Physical features of india

Millions of years ago, the Peninsular Plateau region (the oldest landmass) was a part of the Gondwana Land which covered India, Australia, South Africa, and South America. Over hundreds of years of shifting landmass and ocean currents broke this landmass into multiple pieces.

.One such piece- the Indo-Australian plate started shifting northwards, where it collided with the Eurasian plate (now Europe). Consequently, this collision caused the landmass to fold and become, what we know as the Himalayas today. Thereafter, many such geological events led to the formation of each of the varied physical features of India.

MAJOR PHYSIOGRAPHIC DIVISIONS

The physical features of India can be grouped under the following physiographic divisions

- The Himalayan Mountains
- The Northern Plains
- The Peninsular Plateau
- The Indian Desert
- The Coastal Plains
- The Islands

The Himalayan Mountains

The Himalayas, geologically young and structurally fold mountains stretch over the northern borders of India. These mountain ranges run in a west-east direction from the Indus to the Brahmaputra. The Himalayas represent the loftiest and one of the most rugged mountain barriers of the world. They form an arc, which covers a distance of about 2,400 Km. Their width varies from 400 Km in Kashmir to 150 Km in Arunachal Pradesh. The altitudinal variations are greater in the eastern half than those in the western half. The Himalaya consists of three parallel ranges in its longitudinal extent. A number of valleys lie between these ranges. The northern most range is known as the Great or Inner Himalayas or the 'Himadri'. It is the most continuous range consisting of the loftiest peaks with an average height of 6,000 metres. It contains all the prominent Himalayan peaks,

The folds of Great Himalayas are asymmetrical in nature. The core of this part of Himalayas is composed of granite. It is perennially snow bound, and a number of glaciers descend from this range.

The range lying to the south of the Himadri forms the most rugged mountain system and is known as Himachal or lesser Himalaya. The ranges are mainly composed of highly compressed and altered rocks. The altitude varies between 3,700 and 4,500 metres and the average width is of 50 Km. While the Pir Panjal range forms the longest and the most important range, the Dhaula Dhar and the Mahabharat ranges are also prominent ones. This range consists of the famous valley of Kashmir, the Kangra and Kullu Valley in Himachal Pradesh. This region is well known for its hill stations.

The outer most range of the Himalayas is called the Shiwaliks. They extend over a width of 10-50 Km and have an altitude varying between 900 and 1100 metres. These ranges are composed of unconsolidated sediments brought down by rivers from the main Himalayan ranges located farther north. These valleys are covered with thick gravel and alluvium. The longitudinal valley lying between lesser Himalaya and the Shiwaliks are known as Duns. Dehra Dun, Kotli Dun and Patli Dun are some of the well-known Duns.

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Besides the longitudinal divisions, the Himalayas have been divided on the basis of regions from west to east. These divisions have been demarcated by river valleys. For example, the part of Himalayas lying between Indus and Satluj has been traditionally known as Punjab Himalaya but it is also known regionally as Kashmir and Himachal Himalaya from west to east respectively. The part of the Himalayas lying between Satluj and Kali rivers is known as Kumaon Himalayas. The Kali and Tista rivers demarcate the Nepal Himalayas and the part lying between Tista and Dihang rivers is known as Assam Himalayas. There are regional names also in these broad categories. Find out some regional names of the Himalayas.

The Brahmaputra marks the eastern most boundary of the Himalayas. Beyond the Dihang gorge, the Himalayas bend sharply to the south and spread along the eastern boundary of India. They are known as the Purvachal or the Eastern hills and mountains. These hills running through the north-eastern states are mostly composed of strong sandstones which are sedimentary rocks. Covered with dense forests, they mostly run as parallel ranges and valleys. The Purvachal comprises the Patkai hills, the Naga hills, Manipur hills and the Mizo hills.

The Northern Plain

The northern plain has been formed by the interplay of the three major river systems, namely– the Indus, the Ganga and the Brahmaputra along with their tributaries. This plain is formed of alluvial soil. The deposition of alluvium in a vast basin lying at the foothills of the Himalaya over millions of years, formed this fertile plain. It spreads over an area of 7 lakh sq. km. The plain being about 2400 Km long and 240 to 320 Km broad, is a densely populated physiographic division. With a rich soil cover combined with adequate water supply and favourable climate it is agriculturally a very productive part of India.

The rivers coming from northern mountains are involved in depositional work. In the lower course, due to gentle slope, the velocity of the river decreases which results in the formation of riverine islands.

The rivers in their lower course split into numerous channels due to the deposition of silt. These channels are known as distributaries. The Northern Plain is broadly divided into three sections. The Western part of the Northern Plain is referred to as the Punjab Plains. Formed by the Indus and its tributaries, the larger part of this plain lies in Pakistan. The Indus and its tributaries–the Jhelum, the Chenab, the Ravi, the Beas and the Satluj originate in the Himalaya. This section of the plain is dominated by the doabs.

The Ganga plain extends between Ghaggar and Teesta rivers. It is spread over the states of North India, Haryana, Delhi, U.P., Bihar, partly Jharkhand and West Bengal to its East, particularly in Assam lies the Brahmaputra plain. The northern plains are generally deseribed as flat land with no variations in its relief. It is not true. These vast plains also have diverse relief features. According to the variations in relief features, the Northern plains can be divided into four regions. The rivers, after descending from the mountains deposit pebbles in a narrow belt of about 8 to 16 km in width lying parallel to the slopes of the Shiwaliks. It is known as bhabar. All the streams disappear in this bhabar belt. South of this belt, the streams and rivers re-emerge and create a wet, swampy and marshy region known as terai. This was a thickly forested region full

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of wildlife. The forests have been cleared to create agricultural land and to settle migrants from Pakistan after partition. Locate Dudhwa National Park in this region.

The largest part of the northern plain is formed of older alluvium. They lie above the flood plains of the rivers and present a terrace like feature. This part is known as bhangar. The soil in this region contains calcareous deposits locally known as kankar. The newer, younger deposits of the flood plains are called khadar. They are renewed almost every year and so are fertile, thus, ideal for intensive agriculture.

The Peninsular Plateau

The Peninsular plateau is a tableland composed of the old crystalline, igneous and metamorphic rocks. It was formed due to the breaking and drifting of the Gondwana land and thus, making it a part of the oldest landmass. The plateau has broad and shallow valleys and rounded hills. This plateau consists of two broad divisions, namely, the Central Highlands and the Deccan Plateau. The part of the Peninsular plateau lying to the north of the Narmada river covering a major area of the Malwa plateau is known as the Central Highlands. The Vindhyan range is bounded by the Central Highlands on the south and the Aravalis on the northwest. The further westward extension gradually merges with the sandy and rocky desert of Rajasthan. The flow of the rivers draining this region, namely the Chambal, the Sind, the Betwa and Ken is from southwest to northeast, thus indicating the slope. The Central Highlands are wider in the west but narrower in the east. The eastward extensions of this plateau are locally known as the Bundelkhand and Baghelkhand. The Chotanagpur plateau marks the further eastward extension, drained by the Damodar river.

The Deccan Plateau is a triangular landmass that lies to the south of the river Narmada. The Satpura range flanks its broad base in the north while the Mahadev, the Kaimur hills and the Maikal range form its eastern extensions. Locate these hills and ranges in the physical map of India. The Deccan Plateau is higher in the west and slopes gently eastwards. An extension of the Plateau is also visible in the northeast– locally known as the Meghalaya, Karbi-Anglong Plateau and North Cachar Hills. It is separated by a fault from the Chotanagpur Plateau. Three Prominent hill ranges from the west to east are the Garo, the Khasi and the Jaintia Hills.

The Western Ghats and the Eastern Ghats mark the western and the eastern edges of the Deccan Plateau respectively. Western Ghats lie parallel to the western coast. They are continuous and can be crossed through passes only. Locate the Thal, Bhor and the Pal Ghats in the Physical map of India.

The Western Ghats are higher than the Eastern Ghats. Their average elevation is 900– 1600 metres as against 600 metres of the Eastern Ghats. The Eastern Ghats stretch from the Mahanadi Valley to the Nigiris in the south. The Eastern Ghats are discontinuous and irregular and dissected by rivers draining into the Bay of Bengal. The Western Ghats cause orographic rain by facing the rain bearing moist winds to rise along the western slopes of the Ghats. The Western Ghats are known by different local names. The height of the Western Ghats progressively increases from north to south. The highest peaks include the Anai Mudi (2,695metres) and the Doda Betta (2,637 metres). Mahendragiri (1,501 metres) is the highest peak in the Eastern Ghats. Shevroy Hills and the Javadi Hills are located to the southeast of the Eastern Ghats. Locate the famous hill stations of Udagamandalam,

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popularly known as Ooty and the Kodaikanal. One of the distinct features of the peninsular plateau is the black soil area known as Decean Trap. This is of volcanic origin hence the rocks are igneous. Actually these rocks have denuded over time and are responsible for the formation of black soil. The Aravali Hills lie on the western and northwestern margins of the peninsular plateau. These are highly eroded hills and are found as broken hills. They extend from Gujarat to Delhi in a southwest-northeast direction.

The Indian Desert

The Indian desest lies towards the western margins of the Aravali Hills. It is an undulating sandy plain covered with sand dunes. This region receives very low rainfall below 150 mm per year. It has arid climate with low vegetation cover. Streams appear during the rainy season. Soon after they disappear into the sand as they do not have enough water to reach the sea. Luni is the only large river in this region.

The Coastal Plains

The Peninsular plateau is flanked by stretch of narrow coastal strips, running along the Arabian Sea on the west and the Bay of Bengal on the east. The western coast, sandwiched between the Western Ghats and the Arabian Sea, is a narrow plain. It consists of three sections. The northern part of the coast is called the Konkan (Mumbai – Goa), the central stretch is called the Kannad Plain while the southern stretch is referred to as the Malabar coast.

The plains along the Bay of Bengal are wide and level. In the northern part, it is referred to as the Northern Circar, while the southern part is known as the Coromandel Coast. Large rivers such as the Mahanadi, the Godavari, the Krishna and the Kaveri have formed extensive delta on this coast. Lake Chilika is an important feature along the eastern coast.

Lakes

Kolleru Lake

Kolleru Lake is one of the largest freshwater lakes in India located in state of Andhra Pradesh and forms the largest shallow freshwater lake in Asia, 15 kilometers away from the city of Eluru. Kolleru is located between Krishna and Godavari deltas. Kolleru spans into two districts - Krishna and West Godavari. The lake is fed directly by water from the seasonal Budameru and Tammileru streams, and is connected to the Krishna and Godavari irrigation systems by over 67 major and minor irrigation canals. This lake is a major tourist attraction. Many birds migrate here in winter, such as Siberian crane, ibis, and painted storks. The lake was an important habitat for an estimated 20 million resident and migratory birds, including the grey or spot-billed pelican (Pelecanus philippensis). The lake was declared as a wildlife sanctuary in November 1999 under India's Wildlife Protection Act of 1972, and designated a wetland of international importance in November 2002 under the international Ramsar Convention. The wildlife sanctuary covers an area of 308 km2.

Chandubi Lake

Chandubi Lake is a natural lake located in Rabha Hasong Autonomous Council, Kamrup District, Assam at a distance of 64 kilometers from the city of Guwahati accessible through National Highway 37. The lake is located at the foot of Garo hills

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surrounded by Assam and Meghalaya. The area is covered by deep forest, and small villages. It is a natural sightseeing and picnic spot. This lake attracts migratory birds during winter.

Surajkund

Surajkund is an ancient reservoir of the 10th century located in Faridabad about 8 km (5 miles) from South Delhi. Surajkund (literal meaning is 'Lake of the Sun') is an artificial Kund (‘Kund’ means "lake" or reservoir) built in the backdrop of the Aravalli hills with an amphitheatre shaped embankment constructed in semicircular form. It is said to have been built by the king Suraj Pal of Tomar dynasty in the 10th century. Tomar was a sun worshipper and he had therefore built a Sun temple on its western bank.

Gobind Sagar

Gobind Sagar is a man-made reservoir situated in Bilaspur District, Himachal Pradesh. It is formed by the Bhakra Dam. The reservoir is on the river Sutlej and is named in honour of Guru Gobind Singh, the tenth Sikh guru. One of the world's highest gravity dams, the Bhakra dam rises nearly 225.5 m above its lowest foundations. Under the supervision of the American dam-builder, Harvey Slocum, work began in the year of 1955 and was completed in 1962. To maintain the level of water, the flow of river Beas was channelized to Gobind Sagar by the Beas-Sutlej link which was accomplished in 1976.

Wular Lake

Wular Lake (also spelt Wullar) is one of the largest fresh water lakes in Asia[citation needed]. It is sited in Bandipora district in the Indian state of Jammu and Kashmir. The lake basin was formed as a result of tectonic activity and is fed by the Jhelum River. The lake's size varies seasonally from 12 to 100 square miles (30 to 260 square kilometers). In addition, much of the lake has been drained as a result of willow plantations being built on the shore in the 1950s.

Dal Lake

Dal is a lake in Srinagar, the summer capital of Jammu and Kashmir. The urban lake, which is the second largest in the state, is integral to tourism and recreation in Kashmir and is named the "Jewel in the crown of Kashmir" or "Srinagar's Jewel". The lake is also an important source for commercial operations in fishing and water plant harvesting.

Ashtamudi Lake

Ashtamudi Lake in the Kollam District of the Indian state of Kerala, is the most visited backwater and lake in the state. It possesses a unique wetland ecosystem and a large palm-shaped (also described as octopus-shaped) water body, second only in size to the Vembanad estuary ecosystem of the state. Ashtamudi means 'eight braids' (Ashta : 'eight'; mudi : 'hair braids') in the local Malayalam language. The name is indicative of the lake's topography with its multiple branches. The lake is also called the gateway to the backwaters of Kerala and is well known for its houseboat and backwater resorts. Ashtamudi Wetland was included in the list of wetlands of international importance, as defined by the Ramsar Convention for the conservation and sustainable utilization of wetlands.

Vembanad

Vembanad (Vembanad Kayal or Vembanad Kol) is the longest lake in India, and the largest lake in the state of Kerala. Spanning

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