

المادة : نصوص جغرافية باللغة الانكليزية

المرحلة : الثالثة

عدد الساعات : ٢

الفصل : السادس

### مفردات المنهج

(Iraq Geographic and climatic characteristics) نص جغرافي يتحدث عن طبيعة القطر العراقي بعنوان

1-location الموقع

2-Area المنطقة/المساحة

3-Climatation المناخ

4-Vegetation المناطق الزراعية /النباتات

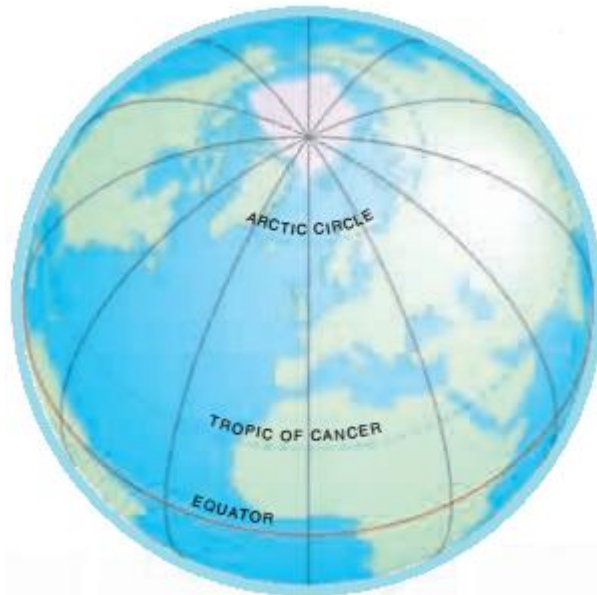
مصطلحات جغرافية باللغة الانكليزية

بالتخصصات الجغرافية العامة نصوص تتعلق

السكان والتعداد السكاني (Population)

## UNIT ONE

### GEOGRAPHY



Geography (from Greek *geographia*, lit. "earth describe-write") is the science that studies the lands, features, inhabitants, and phenomena of Earth. A literal translation would be "to describe or write about the Earth". The first person to use the word "geography" was Eratosthenes (276-194 BC). Four historical traditions in geographical research are the spatial analysis of natural and human phenomena (geography as a study of distribution), area studies (places and regions), study of man-land relationship, and research in earth sciences. Nonetheless, modern geography is an all-encompassing discipline that foremost seeks to understand the Earth and all of its human and natural complexities—not merely where objects are, but how they have changed and come to be. Geography has been called "the world discipline" and "the bridge between the human and the physical science". Geography is divided into two main branches: human geography and physical geography.

## **Introduction**

Traditionally, geographers have been viewed the same way as cartographers and people who study place names and numbers. Although many geographers are trained in toponymy and cartology, this is not their main preoccupation. Geographers study the spatial and temporal distribution of phenomena, processes and features as well as the interaction of humans and their environment. As space and place affect a variety of topics such as economics, health, climate, plants and animals; geography is highly interdisciplinary.“. Geography has higher aims than this: it seeks to classify phenomena (alike of the natural and of the political world, in so far as it treats of the latter), to compare, to generalize, to ascend from effects to causes, and, in doing so, to trace out the laws of nature and to mark their influences upon man. This is 'a description of the world'—that is Geography. In a word Geography is a Science—a thing not of mere names but of argument and reason, of cause and effect.

Geography as a discipline can be split broadly into two main subsidiary fields: human geography and physical geography. The former largely focuses on the built environment and how humans create, view, manage, and influence space. The latter examines the natural environment and how organisms, climate, soil, water, and landforms produce and interact. The difference between these approaches led to a third field, environmental geography, which combines physical and human geography and looks at the interactions between the environment and humans.

## UNIT TWO

### GEOGRAPHY OF IRAQ

Iraq lies between latitudes 29° and 38° N, and longitudes 39° and 49° E (a small area lies west of 39°). Spanning 437,072 km<sup>2</sup> (168,754 sq mi), it is the 58th-largest country in the world. It is comparable in size to the US state of California, and somewhat larger than Paraguay.

Iraq mainly consists of desert , but near the two major rivers (Euphrates and Tigris) are fertile alluvial plains, as the rivers carry about 60,000,000 m<sup>3</sup> (78,477,037 cu yd) of silt annually to the delta. The north of the country is mostly composed of mountains; the highest point being at 3,611 m (11,847 ft) point, unnamed on the map opposite, but known locally as Cheekah Dar (black tent). Iraq has a small coastline measuring 58 km (36 mi) along the Arab Gulf. Close to the coast and along the Shatt al-Arab (known as arvandrud among Iranians) there used to be marshlands, but many were drained in the 1990s.



The geography of Iraq is diverse and falls into four main regions: the desert (west of the Euphrates), Upper Mesopotamia (between the upper Tigris and Euphratesh rivers), the northern highlands of Iraqi Kurdistan, and Lower Mesopotamia, the alluvial plain extending from around Tikrit to the Arab Gulf.

The mountains in the northeast are an extension of the alpine system that runs eastward from the Balkans through southern Turkey, northern Iraq, Iran, and Afghanistan, eventually reaching the Himalayas. The desert is in the southwest and central provinces along the borders with Saudi Arabia and Jordan and geographically belongs with the Arabian Peninsula.

Iraq holds a special distinction in the history of geography: a clay tablet generally accepted as "the earliest known map" was unearthed in 1930 during the excavation of Ga-Sur at Nuzi Yorgha Tepe, near the towns of Harran and Kirkuk, 200 miles (322 km) north of the site of Babylon. The tablet, measuring 6.8 × 7.6 in (173 × 193 mm), is usually dated from the dynasty of Sargon of Akkad between 2500-2300 BC; an even earlier date for the tablet was promulgated by archeologist Leo Bagrow, placing it in the Agade Period (3800 BC).

## **Area and Boundaries**

### **Area:**

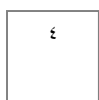
Total : 437,072 km<sup>2</sup> (168,754 sq mi)

land: 432,162 km<sup>2</sup> (166,859 sq mi)

water: 4,910 km<sup>2</sup> (1,900 sq mi)

### **Land boundaries:**

total: 3,631 km (2,256 mi)



border countries: Iran 1,458 km (906 mi), Saudi Arabia 814 km (506 mi), Syria 605 km (376 mi), Turkey 331 km (206 mi), Kuwait 242 km (150 mi), Jordan 181 km (112 mi)

**Coastline:** 58 km (36 mi)

**Maritime claims:**

continental shelf: not specified

territorial sea: 12 nmi (22.2 km; 13.8 mi)

**Elevation extremes:**

lowest point: Arab Gulf 0 m.

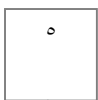
highest point: Mount of Hasarust 3,611 m (11,847 ft) .

**Climate**

Average temperatures in Iraq range from higher than 48 °C (118.4 °F) in July and August to below freezing in January. Most of the rainfall occurs from December through April and averages between 100 and 180 millimeters (3.9 and 7.1 in) annually. The mountainous region of northern Iraq receives appreciably more precipitation than the central or southern desert region.

Roughly 90% of the annual rainfall occurs between November and April, most of it in the winter months from December through March. The remaining six months, particularly the hottest ones of June, July, and August, are dry.

Except in the north and northeast, mean annual rainfall ranges between 100 and 170 millimeters (3.9 and 6.7 in). Data available from stations in the foothills and steppes south and southwest of the mountains suggest mean annual rainfall between 320 and 570 millimeters (12.6 and 22.4 in) for that



area. Rainfall in the mountains is more abundant and may reach 1,000 millimeters (39.4 in) a year in some places, but the terrain precludes extensive cultivation. Cultivation on nonirrigated land is limited essentially to the mountain valleys, foothills, and steppes, which have 300 millimeters (11.8 in) or more of rainfall annually. Even in this zone, however, only one crop a year can be grown, and shortages of rain have often led to crop failures.

Mean minimum temperatures in the winter range from near freezing (just before dawn) in the northern and northeastern foothills and the western desert to 2 to 3 °C (35.6 to 37.4 °F) and 4 to 5 °C (39.2 to 41 °F) in the alluvial plains of southern Iraq. They rise to a mean maximum of about 16 °C (60.8 °F) in the western desert and the northeast, and 17 °C (62.6 °F) in the south. In the summer mean minimum temperatures range from about 27 to 34 °C (80.6 to 93.2 °F) and rise to maximums between roughly 42 and 47 °C (107.6 and 116.6 °F). Temperatures sometimes fall below freezing and have fallen as low as -14 °C (6.8 °F) at Ar Rutbah in the western desert. They are more likely, however, to go over 49 °C (120.2 °F) in the summer months, and several stations have records of over 53 °C (127.4 °F).

The summer months are marked by two kinds of wind phenomena. The southern and southeasterly sharqi, a dry, dusty wind with occasional gusts of 80 kilometers per hour (50 mph), occurs from April to early June and again from late September through November. It may last for a day at the beginning and end of the season but for several days at other times. This wind is often accompanied by violent duststorms that may rise to heights of several thousand meters and close airports for brief periods. From mid-June to mid-September the prevailing wind, called the shamal, is from the north and northwest. It is a steady wind, absent only occasionally during

this period. The very dry air brought by this shamal permits intensive sun heating of the land surface, but the breeze has some cooling effect.

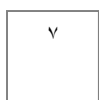
The combination of rain shortage and extreme heat makes much of Iraq a desert. Because of very high rates of evaporation, soil and plants rapidly lose the little moisture obtained from the rain, and vegetation could not survive without extensive irrigation. Some areas, however, although arid, do have natural vegetation in contrast to the desert. For example, in the Zagros Mountains in northeastern Iraq there is permanent vegetation, such as oak trees, and date palms are found in the south

## **Major geographical features**

Most geographers, including those of the Iraqi government, discuss the country's geography in terms of four main zones or regions: the desert in the west and southwest; the rolling upland between the upper Tigris and Euphrates rivers (in Arabic the Dijlah and Furat, respectively); the highlands in the north and northeast; and the alluvial plain through which the Tigris and Euphrates flow. Iraq's official statistical reports give the total land area as 438,446 km<sup>2</sup> (169,285 sq mi), whereas a United States Department of State publication gives the area as 434,934 km<sup>2</sup> (167,929 sq mi).

## **Upper Mesopotamia**

The uplands region, between the Tigris north of Samarra and the Euphrates north of Hit, is known as Al Jazira (the island) and is part of a larger area that extends westward into Syria between the two rivers and into Turkey. Water in the area flows in deeply cut valleys, and irrigation is much more difficult than it is in the lower plain. Much of this zone may be classified as desert.





## **Lower Mesopotamia**

An Alluvial plain begins north of Baghdad and extends to the Arab Gulf. Here the Tigris and Euphrates rivers lie above the level of the plain in many places, and the whole area is a river delta interlaced by the channels of the two rivers and by irrigation canals. Intermittent lakes, fed by the rivers in flood, also characterize southeastern Iraq. A fairly large area (15,000 km<sup>2</sup> or 5,800 sq mi) just above the confluence of the two rivers at Al Qurnah and extending east of the Tigris beyond the Iranian border is marshland, known as Hawr al Hammar, the result of centuries of flooding and inadequate drainage. Much of it is permanent marsh, but some parts dry out in early winter, and other parts become marshland only in years of great flood.

Because the waters of the Tigris and Euphrates above their confluence are heavily silt- laden, irrigation and fairly frequent flooding deposit large quantities of silty loam in much of the delta area. Windborne silt contributes to the total deposit of sediments. It has been estimated that the delta plains are built up at the rate of nearly twenty centimeters in a century. In some areas, major floods lead to the deposit in temporary lakes of as much as thirty centimeters of mud.

The Tigris and Euphrates also carry large quantities of salts. These, too, are spread on the land by sometimes excessive irrigation and flooding. A high water table and poor surface and subsurface drainage tend to concentrate the salts near the surface of the soil. In general, the salinity of the soil increases from Baghdad south to the Arab Gulf and severely limits productivity in the region south of Al Amarah. The salinity is reflected in the large lake in central Iraq, southwest of Baghdad, known as Bahr al Milh (Sea of Salt). There are two

other major lakes in the country to the north of Bahr al Milh: Buhayrat ath Tharthar and Buhayrat al Habbaniyah.

## **Baghdad area**

Between Upper and Lower Mesopotamia is the urban area surrounding Baghdad. These "Baghdad Belts" can be described as the provinces adjacent to the Iraqi capital and can be divided into four quadrants: Northeast, Southeast, Southwest, and Northwest. Beginning in the north, the belts include the province of Salah ad Din, clockwise to Baghdad province, Diyala in the North-east, Babil and Wasit in the south east and around to Al Anbar in the west.

## **Highlands**

The northeastern highlands begin just south of a line drawn from Mosul to Kirkuk and extend to the borders with Turkey and Iran. High ground, separated by broad, undulating steppes, gives way to mountains ranging from 1,000 to 4,000 meters (3,281 to 13,123 ft) near the Iranian and Turkish borders. Except for a few valleys, the mountain area proper is suitable only for grazing in the foothills and steppes; adequate soil and rainfall, however, make cultivation possible. Here, too, are the great oil fields near Mosul and Kirkuk.

## **Desert**

The desert zone, an area lying west and southwest of the Euphrates River, is a part of the Syrian Desert, which covers sections of Syria, Jordan, and Saudi Arabia. The region, sparsely inhabited by pastoral nomads, consists of a wide, stony plain interspersed with rare sandy stretches. A widely ramified pattern of wadis—watercourses that are dry most of the year—runs from the border to the Euphrates. Some wadis are over

400 km (250 mi) long and carry brief but torrential floods during the winter rains.

### **Tigris-Euphrates river system**

The Euphrates originates in Turkey, is augmented by the Balikh and Khabur rivers in Syria, and enters Iraq in the northwest. Here it is fed only by the wadis of the western desert during the winter rains. It then winds through a gorge, which varies from two to 16 kilometers in width, until it flows out on the plain at Ar Ramadi. Beyond there the Euphrates continues to the Hindiya Barrage, which was constructed in 1914 to divert the river into the Hindiya Channel; the present day Shatt al Hillah had been the main channel of the Euphrates before 1914. Below Al Kifl, the river follows two channels to As-Samawah, where it reappears as a single channel to join the Tigris at Al Qurnah. The Tigris also rises in Turkey but is significantly augmented by several rivers in Iraq, the most important of which are the Khabur, the Great Zab, the Little Zab, and the Adhaim, all of which join the Tigris above Baghdad, and the Diyala, which joins it about thirty-six kilometers below the city. At the Kut Barrage much of the water is diverted into the Shatt al-Hayy, which was once the main channel of the Tigris. Water from the Tigris thus enters the Euphrates through the Shatt al-Hayy well above the confluence of the two main channels at Al Qurnah.

Both the Tigris and the Euphrates break into a number of channels in the marshland area, and the flow of the rivers is substantially reduced by the time they come together at Al Qurnah. Moreover, the swamps act as silt traps, and the Shatt al Arab is relatively silt free as it flows south. Below Basra, however, the Karun River enters the Shatt al Arab from Iran, carrying large quantities of silt that present a continuous dredging problem in maintaining a channel for ocean-going

vessels to reach the port at Basra. This problem has been superseded by a greater obstacle to river traffic, however, namely the presence of several sunken hulls that have been rusting in the Shatt al Arab since early in the Iran-Iraq war.

The waters of the Tigris and Euphrates are essential to the life of the country, but they sometimes threaten it. The rivers are at their lowest level in September and October and at flood in March, April, and May when they may carry forty times as much water as at low mark. Moreover, one season's flood may be ten or more times as great as that in another year. In 1954, for example, Baghdad was seriously threatened, and dikes protecting it were nearly topped by the flooding Tigris. Since Syria built a dam on the Euphrates, the flow of water has been considerably diminished and flooding was no longer a problem in the mid-1980s. In 1988 Turkey was also constructing a dam on the Euphrates that would further restrict the water flow.

Until the mid-twentieth century, most efforts to control the waters were primarily concerned with irrigation. Some attention was given to problems of flood control and drainage before the revolution of July 14, 1958, but development plans in the 1960s and 1970s were increasingly devoted to these matters, as well as to irrigation projects on the upper reaches of the Tigris and Euphrates and the tributaries of the Tigris in the northeast. During the war, government officials stressed to foreign visitors that, with the conclusion of a peace settlement, problems of irrigation and flooding would receive top priority from the government.

### **Settlement patterns**

In the rural areas of the alluvial plain and in the lower Diyala region, settlement almost invariably clusters near the rivers, streams, and irrigation canals. The bases of the relationship

between watercourse and settlement have been summarized by Robert McCormick Adams, director of the Oriental Institute of the University of Chicago. He notes that the levees laid down by streams and canals provide advantages for both settlement and agriculture. Surface water drains more easily on the levees' backslope, and the coarse soils of the levees are easier to cultivate and permit better subsurface drainage. The height of the levees gives some protection against floods and the frost that often affect low-lying areas and may kill winter crops. Above all, those living or cultivating on the crest of a levee have easy access to water for irrigation and household use in a dry, hot country.

Although there are some isolated homesteads, most rural communities are nucleated settlements rather than dispersed farmsteads; that is, the farmer leaves his village to cultivate the fields outside it. The pattern holds for farming communities in the Kurdish highlands of the northeast as well as for those in the alluvial plain. The size of the settlement varies, generally with the volume of water available for household use and with the amount of land accessible to village dwellers. Sometimes, particularly in the lower Tigris and Euphrates valleys, soil salinity restricts the area of arable land and limits the size of the community dependent on it, and it also usually results in large unsettled and uncultivated stretches between the villages.

Fragmentary information suggests that most farmers in the alluvial plain tend to live in villages of over 100 persons. For example, in the mid-1970s a substantial number of the residents of Baqubah, the administrative center and major city of Diyala Governorate, were employed in agriculture.

The Marsh Arabs (the Madan) of the south usually live in small clusters of two or three houses kept above water by

rushes that are constantly being replenished. Such clusters often are close together, but access from one to another is possible only by small boat. Here and there a few natural islands permit slightly larger clusters. Some of these people are primarily water buffalo herders and lead a semi-nomadic life. In the winter, when the waters are at a low point, they build fairly large temporary villages. In the summer they move their herds out of the marshes to the river banks.

The war has had its effect on the lives of these denizens of the marshes. With much of the fighting concentrated in their areas, they have either migrated to settled communities away from the marshes or have been forced by government decree to relocate within the marshes. Also, in early 1988, the marshes had become the refuge of deserters from the Iraqi army who attempted to maintain life in the fastness of the overgrown, desolate areas while hiding out from the authorities. These deserters in many instances have formed into large gangs that raid the marsh communities; this also has induced many of the marsh dwellers to abandon their villages.

The war has also affected settlement patterns in the northern Kurdish areas. There, the persistence of a stubborn rebellion by Kurdish guerrillas has goaded the government into applying steadily escalating violence against the local communities. Starting in 1984, the government launched a scorched-earth campaign to drive a wedge between the villagers and the guerrillas in the remote areas of two provinces of Kurdistan in which Kurdish guerrillas were active. In the process whole villages were torched and subsequently bulldozed, which resulted in the Kurds flocking into the regional centers of Irbil and As Sulaymaniyah. Also as a military precaution, the government has cleared a broad strip of territory in the Kurdish region along the Iranian border of all its inhabitants, hoping in this way to interdict the movement of Kurdish guerrillas back

and forth between Iran and Iraq. The majority of Kurdish villages, however, remained intact in early 1988.

In the arid areas of Iraq to the west and south, cities and large towns are almost invariably situated on watercourses, usually on the major rivers or their larger tributaries. In the south this dependence has had its disadvantages. Until the recent development of flood control, Baghdad and other cities were subject to the threat of inundation. Moreover, the dikes needed for protection have effectively prevented the expansion of the urban areas in some directions. The growth of Baghdad, for example, was restricted by dikes on its eastern edge. The diversion of water to the Milhat ath Tharthar and the construction of a canal transferring water from the Tigris north of Baghdad to the Diyala River have permitted the irrigation of land outside the limits of the dikes and the expansion of settlement.

Resources and land use

**Natural resources:** petroleum, natural gas, phosphates, sulfur.

**Land use:**

arable land: 12%

permanent crops: 0%

permanent pastures: 9%

forests and woodland: 0%

other: 79% (1993 est).

**Irrigated land:** 25,500 km<sup>2</sup> or 9,800 sq mi (1993 est).

While its proven oil reserves of 112 billion barrels (17.8×10<sup>9</sup> m<sup>3</sup>) ranks Iraq second in the world behind Saudi Arabia, the United States Department of Energy estimates that up to 90

percent of the country remains unexplored. Unexplored regions of Iraq could yield an additional 100 billion barrels (16×10<sup>9</sup> m<sup>3</sup>). Iraq's oil production costs are among the lowest in the world. However, only about 2,000 oil wells have been drilled in Iraq, compared to about 1 million wells in Texas alone.

GEOGRAPHIC TEXTS 2017



## **UNIT THREE**

### **GEOGRAPHICS TECHNIQUES AND TERMS**

#### **Techniques**

As spatial interrelationships are key to this synoptic science, maps are a key tool. Classical cartography has been joined by a more modern approach to geographical analysis, computer-based geographic information systems (GIS).

In their study, geographers use four interrelated approaches:  
Systematic — Groups geographical knowledge into categories that can be explored globally.

Regional — Examines systematic relationships between categories for a specific region or location on the planet.

Descriptive — simply specifies the locations of features and populations.

Analytical — Asks why we find features and populations in a specific geographic area.

#### **Cartography**

Cartography studies the representation of the Earth's surface with abstract symbols (map making). Although other subdisciplines of geography rely on maps for presenting their analyses, the actual making of maps is abstract enough to be regarded separately. Cartography has grown from a collection of drafting techniques into an actual science.

#### **Geographic information system**

Geographic information systems (GIS) deal with the storage of information about the Earth for automatic retrieval by a computer, in an accurate manner appropriate to the information's purpose. In addition to all of the other subdisciplines of geography, GIS specialists must understand computer science and database systems. GIS has revolutionized the field of cartography; nearly all mapmaking is now done with the assistance of some form of GIS software. GIS also refers to the science of using GIS software and GIS techniques to represent, analyze and predict spatial relationships. In this context, GIS stands for Geographic Information Science.

### **Remote Sensing**

Remote sensing is the science of obtaining information about Earth features from measurements made at a distance. Remotely sensed data comes in many forms such as satellite imagery, aerial photography and data obtained from hand-held sensors. Geographers increasingly use remotely sensed data to obtain information about the Earth's land surface, ocean and atmosphere because it: a) supplies objective information at a variety of spatial scales (local to global), b) provides a synoptic view of the area of interest, c) allows access to distant and/or inaccessible sites, d) provides spectral information outside the visible portion of the electromagnetic spectrum, and e) facilitates studies of how features/areas change over time. Remotely sensed data may be analyzed either independently of, or in conjunction with, other digital data layers (e.g., in a Geographic Information System).

### **Geomatics**

Geomatics is a branch of geography that has emerged since the quantitative revolution in geography in the mid 1950s.

Geomatics involves the use of traditional spatial techniques used in cartography and topography and their application to computers. Geomatics has become a widespread field with many other disciplines using techniques such as GIS and remote sensing. Geomatics has also led to a revitalization of some geography departments especially in Northern America where the subject had a declining status during the 1950s.

Geomatics encompasses a large area of fields involved with spatial analysis, such as Cartography, Geographic information systems (GIS), Remote sensing, and Global positioning systems (GPS).

### **Geostatistics**

Geostatistics deal with quantitative data analysis, specifically the application of statistical methodology to the exploration of geographic phenomena. Geostatistics is used extensively in a variety of fields including: hydrology, geology, petroleum exploration, weather analysis, urban planning, logistics, and epidemiology. The mathematical basis for geostatistics derives from cluster analysis, linear discriminant analysis and non-parametric statistical tests, and a variety of other subjects. Applications of geostatistics rely heavily on geographic information systems, particularly for the interpolation (estimate) of unmeasured points. Geographers are making notable contributions to the method of quantitative techniques.

### **Ethnography**

Geographic qualitative methods, or ethnographical; research techniques, are used by human geographers. In cultural geography there is a tradition of employing qualitative research techniques also used in anthropology and sociology. Participant

observation and in-depth interviews provide human geographers with qualitative data.

## **OTHER TERMS**

### **Location**

Location (geography), one of the five geographic themes, and a specific position or point in physical space.

Absolute location, describing a position on the surface of the Earth.

Location-allocation, used in geographic information systems (GIS) .

The terms location and place in geography are used to identify a point or an area on the Earth's surface or elsewhere. The term 'location' generally implies a higher degree of certainty than "place" which often has an ambiguous boundary relying more on human/social attributes of place identity and sense of place than on geometry.

### **Types of location/place**

An absolute location is designated using a specific pairing of latitude and longitude, a Cartesian coordinate grid (e.g., a Spherical coordinate system), an ellipsoid-based system (e.g., World Geodetic System), or similar methods.

A relative location is described as a displacement from another "site, i.e. "3 miles northwest of Seattle".

A place, such as a settlement or suburb is likely to have a well-defined name but have a boundary which is less well defined and which varies by context. London has a legal boundary, but this is unlikely to completely match with general usage. Areas

within a town, such as Covent Garden in London again has some ambiguity as to its extent.

## **Area**

Area is a quantity that expresses the extent of a two-dimensional surface or shape in the plane. Area can be understood as the amount of material with a given thickness that would be necessary to fashion a model of the shape, or the amount of paint necessary to cover the surface with a single coat. It is the two-dimensional analog of the length of a curve (a one-dimensional concept) or the volume of a solid (a three-dimensional concept).

The area of a shape can be measured by comparing the shape to squares of a fixed size. In the International System of Units (SI), the standard unit of area is the square metre (m<sup>2</sup>), which is the area of a square whose sides are one metre long. A shape with an area of three square metres would have the same area as three such squares. In mathematics, the unit square is defined to have area one, and the area of any other shape or surface is a dimensionless real number.

## **Vegetation**

Vegetation is a general term for the plant life of a region; it refers to the ground cover provided by plants. It is a general term, without specific reference to particular taxa, life forms, structure, spatial extent, or any other specific botanical or geographic characteristics. It is broader than the term flora which refers exclusively to species composition. Perhaps the closest synonym is plant community, but vegetation can, and often does, refer to a wider range of spatial scales than that term does, including scales as large as the global. Primeval redwood forests, coastal mangrove stands, sphagnum bogs, desert soil crusts, roadside weed patches, wheat fields,

cultivated gardens and lawns; all are encompassed by the term vegetation.

### **A census**

is the procedure of systematically acquiring and recording information about the members of a given population. It is a regularly occurring and official count of a particular population. The term is used mostly in connection with national population and housing censuses; other common censuses include agriculture, business, and traffic censuses. In the latter cases the elements of the 'population' are farms, businesses, and so forth, rather than people. The United Nations defines the essential features of population and housing censuses as "individual enumeration, universality within a defined territory, simultaneity and defined periodicity", and recommends that population censuses be taken at least every 10 years. The term itself comes from Latin: during the Roman Republic the census was a list that kept track of all adult males fit for military service.

The census can be contrasted with sampling in which information is obtained only from a subset of a population, sometimes as an intercensal estimate. Census data is commonly used for research, business marketing, and planning, as well as a baseline for sampling surveys. In some countries, census data are used to apportion electoral representation (sometimes controversially – e.g., *Utah v. Evans*).