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Uttarakhand

State Civil Services

Uttarakhand Combined State Civil/Upper Subordinate Examination

Volume - 6

Uttarakhand General knowledge

SIERRA INNOVATIONS

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Table of Content

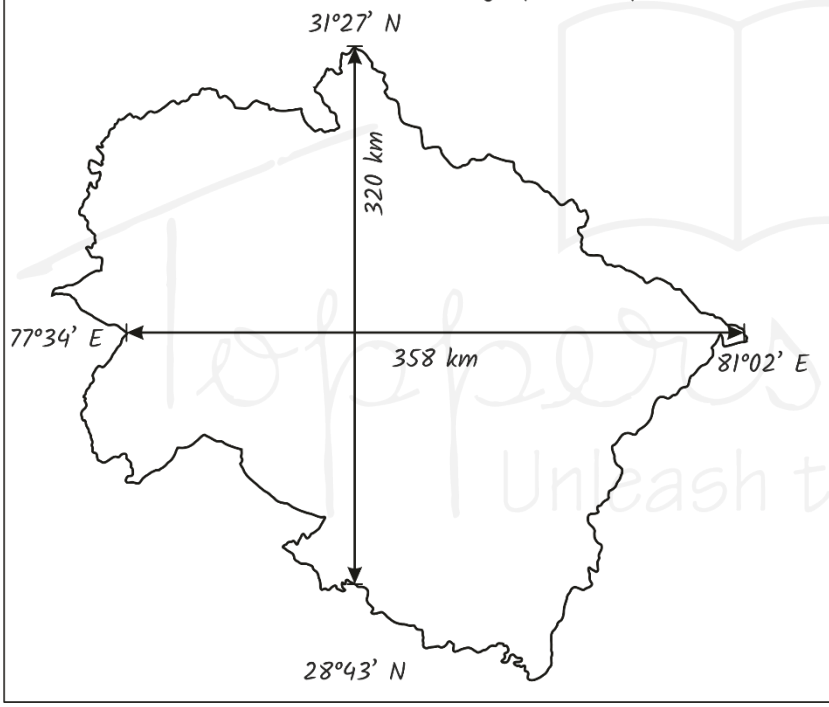
1 CHAPTER Location and Extent

A. Basic Geographical Information

Fact	Details
Formation of Uttarakhand	9th Nov 2000
Name change to Uttarakhand	1st Jan 2007
Area of Uttarakhand	53,483 km²
Percentage of India's area	1.69%

B. Geographical Spread of Uttarakhand

Geographical Spread of Uttrakhand



Area of Uttarakhand: 53,483 km²

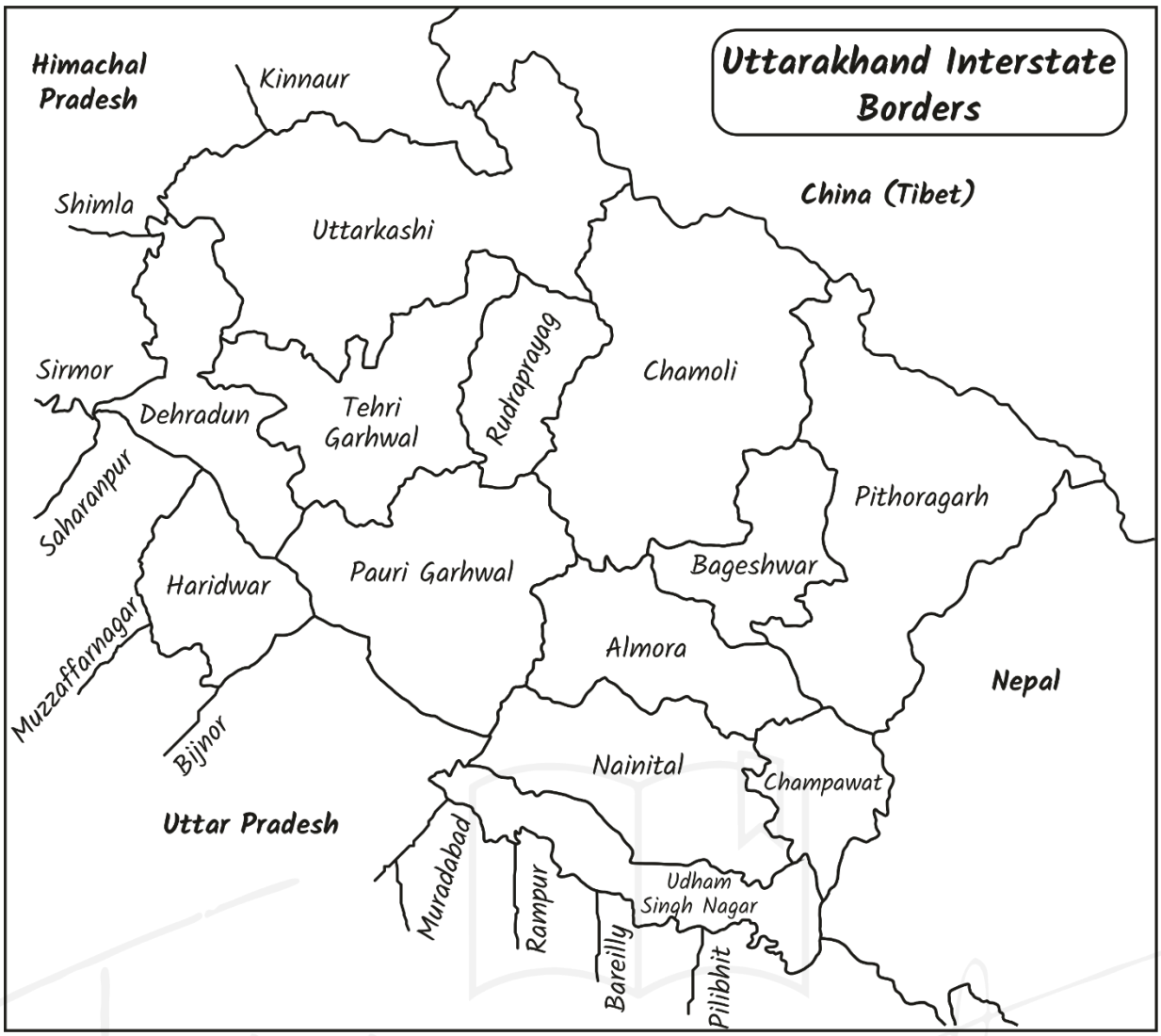
Fact	Details
East-West extent	358 km
North-South extent	320 km
Latitude	28° N to 31° N
Longitude	77° E to 81° E
Total Population (2011)	10,116,752
Male Population (2011)	5,137,773
Female Population (2011)	4,948,519
State Capital & Largest City	Dehradun
Summer Capital	Bhararisain (Notified: 08/06/2020)
Official Language	Hindi, Sanskrit (from Jan 2010)

State Symbol	Details
Animal	Himalayan Musk Deer (Moschus Chrysogaster)
Bird	Monal
Tree	Buransh (Rhododendron)
Flower	Brahma Kamal (Saussurea Obvallata)
Game	Football (from 2011)
Butterfly	Common Peacock (from 2016)
Instrument	Dhol or Drum (from 2015)

C. Boundary extension of Uttarakhand

- *Uttarakhand shares its boundaries with two countries:* ***China (Tibet) and Nepal***
  - ✓ *Total districts having international border: 5*
  - ✓ *3 Districts shares border with China (345 km):* ***Uttarkashi, Chamoli, and Pithoragarh.***
  - ✓ *3 Districts shares border with Nepal (275 km):* ***Pithoragarh, Champawat, Udham Singh Nagar.***
  - ✓ *The Mahakali River (Kali Ganga) demarcates Nepal's western border with India. This boundary was established by the* ***Treaty of Sugauli*** *(1816).*

- *Uttarakhand shares its boundaries with two states:* ***Himachal Pradesh and Uttar Pradesh.***
  - ✓ *Total districts having inter-state border: 6*
  - ✓ *2 Districts shares border with Himachal Pradesh:* ***Uttarkashi and Dehradun.***
  - ✓ *5 Districts shares border with Uttar Pradesh:* ***Dehradun, Haridwar, Pauri, Nainital, and Udham Singh Nagar.***



- *District that shares boundaries with largest number of other districts of Uttarakhand:* **Pauri (Shares boundaries with 7 districts of Uttarakhand).**
- *District with two international boundaries:* **Pithoragarh (China and Nepal).**
- *Districts that do not have boundaries with other states or countries:* **Four Districts (Tihri, Rudraprayag, Bageshwar, and Almora).**
- *Area-wise largest district:* **Chamoli.**
- *Area-wise smallest district:* **Champawat.**
- *Highest peak of Uttarakhand:* **Nanda Devi (7,816 meters).**
- *Longest river of Uttarakhand:* **Kali River.**
- *Largest bugyal of Uttarakhand:* **Ali Bedni Bugyal (Chamoli district).**

Total Recorded Forest Area (RFA)

Reserved Forest:

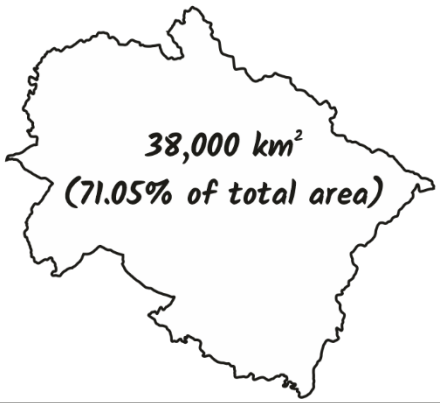
26,547 km^2

Protected Forest:

9,885 km^2

Unclassified Forest:

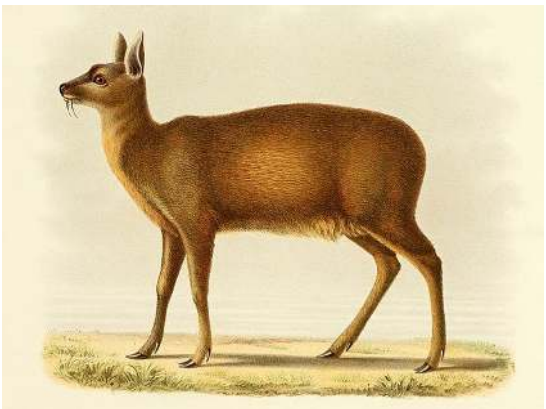
1,568 km^2



- ✓ Total Forest Cover: **24,305 km² (45.44% of total area)**
  - Very dense forest: **5,055 km²**
  - Moderately dense forest: **12,768 km²**
- Open forest: **6,482 km²**

D. Symbols of Uttarakhand State

1. State Animal – Musk Deer (Kasturi Mrig – *Moschus chrysogaster*):



- **Habitat**: Found in the Himalayas at altitudes above 2500 m.
- **Physical Description**: A primitive deer species (Family: Moschidae, Genus: Moschus).
- **Unique Feature**: Male secretes musk from abdominal glands (30-45g per deer, valued at $65-75 per gram).
- **Uses**: Musk is used in perfumes, cosmetics, and medicines.

- ***Threats*: *Endangered* on the *International Union for Conservation of Nature (IUCN) Red List*.** *Illegal poaching is a major threat.*
- ***Behavior*:** *Lives solitarily, mates in November-December. Feeds on oak, bamboo leaves, and herbs.*
- ***Conservation Efforts*:** *Includes captive breeding centers and protected areas like Askot Musk Deer Park (Pithoragarh).*

2. State Bird – Monal (*Lophophorous impejanus*):

- ***Habitat*:** *Found at 8,000-15,000 ft in the Himalayas. Also known as the Himalayan Peacock, the male has vibrant plumage.*
- ***Behavior*:** *Lives in high altitudes, descends during snow.*
- ***Threats*:** *Faces poaching threats.*
- ***Distribution*:** *Also found in Assam, Himachal Pradesh, Kashmir, Nepal, and Pakistan.*
- ***Diet*:** *Feeds on algae, herbs, and potatoes.*
- ***Reproduction*:** *Lays up to 4 eggs.*
- ***Conservation*:** *Protected under the Wildlife Protection Act, 1972.*

3. State Tree – Buransh (*Rhododendron*):

- ***Habitat*:** *Grows at altitudes of 5,000-11,000 ft in the Himalayan region.*
- ***Description*:** *Known for vibrant red flowers, also called "Flame of the Forest."*
- ***Uses*:** *Medicinal use in Ayurveda for heart ailments and high blood pressure.*
- ***Threats*:** *Faces dangers from deforestation.*
- ***Conservation Efforts*:** *Includes tissue culture and plantation drives.*

4. State Flower – Brahm Kamal (*Saussurea obvallata*):

- ***Habitat*:** *Found at altitudes of 3,500-5,500m on rocky terrains in the Greater Himalayas.*
- ***Cultural Significance*:** *Sacred to Lord Brahma, used in rituals and festivals such as the Nanda Devi Yatra.*
- ***Medicinal Uses*:** *Treats bruises, joint pain, and abdominal problems.*

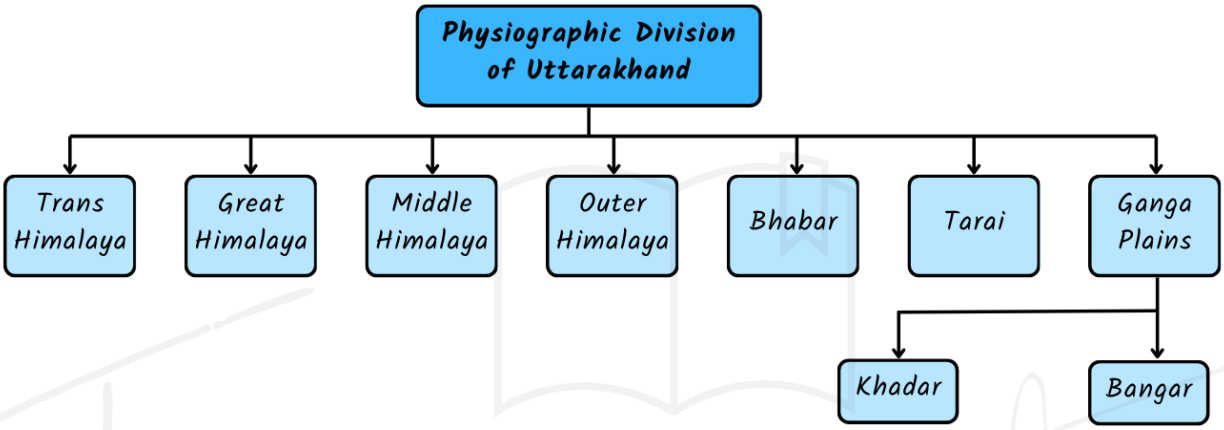
5. Insignia of Uttarakhand

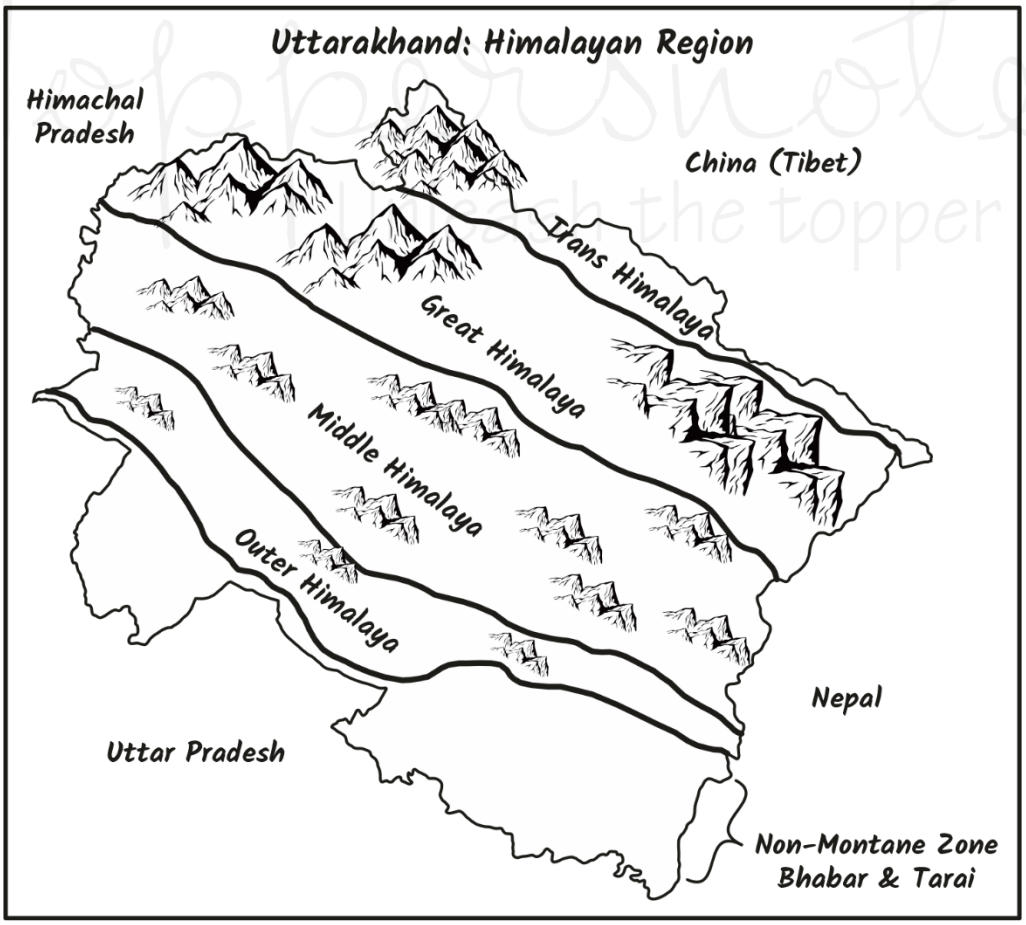
- **Design**: The state insignia features the Ashoka Pillar atop a range of three mountain peaks, with four waves of the Ganga River at the base.
- **Purpose**: It serves as the official emblem for all government documents of Uttarakhand.

2 CHAPTER Physiographic Division of Uttarakhand

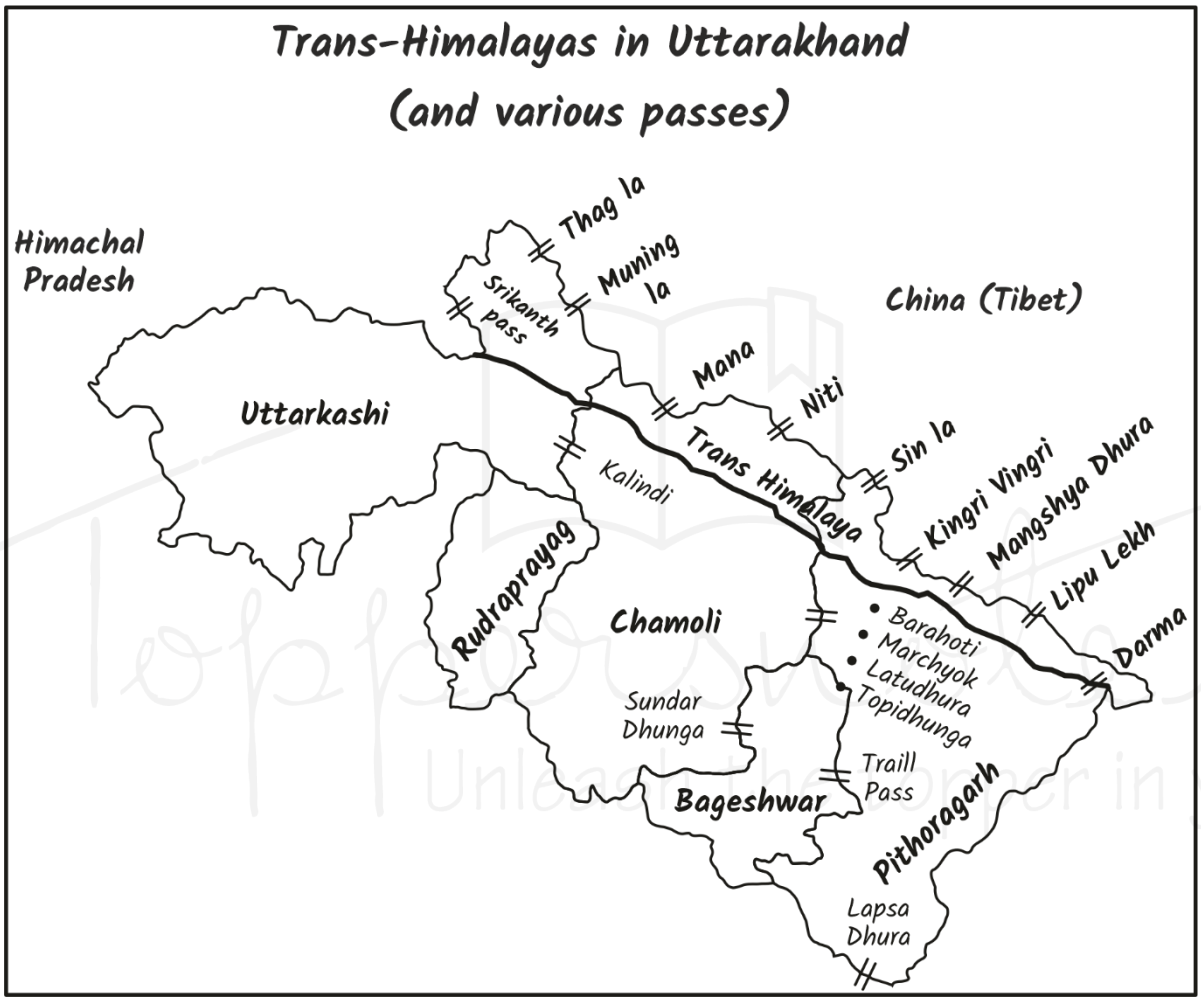
Uttarakhand is the 27th state of the Republic of India that consists of two main geographical regions: the Himalayan region (covering 86.07% of the state) and the Plains region (covering 13.97%). The Plains region includes three districts: Dehradun, Haridwar, and Udham Singh Nagar. The remaining 10 districts of the state are part of the Himalayan region. The state's diverse physiography plays a key role in its ecological and cultural landscape.

Physiographically, Uttarakhand can be divided into the following seven categories:

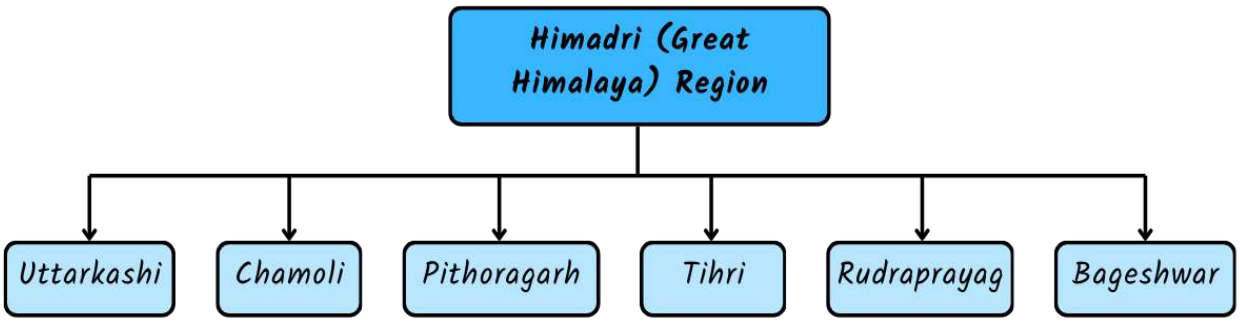




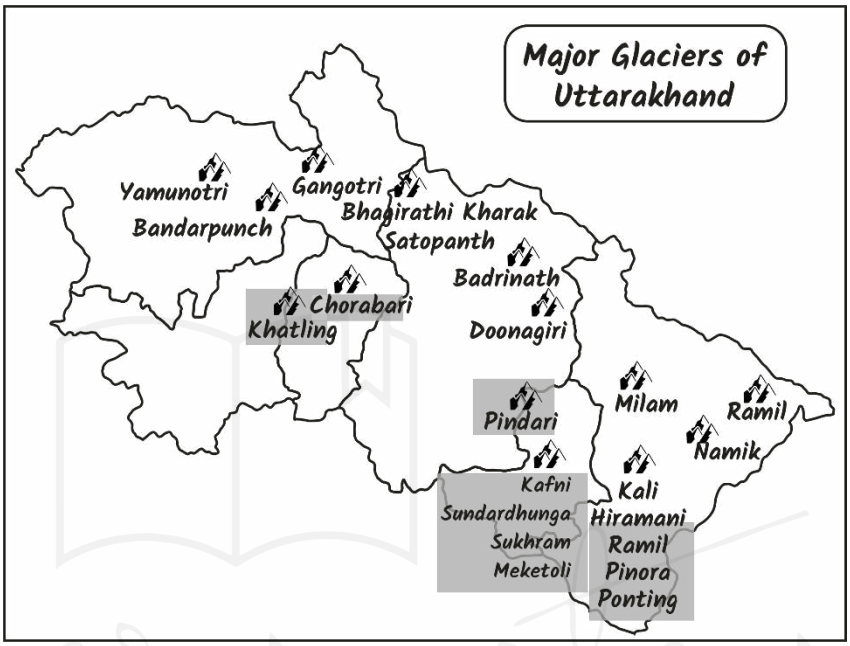
1. **Trans Himalayas:**
   - **Location:** The Trans Himalayas lie to the north of the Great Himalayas.
   - **Width**: approximately 25 to 35 kilometers.
   - **Altitude:** It lies at an elevation of 2,500 to 3,500 meters above mean sea level (MSL).
   - **Snow Cover**: This region experiences thin snow cover, as it is located in the rain shadow region of the Great Himalayas, receiving less precipitation.
   - This region is made up **of extensive valleys** across the main Himalayan region.
   - **Important Passes** in this region such as- Thag La, Muning La, Niti, Mana, Sin La, Kingri Bingri, Mangshya Dhura, Lipu Lekh, Darma, etc.



2. **Himadri (Great Himalayas):**
   - **Location:** situated north of the Lesser Himalaya and south of the Trans-Himalayas.



- It contains the **highest peaks** of Uttarakhand such as- Nandadevi, Kamet, Mana, Badrinath, Chaukhamba, Trishul, Satopanth, etc.
  - ✓ The highest peak of Uttarakhand, i.e. **Nandadevi** is 7817 meters high.
- **Width:** The average width of this region is **30 to 50 kilometers**.
- **Elevation**: **4,500 meters** and above.
- **Snow Coverage**: The majority of this region is **snow-covered year-round**, primarily due to the **high precipitation** (mostly snow) from monsoonal winds. In ancient texts it has been called Himadri due to being covered with snow.
- **Major glaciers** of Uttarakhand are found in this region such as- Gangotri, Yamunotri, Bhagirathi Kharak – Satopanth, Milam, etc.



- **Alpine Pastures (Bugyals)**: The lower regions of the Great Himalayas feature **alpine pastures** known as **Bugyals**. These are also popular tourist spots, including: are famous tourist destinations such as- The Valley of Flowers, Ali, Bedni, Kafni, Bagji, etc.
- The region is generally inhabitable during winters due to extreme climate but during summers, some communities (such as Bhotiya) inhabit these pastures and practice transhumance along with their animals.

BUGYALS – Alpine meadows, locally known as bugyals, are an essential component of the Himalayan ecosystem. These lush grasslands emerge at altitudes of around 3,000 meters, marking the end of the tree line. They extend up to approximately 4,500 meters, where the snowline begins, and vegetation becomes sparse.

ABOUT BEDNI BUGYAL – Bedni Bugyals, located in Chamoli district at 3,354 meters, is Uttarakhand's largest bugyals. It is surrounded by peaks like Trishul and Nanda Ghunti, and blooms with vibrant flowers in summer. It holds cultural significance due to the sacred Bedni Gufa and Nanda Devi Raj Jat Yatra.

Major Peaks of Uttarakhand (In descending order of height):

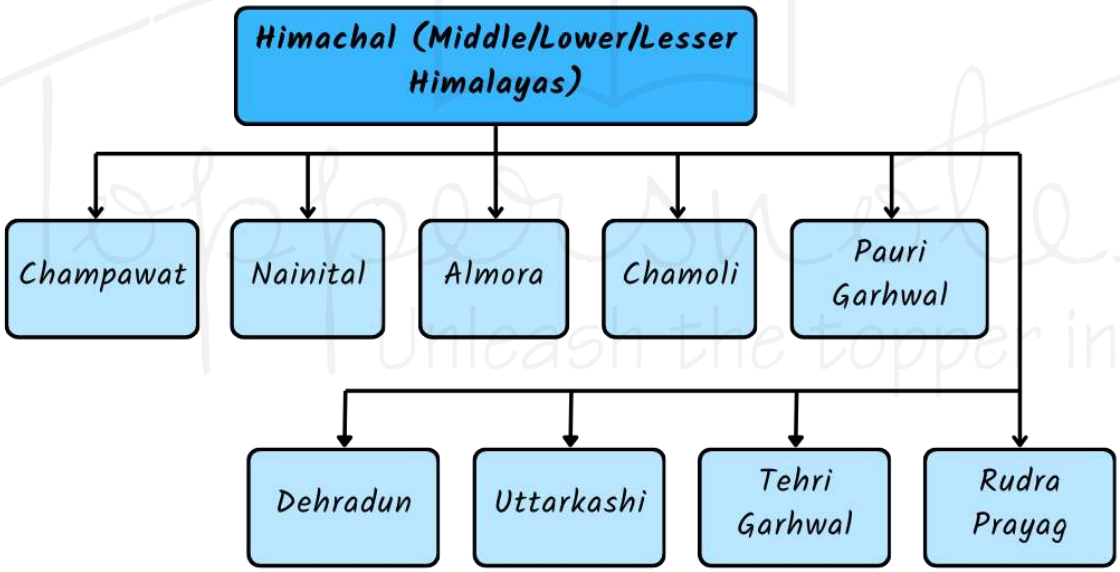
S.R	Mountain Peak	Height (m)	District
1.	**Nanda Devi (West)**	7817	Chamoli
2.	**Kamet**	7756	Chamoli
3.	**Nanda Devi (East)**	7434	Chamoli-Pithoragarh
4.	**Mana**	7272	Chamoli
5.	**Badrinath**	7140	Chamoli
6.	**Chaukhamba**	7138	Chamoli
7.	**Trishula**	7120	Chamoli
8.	**Satopanth**	7084	Chamoli

TRICK TO REMEMBER

Never Keep New Mountain Boundaries Close To Sight.

3. Himachal (Middle/Lower/Lesser Himalayas):

- **Location**: The Middle Himalayas lies north of the Shivalik ranges and south of the Great Himalayas.

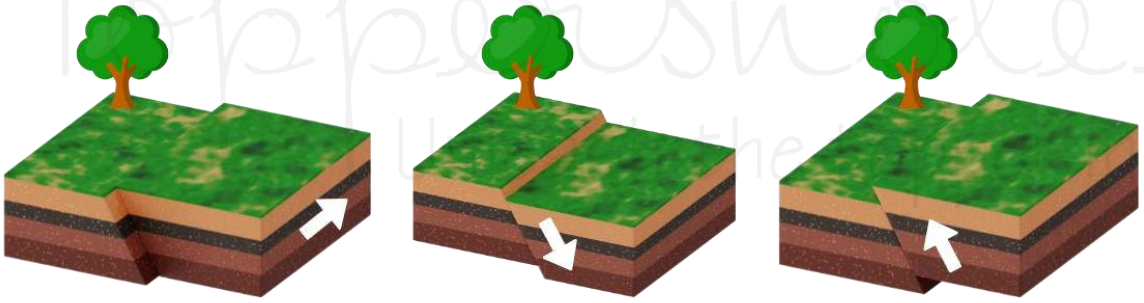


- **Width**: between **70 to 100 km**.
- **Elevation**: ranges from **1,200 to 4,500 meters** above mean sea level (MSL).
- The Main Boundary Thrust (MBT) separates the Himachal region from the Shivalik region.
- One of the unique features of this region is the **absence of fossils** because these mountain ranges are formed by folded and metamorphic rocks.
- The slopes on the **northern side** of this range are **steep**, while the **southern slopes** are **gentle**. Due to a heavy monsoonal rainfall over southern slopes (160 to 200 cm), this region is **abundantly forested** with Banj, Burans, Chir, Deodar, Fir, etc. as some of the main varieties.

- *This region is home to several **famous hill stations** of Uttarakhand such as- Ranikhet, Nainital, Mussoorie, Binsar, Laaltibba, etc.*
- *In Kumaun region, the southern parts of the Middle Himalayas have **several lakes** which offer unique tourist attractions such as- Nainital, Bhimtal, Sattal, Naukuchiyatal, Sukhatal, Khurpatal, Sariyatal, etc.*
- ***Rich in minerals:** Copper (Almora, Pauri), asbestos, graphite, gypsum, magnesite.*

***A fault line** is a **fracture (crack)** or zone of fractures **in the Earth's** crust along which there has been **displacement of the rocks** on either side. These fractures typically **occur due to tectonic forces** caused by plate movements, resulting in stresses that the crust cannot withstand. Fault lines are often associated with earthquakes as the release of energy along these lines causes the ground to shake. Faults are classified into various types based on the directions of the slips among their rocks:*

A. ***Strike-slip faults** are the fault lines resulting as a movement of rocks in a horizontal direction, involving little or no vertical movement. Example: San Andreas Fault.*
B. ***Normal faults** are fault lines where the crust moves apart along the fault line, creating a void in between. Example: The East African Rift Zone.*
C. ***Reverse faults** result from blocks of crust sliding above each other rather than separating from each other. Such faults often lead to orogeny (the shaping of the earth's crust through tectonic activity), such as the creation of mountain ranges like the Himalayas.*



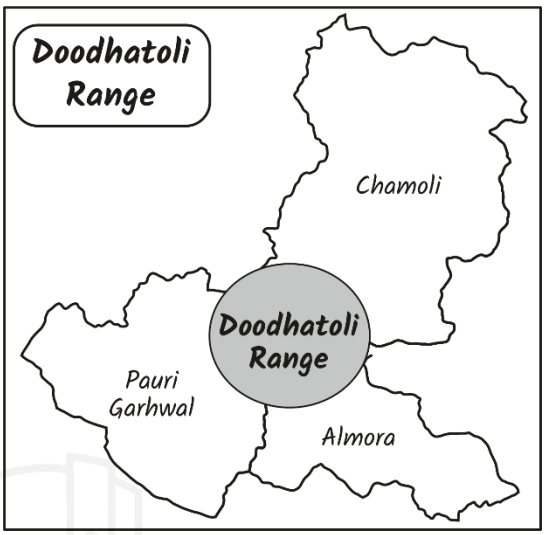
Strike-Slip **Normal** **Reverse**

***FAULTS LINES IN UTTARAKHAND** – The three major fault lines in Uttarakhand are the Himalayan Frontal Fault (HFF), Main Boundary Thrust (MBT), and the Main Central Thrust (MCT):*

1. ***Himalayan Frontal Fault (HFF)** A series of reverse faults that run parallel to the Shivalik range and mark the boundary between the Shivalik and the Indo-Gangetic plains.*
2. ***Main Boundary Thrust (MBT)** Runs parallel to the foot of the lower Himalayas and separates the outer Himalayas (Shiwalik) from the Middle Himalayas. It is a prominent fault line responsible for the uplift and folding of the Shivalik ranges.*

3. **Main Central Thrust (MCT)** Runs parallel to the Himalayan range and separates the Greater Himalayas from the Middle Himalayas. MCT passes through several important locations in Uttarakhand like Chamoli, Gopeshwar, Pipalkoti, and also other places of Kumaun. The same fault line passes through the Tehri Dam making it vulnerable.

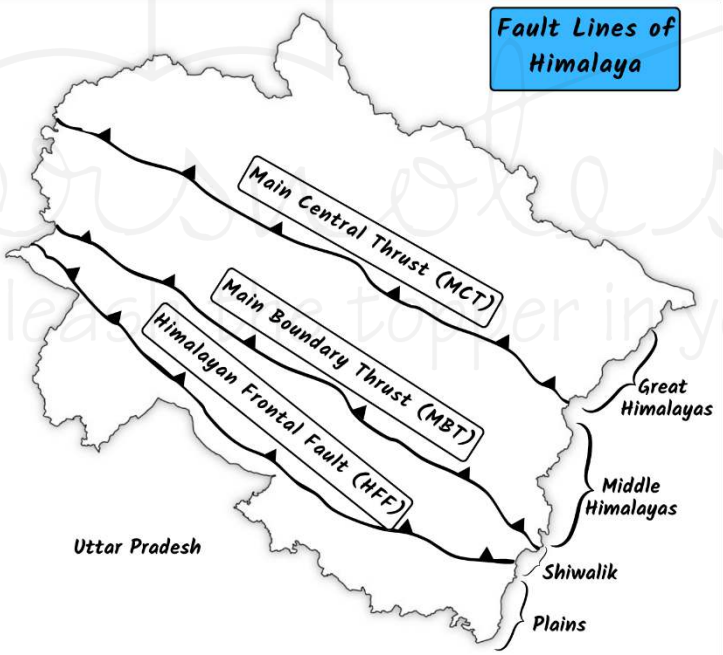
These fault lines are part of the Himalayan tectonic discontinuities that criss-cross Uttarakhand. The state is considered to be in a seismic gap, meaning it has the potential to generate a great earthquake in the future.



DOODHATOLI RANGE (The Pamir of Uttarakhand) – Doodhatoli is a mountain range situated in the Middle Himalaya region. This range is spread across Chamoli, Pauri, and Almora districts.

Geographical Features:

- The region is characterized by **gentle slopes** and **rich grasslands**, often used as **pastures** for livestock by communities like the **Gaddis** and **Gujjars**.
- These communities establish temporary habitats known as **'Kharak'** or **'Chhanni'**.
- The average elevation of its core area is around 3000 meters.



Significance:

- Doodhatoli is referred to as the **Pamir of Uttarakhand** due to its scenic and unique geographical characteristics.
- It is the source of several non-glacial perennial rivers namely, Ramganga (west), Atagad (tributary of Pindar River), Nayar (east), Nayar (west), Bino, Dhaijyuli Gad, etc. All these rivers flow in different directions from here.
- Doodhatoli separates the basins of Ramganga, Pindar, and Nayar (both eastern and western Nayar streams meet at Satpuli).

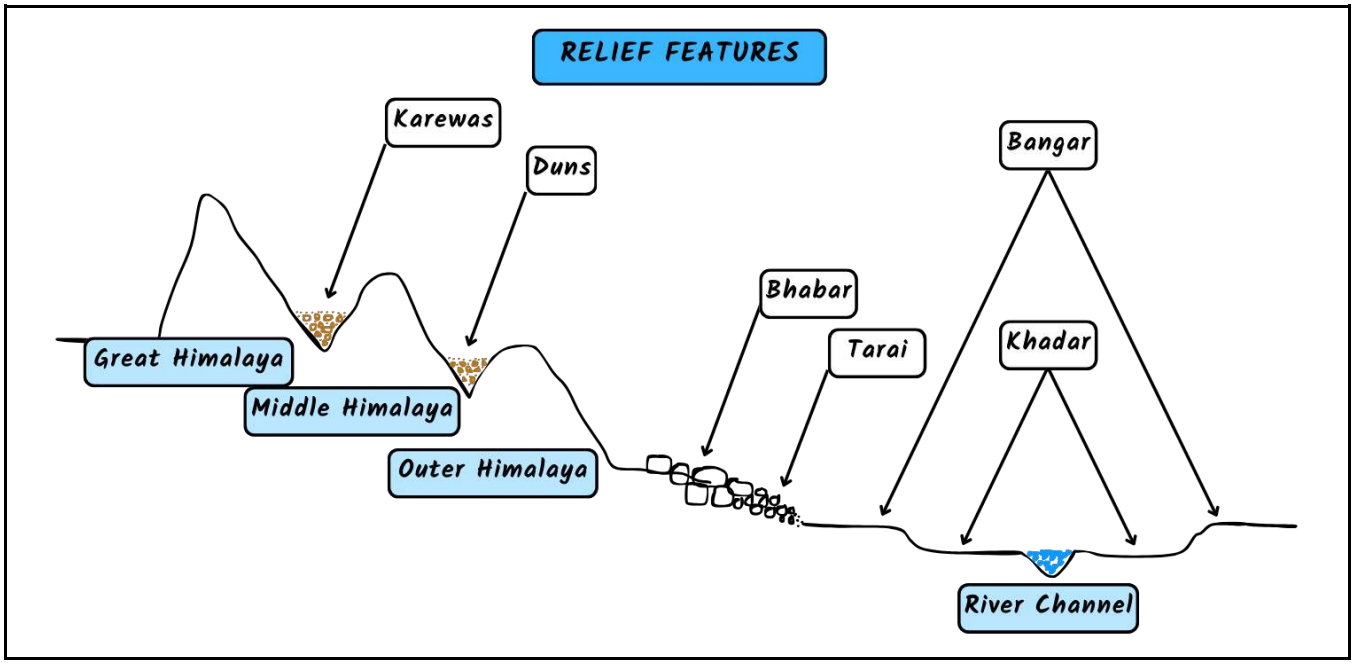
- Gairsain, the summer capital of Uttarakhand is located in this region. This place is located at the geographical centre of Uttarakhand.
- The demand for making Gairsain summer capital was raised before Pandit Jawahar Lal Nehru by Veer Chandra Singh Garwali in 1960.
- Doodhatoli was the dreamland of great freedom fighter Veer Chandra Singh Garhwali. Kodiyabagad in Doodhatoli is the place of his Burial. Every year on 12th June a big cultural fair is organised here in his memory.

4. Shiwalik (Outer Himalayas):

- **Location:** This region lies at the outermost parts of the Himalayas hence also known as the foothills or outer Himalayas. It covers the southern parts of Champawat, Almora, and Pauri districts, and the central parts of Nainital and Dehradun districts.
- **Width**: 10 to 20 Km.
- **Elevation**: 700 to 1200 meters above the MSL.
- Since this is the most recently formed part of the Himalayas, this region contains fossils.
- The Shiwalik range is broken at several places due to fast flowing Himalayan Rivers like Ganga, Yamuna, Kali, etc. these gaps are called 'Dwars' such as- Haridwar, Kotdwar, etc.
- The northern regions of Shiwalik range contains longitudinal valleys also known as 'Duns', in which Dehradun is one of the most famous. Some other duns are Patli, Kota, Har ki, etc.
- Himachal and Shiwalik parts of Uttarakhand Himalaya are some of the most important regions of Uttarakhand in terms of minerals.
- It is a general pattern observed that the amount of rainfall increases as we move from north to south in Uttarakhand i.e. from Trans-Himalaya towards Shiwalik, Bhabar, and Terai region.
- Thus, Shivalik region has one of the highest rainfall experiencing parts of Uttarakhand with mean annual rainfall above 200 cm.

Duns – The longitudinal valleys between the Middle Himalayas and the Shivaliks are called Duns. These valleys are broad depressions formed due to structural processes. They are filled with boulders and gravel resulting from the erosion of the Himalayas and Shivalik hills. Duns are shaped by river deposits, with water eventually draining from these areas.

Some examples of 'Duns' are Dehradun, Kotli Dun, Patli Dun, Har Ki Dun, etc. Dehradun is the largest Dun of Uttarakhand stretching over 35-45 Km in length and 22-25 Km in width.



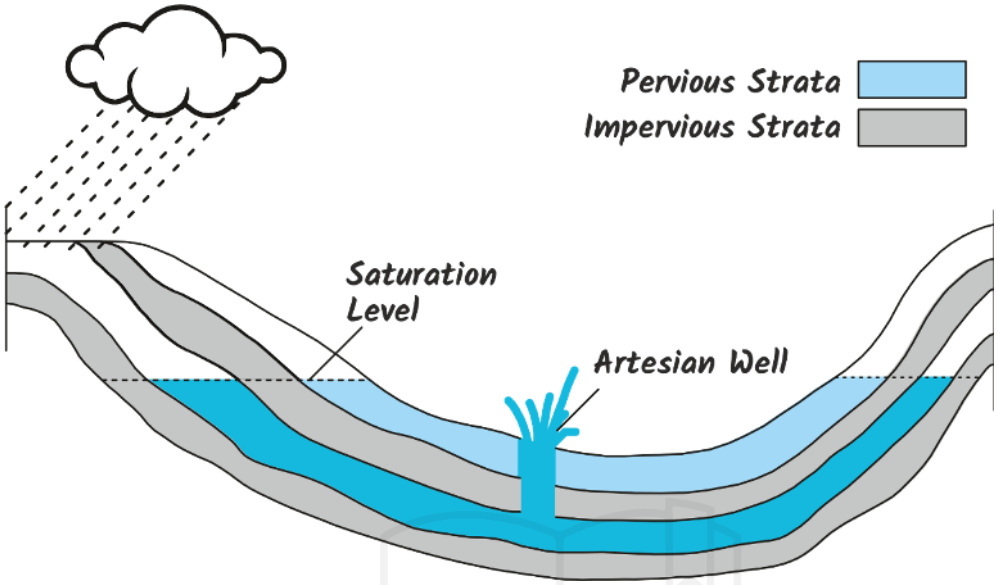
5. Bhabar:

- *This region is a 10 to 15 Km broad stretch of coarse sediments lying to the immediate south of the Shiwalik range.*
- *The coarse sediments are formed due to the sudden break in the slope of the Himalayan Rivers.*
- *The presence of big boulders makes the streams disappear in this region.*
- *Due to the coarse nature, the soils of this region are not suitable for agriculture.*

6. Tarai:

- *This region is a 20 to 30 Km wide stretch of land lying immediately south of the Bhabar area.*
- *This region is made up of fine particles of sand, silt, and clay brought down by the Himalayan Rivers.*
- *The soil found here is quiet fertile hence best suited for agriculture.*
- *This region spans across districts like Haridwar, Udham Singh Nagar, Nainital, and Pauri Garhwal, lying between Bhabar (north) and Great Plains (south).*
- *The slopes of Tarai are gentle causing water logging. Hence this place is marshy with abundant forests, and rich wildlife.*
- *The river stream that disappeared in the Bhabar region, re-appears in this region.*
- *One of the unique features of this region is the presence of 'Artesian Wells'.*
- *Cities like Kashipur, Rudrapur, etc. come under this region and are highly populous regions of Uttarakhand.*

ARTESIAN WELLS – An artesian well is a type of well where water flows to the surface naturally without the need for pumping. This happens because the groundwater is under pressure in an aquifer (a water-holding layer of rock or sediment). The aquifer is sandwiched between layers of impermeable rock or clay, which trap the water and create pressure. When a well is drilled into this pressurized aquifer, the water is forced up due to the pressure.



7. Gangetic Plains:

- A small part of Uttarakhand comes under the Gangetic Plains region.
- The **southern regions of Haridwar district** is composed of Gangetic Plains.
- This region is formed by the fine sediments brought down by the Himalayan Rivers after they enter the grain northern plains of India.
- This is one of the **most fertile and highly populous** regions of India.
- The main crops grown in this region are **Wheat, Sugarcane, rice, and vegetables**.
- The regions where the rivers bring sediments and often floods are called **'Khadar'** while those places where floods are not so common are called **'Bangar'** regions.

Khadar	Bhangar
1. Formed from newer alluvial deposits along river courses: These are freshly deposited soils brought by rivers during annual floods, making the region fertile and agriculturally productive.	**1. Made up of old alluvial soil deposits:** These are ancient floodplain soils, deposited in the past, and are found in upland areas that remain relatively unaffected by recent river activities.
2. Found in low-lying, flat areas: Khadar regions are situated near rivers, often forming the primary floodplains that receive fresh deposits.	**2. Located in elevated areas:** The Bhangar region is higher than the floodplains, so it is less affected by waterlogging or seasonal flooding.

3. Very fertile as the soil is replenished yearly: The fertile soil in Khadar is enriched by fresh silt deposits from river floods, boosting its agricultural yield.	**3. Rich in humus, though less fertile than Khadar:** The soil in Bhangar contains humus but lacks the renewal of nutrients that floods bring, making it less fertile.
4. Composed of silt, clay, mud, and sand: The Khadar soil composition is balanced and highly suitable for diverse crops due to its richness in essential nutrients.	**4. Contains impure calcium nodules called "Kankars.":** Bhangar soil often contains lime-rich nodules, which reduce its fertility for certain crops.