14

LIFE IN THE LOW LATITUDES

14.1 INTRODUCTION

In the previous lesson we have studied about the interaction between the biotic and the abiotic environments. We have also studied that the overall natural environmental conditions vary from one part of the world to the other. The climate and natural vegetation in different parts of the world are not uniform. Variations in the abiotic environtmental conditions affect the distribution of biotic communities and the pattern of human activity. On the basis of the natural environmental conditions, the world can be divided into a number of natural regions. These regions are identified on the basis of the variations in the relief, climate, natural vegetation, animal life and the human responses to the environment. The world can be divided into a large number of natural regions and they can be grouped as the regions of the low latitudes, the regions of the mid latitudes and the regions of the high latitudes.

In this lesson, we are going to study the environmental conditions and human responses to the natural environment in some of the important regions of the low latitudes.

14.2 OBJECTIVES

After studying this lesson you will be able to :

- explain the concept of a natural region;
- locate the regions of the low latitudes on the world map;
- describe environmental conditions in some of the natural regions of the low latitudes;
- establish relationship between the human occupations and the

natural environmental conditions in each natural region;

- enumerate the major economic activities associated with various natural regions of the low latitudes;
- state the similarities and differences in human response in various regions of the low latitudes; and
- explain reasons for the difference in the economic development in different parts of the same natural region.

14.3 NATURAL REGION

The term region is used very commonly in geographical studies and literature. A region is an area that has recognizably similar internal characteristics that are distinct from those of other areas. They are recognised on the basis of some criteria like climate, soil, vegetation etc. This means that in case of a climatic region, the whole region will have a similar type of climate, e.g. Mediterranean region has a Mediterranean type of climate. Likewise, a soil region will have similarity in term of soils found there. Thus it is the criterion which decides the nature of similarities within a region. Another characteristic of the region is its external dissimilarity. This means that a region has distinct characteristics from other regions. The boundaries of these regions are not sharply defined. Rather they are zones of transition in which one natural region merges with the other.

A region can thus be of any size. The size or the area of a region will depend upon the criteria selected. In the light of this definition of a region, it can be said that a natural region is an area within which the natural environmental conditions are almost uniform.

Delimitation of a region is an important technical task. In this context, the criteria selected for defining the region play a crucial role. For delimiting a natural region, we depend upon the natural environmental factors like relief, climate, soils, vegetation and the wild life. Among these components of the natural environment, climate is the most important criterion for identification of natural regions. The type of soils and vegetation found in any region depend a great deal on the prevailing climatic conditions. The types of animal life and human occupations are also affected by the climatic variations. Thus among the criteria used for delimitation of natural regions, climate is predominant. The variations in the climatic conditions and the result at variations in the other natural environmental factors and human responses enable us to divide the world into a large number of natural regions. Such a division of the earth's surface into smaller units facilitates an in-depth study of human responses to the natural environment and also allows comparisons between various parts of earth's surface.

* A region is an area on the surface of the earth which has identical characteristics throughout, with respect to some selected criteria.
* A natural region can be defined as an area within which the natural environmental conditions are almost uniform.
* Division of the earth's surface into natural regions facilitates indepth study of human responses to the natural environment.

14.4 MAJOR NATURAL REGIONS OF THE WORLD

On the basis of the variations in the natural environmental conditions, the earth may be divided into following major natural regions

I. **Regions of Low Latitudes**

(1) Equatorial Region-Lowlands and Highlands
(2) Tropical Grasslands or Savanna Region
(3) Monsoon Region
(4) Hot Desert Region

II. **Regions of Mid Latitudes**

(5) Mediterranean Region
(6) China Type Region
(7) Temperate Desert Region or Iran Type Region.
(8) North-West Europe Type Region
(9) Manchuria or St. Lawrence Type Region.
(10) Temperate Grasslands or steppe Region.

III. **Regions of High Latitudes**

(11) Coniferous Forest or Taiga Region
(12) Cold Desert or Polar Tundra Region
(13) Ice caps and Regions of High Altitude.

In this book we will study some of the natural regions from low latitudes, mid-latitudes and high latitudes.

14.5 NATURAL REGIONS OF THE LOW LATITUDES

These regions are found in both the hemispheres between 30^0 north and south latitudes. Out of the four major natural regions of this zone listed above, we are going to study the equatorial lowlands, the hot desert lands and the monsoon regions in this lesson. The equatorial regions are generally divided into equatorial lowlands and equatorial high lands. There are some differences

in the natural environmental conditions in the two sub-regions and in this lesson we are going to study only the equatorial lowlands.

14.6 EQUATORIAL LOWLANDS

These regions are among the hottest and the most humid areas of the world. Hence they are also called the hot and humid regions.

(i) Location and Areas

The true equatorial belt extends upto 5^0 of latitudes on both sides of the equator. It is a rather narrow belt with equator dividing it into two equal parts. The important areas included in the equatorial lowlands region are the Amazon basin in South America and the Zaire basin in Africa. Malaysia, Indonesia and Singapore in Asia are also included in the equatorial region. The areas covered by this region are shown in the map in fig. 14.1.

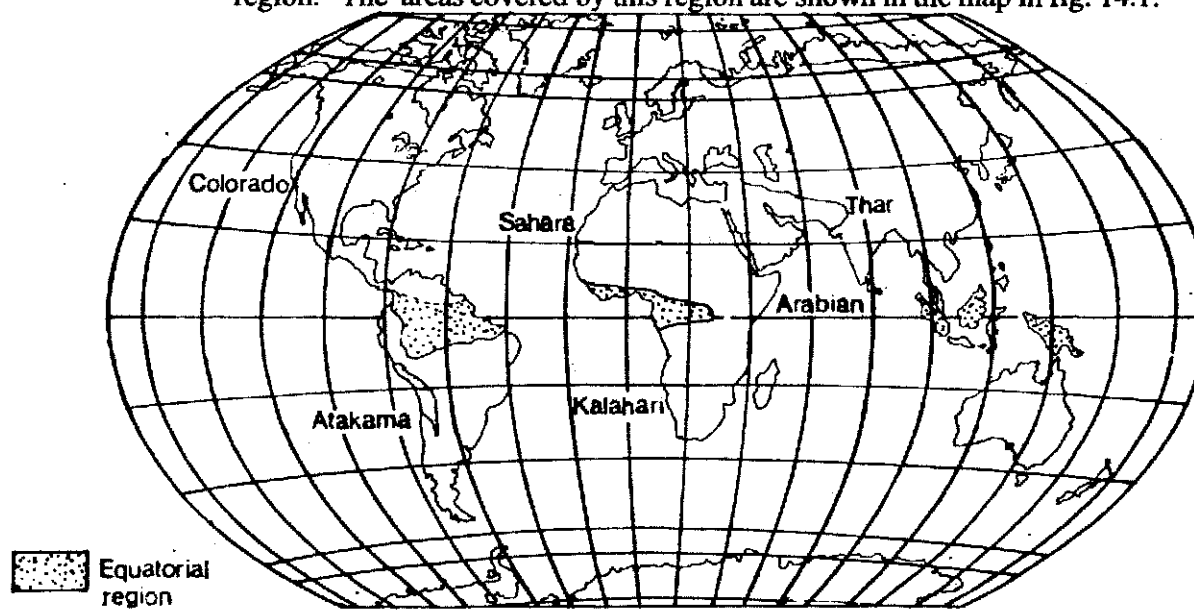
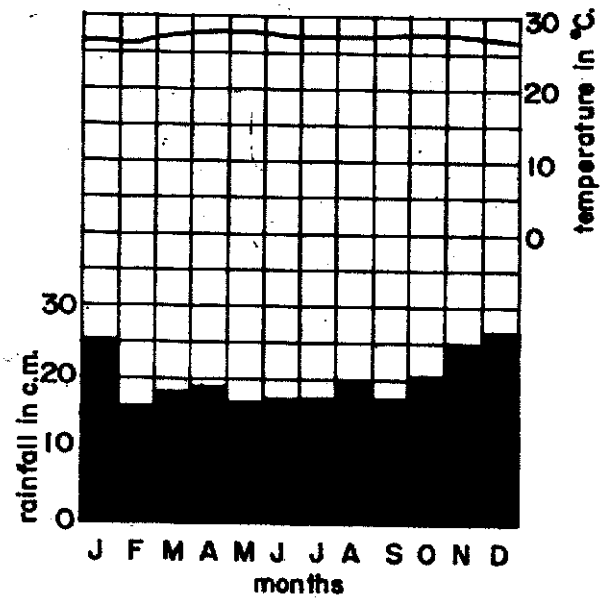


Fig. 14.1 The Equatorial Lowlands

(ii) Climate

As the equatorial lowlands lie within a few degrees of the equator in the belt of doldrums, the climate is hot and humid. Temperatures are high throughout the year and the annual range of temperature is very low. The daily range of temperature though higher than the annual is still among the lowest in the world. Due to uniform temperature throughout the year, there is no perceptible change of season from summer to winter. Rainfall is heavy and conventional in nature. It occurs almost daily in the afternoon in the form of thunder showers. Relative humidity remains high throughout the year. High temperature and high humidity of these regions make these areas uncomfortable. Study the climograph of Singapore in fig. 14.2.



For detail about the data please refer to the page no. 38

Fig. 14.2 Temperature and Precipitation Graph of Singapore

(iii) Natural Vegetation and Animal Life

Owing to continuous heat, high humidity and ample rainfall, the natural vegetation of these regions comprises of dense forests known as equatorial rain forests. The dense evergreen forests of the Amazon basin are called ***selvas***. The trees in the ***selvas*** are tall-30 to 60 metres high, having a canopy of foliage. There are also the smaller palm trees and climbing plants like the Lianas, which grow supported by the trunks and branches of trees. Some of the lianas are slender like ropes; while others have some of the thickness of upto 20 cm. They rise to heights of the upper tree levels where sunlight is available. Epiphytes and parasitic plants are numerous in the equatorial rainforest. Both epiphytes and parasitic plants grow on other plants or trees. While the epiphytes grow on the other trees for only support, the parasitic plants obtain their food also from the host plants or trees. They make these forests impassable or impenetrable. The interior of these forests is dark and damp. The forests are so dense that even sunlight can reach the ground only occasionally. The ground is therefore bare of plants and is covered by decaying vegetative matter. In the African parts of the region, however, the density of trees is slightly less because of lesser amount of rainfall. In these areas, there is a dense undergrowth of smaller plants, mainly shrubs. This undergrowth of broad-leaved plants makes the forests still more impenetrable.

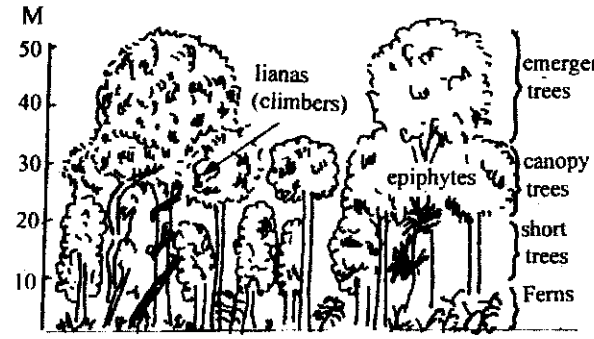


Fig 14.3 Typical structure of equatorial forests

Due to a hot and humid climate of these regions, the vegetation grows all the year round. Some plants may be bursting into leaves while the others might be shedding them. Still others might be flowering or bearing fruits at the same time. Hence the forest never loses its green appearance. The number of species per unit of areas in these forests is large. Most trees have large leaves. They transpire large amounts of water from their surface. The lower areas like the deltas and swamps are covered by mangrove type forests. Mangrove trees have aerial roots. The major trees growing in the equatorial forests include the hardwoods like mahogany, rosewood, sandalwood and Brazilwood. Other important species of trees include rubber, gutta-percha, cinchona and bamboo.

The equatorial lowlands are rich in animal life too. Most of the animals, however, are confined to the upper parts of the trees. The important animals here include the insects, birds, reptiles and the monkeys living mostly on the tree tops. Most of these animals never come down to the ground. The large animals cannot live in these forests because of impenetrability of the vegetation. In the comparatively less dense forests in the Zaire basin, some elephants are also found. Water bodies are also fairly rich in animal life. Alligators and turtles are found in large numbers in the rivers. Birds found in these forests are famous for their bright colours.

* The climate of equatorial lowlands is hot and humid throughout the year
* High temperature and high humidity and ample rainfall lead to growth of dense evergreen forests in the equatorial lowlands.
* Due to the impenetrable character of the forests in the equatorial low-lands, most of the animals live on the tree tops or in the water bodies.

(iv) Resources

Among the resources of these regions, the forests are perhaps the most

important. The economic importance of the forests lies in their wealth of hardwoods, sap products (e.g. natural rubber, gum) and medicinal plants. There is not much scope of agriculture as only a few areas are free from swampy conditions. However, in Malaysia and Indonesia, where climate is modified due to elevation, intensive subsistence type of farming has been a traditional economic activity. The rich volcanic soil of Java in Indonesia are known for their high fertility and this island supports one of the highest population densities in the world. Malaysia and Indonesia have developed rubber plantations also. These countries are among the leading producers of natural rubber in the world. The region is quite rich in mineral deposits. The Zaire basin is known for large deposits of diamonds, gold, copper and uranium. Malaysia is the leading producer of tin in the world. Indonesia has been a known producer of petroleum.

* Forest products like hardwood timber, sap products and medicinal plants are the most important resources of the equatorial lowlands.
* Rubber plantations are well developed in Indonesia and Malaysia.
* Zaire Basin has large deposits of diamonds, gold, copper and uranium. Malaysia has large reserves of tin and Indonesia is a producer of petroleum.

(v) Human Response

(a) Forestry, Agriculture and Mining : Due to unfavourable climatic conditions most of these regions are sparsely populated. Agriculture as an occupation has not developed much in the African and South America regions. Collection of rubber latex and nuts are the major occupations of people in the Amazon basin even today. Recently, the emphasis has been laid on the production of tropical crops like cocoa. In the forests of Amazon basin gum blata is an important item of collection by the people. Timber production has ample scope. However, even this industry is not developed perhaps due to a large number of species of trees per unit of area and a general lack of means of transport in these regions. A large number of tree species growing in close proximity of each other make cutting of desired tree species very difficult. In some parts of the Amazon basin, forest has been cut to obtain agricultural land. Some plantation crops have been introduced in such regions. Sugarcane is an important product of plantation agriculture. The other crops grown in these regions include rice, coffee, banana and maize.

In the Zaire basin, collecting of wild rubber and ivory used to be an important economic activity. The most important products now-a-days are the palm kernels and palm oil. Agriculture is the major occupation of the Negro people while the Pygmies live mainly by hunting and collecting food. The major

crops of this region are the yams, coffee, cocoa, tobacco and rice. Gum copal is the chief product of the swampy areas. Rivers are a source of fish. Crops of sugarcane, rice and coconut are raised in the coastal lowlands. Zaire basin is an important producer of diamonds, copper, gold and uranium.

In Malaysia and Indonesia, agriculture is the major economic activity of the people. The rich lava soils of Java island in Indonesia support intensive farming and this area has a high density of population. Rice is the major food crop. This region is also known for plantation farming. Rubber and sugarcane are leading cash crops of Indonesia and rubber is the most important cash crops of Malaysia. Besides agriculture, mining is also an important activity in this part of the equatorial regions. Malaysia is the leading producer of tin in the world. Indonesia has petroleum deposits also. The timber resources of Malaysia and Indonesia are also important.

* Traditionally the collecting of forest products has been an important economic activity in the Amazon basin, but these days plantation crops like sugarcane, cocoa and bananas have been introduced in some parts of this region.
* Agriculture has become an important occupation in the African part of the equatorial lowlands.
* Zaire basin is rich in minerals. Diamonds, copper, gold and uranium are mined in this region.
* Agriculture is the major economic activity in Malaysia and Indonesia. Rubber is an important plantation crop of these countries.
* Malaysia is the leading producer of tin in the world.

(B) Communications, Industry and Trade : In the Zaire Basin and the Amazon basin communication is difficult and the rivers are the main arteries of transport. As the development of resources has been limited, trade is not important and has not developed much even today. The major exports of these regions are the natural or plantation products and the imports include all sorts of manufactured goods. Population is small and it is distributed in small villages situated along the rivers. Most of the population living in these areas comprises of tribal people. Unfavourable climatic conditions have been a deterrent to the European settlers. The people are thus least influenced by the industrial world.

In contrast, the means of transport and communication are well developed in Malaysia and Indonesia. Singapore enjoys the most favorable location in terms of the international trade routes. This has been one of the major reasons for its growth as one of the leading centers of international trade. With the help of improved means of communication and transport, these countries have been able to develop agro-based and mineral based indus-

tries. Today, Malaysia is developing its industries at a rapid rate. Singapore also produces a variety of industrial goods. Although a large proportion of the population of Malaysia and Indonesia is still rural, a number of large cities have grown here and Singapore is predominantly an urban society. Besides the products of plantation, farming and minerals, these countries today export a number of industrial products such as textiles. The level of industrial development in this region is picking up rapidly.

* Unfavourable climatic conditions have been a major deterrent to the human occupance of the equatorial lowland regions of Zaire basin and the Amazon basin.
* Malaysia, Indonesia and Singapore have a more favourable environment and plantation agriculture and industries have developed in these regions.

INTEXT QUESTIONS 14.1

1. Answer in one or two words :

   (a) What is the latitudinal extent of the equatorial lowlands in the Northern and Southern Hemisphere. _____

   (b) Name one of the major areas falling in the equatorial lowland region _____.

   (c) During which part of the day is most of the rainfall in the equatorial lowlands occurs. _____

   (d) What is the name given to the forests of the equatorial lowlands in South America. _____

   (e) What is the most important cash crop of Malaysia and Indonesia? _____

   (f) Name the most important mineral found in Malaysia. _____

2. Fill in the blanks by selecting the most appropriate words from those given in the bracket

   (diamonds, lianas, mangrove, hunting and food gathering, Singapore, Zaire basin)

   (a) The most common type of vegetation in the deltaic and swampy areas of Amazon basin is _____ forests.

   (b) The traditional occupation of the people in the equatorial forests of Zaire basin has been _____.

   (c) The chief minerals mined in Zaire basin is _____.

   (d) Epiphytes and _____ are found in large numbers in

the equatorial forests. They are supported by tall trees growing there.

(e) An area of the equatorial lowlands region in which elephants are found is _____ .

(f) _____ enjoys the most favourable location from the point of view of international trade routes among the equatorial lowland regions.

14.7 HOT DESERT REGIONS

These are known as the tropical deserts or the Sahara type regions also.

(i) Location and Areas:

These regions are located around both the Tropics on the western margins of the continents in the trade wind belt. Latitudinally they extend between 20° and 30° latitude in both the hemispheres. Actual width of this belt in different parts of the world varies according to the location and the size of the landmasses. The major areas falling in this region are the Rajasthan Desert in India, Thar Desert of Pakistan, the Deserts of Arabia and Syria in south-west Asia, the Desert of sahara in northern Africa and Kalahari in southern Africa, parts of Arizona and Colorado Deserts in North America, the Atacama Desert in South America and the Great Australian Desert in Australia. (see fig. 14.4)

* The hot deserts are located on the western margins of the continents in both the hemispheres, between 20° and 30° latitude in the Trade wind belt.

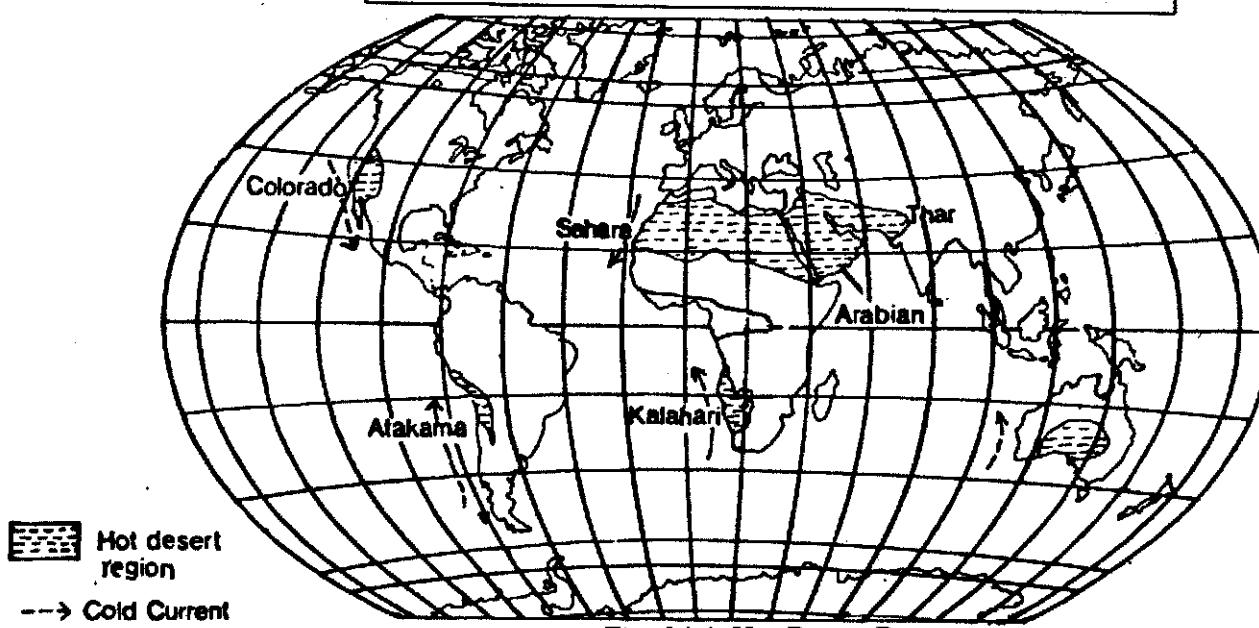
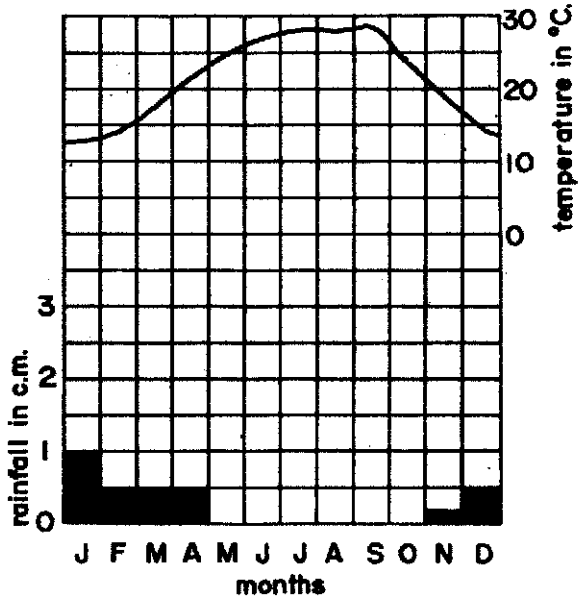


Fig. 14.4 Hot Desert Region

(ii) Climate

As the name itself suggests, the climate of these regions is hot and dry. In these latitudes, the prevailing winds are the trade winds which blow as off-shore winds from land to sea on the western margins of the continents. They are thus dry winds in these areas. These regions owe their dry climate partly to their location in the high pressure belt. Here, the descending air is unfavourable for precipitation. The climate is extreme with very high annual and daily ranges of temperature. The clear skies help intense heating of the surface during the day and rapid cooling at night. The absolute daily range of temperature may be as much as 40° C. Night temperature may often go below the freezing point. Convection during the day produces strong winds full of blistering sands. ***Simoon***, the local wind of Northern Sahara and Arabia is known for its force and high temperature. The summer heat is intense and the maximum temperatures of upto 57° C have been recorded in this region. The temperatures are slightly lower in the Atacama Desert because of nearness to the sea.

Rainfall in the desert regions is scanty. The average annual rainfall in most parts is less than 25 cm and some of the areas receive less than 10 cm. The relative humidity is very low. The dry climate of the desert region is unbearable and the low relative humidity makes the high temperature somewhat bearable.



For detail about the data please refer to the page no. 38

Fig. 14.5 Temperature and Precipitation Graph of Cairo

(iii) Natural Vegetation and Animal Life

On account of aridity, these regions are almost completely devoid of vegetation. Some vegetation grows in oases where water is available. Over

vast areas, there is no vegetation at all. Most of the plants growing here are called *xerophytes* or drought-resistant. They are mostly thorny scrubs and are able to store water in their stems of fleshy leaves. Cactus and agave are the examples of the plants of these two types. The plants protect themselves against evaporation with the help of very tiny and thorny leaves. Date palm is the most important tree found in the oases.

The characteristic animal of the hot desert regions is the camel. This animal can live on thorny scrubs and can survive for a number of days without water. In the slightly better watered areas some sheep or goats can also be found.

* The climate of the hot deserts is hot and dry. Range of temperature, both diurnal and annual, is large.
* Due to dry climate very little vegetation grows in the hot deserts. Thorny scrubs and date palm in the oases are the major plants of these regions.
* The hot desert regions are rather poor in biotic resources. The mineral resources are, however, noteworthy.

(iv) Resources

The biotic(living) resources of the hot deserts are rather limited. There is hardly any vegetation and hardly any animals can live in these dry regions. Due to aridity, these regions are not suitable for agriculture. Only in the oases some plants can be grown and some animals can be kept. The mineral resources of the desert regions are, however, noteworthy. At many places the ground is encrusted with a coating of various salts. Some of these are of significant commercial value. Some of the dry lakes provide common salt while the others contain borates. Nitrates are the most important product of northern Chile. Besides these salts, there are large deposits of oil in the Arabian Desert and copper in the Chilean Desert. Chiquicamata in Chilean desert is known for copper mining. Iron ore deposits are also found in chile. Silver deposits of Colorado, the nickel and gold deposits of Australia, and the gold deposits of Colorado and Arizona are also important.

(v) Human Response

(A) Agricultureand Animal Rearing : As the climate is extreme and dry and the biotic resources meagre, the hot deserts are not favourable for large densities of population. Agriculture is confined to the oases where moisture availability is better. In some areas, where some streams bring water for irrigation, agriculture is practised outside the oases also. Such areas are, however, few and far between. Egypt and Sind in Pakistan, lying in the valleys of the mighty rivers are the most important agricultural areas in the hot

desert regions. Large areas are put to use for cultivation of wheat, cotton and rice in the irrigated areas of the valleys of these rivers. The other crops grown in the oases of arid regions include millets, beans, tobacco and date palm. These regions are the largest producers of dates in the world. In the comparatively wetter parts, camel, goats, sheep and horses are reared. As the area is too dry, the supply of fodder is not large in any one part. People rearing animals, therefore, cannot lead a settled life. They are generally nomadic. Settled life is possible only in the oases and river valleys. Population is scattered and there are no large settlements. Communication is very difficult and the most important means of transport are the camels.

(B) Mining : Development has started taking place in the areas where minerals are mined. Modern means of transport have also developed in such areas. From the point of view of this development, the gold mining areas in North America and Australia are most noteworthy. Oil exploitation in the Arabian Desert has lead to similar developments.

* Agriculture is practised in the oases and the river valley areas of the desert regions.
* Animals are kept mainly in the wetter parts of the hot deserts.
* Mining of minerals like gold and oil has led to development of large human concentrations in some parts of the hot desert regions.

INTEXT QUESTION 14.2

1. Give one word answers

   (a) What is the name given to an area in the desert where some water is available? _____

   (b) Which is the chief animal that can survive in the dry hot regions? _____

   (c) What is the most important tree crop of the hot desert regions? _____

2. Fill in the blanks by selecting the most appropriate words from those given in the brackets.

   (Chile, nomadic, 25cm, gold, 50°C)

   (a) The average amount of annual rainfall in the hot desert regions is less than _____.

   (b) The highest temperature in the hot deserts go upto more than _____.

(c) The people rearing animals in the hot deserts generally follow _____ way of life.

(d) The valuable minerals found in the Australian desert is _____.

(e) Nitrates are the most important product of the hot region in _____.

14.8 MONSOON REGION

These regions are among the most densely populated regions of the world. They are also known as the Tropical Eastern Margins or the Tropical Monsoon Regions.

(i) Location and Areas

The latitudinal expanse of the monsoon regions is between 10° and 30° latitudes in both the hemispheres on the eastern margins of the land masses. The important monsoon lands of the world are India, Pakistan, Myanmar, Bangladesh, Thailand, South China and Philippine Islands in Asia and Queensland territory, coastlands and southern New Guinea in Australia. Coast lands of Central America, Mexico and West Indies in North America, Brazilian seaboards and associated highlands in South America and parts of Ethiopia in Africa are the areas of modified monsoon climate. (See fig. 14.6)

* Monsoon regions are located on the eastern margins of the continents between 10° and 30° latitudes in both the hemispheres.

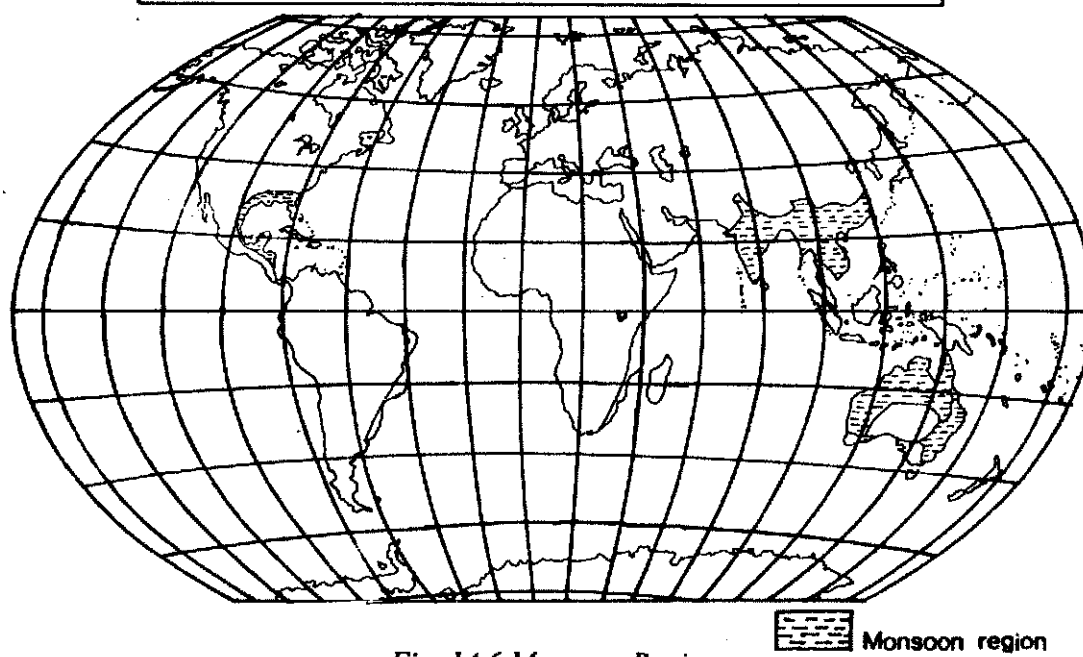
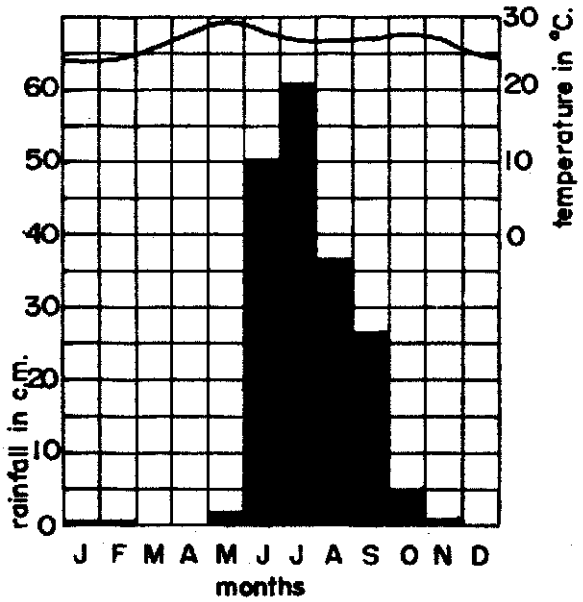


Fig. 14.6 Monsoon Regions

(ii) Climate

The climate of monsoon regions is characterised by warm and humid summers and cool and dry winters. Range of temperature, both annual and daily is small but more marked than in the equatorial regions. The ranges tend to become larger in the inland locations like the interior plains of India and Pakistan.

The seasonal character of rainfall is largely the result of complete reversal of wind directions with the change of seasons. The amount of rainfall, however, varies according to the local relief conditions. Generally it is lower than in the equatorial lowlands and is certainly more seasonal in character. Only a few favourably located coastal strips receive some precipitation during winter. Rainfall of the monsoon regions is characterised with passage of tropical cyclones during which heavy rainfall is received. The total amount of rainfall varies from 50 to 500 cm depending upon the location and the relief of the area. It is generally higher on the windward sides of the mountains and near the coasts. Study the Temperature and Precipitation Graphs of Bombay (see fig. 14.7) which is typical of monsoon regions.



For detail about the data please refer to the page no. 38

Fig. 14.7 Temperature and Precipitation Graph of Mumbai

(iii) Natural Vegetation and Animal Life

The combination of high temperature and heavy rainfall during the summer season favours the growth of vegetation. Natural vegetation of these areas is composed of forests and woodlands. The character of the natural vegetation varies according to the amount of rainfall. The plants in the forests are generally deciduous (shedding their leaves during the dry season). However, in areas of heavy rainfall (more than 200 cm) such as the Malabar coast and the North-Eastern parts of India, dense tropical evergreen forests

are found. Mahogany and Rosewood are the important trees of these forests.

Being slightly open than the equatorial forests, the monsoon forests have a greater amount of undergrowth. The epiphytes and the lianas are fewer and the height of the trees is also lesser than in the equatorial lowlands region. Teak and sal are the typical hardwoods of these forests. Sandalwood tree also grows in these forests.

The monsoon forests provide a natural habitat to a large number of animal species. The animals include herbivores like elephant, rhinoceros, deer, buffaloes and carnivores like tigers and panthers. The water bodies are also rich in animal life. A large number of species of fish are found in the water bodies. The variety of birds and insects is also large but it is lesser than in the equatorial lowlands.

* The climate of the monsoon regions is characterised by warm and humid summer and cool and dry winters
* High temperature and adequate rainfall give rise to forest vegetation in the monsoon lands. The trees of monsoon forests are generally deciduous.
* The monsoon forests are rich in variety of animal life.
* The biotic resources of the monsoon regions are varied and large. By far the most important resource is the agricultural resource. There are large deposits of minerals too.

(iv) Resources

Like the equatorial lowlands the monsoon regions are rich in biotic resources. The climate is warm and humid enough to help plant growth and it is dry enough to be healthy in general. The vegetative growth can support large animal population. At the same time, the soils are also rich favouring agriculture. Some of the fertile soils found in these areas include alluvial soils and the black soils. The mineral resources of the monsoon regions are adequate enough to allow industrial development. Among the major minerals found in these regions include the iron and coal deposits of India. African region is also rich in minerals.

Resources have been developed well in the monsoon regions. However, the development of resources has not attained the kind of levels which have been attained in some of the more developed areas of the world. Agricultural potential of these regions is large and it is by far the most important support base of these regions. Enough pastures are generally available for cattle rearing in monsoon regions. Cattle form the backbone of the rural economy in many areas such as India.

(v) Human Response

(A) Agriculture and Animal Rearing : The environment of the monsoon regions has favoured development of agriculture. This has formed the basis for supporting a high density of population. Clearing of forest has made available some of the richest agricultural lands of the world. Irrigation is commonly practised where the rainfall is insufficient. Irrigation has made cultivation possible also in relatively arid parts of these regions. Rice, maize, oilseeds, tee and coffee are the typical crops of the tropical monsoon lands. Other important crops include tobacco, sugarcane, cotton and tropical fruits. Rice is grown mainly in the lowlands. India and Bangladesh are important producers of rice and jute in the world. India is the leading producer of tea in the world. Millets are grown in the drier parts of India and East Africa. Wheat is an important winter crop of irrigated areas in the northern and the central parts of India. Brazil is the leading producer of coffee. Other important crops of this country include sugarcane and cotton. Ethiopia is also an important producer of coffee. The Philippines produce practically the entire worlds, supply of manila hemp and also is the leading producer of coconuts. West Indies and India are known for production of sugarcane and sugar in the world.

In spite of cattle being reared in large numbers, the pastoral activity in itself has limited economic importance in these regions. Most of the animals are kept for droughts purposes (animal used for pulling load) and milk. Rearing of cattle for meat is not developed as an economic activity. These regions supply large quantities of hides and skins. India and Pakistan are the leading exporters of hides and skins in the world.

* Agriculture has developed well in the monsoon regions. A variety of crops including food grains, cotton, sugarcane, tea and coffee are grown in various parts of the region.
* Cattle are kept in large numbers in monsoon lands. They are reared mainly for draught and milk purposes.

(B) Mining, Industry and Trade : As mentioned earlier the monsoon lands are fairly rich in mineral resources also. The Chota Nagpur Plateau region of India (iron ore, coal, manganese and mica) is among the richest mineral bearing areas of the world. Australian region produces bauxite. Thailand produces tin and Madagascar (Malagasy Republic) produces large quantities of graphite.

The development of mineral resources has taken place notably in India, Australia and Thailand. In most of the remaining areas, the level of development is relatively low. Industrialisation has taken place mainly to process the products of the primary occupations. India is one of the important countries in the field of agro and mineral based industries. Iron and steel, cotton textiles and sugar industry are among the leading industries. India is the

leading producer of jute goods in the world. Australian region and West Indies have also developed mineral-based and agro-based industries.

The population of the monsoon regions is large, concentrated mainly in the wetter and irrigated parts. Its Asiatic parts are among the most densely populated regions in the world. They exhibit highly developed communities with varied arts and literature, rich cultural heritage and great cities with developed commerce. The character of the monsoon lands in terms of their role in the world trade is changing rapidly. Traditionally, these areas have been the suppliers of agricultural products like tea, coffee and jute and the mineral raw materials to the developed parts of the world. They used to be the importers of the industrial goods mainly from the European countries. This situation is fast changing with increasing industrialisation. Some of the countries like India have become exporters of industrial goods. The dependence of these countries on the European countries for industrial goods is thus declining. Communication is developing rapidly and the developed means of transport and communications are likely to boost the overall development in these regions. As some of the natural resources of these regions are yet to develop, the pace of economic development is likely to be more rapid in future.

* Industrialisation has taken place in some parts of the monsoon regions. Both agro-based and mineral-based industries are important.
* The monsoon lands are the home of a large number of people. The density of population is higher in the wetter and irrigated parts.

INTEXT QUESTIONS 14.3

1. Answer in one or two words :

   (a) Generally on which parts of the continents are the Monsoon lands located. _____

   (b) Which is the rainy season in the monsoon lands ?_____

   (c) What is the main occupation of the people in the monsoon regions. _____

2. Fill in the blanks with suitable words from those given below : (draught, 10^0,sugar, coffee, Thailand)

   (a) The monsoon regions generally extend between _____ and 30^0 latitudes in both the hemispheres.

   (b) The country in the monsoon region known for production of tin is_____.

(c) Brazil is a leading world producer of _____.

(d) _____ industry of West Indies is well developed.

(e) Cattle in the monsoon regions are reared mainly for _____ and milk purposes.

3. Fill in the blanks with the most appropriate word from those given in the brackets :

(a) The range of temperature in the monsoon regions is _____ than in the equatorial lowlands. (smaller/larger)

(b) The range of temperature in the monsoon lands _____ as one goes away from coastal areas to the continental interiors. (decreases/increases)

(c) The trees in the monsoon forests are generally _____ in nature. (evergreen/deciduous)

WHAT YOU HAVE LEARNT

The natural environmental conditions on the surface of the earth vary from one place to the other. On the basis of the variations in the natural environmental conditions, the world may be divided into a number of natural regions. In this lesson, we have studied the natural environmental conditions and human response in three natural regions of the low latitudes. The three regions represent a climatic gradation from hot and humid to hot and dry climate and with the variations in the climatic conditions. The climatic conditions also decide the suitability of an area for human occupance. Occupations of people and the density, distribution of population in the world are also a function of the natural environmental conditions. Natural environment provides the basic needs of life and on their availability depends the comfort of human beings. Monsoon regions offer the greatest possibility of developing agriculture and they are fairly rich in minerals also. That is why they are most densely populated out of the three regions in the low latitudes. Desert regions on the other hand have the least potential for agriculture and

are thus the least densely settled areas. Even within the region, the areas of most favourable climate and with the largest resource potential (agricultural and minerals) are more densely populated than the other parts of the region.

TERMINAL QUESTIONS

1. Explain the concept of natural regions. Name the major natural regions.
2. Describe the location, climate, natural vegetation and human life in the equatorial lowland regions.
3. How has the natural environment of the tropical deserts limited the scope of economic development in this region ?
4. Describe the climate, natural vegetation and the agricultural resources of the monsoon regions.
5. What factors have interacted to make tropical monsoon regions among the most densely populated areas of the world ?
6. Compare the natural environmental conditions and human responses in the equatorial lowlands and the tropical monsoon regions.

CLIMATIC DATA OF THREE STATIONS OF LOW LATITUDES
T for Temperature in °C (degree celsius); P for Precipitation in Centimetres

Station	Natural Region	Location	Altitude in in Metres	T/P	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Singapore	Equatorial Lowlands	1°N 104°E	3	T	26.7	26.7	27.2	27.8	27.8	27.2	27.2	27.2	27.2	27.2	27.2	26.7
				P	25.1	16.8	18.8	19.3	17.0	17.3	17.3	20.1	17.3	20.6	25.1	26.9
Cairo	Hot Desert	30°N 31°E	116	T	12.8	13.9	17.2	21.1	24.4	26.7	27.8	27.8	28.6	23.3	18.3	14.4
				P	1.0	0.5	0.5	0.5	-	-	-	-	-	-	0.2	0.5
Mumbai (Bombay)	Monsoon	19 °N 73 °E	11	T	24.4	24.4	26.7	28.3	30.0	28.9	27.2	27.2	27.2	27.8	27.2	25.0
				P	0.2	0.2	-	-	1.8	50.6	61.0	36.9	26.9	4.8	1.0	

7. Study the above climatic data and answer the following questions:

7.1 Arrange the stations according to the dicreasing order opf the annual range of temperature.

7.2 Arrange the stations according to the dicreasing order of the total an nual precipitation (rainfall).

7.3 What is the difference between the regim of rainfall of Singapore and that of Mumbai?

CHECK YOUR ANSWERS

INTEXT QUESTION

14.1

1. (a) 5° N. 5°S (b) Amazon basin or the Zaire basin. (c) Afternoon (d) Selvas (e) Rubber (f) Tin
2. (a) mangrove (b) hunting and food gathering (c)diamonds (d) lianas (e) Zaire basin (f) Singapore

14.2

1. (a) Oasis (b) Camel (c) Date palm
2. (a) 25cm. (b) 50°C (c) nomadic (d) gold (e) Chile

14.3

1. (a) Eastern parts (b) Summer (c) Agriculture
2. (a) 10° (b) Thailand (c) coffee (d)sugar (e) draught
3. (a) larger (b) increases (c) deciduous.

TERMINAL QUESTIONS

1. Refer to section 14.3 and 14.4
2. Refer to sections 14.6 (i), (ii), (iii) and (iv).
3. Mention in brief the location and areas included in the tropical deserts, discuss the climate, natural vegetation, animal life and resources in details. (Refer to section 14.7 (ii), (iii) and (iv). Correlate the physical environment of the desert regions with comparatively lower levels of economic development there. It is the inhospitable natural environmental conditions that have been responsible for lower levels of economic development in tropical deserts. (Refer to section 14.7 (v))
4. Refer to sections 14.8 (ii), (iii) and (iv) .
5. The congenial climate and the vast biotic and mineral resources of the monsoon regions have been the most important factors making these regions some of the most densely populated areas of the world. Highlight this fact. (Refer to sections 14.8 (ii) (iii) and (iv)).
6. Give the comparison between the two regions in respect of physical environment (climate, vegetation and resources) and human responses. (Refer to Sections 14.6 & 14.8)
7. (7.1) Cairo (15.8°C); Mumbai (5.6°C) and Singapore (1.6°C)

   (7.2) Singapore (241.6cm); Mumbai(103.4cn) and Cairo (3.2cm)

   (7.3) Singapore receives rainfall all the year round while Mumbai gets mainly in summer.