

Geography of Bihar

Bihar is an entirely landlocked state, in a subtropical region of the temperate zone. Bihar lies between the humid West Bengal in the east and the sub humid Uttar Pradesh in the west, which provides it with a transitional position in respect of climate, economy, and culture. It is bounded by Nepal in the north and by Jharkhand in the south. Bihar plain is divided into two unequal halves (North Bihar and South Bihar) by the river Ganges which flows through the middle from west to east. Bihar's land has an average elevation above sea level of 173 feet.

- Longitudinal extent - $83^{\circ}19'50''$ E to $88^{\circ}17'40''$ E
- Latitudinal extent - $24^{\circ}20'10''$ N to $27^{\circ}31'15''$ N
- Distance from east to west - 483 km
- Distance from north to south - 345 km
- Bihar has boundaries with the states of UP, Jharkhand, and West Bengal. It also borders Nepal in the north.
- Length of Nepal border - 601 km
- 7 Districts that border Nepal in the west to east direction - West Champaran, East Champaran, Sitamarhi, Madhubani, Supaul, Araria, and Kishanganj
- 7 Districts that border UP in north to south direction - West Champaran, Gopalganj, Siwan, Saran, Bhojpur, Buxar, and Kaimur
- 8 Districts that border Jharkhand in the west to east direction - Rohtas, Aurangabad, Gaya, Nawada, Jamui, Banka, Bhagalpur, and Katihar
- 3 Districts that border WB in the north to south direction - Kishanganj, Purnia, and Katihar
- Ganga, Ghaghara, and Gandak form boundaries with UP in some parts
- Sone river forms a boundary with Jharkhand in Rohtas district



Geological Structure of Bihar:

- Younger rocks to the north, older rocks to the south
- North-west is Terai, Central is Gangetic plain and south is a plateau region
- Bihar plain is the youngest to be formed
- **Dharwar** rocks - South-eastern Bihar - Jamui, Nawada, Munger districts
- **Vindhyan** rocks - South-western Bihar - Kaimur, Rohtas districts
- **Plateau** region - extends as a narrow belt from Kaimur district to Banka district

The climate of Bihar:

Bihar lies completely in the Subtropical region of the Temperate Zone, and its climatic type is humid subtropical. Its temperature is subtropical in general, with hot summers and cold winters. Bihar has an average daily high temperature of only 26°C with a yearly average of 26°C. The climate is very warm but has only a very few tropical and humid months. Several months of the year it is warm to hot at temperatures continuously above 25°C, sometimes up to 29°C. Due to less rain, the

best time for traveling is from October to April. Most rain days occur from May to September.

- Continental Monsoon type climate
- The northern part is cooler compared to the southern part
- The Eastern part receives 200 cm of rainfall while the western part receives 100 cm.
- April month has the lowest humidity
- The temperature of the eastern part is reduced due to the impact of the Nor'wester showers.
- **Nor'wester** - tropical cyclonic thunderstorm, extremely helpful for pre-Kharif crops
- Gaya is hottest in May while coldest in January.

Soils of Bihar:

- **Piedmont Swamp Soil** - West-Champan, supports rice, rich in organic matter
- **Terai Soil** - found in the Northern belt bordering Nepal, Champan to Kishanganj, sugarcane, jute
- **Bhangar** - older alluvial soil -loamy, sticky, rich in lime, good for paddy and sugarcane, Patna and Gaya
- **Khadar** - younger alluvial soil - rich in nitrogen, good for paddy and wheat, Purina, Saharsa, Darbhanga
- **Karail-Kewal** soil - heavy clay, alkaline, from Rohtas to Bhagalpur, brown to yellow
- **Tal soil** - poor drainage, grey, high yield, from Buxar to Banka
- **Balthar soil** - the presence of iron, red and yellow, less fertile, in the transitional zone between Chhotanagpur plateau and Ganga plain, Kaimur to Rajmahal hills
- **Bal Sundari** - alkaline, Saharsa and Champan, maize and tobacco

Ganga:

- Enters at **Chausa** forming boundary of Bhojpur and Saran
- Northern tributaries - **Ghaghra** in Siwan, **Gandak** at Sonpur, **Bagmati** at Munger, **Kosi** at Kursela, **Kali-Kosi** at Manihari
- Southern tributaries - Sone at Maner, Karmanasa at Chausa, Punpun at Fathua
- It has the largest catchment area in Bihar
- **Mahatma Gandhi Setu** - connects Patna in the south to Hajipur in north

Ghaghra / Saryu:

- Originates at **Nampa** in Nepal
- Enters Bihar at **Gopalganj**
- Joins Ganga at **Chhapra**

Gandak:

- Originates at **Tibet**
- Enters India near **Triveni** in Nepal,
- Forms boundary of Bihar and UP
- Enters Bihar at **West Champaran**
- Joins Ganga at **Sonepur**
- **Triveni Canal** gets water from this river

Burhi Gandak:

- Originates at **Someshwar hills** in Chautarwa Chaur of **West Champaran**
- Flows parallel to river Gandak
- Joins Ganga at **Khagaria**

Kosi:

- Notoriously known as **Sorrow of Bihar** for its changing of course
- It is made up of seven channels from Nepal known as Sapt Kosi
- Enters Bihar through **Supaul**
- Joins Ganga at **Kursela in Katihar**

Bagmati:

- Originates in **Shivpuri range** in Nepal
- Enters Bihar in **Sitamarhi**
- Joins Kosi at **Badlaghat**

Kamla:

- Originates in **Mahabharat Range** in Nepal near **Sindhuliagarhi**
- Enters Bihar in **Madhubani**
- **Kamla Barrage** has been constructed
- Joins river Bagmati at **Badlaghat**

Mahananda:

- Originates in **Sikkim**
- Enters Bihar in **Kishanganj**
- Joins Ganga at **Nawabganj in Bangladesh**
- In upper course forms an important linguistic boundary between Hindi and Bengali speaking area.

Sone:

- Originates in **Amarkantak range in MP**
- Joins Ganga near Maner
- Important tributaries are Rihand and North Koel

Punpun:

- Originates in the Hazaribagh plateau
- Joins Ganga near Fatuha
- Causes heavy flood damage to the east of Patna city

Phalgu:

- It is also known as **Niranjana**
- It is considered a sacred river and flows past **Gaya**

Waterfalls in Bihar:

- **Kakolat waterfall** - in Nawada near Jharkhand border, fall of 160 ft
- **Karkat waterfall** - in the Kaimur hills near the Kaimur Wildlife Sanctuary
- **Manjhar Kund and Dhua Kund** - in Sasaram, utilized for power generation

Hot Springs:

- Most of the Hot Springs are concentrated in Rajgir and Munger.
- **Rajgir** - Saptdhara, Surya Kund, Makhdum Kund, Brahma Kund
- **Munger** - Lakshman Kund, Rameshwar Kund, Gaumukh Kund, Sita Kund, Rishi Kund

Flora and Fauna:

- Total forest area - 7299 sq. km, 7.75% of total area (1.04% of India's forest) (IFR2017)

- Maximum forest area - Kaimur district
- Minimum forest area - Sheikhpura
- The total area under very dense forest is in West Champaran
- The moist deciduous forest is found in Kishanganj, West Champaran, Kaimur, Gaya etc.
- Dry Deciduous - most abundant in Bihar, Kaimur, Purnia, Raxaul etc.
- **Valmiki National Park** -located in West Champaran, established on **2nd August 1989**
- **Valmiki Tiger Reserve** consists of Valmiki National Park and Valmiki Wildlife Sanctuary
- **Bhimbandh Wildlife Sanctuary** - Munger, south of Ganga, has several hot springs like Sita Kund and Rishi Kund, more famous for birds than land animals, established on **25 June 1976**
- **Kaimur Wildlife Sanctuary** - Kaimur, Bengal Tigers are also found here, several waterfalls like Karkat and Telhar waterfall, the famous lake is **Anupam Lake**, established on **25 July 1979**
- **Gautam Buddha Wildlife Sanctuary** - located in Gaya and Hazaribagh (Jharkhand), previously it was a private hunting reserve, established on **14 September 1971**
- **Vikramshila Gangetic Dolphin Sanctuary** - Bhagalpur stretching from Sultanganj to Kahalgaon, only protected area for Gangetic Dolphins, established on **28 August 1990**
- **Sanjay Gandhi Jaivik Udyan** - located in **Patna**, biological park combining a botanical garden with the zoo, established on **8th March 1983**

Miscellaneous:

- Total area - **94,163 sq. km** (12th in India)
- Population - **10,38,04,630** (3rd in India)
- Decadal Growth Rate - 25.4%
- Population Density - 1106
- Sex Ratio - 918
- Child Sex Ratio - 934
- Literacy Rate - 69.83%
- Most Populated -Patna
- Least populated - Sheikhpura
- Most Dense - Sheohar (1882)
- Least Dense - Kaimur (488)
- Largest district Area Wise - West Champaran
- Smallest district Area Wise- Sheohar