

Drainage System of India

Geography is an important part of the UPSC syllabus. Many questions are asked every year in both the prelims and the mains from this subject. It is also a very interesting subject. In this article, you can read all about the drainage system in India for the <u>IAS exam</u>.

Drainage System of India

The flow of water through well-defined channels is known as drainage and the network of such channels is called a "drainage system". The drainage system of an area is the outcome of the geological time period, nature and structure of rocks, slope, topography, amount of water flowing and the periodicity of flow. The area drained by a single river system (river and its tributaries) is called its drainage basin. An elevated area (mountain or an upland) that separates two drainage basins is called a "water divide". The world's largest drainage basin is of the Amazon river and in India, the river Ganga has the largest river basin.

Different Drainage Patterns

- a. **Dendritic** The drainage system resembling the branches of a tree is known as dendritic. For example, the rivers of the northern plains.
- b. **Radial** When the rivers originate from a hill and flow in all directions, the drainage pattern is known as radial. For example, rivers originating from the Amarkantak range.
- c. **Trellis** When the primary tributaries of a river flow parallel to each other and secondary tributaries join them at right angles, the pattern is known as trellis.
- d. **Centripetal** When the rivers discharge their waters from all directions in a lake or depression, the pattern is known as centripetal.

Different Drainage Systems of India

The Indian drainage system can be grouped into two based on the discharge of water (orientation to the sea).

- 1. The Arabian Sea drainage
- 2. The Bay of Bengal drainage

These two drainage systems are separated from each other through the Delhi ridge, the Aravallis and the Sahyadris. About 77% of the drainage is oriented towards the Bay of Bengal while 23% discharge their water into the Arabian Sea.

 On the basis of mode of origin, nature and characteristics, the Indian drainage may be classified into the Himalayan drainage and the Peninsular drainage. The Himalayan and the Peninsular rivers originate from the two major physiographic regions of India and are different from each other in many ways.

The Himalayan rivers

• Most of the Himalayan rivers are perennial and have water throughout the year. These rivers receive water from rain as well as from melted snow from the lofty mountains.



- These rivers pass through the giant gorges carved out by the erosional activity carried on simultaneously with the uplift of the Himalayas. Besides deep gorges, these rivers also form V-shaped valleys, rapids and waterfalls in their mountainous course (upper course).
- In the middle and the lower courses (plains), these rivers form meanders, oxbow lakes and many other depositional features in their floodplains. These rivers have the tendency to shift their courses frequently e.g, river Kosi ("sorrow of Bihar"), is known for changing its course frequently. The river carries a huge quantity of sediments from its upper reaches and deposits it in the plains. The course gets blocked and consequently, the river changes its course.

The Peninsular rivers

- The Peninsular drainage system is older than the Himalayan one.
- Most of the Peninsular rivers are seasonal, as their flow depends largely on the rainfall of the region.
- The Peninsular rivers have shorter and shallower courses as compared to the Himalayan rivers.
- Most of the major Peninsular rivers, except Narmada and Tapi, flow towards the Bay of Bengal (west to east). The Chambal, the Sindh, the Betwa, the Ken and the Son originating in the northern part of the Peninsula belong to the Ganga river system. The other important rivers of the Peninsular drainage are the Mahanadi, the Godavari, the Krishna and the Kaveri.
- The Western Ghats act as a water divide between the major Peninsular rivers, discharging their water in the Bay of Bengal and the small rivulets joining the Arabian Sea.



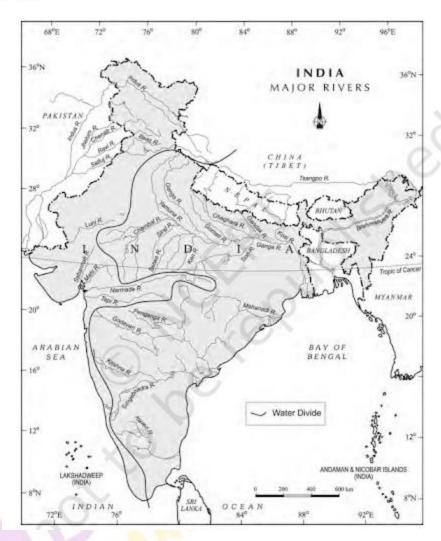


Image Source: - NCERT

Himalayan Drainage System

The Indus, the Ganga and the Brahmaputra systems are the three major river systems of the Himalayan drainage system.

The Indus River System

- Area It covers a total area of 11,65,000 sq.km. In India, it covers an area of 3,21,289 sq.km.
- Length Its total length is 2,880 km and in India, its length is 1,114 km.
- It is also known as "Sindhu" and is the westernmost of the Himalayan rivers in India.
- Origin and its course It originates from a glacier near Bokhar Chu (31°15' N latitude and 81°41' E longitude) in the Tibetan region at an altitude of 4,164 m in the Kailash mountain range. It moves in the north-west direction and enters India in Ladakh (Leh). It forms a picturesque gorge in this part. Several Himalayan tributaries like the Shyok, the Gilgit, the Zaskar, the Hunza and the Nubra join it. The Indus flows through Baltistan and Gilgit and emerges from the mountains at Attock where it



receives the Kabul river on its right bank. The river flows southwards and receives Panjnad near Mithankot in Pakistan. The Panjnad is the name given to the Satluj, the Beas, the Ravi, the Chenab and the Jhelum. The river eventually reaches the Arabian Sea.

• In Tibet, it is known as "Singi Khamban" or "Lion's mouth".

Main Tributaries of Indus River

Satluj	 Origin – "Rakas tal" near Mansarovar in Tibet. This is an antecedent river called Langechen Khambab in Tibet. Course – it runs almost parallel to the Indus river for about 400 km before entering India. It passes through the Shipki La on the Himalayan ranges and enters the Punjab plains. It meets the Beas river in Hari-ke-Patan in Amritsar, Punjab. After the confluence, the combined river enters Pakistan. It feeds the canal system of the Bhakra Nangal project.
Beas	 Origin – Beas Kund near Rohtang Pass (Himachal Pradesh). Course – It flows through the Kullu valley (Himachal Pradesh) and forms gorges at Kati and Largi in the Dhauladhar range. It enters the Punjab plains where it meets the Satluj near Harike (Punjab). The Beas river flows entirely within India.
Ravi	 Origin – West of Rohtang Pass, Killu Hills (Himachal Pradesh). Course – It flows through the Chamba valley (Himachal Pradesh) of the state. It drains the area lying between the south-eastern part of Pir Panjal and the Dhauladhar ranges. It enters the plains of Punjab and runs along the Indo-Pakistan border for some distance. It then enters Pakistan and joins the Chenab river near Sarai Sidhu.
Chenab	 Origin – Baralacha Pass (Himachal Pradesh). It is formed by two streams – the Chandra and the Bhaga which meet at Tandi near Keylong in Himachal Pradesh. It is also known as Chandrabhaga. It is the largest tributary of the Indus and flows for about 1180 km before entering into Pakistan.
Jhelum	 Origin – Spring at Verinag, in the south-eastern part of Kashmir valley, at the foothills of Pir Panjal. Course – It flows through Srinagar and enters Wular Lake before entering Pakistan through a deep narrow gorge. At Jhang (Pakistan) it joins Chenab.

Right and Left bank tributaries of the Indus river



- Right bank tributaries Nubra river (main tributary of Shyok river), Shyok river, Gilgit river, Hunza river, Kabul river, Khurram river, Gomal river, Viboa river, Tochi river and Sangar river.
- Left bank tributaries Zanskar river, Suru river, Kishanganga (Neelam) river, Jhelum river, Chenab river, Ravi river, Beas river, Satluj river, Panjnad river.

Indus Water Treaty (IWT)

This treaty was signed between India and Pakistan on 19th September 1960, regarding the sharing of water of the Indus and its tributaries. It was essentially a confidence-building measure between the two countries. The treaty divides the Indus river system into two segments, eastern rivers – Satluj, Beas and Ravi and western rivers – Chenab, Jhelum and Indus. According to this treaty, India has been given rights to use the waters of the eastern rivers while Pakistan is entitled to use western rivers. The treaty gives India 20% of the water from the Indus river system and the rest 80% to Pakistan.

Know more about the Indus Water Treaty in the link.

The Ganga River System

- The Ganga is the <u>national river</u> and also the largest river system in <u>India</u>. The Ganga river system consists of both perennial as well as non-perennial rivers which originate in the Himalayas (north) and the Peninsula (south) respectively.
- It is a transboundary river that flows through India and Bangladesh.
- Length approx. 2525 km.
- The Ganga river basin covers about 8.6 lakh sq.km in India. It runs through Uttarakhand (110 km),
 Uttar Pradesh (1450 km), Bihar (445 km) and West Bengal (520 km).
- It originates in the <u>Gangotri glacier</u> near <u>Gaumukh</u> of Uttarakhand (Uttarkashi district), here it is known as Bhagirathi. At Devprayag, Bhagirathi meets Alaknanda and thereafter, it is known as the Ganga.
- Alaknanda originates in the Santopanth glacier above Badrinath. The five confluences known as the Panch Prayag are along the Alaknanda.
 - Vishnuprayag, the place of the confluence of the Dhauliganga river and the Alaknanda river.
 - Nandaprayag, the place of the confluence of the Nandakini river and the Alaknanda river.
 - Karnaprayag, the place of the confluence of the Pindar river with the Alaknanda river.
 - Rudraprayag, the place of confluence of the Mandakini river/Kali Ganga with the Alaknanda river.
 - Devprayag, the place of confluence of the Bhagirathi river with the Alaknanda river.
- At Haridwar, the Ganga emerges from the mountains onto the plains.
 - The Ganga initially flows in the southern direction, then in the south-east direction up to Mirzapur and then in the east direction in the Bihar plains.
 - The Ganga flows eastwards to Farakka in West Bengal. At Farakka, its distributary, Bhagirathi-Hooghly flows southwards through deltaic plains to the Bay of Bengal near Sagar Island.



- After entering Bangladesh, the main branch of the Ganga is known as the Padma which
 meets Jamuna river (largest distributary of the Brahmaputra river). Padma river meets
 Meghna (second largest distributary of Brahmaputra) and hereafter, it is known as Meghna
 river and enters into the Bay of Bengal.
- The delta formed with waters from the Ganga and the Brahmaputra rivers is known as the Sundarban Delta. It is the world's largest and fastest-growing delta. It is also the home of the Royal Bengal tiger.
- Right bank tributaries of Ganga the Yamuna (which is joined by the Tons, the Chambal, the Sindh, the Betwa and the Ken on its right bank which originate from the Peninsular Plateau. On its left bank it is joined by the Hindan, the Rind, the Sengar, the Varuna, etc), the Tamas, the Son and the Punpun.
- Left bank tributaries of Ganga the Ramganga, the Gomati, the Ghaghara, the Gandak, the Kosi and the Mahanadi.

Right Bank Tributaries

Yamuna River	• This is the longest and the westernmost tributary of Ganga. Its source lies in the Yamunotri Glacier on the western slopes of the Bandarpunch range (Uttarakhand). It joins the Ganga at Prayag (Allahabad).
	• Tributaries of the Yamuna river – The important tributaries of the Yamuna are mostly the right bank tributaries, originating from the Aravallis (Rajasthan), the Vindhyan Range and the Malwa Plateau of Madhya Pradesh. The Tons, Chambal, Sindh, Betwa and Ken are the main right-hand tributaries of the Yamuna river. The Chambal is famous for its badland topography called the Chambal ravines.
Tamas River	• Its source is Tamakund in the Kaimur Range (Madhya Pradesh). It joins Ganga at Sirsa (Uttar Pradesh).
Son/Sone River	 It is the second-largest southern tributary of the Ganga (first being the Yamuna river). It originates near Amarkantak Hill, (Madhya Pradesh) near the Narmada river and joins the Ganga near Patna in Bihar.
Punpun River	 It originates from the Chotanagpur Plateau region of Palamu district in Jharkhand. It joins the Ganga at Fatwah (Patna).

Left Bank Tributaries

Ramganga	• It originates in the Garhwal hills near Gairsain (Uttarakhand). It changes its course
River	to the south-west direction after crossing the Shiwaliks and enters into the plains



	of Uttar Pradesh near Najibabad. It joins the Ganga near Kannauj (Uttar Pradesh).
	• It flows through the Jim Corbett National Park.
	• The Gomti is a monsoon and groundwater-fed river which originates from Gomat Taal (Fulhaar Jheel) near Pilibhit district (Uttar Pradesh).
Gomti River	• Kaithi, Ghazipur (Uttar Pradesh) is the place where the river Gomti and the Ganga meet.
	• The Markandey Mahadev temple is at the confluence of the Gomti and the Ganga.
Ghaghara River	• It is a perennial transboundary river. The Ghaghara originates in the glaciers of Mapchachungo, near Mansarovar Lake, Tibet. After collecting the waters from its tributaries – Tila, Seti and Beri it comes out of the mountain, cutting a deep gorge at Shishapani. The river Sharda joins it at Brahmaghat in India. The Sharda or Saryu river originates in the Milam glacier in the Nepal Himalayas. The Ghaghara joins the Ganga at Chhapra (Bihar).
	• It is the second-longest tributary by length after the Yamuna.
	• The Ghaghara or Karnali in Nepal is the longest river in Nepal.
	• It originates at the Nhubine Himal Glacier in the Mustang region of the Nepal border.
Gandhak River	• It is one of the major rivers of Nepal and is known as Kali Gandaki. In Nepal, the river is also known as Narayani and Sapt-Gandhaki.
	• The Gandhaki river merges with the Ganga at Patna (Bihar).
	The Kosi is an antecedent river.
	• It is often referred to as the "Sorrow of Bihar".
Kosi River	 Arun is its main stream which originates from the northern slopes of Mt. Everest in Tibet (China). After crossing the Central Himalayas in Nepal, it is joined by Son Kosi from the west and Tamur Kosi from the east. It forms Sapt Kosi after uniting with the River Arun.
	 The Kosi river branches into distributaries before joining the river Ganga near Kursela in Katihar district (Bihar).
Mahananda River	• The river rises in the Darjeeling hills of West Bengal. It flows southwards through the fertile agricultural area of Bihar and enters into West Bengal. It then flows in the southeast direction into Bangladesh. The river joins the Ganga at Godagari Ghat (Bangladesh).



• It is the easternmost tributary of the Ganga river.

The Brahmaputra River System

- It is a transboundary river and flows through China, India and Bangladesh.
- The Brahmaputra river has its origin in the Chemayungdung glacier of the Kailash range near the Mansarovar Lake. It flows eastwards longitudinally for a distance of nearly 1,200 km in a dry and flat region of southern Tibet, where it is known as the "Tsangpo", which means "the purifier". The Rango Tsangpo is the major right-bank tributary of this river in Tibet. It emerges as a turbulent and dynamic river after carving out a deep gorge in the Central Himalayas near Namcha Barwa, 7,755 m (eastern part of the Himalayas).
- It enters India (with the name of Siang or Dihang) west of the Sadiya town in Arunachal Pradesh.
 Flowing southwest, it receives its main left-bank tributaries, Dibang or Sikang and Lohit and thereafter, it is known as the Brahmaputra.
 - Dihang + Lohit + Dibang = Brahmaputra (Assam).
- The Brahmaputra river has a braided channel in its entire length in Assam and forms many riverine islands.
- Majuli (Assam) is the largest river island in the world which lies in this river.
- The Brahmaputra enters Bangladesh near Dhubri and flows southwards. In Bangladesh, the river Tista/Teesta (from Sikkim) joins it on its right bank and thereafter, the river is known as Jamuna. Now, the river splits into two distributaries.
 - The western branch, which contains the majority of the river's flow, continues as Jamuna to merge with the Padma river (Ganga river).
 - The eastern branch (now much smaller) is called the lower or old Brahmaputra. It curves southeast to join the Meghna River near Dhaka. The Padma and Meghna converge near Chandpur and flow out as Meghna into the Bay of Bengal.
- Major left-bank tributaries of the Brahmaputra river Burhi-Dihing and Dhansiri.
- Major right bank tributaries of the Brahmaputra river Subansiri (Gold river), Kameng, Manas and Sankosh.
- The Brahmaputra river is known for floods, channel shifting and bank erosion. This is due to the fact
 that most of its tributaries are large and bring large quantities of sediments owing to heavy rainfall in
 its catchment area.

Know more about the Brahmaputra River System in the link.

Peninsular Drainage System

The Peninsular rivers are characterised by fixed course, absence of meanders and non-perennial flow of water. The Narmada and Tapi which flow through the rift valley are, however, exceptions.

Major West Flowing Peninsular Rivers



Narmada

- The Narmada originates on the western flank of the Amarkantak plateau (Madhya Pradesh) at a height of about 1,057 m.
- It flows in a rift valley towards the west between the Vindhyan range in the north and the Satpura range in the south. On its way to the sea, the Narmada river creates many picturesque locations. 'The Marble rocks' near Jabalpur where the Narmada flows through a deep gorge and the 'Dhuandhar Falls', Jabalpur (Madhya Pradesh) where the river plunges over steep rocks are some of the notable ones.
- The Narmada river flows through Madhya Pradesh and Gujarat.
- The river drains into the Arabian sea near the Gulf of Khambhat, south of Bharuch city of Gujarat and forms a broad 27 km estuary (unlike east-flowing rivers which form deltas). It is the longest west-flowing river in India and the largest flowing river of the state of Madhya Pradesh.
- The Sardar Sarovar Project has been constructed on this river.
- Length of the river is $\sim 1,312$ km.
- <u>Kanha National Park</u> is located in the upper reaches of the Narmada river. The park has been described by Rudyard Kipling in his famous book "The Jungle Book".

Tapi/Tapti

- Like Narmada, it is also an important westward flowing river. It originates from Multai in the Betul district of Madhya Pradesh. It also flows in a rift valley parallel to the Narmada but is much shorter in length. The river drains into the Arabian Sea near the Gulf of Khambhat.
- The river has a length of around 724 km and flows through the states of Madhya Pradesh, Maharashtra and Gujarat. Nearly 79 % of its basin lies in Maharashtra, 15% in Madhya Pradesh and the remaining 6% in Gujarat.
- The Ukai Dam has been constructed on this river.

Mahi

- The Mahi river originates in the Vindhyan Range (Madhya Pradesh). Turning north-west it enters Rajasthan (Vagad) and then turns southwest to flow through Gujarat. It drains into the Arabian Sea near the Gulf of Khambhat.
- Mahi Bajaj Sagar Dam and Kandana Dam have been built on this river.

Sabarmati



• It originates in the Aravalli Range of the Udaipur District of Rajasthan. It meets the Gulf of Khambhat of the Arabian Sea after travelling in a south-west direction across Rajasthan and Gujarat.

Luni

- The Luni is the largest river in the Thar Desert of north-west India.
- It originates in the Pushkar valley of the Aravalli Range, near Ajmer. At its origin, it is known as Sagarmati which meets Sarasvati (which originates from Pushkar Lake) and thereafter, it is called Luni.
- The Luni turns brackish below Balotra and loses itself south-westwards into the Rann of Kutch.
- The Luni is also known as the Lavanavari or Lavanavati, which means "Salt water" in Sanskrit.

West Flowing Small Rivers

The rivers and their origins are mentioned below.

- Shetrunji near Dalkahwa in Amreli district (Gujarat).
- Bhadra Aniali village in Rajkot district (Gujarat).
- Dhadhar near Ghantar village in PanchMahal district (Gujarat).
- Vaitarna Trimbak Hills in Nasik District (Maharashtra).
- Kalinadi Belgaum district and falls in Karwar Bay.
- Bedti Hubli Dharwar (Karnataka).
- Sharavati Shimoga district of Karnataka.
- Mandovi and Juari are the two important rivers of Goa.
- Bharathapuzha near Anamalai hills. The river is also known as Ponnani.
- Periyar Sivagiri Hills of Western Ghats. It is an important river of Kerala.
- Pamba It flows in Kerala and falls in the Vembanad lake.

Major East Flowing Peninsular Rivers

East flowing rivers flow from west to east due to the gradient of the land and finally drain into the Bay of Bengal. These rivers carry huge amounts of sediments and therefore, form delta on the east coast (west-flowing rivers form estuaries).

Mahanadi

- The Mahanadi originates near Sihawa in the Raipur district of Chhattisgarh. It runs through Odisha and discharges into the Bay of Bengal.
- Its length is 851 km and the drainage basin is shared by Maharashtra, Chhattisgarh, Jharkhand and



Odisha.

- Initially, the river flows in a northerly direction and drains the Raipur district. It then flows in an easterly direction and is joined by the Jonk and Hasdeo rivers before entering Odisha. Near the city of Sambalpur, it is dammed by the largest earthen dam in the world, the Hirakud Dam. The Mahanadi enters the Bay of Bengal via several channels near Paradeep at False Point, Jagatsinghpur (Odisha).
- The Mahanadi was called "the sorrow of Orissa", however, the construction of the Hirakud Dam has helped to keep the river well in control.

Godavari

- The Godavari is the largest Peninsular river system and is also called the Dakshin Ganga (Ganga of the south).
- The river originates in the Western Ghats of Central India near Nashik in Maharashtra. It flows eastwards and enters Telangana State (in Nizamabad district). The river then flows south-east, flowing through a gap in the Eastern Ghats ranges and then crosses Andhra Pradesh. The river after Rajahmundry splits into several branches forming a large delta along the coast of the Bay of Bengal. This delta along with the delta of the Krishna river is called the Rice Granary of South India.
- Its length is 1,465 km and the drainage system is shared by the states of Maharashtra, Madhya Pradesh, Chhattisgarh, Odisha and Andhra Pradesh.
- Below the city of Rajahmundry in Andhra Pradesh, a dam was constructed on the river in the mid 19th century by the British engineer Sir Arthur Thomas Cotton, the first major irrigation project on the Godavari.
- The Penganga, the Indravati, the Pranhita and the Manjra are the principal tributaries of the Godavari river.

Krishna

- The Krishna is the second-largest east-flowing Peninsular river which originates near Mahabaleshwar in Sahyadri. It empties into the Bay of Bengal at Hamsaladeevi, near Koduru in Andhra Pradesh.
- Its length is 1,401 km and the drainage basin is shared by the States of Maharashtra, Karnataka, Andhra Pradesh and Telangana.
- The Tungabhadra, Dhudhganga, Koyana, Ghatprabha, Musi and Bhima are some of its important tributaries.

Kaveri/Cauvery



- The river originates in the Brahmagiri range of the Western Ghats, Kogadu district in Karnataka.
- The river flows through the states of Karnataka and Tamil Nadu.
- The length of the river is about 800 km and the river basin is shared by three states and a Union Territory Tamil Nadu, Karnataka, Kerala and Puducherry.
- The river Kaveri makes the second biggest waterfall in India known as Shivasamudram Falls. The power generated from the falls is supplied to Mysore, Bengaluru and the Kolar Gold Field.
- The drainage basin of the river receives rainfall during the summer monsoon as well as during the retreating and winter monsoon and therefore, the river carries water throughout the year with comparatively less fluctuation than the other Peninsular rivers.
- Its important tributaries are the Kabini, Bhavani, Amravati and Hemavati.

East Flowing Small rivers

The Subarnrekha, Baitarni, Brahmani, Vamsadhara, Penner, Palar and Vaigai are small east-flowing rivers.

Also read: Major river systems of India

Lakes

A lake is a large body of natural water accumulated in a depression. Apart from natural lakes, the damming of the rivers for the generation of hydel power has also led to the formation of lakes (artificial ones), such as Guru Gobind Sagar (Bhakra Nangal Project). These lakes differ from each other in size and other characteristics. Most lakes are permanent and have some perennial source of inflow of water like a glacier, eg. Dal lake. There are some lakes that contain water only during the rainy season (temporary lakes).

Lakes can also be classified on the basis of their origin and mode of formation

- Tectonic Lakes These lakes are formed by filling up of water in the tectonic depressions created due to the fractures and faults in the earth's crust e.g, Wular Lake in Kashmir, Pangong Lake in Ladakh.
- 2. **Crater Lakes** Crater lakes are formed when the craters and calderas are filled with water e.g, Lonar lake in Maharashtra (During a volcanic explosion a natural hollow called a crater is formed by blowing off the top of the cone).
- 3. **Glacial Lakes (Tarns and Cirque lakes)** These lakes are the result of glacial erosion e.g, Chandra Taal (Himachal Pradesh).
- 4. Lagoons A lagoon is a shallow body of water separated from a large body of water (sea/ocean) by sandbanks, coral reefs, etc. The Chilka Lake (Odisha), Pulicat (Andhra Pradesh), Vembanad and Kayals of Kerala are some of its examples.
- 5. **Ox-bow Lakes** A meandering river across a floodplain forms cut-offs that later develop into ox-bow lakes e.g, Lake Bird Sanctuary (Bihar).



Important Lakes of India

Jammu and Kashmir

- 1. Dal Lake Srinagar District of J&K. It is a freshwater lake, fed by the river Jhelum. It is known for houseboats and has some interesting flora like lotus flowers, water lilies and water-chestnut. It is also known as the "Jewel in the crown of Kashmir" or Srinagar's Jewel.
- 2. Nigeen Lake Srinagar District of J&K. It is a natural freshwater lake with channels connecting it to the river Jhelum. It is also known as "Jewel in the ring".
- 3. Anchar Lake Srinagar District of J&K. The lake is connected with the famous Dal lake via a channel called Amir Khan Nallah.
- 4. Wular Lake Bandipur District of J&K. It is one of the largest freshwater lakes in Asia. Wular Lake was formed as a result of tectonic activity and is fed by the river Jhelum. It was declared a Ramsar wetland site in 1990.
- 5. Manasbal Lake Ganderbal District of J&K. It is a natural freshwater lake.
- 6. Gadsar Lake Ganderbal District of J&K. Gadsar in Kashmiri means "lake of fishes".
- 7. Gangabal Lake It is a freshwater lake located at the foothills of Mount Harmukh in the Ganderbal district of J&K.
- 8. Sheshnag Anantnag District of J&K. It lies on the way to Amarnath Shrine.
- 9. Marsar Lake Anantnag District of J&K.
- 10. Tarsar Lake Anantnag district of J&K. Tarsar lake is separated from its sister lake, Marsar by a mountain peak with an elevation of 4000 m.
- 11. Mansar Lake Jammu city of J&K. It is a Ramsar Wetland Site.
- 12. Surinsar Lake Jammu city of J&K. It is a Ramsar Wetland Site.

Ladakh

- Pangong lake/Pangong Tso It is located in Ladakh. It is an endorheic lake and allows no outflow to
 other external bodies of water such as rivers or oceans, but drainage converges instead into lakes or
 swamps, permanent or seasonal, that equilibrate through evaporation. The Line of Actual Control
 passes through this lake.
- 2. Tso-moriri Tso moriri lake is a lake in the Changthang Plateau in Ladakh. It is declared as a Ramsar Wetland site.

Himachal Pradesh

- 1. Chandra Tal Lake It is a high altitude lake in the Lahaul and Spiti district of Himachal Pradesh. It is about 4300 m above sea level. It is a freshwater lake and is near the source of the Chandra river (a source river of Chenab). The name of the lake originates from its crescent shape.
- 2. Suraj Tal Lake It lies below the BaraLacha Pass in Lahaul and Spiti valley of Himachal Pradesh. The lake is just below the source of the Bhaga river that joins the Chandra river downstream to form the Chandrabhaga river, also known as Chenab.
- 3. Nako Lake It is a high altitude lake located in the district of Kinnaur, Himachal Pradesh. This lake is surrounded by willow and poplar trees. Near the lake, there are four Buddhist temples.
- 4. Khajjiar Lake It is located in the Chamba district of Himachal Pradesh.



Uttarakhand

- 1. Bhimtal It is situated near the town of Bhimtal in the Kumaon Division of Uttarakhand. It is the largest lake in the Nainital district which is also known as the "Lake district of India". There is an island at the centre of the lake.
- 2. Roopkund Lake It is a high-altitude glacial lake situated in the Chamoli district of Uttarakhand. It is also known as "Mystery Lake or Skeleton's lake" as it is widely known for the hundreds of ancient human skeletons found at the edge of the lake.
- 3. Sattal or Sat Tal Sattal is an interconnected group of seven fresh-water lakes near Bhimtal town of the Kumaon Division of Uttarakhand.

Rajasthan

- 1. Sambhar lake It is the largest inland salt lake. It is located 80 km to the south-west of Jaipur. Sambhar Lake has been designated as a Ramsar Site.
- 2. Dhebar Lake/Jaisamand Lake It is located in the Udaipur district of Rajasthan. It is the second-largest artificial lake in Asia. Maharana Jai Singh built this lake during the construction of a dam on the Gomti river (Rajasthan).
- 3. Pushkar Lake It is an artificial lake, situated in the town of Pushkar in the Ajmer district of Rajasthan. It is a sacred lake of the Hindus.
- 4. Udaisagar Lake It is an artificial lake situated around 13 km in the east of Udaipur. The lake was built by Maharana Udai Singh.
- 5. Mansagar Lake It is an artificial lake situated in Jaipur, the capital city of Rajasthan. It was built by Raja Man Singh by damming the Dravyavati river. Jal Mahal, an architectural monument, is situated amidst the Mansagar lake.

Maharashtra

- Lonar Lake Also known as Lonar Crater Lake, it is located at Lonar in Buldhana district, Maharashtra. Lonar Crater lake was formed as a result of the accumulation of water in the crater or depression formed in the basaltic rock. The crater is believed to have been formed by a meteorite collision during the Pleistocene Epoch.
- 2. Gorewada Lake It is situated on the north-west corner of Nagpur city. It was developed by the Water Works Department as the primary source of drinking water for the population of Nagpur.

Odisha

- Chilika Lake It is a brackish water lagoon, spread over the Puri, Khurda and Ganjam districts of Odisha state. This lake is the largest coastal lagoon in India. Chilika lake was designated the first Indian wetland of international importance under the <u>Ramsar Convention</u> due to its rich biodiversity.
- 2. Hirakud Dam It is built across the Mahanadi river and is one of the largest man-made (artificial) lakes in the world.
- 3. Kanjia Lake It is a natural lake located on the northern outskirts of Bhubaneswar, Odisha.
- 4. Ansupa Lake It is a fresh-water lake, located on the left bank of the Mahanadi river, opposite Banki in Cuttack district, Odisha.



Manipur

Loktak Lake – It is the largest natural fresh-water lake in North-eastern India. It is located at Moirang
in Manipur. It is famous for the phumdis floating over it. Keibul Lamjao National Park is located on
this phumdi which is the only floating national park in the world. The park is the last natural refuge of
the endangered Sangai (state animal of Manipur). It has been designated as a Ramsar Wetland Site
and is also listed under the Montreux Record.

Sikkim

- 1. Cholamu Lake/Tso Lhamo Lake It is India's highest lake, situated in North Sikkim, about 4 km south of the international border with China.
- 2. Tsongmo Lake Also known as Changu Lake. It is a glacial lake, about 40 km away from the capital Gangtok. It remains frozen during the winter season. It is a sacred lake for Buddhists and Hindus.
- 3. Khecheopalri Lake Originally known as Kha-Chot-Palri (meaning heaven of Padmasambhava), lies in west Sikkim. It is sacred for both Buddhists and Hindus and is believed to be a wish-fulfilling lake.

Kerala

- Vembanad Lake It is the longest lake in India as well as the largest in the state of Kerala. It is the second-largest Ramsar Wetland Site in India (the first being the Sunderbans in West Bengal).
- 2. Ashtamudi Lake It is the second-largest Lake in Kerala, situated in the Kollam district of Kerala. It is the entrance to the famous backwaters of Kerala. It is also a Ramsar Wetland Site.
- 3. Sasthamkotta Lake It is the largest freshwater lake in Kerala (Kollam district). It has also been designated as a Ramsar Wetland Site.

Tamil Nadu

- 1. Kaliveli Lake It is a coastal lake in the Viluppuram district of Tamil Nadu. This lake is on the coromandel coast, near the Bay of Bengal. It is one of the largest wetlands in Peninsular India.
- 2. Kolavai Lake The Kolavai lake is in the Kancheepuram district of Tamil Nadu, which is perennial in nature.

Andhra Pradesh

- Pulicat lake It is the second largest brackish water lake in India (after Chilika lake). It lies on the border of Andhra Pradesh and Tamil Nadu. The barrier island of Sriharikota separates the lake from the Bay of Bengal. It is the habitat of numerous local and migratory birds.
- 2. Kolleru Lake It is one of the largest fresh-water lakes in India and forms the largest shallow fresh-water lake in Asia. It is located between Krishna and Godavari deltas and serves as a natural flood balancing reservoir for these two rivers. The lake was declared as a wildlife sanctuary in 1999 under the Wildlife Protection Act of 1972 and was also designated as a Ramsar Wetland Site in 2002.

Karnataka

1. Ulsoor Lake/Halasuru Lake – It is one of the biggest lakes in Bangalore.



2. Ayyanakere Lake – It is near Sakharayapatna village of Karnataka, at a distance of 18 km from Chikmagalur.

Telangana

- 1. Hussain Sagar It is situated in the city of Hyderabad. It was built across a tributary of the Musi river by Hussain Shah Wali in 1562 during the reign of Ibrahim Quli Qutub Shah.
- 2. Osman Sagar It is an artificial lake in Hyderabad. It was made by damming the Musi river in 1920 by the then Nizam of Hyderabad, Osman Ali Khan.

Get a list of the important lakes in India in the link.

