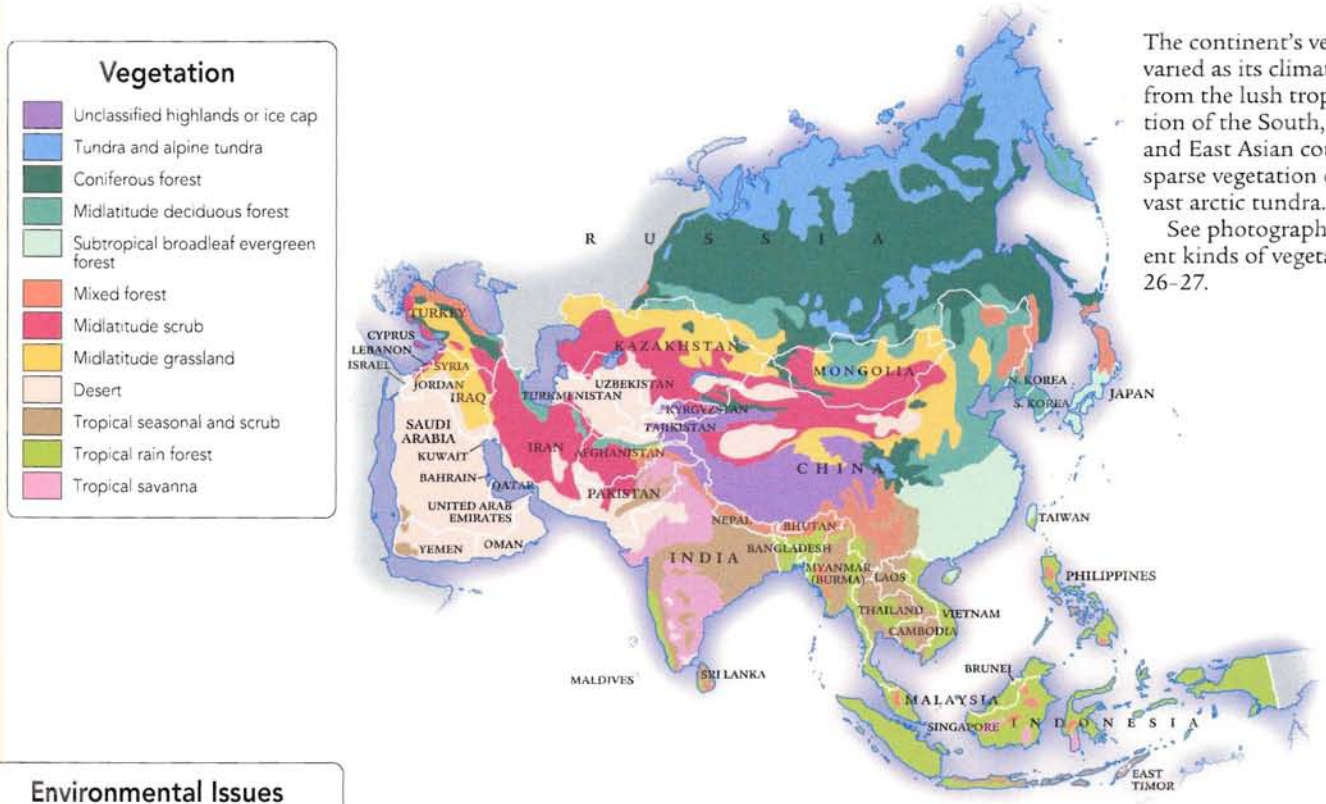


TOKYO, Japan



YAKUTSK, Russia



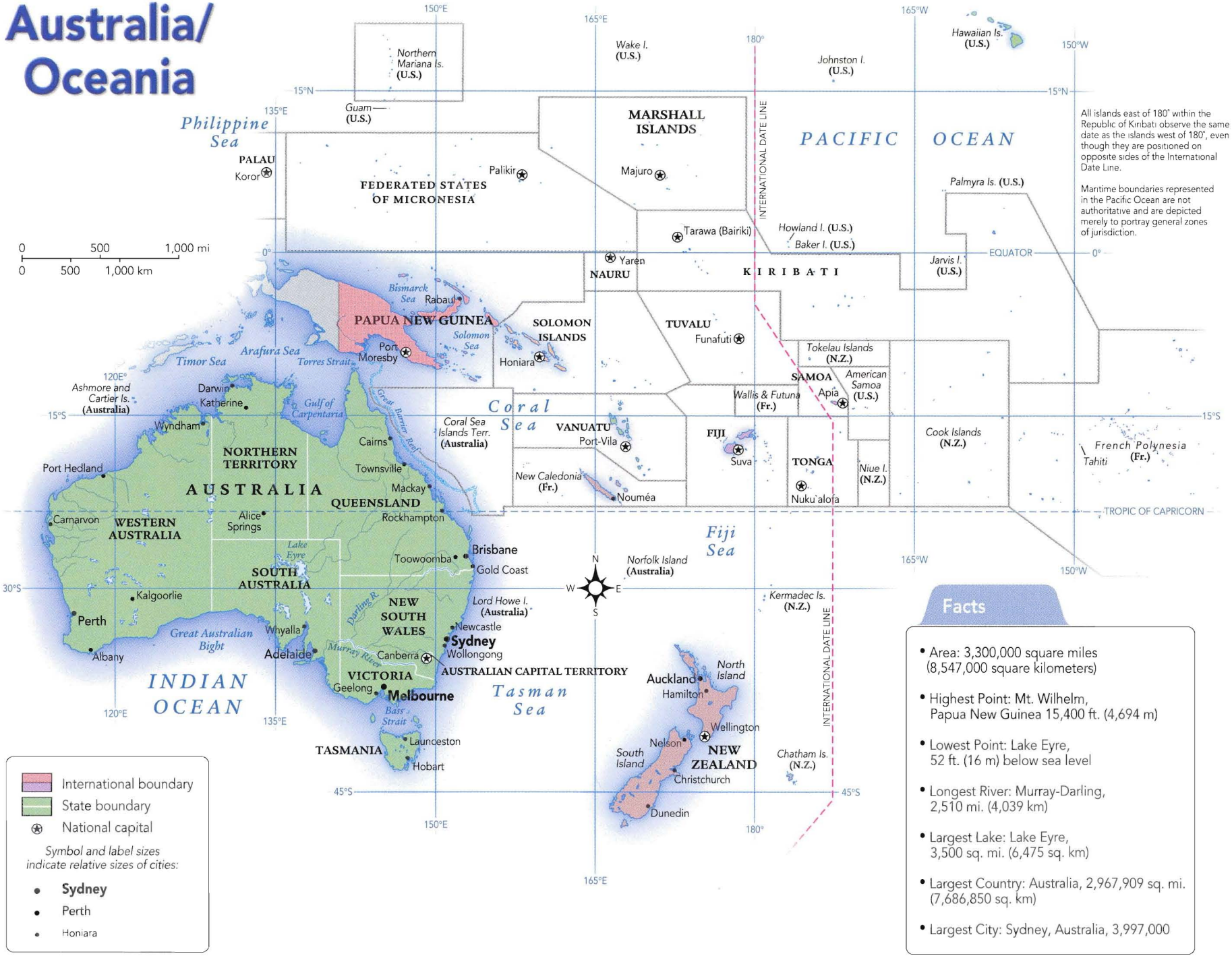


The continent's vegetation is as varied as its climate, ranging from the lush tropical vegetation of the South, Southeast, and East Asian countries to the sparse vegetation of Russia's vast arctic tundra.

See photographs of the different kinds of vegetation on pages 26–27.

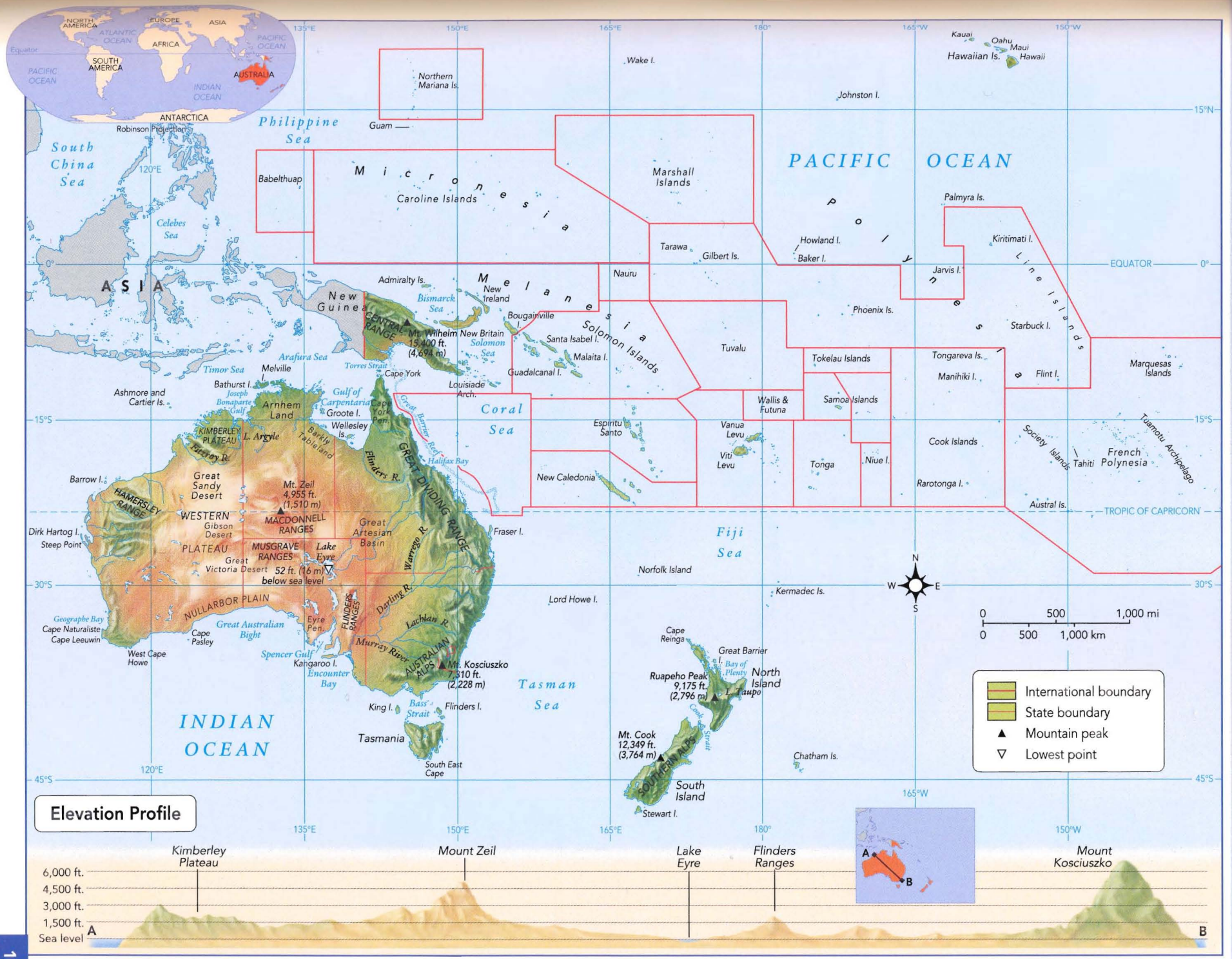
Asia's high population densities have led to a multitude of environmental problems, including pollution, deforestation, overfishing, and water shortages. With rapid population growth, pressures on land and water resources will only continue to increase. In western Asia, desertification and groundwater issues are the most pressing concerns. Most land in the region is either currently desert or is vulnerable to becoming desert in the future, and water is being withdrawn more quickly than it can be replaced.

Australia/ Oceania



Facts

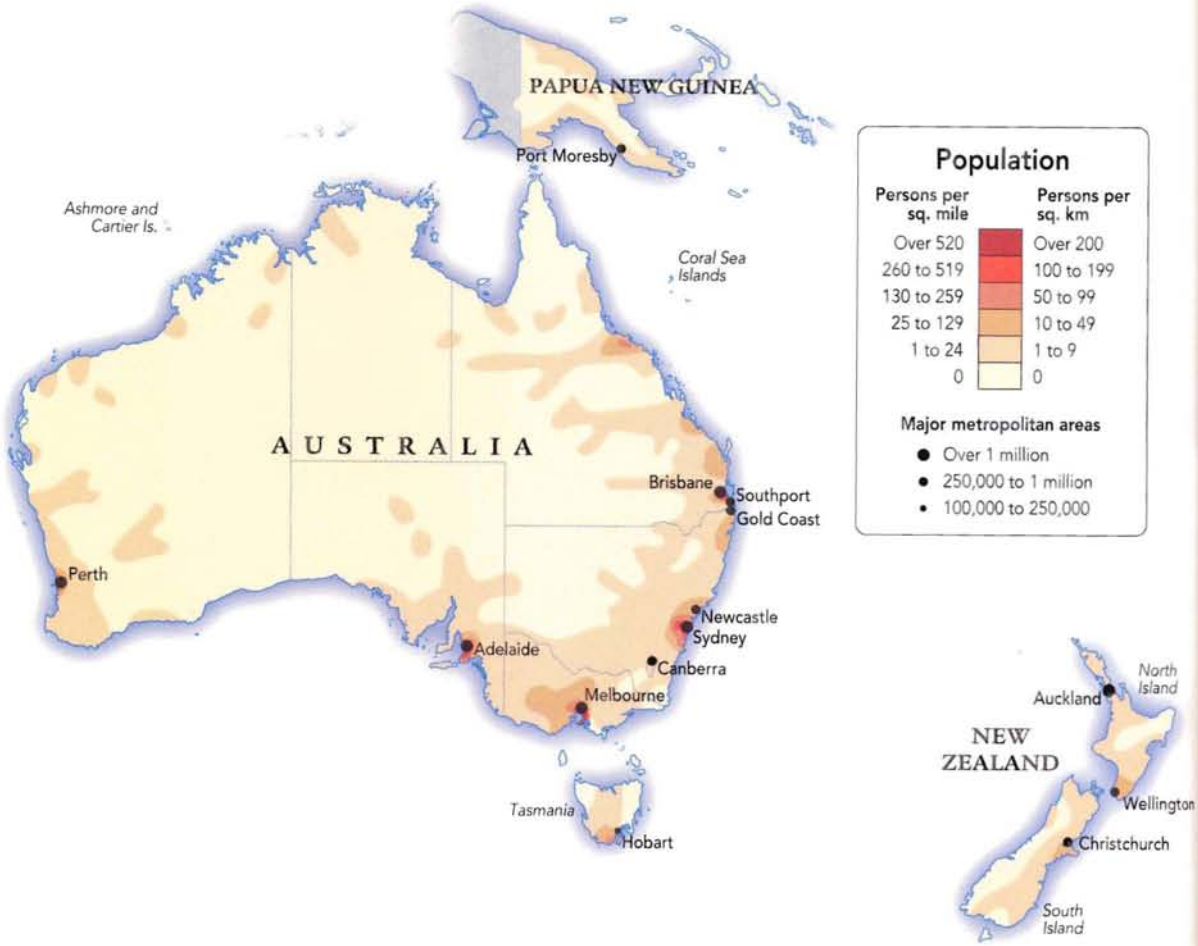
- Area: 3,300,000 square miles (8,547,000 square kilometers)
- Highest Point: Mt. Wilhelm, Papua New Guinea 15,400 ft. (4,694 m)
- Lowest Point: Lake Eyre, 52 ft. (16 m) below sea level
- Longest River: Murray-Darling, 2,510 mi. (4,039 km)
- Largest Lake: Lake Eyre, 3,500 sq. mi. (6,475 sq. km)
- Largest Country: Australia, 2,967,909 sq. mi. (7,686,850 sq. km)
- Largest City: Sydney, Australia, 3,997,000

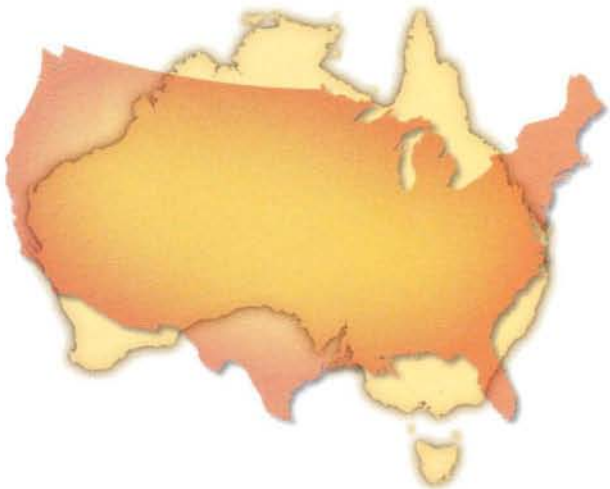

NORTH AMERICA
EUROPE
ASIA
ATLANTIC OCEAN
PACIFIC OCEAN
AFRICA
SOUTH AMERICA
AUSTRALIA
INDIAN OCEAN
ANTARCTICA
Equator
Robinson Projection
Philippine Sea
South China Sea
Celebes Sea
Micronesia
Caroline Islands
Babelthuap
Guam
Northern Mariana Is.
Wake I.
Johnston I.
Hawaiian Is.
Kauai
Oahu
Maui
Hawaii
Marshall Islands
PACIFIC OCEAN
Palmyra Is.
Howland I.
Baker I.
Kiritimati I.
Line Islands
Tarawa
Gilbert Is.
Nauru
Jarvis I.
EQUATOR
ASIA
Admiralty Is.
Melanesia
New Ireland
Bismarck Sea
New Guinea
CENTRAL RANGE
Mt. Wilhelm
15,400 ft.
(4,694 m)
New Britain
Bougainville I.
Solomon Sea
Santa Isabel I.
Solomon Islands
Malaita I.
Guadalcanal I.
Phoenix Is.
Starbuck I.
Tuvalu
Tokelau Islands
Tongareva Is.
Manihiki I.
Flint I.
Marquesas Islands
Arafura Sea
Timor Sea
Melville
Torres Strait
Cape York
Louisiade Arch.
Ashmore and Cartier Is.
Bathurst I.
Joseph Bonaparte Gulf
Gulf of Carpentaria
Arnhem Land
Cape York Pen.
Groote I.
Wellesley Is.
Great Barrier Reef
Coral Sea
Wallis & Futuna
Samoa Islands
Espiritu Santo
Vanua Levu
Viti Levu
Tonga
Niue I.
Cook Islands
Society Islands
Tahiti
French Polynesia
Tuamotu Archipelago
Rarotonga I.
KIMBERLEY PLATEAU
L. Argyle
Barkly Tableland
Flinders R.
GREAT DIVIDING RANGE
Fitzroy R.
Barrow I.
Great Sandy Desert
Mt. Zeil
4,955 ft.
(1,510 m)
HAMERSLEY RANGE
WESTERN PLATEAU
Gibson Desert
MACDONNELL RANGES
MUSGRAVE RANGES
Great Victoria Desert
Great Artesian Basin
Lake Eyre
52 ft. (16 m) below sea level
Warrego R.
Fraser I.
Dirk Hartog I.
Steep Point
New Caledonia
Norfolk Island
Lord Howe I.
Kermadec Is.
Fiji Sea
Austral Is.
TROPIC OF CAPRICORN
NULLARBOR PLAIN
Darling R.
Lachlan R.
Murray River
FLINDERS RANGES
Eyre Pen.
Geographe Bay
Cape Naturaliste
Cape Leeuwin
Cape Pasley
Great Australian Bight
West Cape Howe
Spencer Gulf
Kangaroo I.
Encounter Bay
AUSTRALIAN ALPS
Mt. Kosciuszko
7,310 ft.
(2,228 m)
Tasman Sea
King I.
Flinders I.
Bass Strait
Tasmania
South East Cape
INDIAN OCEAN
Cape Reinga
Great Barrier I.
Bay of Plenty
Ruapehu Peak
9,175 ft.
(2,796 m)
North Island
L. Taupo
Cook Strait
Mt. Cook
12,349 ft.
(3,764 m)
SOUTHERN ALPS
South Island
Stewart I.
Chatham Is.
N
W
E
S
0 500 1,000 mi
0 500 1,000 km
International boundary
State boundary
Mountain peak
Lowest point
Elevation Profile
Kimberley Plateau
Mount Zeil
Lake Eyre
Flinders Ranges
Mount Kosciuszko
6,000 ft.
4,500 ft.
3,000 ft.
1,500 ft.
Sea level
A
B

Major Metropolitan Areas

Australia	
Sydney	3,997,000
Melbourne	3,367,000
Brisbane	1,628,000
Perth	1,340,000
Adelaide	1,073,000
Newcastle	471,000
Gold Coast (Southport)	397,000
Canberra	312,000
Fiji	
Suva	167,000
Lautoka	29,000
Kiribati	
Tarawa (Bairiki)	25,000
Marshall Islands	
Majuro	18,000
Micronesia	
Weno	15,000
Colonia	3,000
Nauru	
Yaren	4,000
New Zealand	
Auckland	1,075,000
Wellington	340,000
Christchurch	334,000
Palau	
Koror	13,000
Papua New Guinea	
Port Moresby	332,000
Lae	81,000
Madang	27,000
Wewak	23,000
Samoa	
Apia	34,000
Solomon Islands	
Honiara	61,000
Tonga	
Nuku'alofa	30,000
Tuvalu	
Funafuti	4,000
Vanuatu	
Port-Vila	30,000

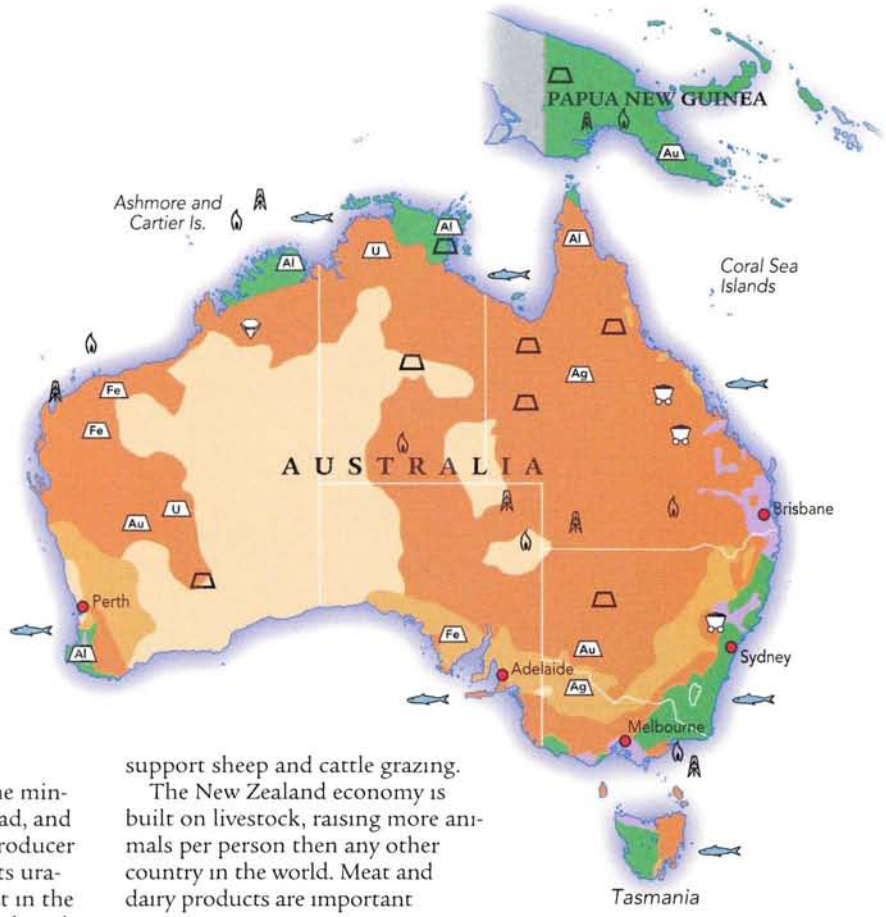
International comparability of population data is limited by varying census methods. Where metropolitan population is unavailable, core city population is shown.

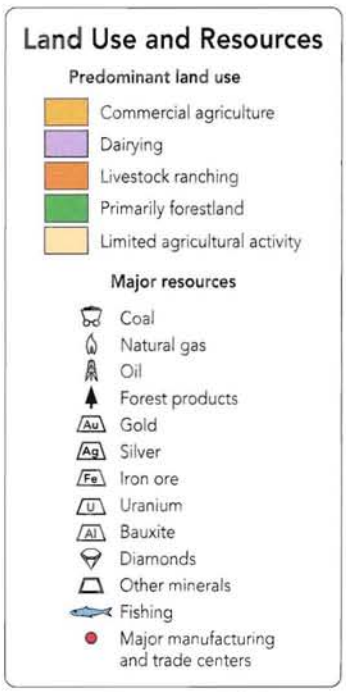




Gross Domestic Product is a measure of the total goods and services generated by a country. Generally, manufacturing, high-tech services, and specialized agricultural products add more value than raw materials and basic food stuffs.

Australia derives its wealth and high standard of living from service industries and mineral extraction and processing. New Zealand's economy is oriented towards the export of animal products. Papua New Guinea's subsistence economy generates little excess wealth.





Australia is rich in mineral resources. It ranks first in the mining of bauxite, diamonds, lead, and zinc while being a leading producer of coal, gold, and iron ore. Its uranium deposits are the largest in the world, though largely undeveloped. Modern methods of farming and irrigation allow a very limited area of commercial agriculture to be highly productive. Despite arid conditions, vast areas of the interior support sheep and cattle grazing.

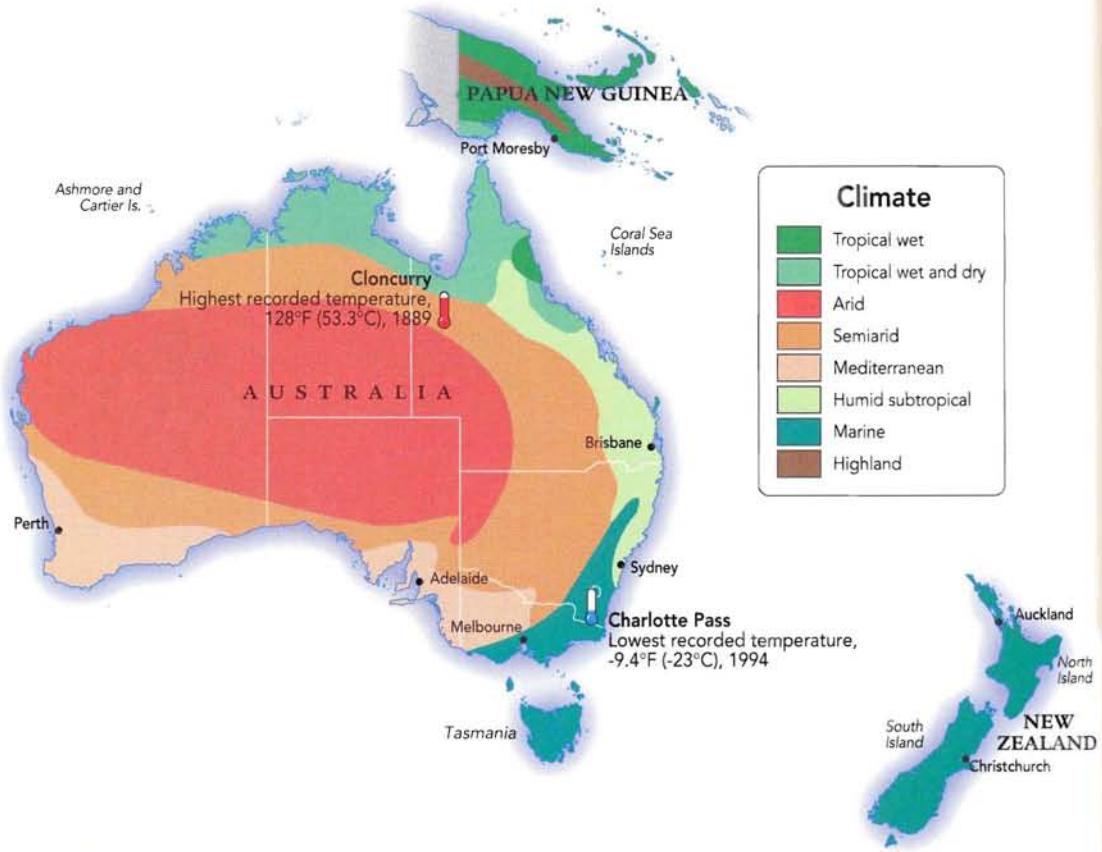
The New Zealand economy is built on livestock, raising more animals per person then any other country in the world. Meat and dairy products are important exports.

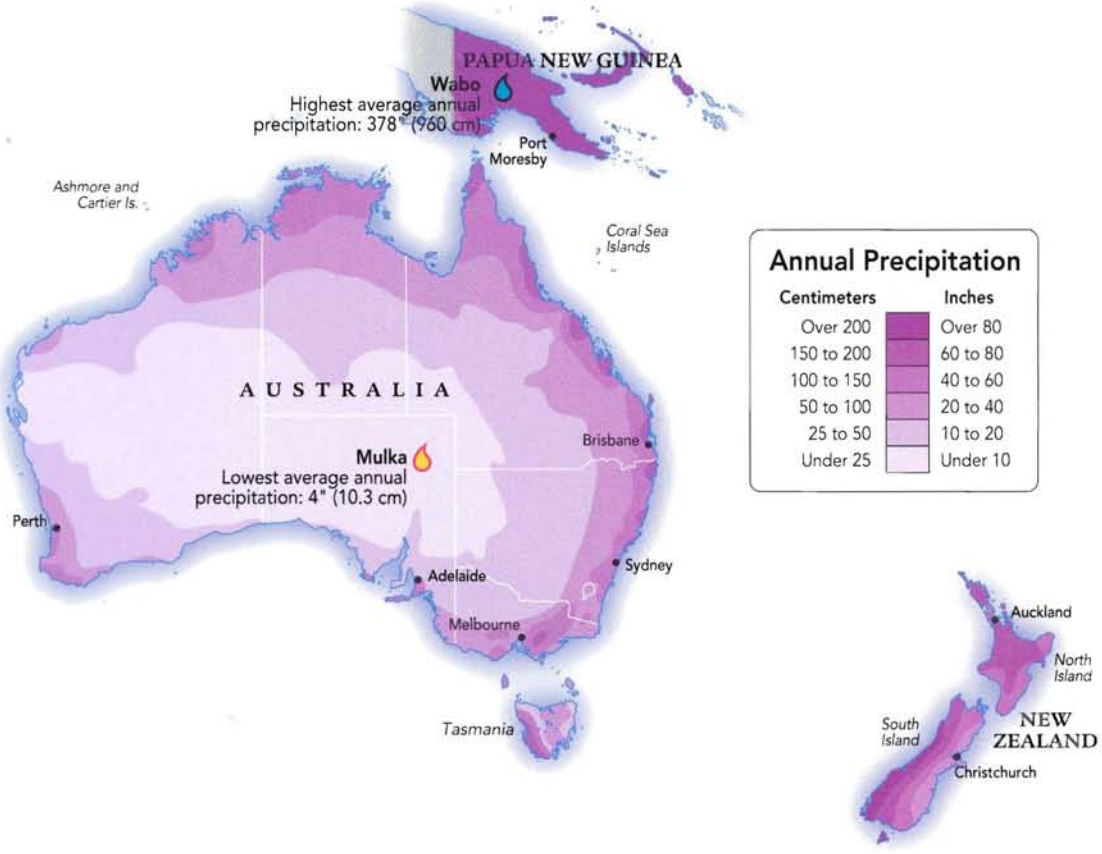
The economies of Papua New Guinea and the other island nations in the region rely primarily on subsistence agriculture and tourism.

Australia's climate is predominately warm and dry. The northern half of the country lies within the tropics and has very warm conditions year round. The southern half of the country lies below the tropics and experiences a warm summer and a cool winter.

New Zealand's climate is like that of the U.S. Pacific Northwest—mild and moist. Papua New Guinea and other island nations surrounding the equator have climates that are mainly very warm and moist year round.

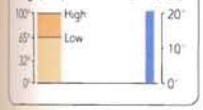
See photographs taken in different kinds of climates on pages 24–25.

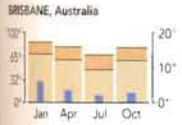


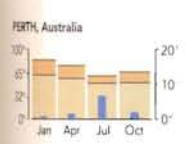


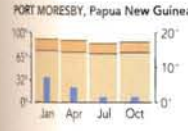
While Papua New Guinea and other island nations within the tropics receive plentiful and reliable rainfall, rain can be a problem in Australia—typically a case of feast or famine or bad timing. Westerly winds off of the Tasman Sea deposit precipitation on the mountain ranges of New Zealand, often in the form of snow that can be seen on some peaks year round.

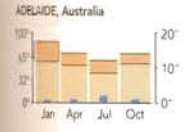
Climate Graphs

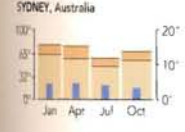








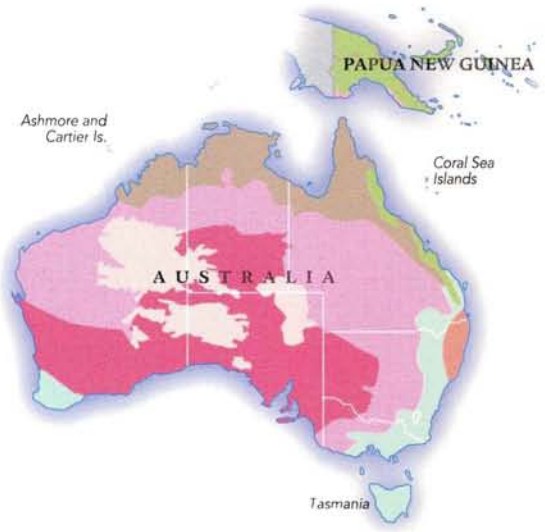


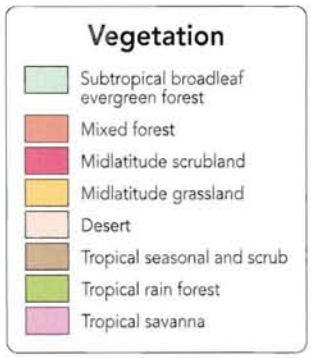


Abundant Australian forestlands are limited to relatively narrow coastal regions where moisture, even if seasonal, is adequate. Most of the rest of the continent is covered by species of trees, bush, and grasses adapted to arid conditions. Eucalyptus are the most common trees in Australia.

Papua New Guinea has dense tropical rain forests, and New Zealand has mixed forests and grasslands arising from its temperate climate.

See photographs of different kinds of vegetation on pages 26–27.





Biodiversity loss (a decrease in the variety of life forms and ecosystems) is a leading environmental problem in both Australia and New Zealand. Over the past two hundred years, vast areas have been cleared for settlements and farmland. This land clearing, along with the introduction of non-native plant and animal species, has permanently altered the ecological balance. In New Zealand, it is estimated that eighty-five percent of the original lowland forests and wetlands have been lost due to human influences. Desertification, often brought on by overgrazing, is another serious environmental threat in many parts of Australia.

D

E

F

G

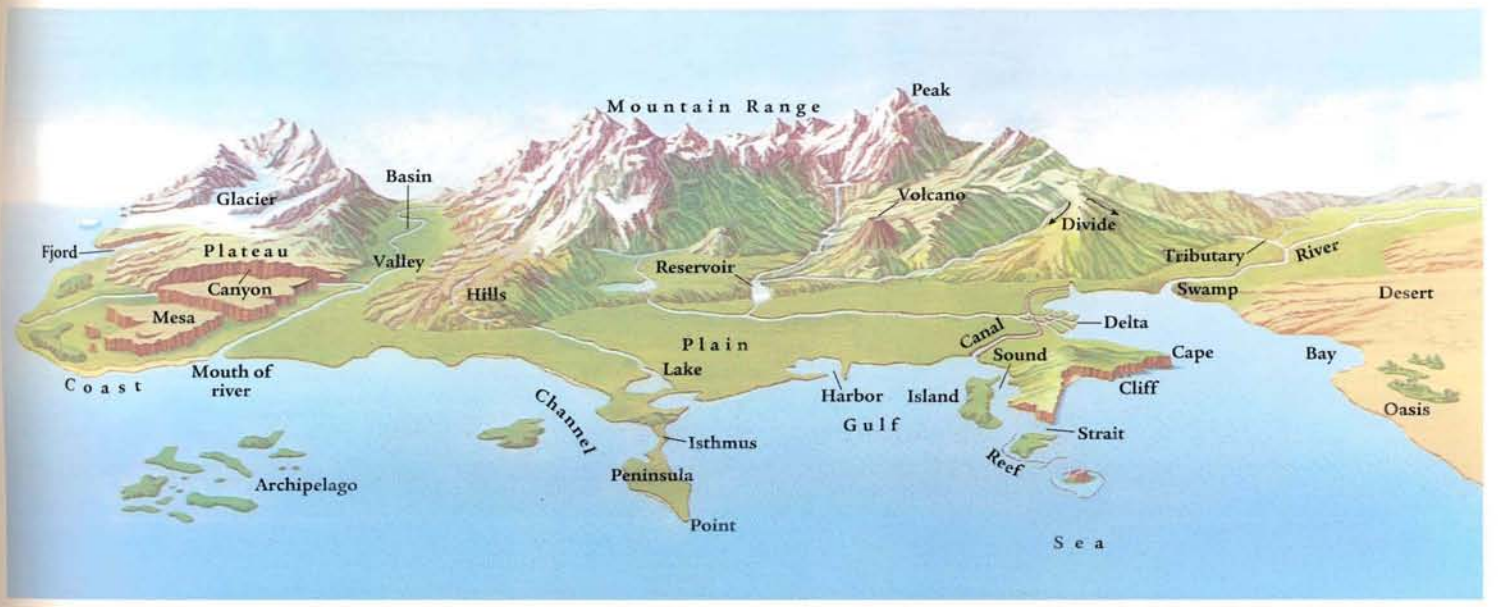
H

I

Abbreviations

Arch.	Archipelago
Austl.	Australia
Bos. & Her.	Bosnia & Herzegovina
C.	Cape
Can.	Canada
Cen. African Rep.	Central African Republic
Czech Rep.	Czech Republic
Dem. Rep. of Congo	Democratic Republic of the Congo
Den.	Denmark
Dominican Rep.	Dominican Republic
fed. dist.	Federal District
Fed. States of Micronesia	Federated States of Micronesia
Fr.	France
Ft.	Fort
F.Y.R. Macedonia	Former Yugoslav Republic of Macedonia
G.	Gulf
Gr.	Greece
I.	Island
Is.	Islands
Isth.	Isthmus
It.	Italy
L.	Lake
Liecht.	Liechtenstein
Mex.	Mexico
Mor.	Morocco
Mt.	Mount
Mtn.	Mountain
Mts.	Mountains
Neth.	Netherlands
N. Korea	North Korea
N.Z.	New Zealand
Pen.	Peninsula
Plat.	Plateau
Pt.	Point
R.	River
Rep.	Republic
Rep. of the Congo	Republic of the Congo
Res.	Reservoir
Russ.	Russia
Serb. & Mont.	Serbia and Montenegro
S. Africa	South Africa
S. Korea	South Korea
Sp.	Spain
St., St-	Saint
Ste., Ste-	Sainte
Str.	Strait
Terr.	Territory
U.K.	United Kingdom
U.S.	United States
Val.	Valley

For U.S. two-letter state abbreviations, see pages 52–53.



Glossary

Archipelago a group of islands

Basin an area surrounded by higher land; an area drained by a river and its tributaries

Bay a coastal indentation of the sea or a lake into the land

Canal a man-made waterway, for irrigation or transportation

Canyon a deep valley with steep sides, usually with a river flowing through it

Cape a point of land extending out into a body of water

Channel a narrow stretch of water connecting two larger bodies of water

Cliff a high, steep rock-face

Coast a strip of land bordering the sea

Continental Divide a ridge of land (divide) that separates the great drainage basins of a continent, each basin emptying into a separate body of water

Delta an area of land formed by deposits at the mouth of a river

Desert an area of land with little rainfall or vegetation

Fjord a narrow inlet of the sea, with steep slopes, formed by a glacier

Glacier a large mass of ice that moves slowly, from higher to lower ground

Gulf an extension of the sea partly surrounded by land, larger than a bay

Harbor a sheltered area along a coast where ships can safely anchor

Hills an upland area, smaller than mountains, with gentle slopes

Island a body of land completely surrounded by water

Isthmus a narrow strip of land that connects two larger bodies of land

Lake a body of water completely surrounded by land

Mesa a flat upland area with steep sides, smaller than a plateau

Mountain an area of land rising much higher than the land around it, with steep slopes and pointed or rounded tops

Mouth, of river the point where a river empties into another body of water

Oasis a place in the desert with enough water to support vegetation

Peak the pointed top of a mountain

Peninsula a long piece of land surrounded on three sides by water

Plain a large area of flat or gently rolling land

Plateau a large elevated area of flat land

Point a narrow piece of land jutting out into a body of water, usually low-lying

Range a chain of mountains

Reef an underwater ridge, lying near the surface of the water

Reservoir a man-made lake, sometimes formed by a river dam

River any stream of fresh water flowing by gravity from an upland source into a body of water or another river. Perennial rivers flow all year; intermittent are dry part of the year

Sea a large body of salt water, smaller than an ocean

Sound a stretch of water between an island and the mainland

Strait a stretch of water joining two larger bodies of water, narrower than a channel

Swamp low-lying land permanently waterlogged

Tributary a river that flows into a larger river

Valley a long, low area, usually with a river flowing through it, and often lying between mountains or hills

Volcano a cone-shaped hill or mountain formed by lava and ash; may be active or extinct