

# 6

## Asia—Land, Climate and Natural Vegetation

### Milestones

In this chapter, you will learn about:

- The size, location and extent of Asia
- The political divisions of Asia
- The physiography of Asia
- The climatic types, natural vegetation and wildlife of Asia

### Buckle Up

Find out why it is difficult for people to swim in the Dead Sea.

Asia is a continent of great cultures. Three of the world's oldest civilizations—the Indus Valley, the Mesopotamian and the Chinese—flourished here. Almost all the world's major religions have originated here. Geographically, economically and socio-culturally, Asia is a land of remarkable contrasts.

Let us now examine why Asia is called a 'Land of Extremes'.

- The highest point on the Earth, Mount Everest (8,850 m above sea level) and the lowest exposed point on the Earth, Dead Sea (424 m below sea level) are both located in Asia.
- Oymyakon, in Russia, is the coldest inhabited place in the world ( $-67.7^{\circ}\text{C}$ ), while Ahvaz, in Iran, and Tirat Zvi in Israel (both  $54^{\circ}\text{C}$ ), have recorded some of the highest temperatures in the world. The Lut Desert in Iran is considered as the hottest place on Earth.



▲ Pandas found in the temperate climatic regions of Asia





▲ Mount Everest, Himalayas



▲ Dead Sea coast

- Mawsynram, in Meghalaya, is the **wettest place on the Earth**, while the deserts of Arabia, Thar and Gobi receive scanty rainfall.
- **The great river valleys of Asia are the most densely populated regions of the world**, while Northern Russia and Mongolia have very low population density.



▲ The Gobi desert

## Size and Extent

Asia is the largest of the seven continents and occupies about one-third of the world's total land area. It also has nearly 60% of the world's population.

Asia extends from  $10^{\circ}\text{S}$  to  $80^{\circ}\text{N}$  latitude and from  $25^{\circ}\text{E}$  to  $170^{\circ}\text{W}$  longitude. Thus, the greater part of the continent lies in the Northern and the Eastern Hemispheres. Asia and Europe together form one continuous landmass called **Eurasia**.



Figure 6.1 Location of Asia



## Location

Asia is bordered by oceans on three sides. To its north lies the Arctic Ocean and to its south is the Indian Ocean. Its eastern coast is bound by the Pacific Ocean. In the west, Asia is separated from Europe by the Ural Mountains, Caspian Sea, Caucasus Mountains and Black Sea. In the south-west it is linked with Africa through the Sinai Peninsula. The narrow Bering Strait separates Asia from North America in the extreme north-east. Locate all these features in a map of Asia.

## Political Divisions

The countries of Asia range in size from the tiny Maldives and Singapore, to Russia, China and India, some of the largest countries in the world.



Figure 6.2 Political divisions of Asia



**Table 6.1 Asian countries and their capitals**

Country	Capital
Afghanistan	Kabul
Armenia	Yerevan
Azerbaijan	Baku
Bahrain	Manama
Bangladesh	Dhaka
Bhutan	Thimphu
Brunei	Bandar Seri Begawan
Cambodia	Phnom Penh
China	Beijing
Cyprus	Nicosia
Georgia	Tbilisi
India	New Delhi
Indonesia	Jakarta
Iran	Tehran
Iraq	Baghdad
Israel	Jerusalem
Japan	Tokyo
Jordan	Amman
Kazakhstan	Astana
Kuwait	Kuwait City
Kyrgyzstan	Bishkek
Laos	Vientiane
Lebanon	Beirut
Malaysia	Kuala Lumpur
Maldives	Male
Mongolia	Ulan Bator
Myanmar	Naypyidaw
Nepal	Kathmandu
North Korea	Pyongyang
Oman	Muscat
Pakistan	Islamabad
Palestine	Ramallah

Philippines	Manila
Qatar	Doha
Russia	Moscow
Saudi Arabia	Riyadh
Singapore	Singapore
South Korea	Seoul
Sri Lanka	Colombo
Syria	Damascus
Taiwan	Taipei
Tajikistan	Dushanbe
Thailand	Bangkok
Timor-Leste	Dili
Turkey	Ankara
Turkmenistan	Ashgabat
United Arab Emirates	Abu Dhabi
Uzbekistan	Tashkent
Vietnam	Hanoi
Yemen	Sana'a

The countries of Asia are divided into different groups based on their locations. ✓

- **East Asia:** Japan, North Korea, South Korea, Taiwan, China, Mongolia
- **North Asia:** The Asian part of Russia
- **Central Asia:** Tajikistan, Kyrgyzstan, Kazakhstan, Uzbekistan, Turkmenistan
- **South-East Asia:** Myanmar, Thailand, Laos, Cambodia, Vietnam, Malaysia, Singapore, Indonesia, Brunei, Timor Leste, Philippines
- **South-Central Asia:** India, Afghanistan, Pakistan, Bangladesh, Nepal, Bhutan, Sri Lanka, Maldives
- **West Asia:** Iran, Iraq, Saudi Arabia, Kuwait, Qatar, Bahrain, United Arab Emirates, Oman, Yemen, Jordan, Israel, Palestine, Lebanon, Syria, Turkey, Cyprus, Armenia, Georgia and Azerbaijan

### Now You Know

The political set-up of the Asian countries varies from democracies like India and Bangladesh, dictatorships such as North Korea to monarchies like Saudi Arabia and UAE.



## Checkpoint

Answer correctly.

1. Which of the following civilisations did not flourish in Asia?  
(a) Indus Valley (b) Mesopotamian (c) Chinese (d) ~~Egyptian~~
2. The \_\_\_\_\_ Sea is the lowest exposed point on the Earth.  
(a) Red (b) ~~Dead~~ (c) Black (d) Caspian
3. Asia occupies about  $\frac{1}{3}$  of the world's total land area.
4. Asia is linked with Africa through the Sinai Peninsula.
5. The Bering Strait separates Asia from Australia. (True/~~False~~)

## Physiography

Asia can be divided into five major physical divisions (Figure 6.3). They are the Northern Lowlands, the Central Mountains, the Southern Plateaus, the Great River Valleys and the island groups.

### The Northern Lowlands

The Northern Lowlands are extensive lowlands located in the north of Asia, bordering the Arctic Ocean. The northern part of these lowlands is called the Siberian Plain. Extending from the Ural Mountains in the west to the Bering Sea in the east, it is the greatest continuous plain in the world.

The Siberian Plain is drained by three major rivers—Ob, Yenisey and Lena and their tributaries. These rivers flow northwards and flow into the Arctic Ocean. During winter, the lower course of these rivers is frozen. Consequently, the water from the upper course is blocked and spreads over the plains, forming marshes and swamps. To the south of the Siberian Plain is the lowland surrounding the Aral Sea. This plain is known as the Turan Plain. It is drained by the two rivers Amu Darya and Syr Darya, which flow into the Aral Sea. Thus, this is an area of inland drainage.

### The Central Mountains

To the south of the Northern Lowlands lies an extensive young fold mountain system called the Central Mountains. Almost all the mountain ranges of Asia radiate from one nodal point in the centre. This is called the Pamir Knot, from which chains of mountain ranges run in all directions.

There are two ranges that lie to the west of the Pamir Knot—the Hindu Kush and the Sulaiman. The Hindu Kush range extends westward and continues along the Caspian Sea as the Elburz Mountains. The Sulaiman range runs, first as the Kirithar Range and then as the Zagros Mountains. The Elburz and the Zagros converge at the Armenian Knot. From here, they diverge westward as the Pontic Mountains and the Taurus Mountains, respectively.





Figure 6.3 Physical divisions of Asia

There are two **intermontane plateaus** in this region. The Plateau of Iran lies between the Elburz and the Zagros and the Plateau of Anatolia is enclosed between the Pontic and the Taurus mountains.

To the east of the Pamir Knot lie five mountain ranges—the Himalayas, Karakoram, Kunlun, Altyn Tagh and Tien Shan.

- The Himalayas run south-eastwards into northern India and Nepal. They are the highest mountain ranges in the world. Mt Everest, the world's highest peak, lies in this range. Further east, the Himalayas bend southward and continue as the Arakan Yoma in Myanmar.
- The Karakoram Range lies to the north of the Himalayas. Mt K2 (8,611 m), also known as Godwin Austen, the second highest peak in the world, is in this range.



- The **Kunlun Mountains** run eastward from the Pamir Knot and extends into China.
- The **Altyn Tagh** runs in the north-east direction and continues into China.
- The **Tien Shan** is the northernmost range branching out from the Pamir Knot and extends north-eastwards into China. The other important ranges include **Altai, Khingan, Yablonovy** and the **Stanovoy**.

In this region too, there are two **intermontane plateaus**. The **Plateau of Tibet** lies between the **Kunlun** in the north and the **Himalayas** in the south. It is the highest plateau in the world and is called the 'roof of the world'. In the north lies the **Plateau of Mongolia**, which is enclosed by mountains on all sides. The vast **Gobi Desert** lies just south of this plateau. Two great depressions—the **Tarim Basin** and the **Tsaidam Basin**—are also located here, enclosed between the mountains. The **Takla Makan Desert** of China is located in the **Tarim Basin**.

### Checkpoint

Answer correctly.

1. The **Turan Plain** is drained by the rivers \_\_\_\_\_.  
 (a) Ob and Yenisey (b) Amu Darya and Syr Darya  
 (c) Tigris and Euphrates (d) Hwang ho and Si Kiang
2. Which of the following is not an intermontane plateau?  
 (a) Plateau of Arabia (b) Plateau of Iran  
 (c) Plateau of Anatolia (d) Plateau of Tibet
3. The \_\_\_\_\_ is the greatest continuous plain in the world.
4. Chains of mountain ranges run in all directions from the \_\_\_\_\_.
5. Mt. K2, the second highest peak in the world, is in the Himalayan range. (True/False)

### The Southern Plateaus

Located to the south of the Central Mountains are three vast plateaus, which are old **stable blocks** made up of **hard crystalline rocks**.

- The **Plateau of Arabia** rises steeply along the **Red Sea coast** and slopes eastwards towards the **Persian Gulf**. It is a **dry desert region**.
- The **Plateau of Peninsular India** has a steep edge along the **Arabian Sea coast** and gently slopes towards the **Bay of Bengal in the east**. It is traversed by many rivers, such as **Mahanadi, Godavari, Krishna** and **Kaveri**.
- The **Plateau of Shan** in **Myanmar** and the **Plateau of Yunnan** in **China** are parts of the same plateau. This plateau too has a **steep western slope** and is drained by the **Salween, Mekong** and **Si Kiang** rivers.



## Around the World

Read the passage carefully and answer the questions given below.

Young fold mountain systems are found along the boundaries of tectonic plates. For example, the Western Cordilleras in North America, the Andes in South America, the Alps in Europe and the Himalayas in India.

1. Find out the names of the highest peaks in each of the mountain ranges mentioned above.
2. Differentiate between young fold and old fold mountains, with respect to their height and gradient.

## The Great River Valleys

Many large rivers rise in the snow-covered mountains and plateaus of the Central Highlands of Asia. These rivers have brought down and deposited huge amounts of **alluvium**, giving rise to **extensive fertile plains**. The Great River Valleys are located between the Central Highlands and the **Southern Plateaus**.

- The **Tigris-Euphrates valley** is situated in Iraq. It is also known as the **Mesopotamian Lowland**. The **Indus valley** is formed by the Indus and its **five tributaries**—Chenab, Jhelum, Ravi, Beas and Sutlej. The major part of this river valley lies in Pakistan, while a small part lies in India. <sup>30 Km</sup>
- The **Ganga-Brahmaputra valley** occupies large areas in India and Bangladesh. This plain has been formed by the Ganga and Brahmaputra rivers and their numerous tributaries.
- The **Great Plain of China** is formed by the three large rivers of China—Hwang-Ho, Yangtze and Si Kiang.
- The **Irrawaddy** and **Salween valleys** in Myanmar, the **Mekong Valley** in the Indo-China peninsula and the **Amur Valley**, also known as the Manchurian Plain, are the other important river valleys of Asia.

## The Island Groups

There are a number of island countries in east and south-east Asia. **Bahrain** is in the **Persian Gulf**; **Sri Lanka** is in the **Indian Ocean**; **Indonesia** is in the **Indian** as well as the **Pacific oceans**; and the **Philippines**, **Taiwan** and **Japan** are in the **Pacific Ocean**. A group of islands is called an **archipelago**. The **Indonesian archipelago** is the **largest in the world**. It includes **Borneo**, **Sumatra**, **Java**, **Sulawesi**, **Bali**, **Timor** and a number of smaller islands. The **Lakshadweep Islands** in the Arabian Sea and the **Andaman and Nicobar Islands** in the Bay of Bengal belong to India. The **Kuril Islands** in the Pacific Ocean are administered by Russia.

Most of the islands have been formed because of **submergence of fold or volcanic mountains**. Some of these islands have active volcanoes.



## Checkpoint

Answer correctly.

1. The Tigris-Euphrates valley is situated in \_\_\_\_\_.  
(a) Iran (b) Iraq (c) Turkey (d) Lebanon
2. The island of Bahrain lies in the \_\_\_\_\_.  
(a) Indian Ocean (b) Pacific Ocean (c) Persian Gulf (d) Arabian Sea
3. The Great Plain of \_\_\_\_\_ is formed by the three large rivers – Hwang Ho, Yangtze and Si Kiang.
4. The Plateau of Peninsular India has a steep edge along the Bay of Bengal coast and gently slopes towards the Arabian Sea. (True/False)
5. The Indonesian group of islands is the largest in the world. (True/False)

## Climate

Being a 'land of extremes', Asia experiences a wide variety of climatic conditions.

### Factors affecting climate of Asia

The main factors that affect the climate of Asia are as follows.

- **Size and latitudinal extent:** The continent has a **vast size** and **latitudinal extent**, covering all the three heat zones. Thus, it has all varieties of climate, ranging from the hot and wet equatorial to the cold arctic type.
- **Distance from the sea:** The **interior of Asia** lies **far away from the sea**. In the absence of the moderating influence of the sea, these areas experience extreme climate.
- **Relief:** Most of the mountain ranges of Asia **run in an east-west direction**. They **obstruct the rain-bearing winds** coming from the south. They also **check the cold northern winds** from reaching the south.
- **Winds:** The **monsoon winds**, which are characterised by the seasonal reversal of wind direction, **affect the distribution of rainfall** over large parts of Asia.
- **Ocean currents:** The **ocean currents**, like the warm Kuro Shio and the cold Oya Shio, also **influence the climate of Asia**, particularly along the eastern coastal margins.

## Types of Climate

The great variety of temperature and rainfall conditions that are found in Asia can be grouped under different climatic types. As natural vegetation and wildlife

### Let's Do This

In your scrapbook, paste pictures of different types of animals found in Asia.



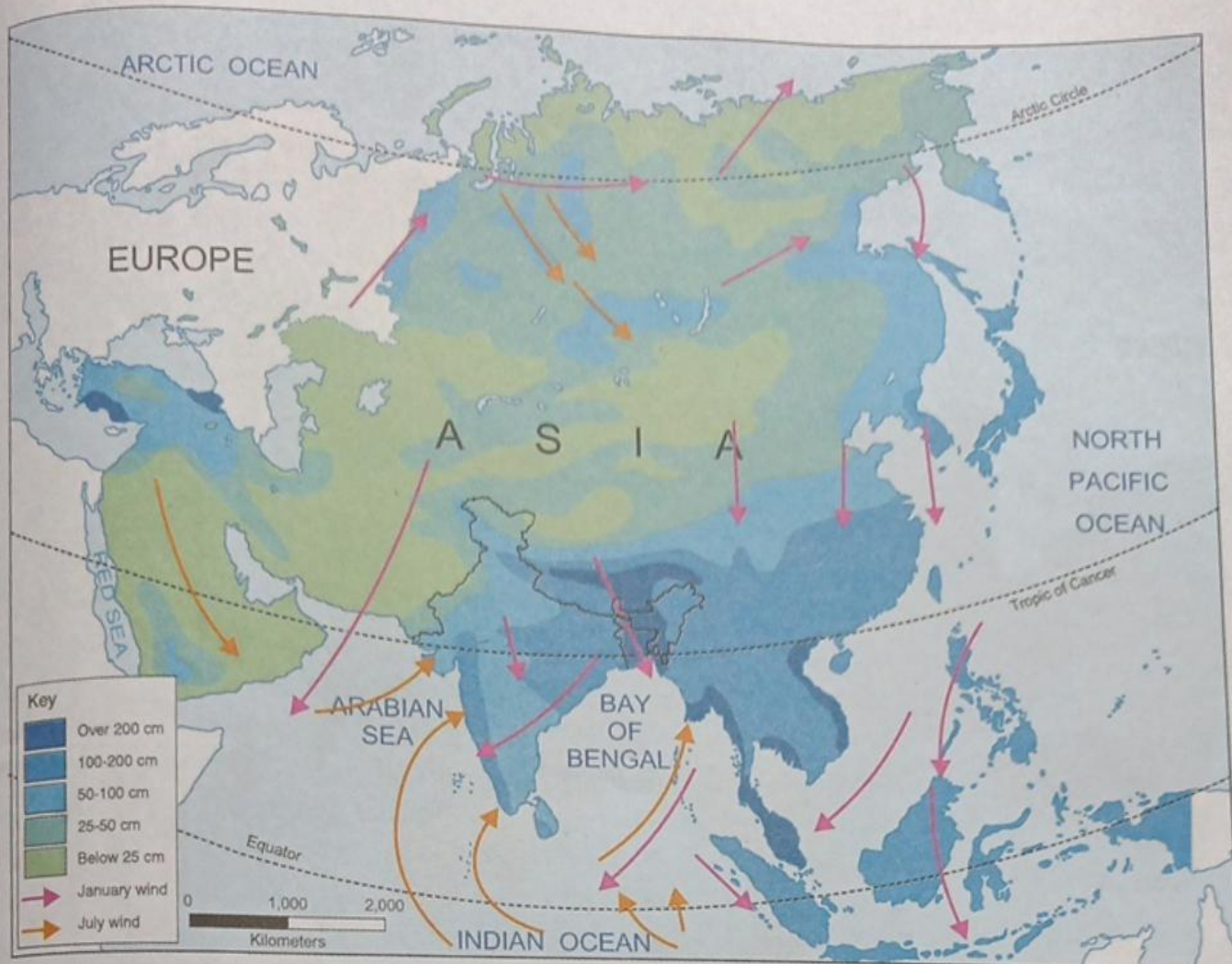
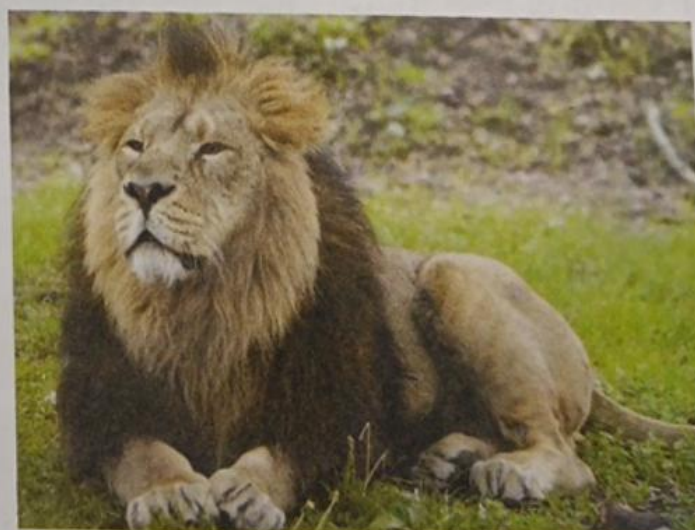


Figure 6.4 Annual rainfall and wind direction in Asia



▲ Mahogany trees



▲ The Asiatic lion

depend on climatic conditions, each type of climate also has its own distinct flora and fauna. The table below gives us a glimpse into each climatic region of Asia, with its specific features.



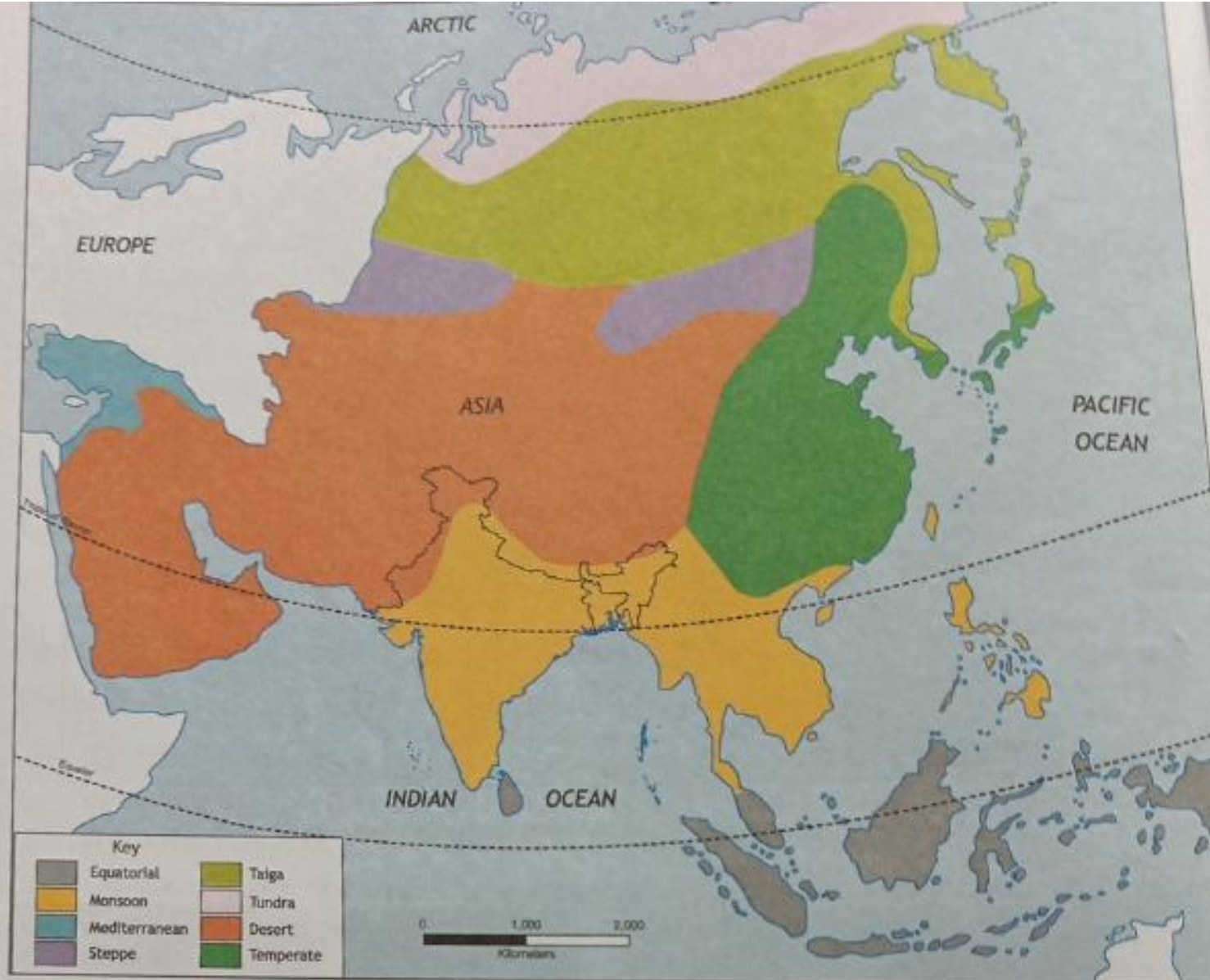


Figure 6.5 Climate and natural vegetation of Asia

Table 6.2 Climatic types of Asia and their features

Climatic Type	Areas	Climate	Natural Vegetation	Wildlife
Equatorial	Indonesia, Malaysia and parts of Philippines	Hot and wet; high temperatures; heavy, convectional, 4 o'clock rainfall	Equatorial, dark, damp rainforests; tall, dense, <b>evergreen trees</b> with broad leaves that form canopy; dense undergrowth of lianas and	Monkeys, sloths, tree frogs, tree lizards, tree iguanas, crocodiles, snakes, birds and insects



Climatic Type	Areas	Climate	Natural Vegetation	Wildlife
Monsoon	India, Pakistan, Bangladesh, Sri Lanka, Myanmar, Thailand, Laos, Vietnam, Cambodia, Philippines and southern China	Hot summers, cool and dry winters; south-west monsoons blow from the sea and bring rain; windward side of mountains receive more rain than the leeward side	creepers; common trees include ebony, mahogany, cinchona and rosewood (hardwood trees); mangrove trees near coastal areas  Areas with heavy rain: dense, evergreen, <b>deciduous forests</b> ; Areas with moderate rainfall: less dense deciduous forests; teak, sal, shisham, bamboo, sandalwood (hardwood trees)	Elephants, tigers, leopards, monkeys, deer, rhinoceros, snakes, Asiatic lion (found only in India)
Steppe (temperate grasslands of Eurasia)	South-western Siberia, eastern Mongolia	Warm summers, cold winters, low summer rain; extreme range of temperature	Short, soft grasses; land cleared for agriculture	Antelopes, mules, donkeys, horses, wolves, cattle, sheep
Desert	South-west (tropical hot deserts of Arabia, Iran and Thar in India and Pakistan) and (temperate or the cold deserts of Gobi and Tibet) central Asia	Scanty rain; extremely hot summer, cool winter; great difference between day and night temperatures	Scrubs, thorny bushes (acacia, cacti), coarse grass, shrubs; natural adaptations—long roots, waxy stems, spiny leaves	Camels, desert rats, desert foxes, lizards, scorpions, gazelles, mules, donkeys, insects; yaks found in cold deserts



Climatic Type	Areas	Climate	Natural Vegetation	Wildlife
Mediterranean	Along the Mediterranean Sea coast in Jordan, Syria, Turkey, Israel, Lebanon	Hot and dry summers, cool and moist winters, moderate winter rainfall	Short evergreen trees with long roots, thick barks and small, leathery leaves; olive, laurel, cork oak, walnut, fig, citrus fruits.	Land cleared for agriculture, hence cattle and sheep found
Temperate	China, Japan, Korea	Warm summers, cold winters, moderate rain caused by monsoon winds in summer, snow in winter	Mixed evergreen and deciduous forests; oak, magnolia, camellia, camphor, bamboo, mulberry, pine, fir, spruce	Giant panda, deer, antelopes, monkeys, bears, wolves, foxes, different species of birds
Taiga	Siberia	Warm summers, severely cold winters, low precipitation in the form of snow; low rain in summer	<b>Coniferous forests;</b> fir, spruce, pine, cedar; softwood used to make timber and for making paper and rayon	Bear, fox, lynx, sable, mink, squirrel
Tundra	Beyond the Arctic Circle, northern Russia, bordering the Arctic Ocean	Short, cool summers; long, extremely cold winters; vast areas covered with snow for 8-9 months in a year; low precipitation in the form of snow	Mosses, lichens, few types of flowering plants during the summer season	Reindeer, polar bear, fox, musk ox, seal, walrus