# STATE
# PCS CA
## (CONSOLIDATION)

## UTTARAKHAND

**MAY 2024**

# Content

# Uttarakhand's Valley of Flowers

## Why in News?

The Valley of Flowers trek in Uttarakhand will open on 1st June 2024. It is located within Uttarakhand's Nanda Devi Biosphere Reserve, a United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Site since 2005.

## Key Points

➢ The Valley of Flowers National Park awaits trekkers with over **300 flower species indigenous to the Himalayas**, accessible during the **monsoon season from June to November.**

   ○ The early signs of spring with blooming potentilla, wild rose, and primrose mark the beginning of the season as the snow starts to melt.

➢ It includes a wide variety of floral species, **surpassing 300 types, like anemones, geraniums, blue poppies, and bluebells.**

➢ It is home to rare animal species such as the **grey langur**, **flying squirrel**, **Himalayan weasel**, **black bear**, **red fox, lime butterfly, snow leopard**, **and Himalayan monal**.

| **Biosphere Reserve** |
|---|
| ➢ Biosphere Reserve (BR) is an international designation by the **United Nations Educational, Scientific and Cultural Organization (UNESCO)** for representative parts of natural and cultural landscapes **extending over large areas of terrestrial or coastal/marine ecosystems** or a combination of both. |
| ➢ Biosphere Reserves **tries to balance economic and social development** and maintenance of associated cultural values along with the preservation of nature. |
| ➢ Biosphere Reserves are thus special environments for both people and nature and are **living examples of how human beings and nature can co-exist** while respecting each other's needs. |

# Horticulture Yield Declining in Uttarakhand

## Why in News?

In 2023, **extreme weather events in Uttarakhand** resulted in the **loss of 44,882 hectares of farmlands**. As **agricultural opportunities diminish,** many **people are migrating** from the hills to the plains, potentially **causing a decrease in** the area dedicated to **horticultural production.**

## Key Points

➢ The **variations in the area of fruit production** in Uttarakhand between 2016-17 and 2022-23 reveal striking shifts in cultivation patterns across different fruit types.

   ○ The increase in guava and gooseberry cultivation indicates a shift in focus towards fruit types better attuned to market demand or local conditions.

   ○ The yields of pear, peach, apricot, plum, walnut and apple have markedly decreased in the last seven years due to the significant impact of global warming on Uttarakhand's horticulture.

➢ **Uttarakhand has experienced frequent disasters** such as heavy rainfall, floods, hailstorms, and landslides, leading to substantial destruction of agricultural lands and crops.

   ○ The increasing temperatures are adversely affecting the cultivation of winter fruits, prompting farmers to switch to tropical options.

➢ According to **Indian Council of Agricultural Research (ICAR)**-**Indian Agricultural Research Institute (IARI)**, the short-term variability and trends in temperature are worrying and there is a need to study the long-term trends in weather variables and its relation to yield, especially, its relation with any change in crop/cropping pattern or shift in crop/cropping pattern.

Note:

## Indian Council of Agricultural Research (ICAR)

- It was established on **16 July 1929** as a **registered society** under the **Societies Registration Act, 1860.**
- It is an **autonomous organisation** under the Department of Agricultural Research and Education (DARE), **Ministry of Agriculture and Farmers Welfare**, Government of India.
- It is **headquartered at New Delhi**. With 102 ICAR institutes and 71 agricultural universities spread across the country this is one of the largest national agricultural systems in the world.
- It is the **apex body** for coordinating, guiding and managing research and education in agriculture including horticulture, fisheries and animal sciences in the entire country.

# Dual-Language Books to Students in Uttarakhand

## Why in News?

In a first-of-its-kind initiative in the country, the **Uttarakhand government** will provide **dual-language science books to students** from the **current academic session.**

## Key Points

- According to the state education department, the **books prepared and printed in dual languages have been delivered to all the state-run schools** ahead of the commencement of the academic year.
- These books are **not published separately in Hindi or English languages**; instead, **each piece follows the same syllabus and carries lessons on adjacent pages in both languages.**
  - While there will be one dual-language book of sciences for sixth to eighth standards, there will be three separate books for physics, chemistry, and biology for senior secondary classes.
- **800 select Uttarakhand government schools** will soon have **two smart classes each.** All **1,600 smart classes will be interconnected through wires.**

- The schools will be equipped with **hi-tech digital equipment,** including big screens, online 3D education modules, high-fidelity internet services, and a host of other techniques and gazettes.

# Government Starts Granting Citizenship Under CAA

## Why in News?

Recently, the **Ministry of Home Affairs** announced that the government has **begun awarding citizenship** under the **Citizenship Amendment Act, 2024** in **West Bengal, Haryana, and Uttarakhand.**

## Key Points

- On May 15, the initial batch of citizenship certificates was presented to the candidates in New Delhi by the Union Home Secretary, subsequent to the issuance of the **Citizenship (Amendment) Rules, 2024,** as approved by the Empowered Committee in Delhi.
- The Citizenship Amendment Rules, 2024, issued by the MHA on March 11 2024, have cleared the path for the implementation of the CAA, which was **approved by Parliament in 2019.**
  - According to the guidelines, migrants belonging to **six minority groups** from **Pakistan, Afghanistan, and Bangladesh** can apply for Indian citizenship under the CAA, with retrospective effect.
- Under the amendment of CAA 2019, **migrants** who **arrived in India by December 31, 2014**, and had **faced "religious persecution or feared religious persecution" in their home country** became **eligible for citizenship** under the new law.
  - These migrants will be granted expedited **Indian citizenship within six years.** The **amendment also reduced the residency requirement** for naturalization of these migrants **from eleven years to five.**

Note:

# What the rules state

Centre has implemented CAA, 4yrs after the law was passed, as it notified rules ahead of expected announcement of LS polls

## THE 39-PAGE NOTIFICATION...
### of the Citizenship (Amendment) Rules, 2024

**...STATES THAT AN APPLICANT WILL HAVE TO SUBMIT**

- Form VIIIA, with affidavits verifying statements and character of applicant
- Declaration that they have adequate knowledge of a language specified in 8th schedule of Constitution
- Supporting papers like a passport, or identity document to show someone in lineage was a citizen of one of the three countries

**APPLICANT MUST ALSO PROVE**

1. They entered India before December 31, 2014
2. The applicant or either of his parents was a citizen of Independent India

**WHAT IS THE 2019 ACT?** CAA made people from Hindu, Sikh, Jain Buddhist, Christian and Parsi faiths who entered India from Afghanistan, Bangladesh and Pakistan eligible for citizenship

# Earthquake in Uttarakhand

### Why in News?

According to the **National Center for Seismology,** an **earthquake** of 3.1 magnitude struck Uttarakhand's **Pithoragarh district** recently with the **epicentre around 5 km** beneath the earth's surface.

➤ **The National Center for Seismology** is the **nodal agency of the Centre under the Earth Sciences ministry** to monitor earthquake activity in the country.

### Key Points

➤ Uttarakhand experiences **high seismic activity,** with most areas falling under **Seismic Zones IV and V.**

   ❍ The **Himalayas are the youngest mountain range in the world,** approximately 50 million years old. This range rises at a rate of around **5 mm per year as the Indian tectonic plate folds beneath the Tibetan plate**.

Note:

drishti

# EARTHQUAKE

## ABOUT

- Shaking of the earth; caused due to release of energy, generating seismic waves in all directions
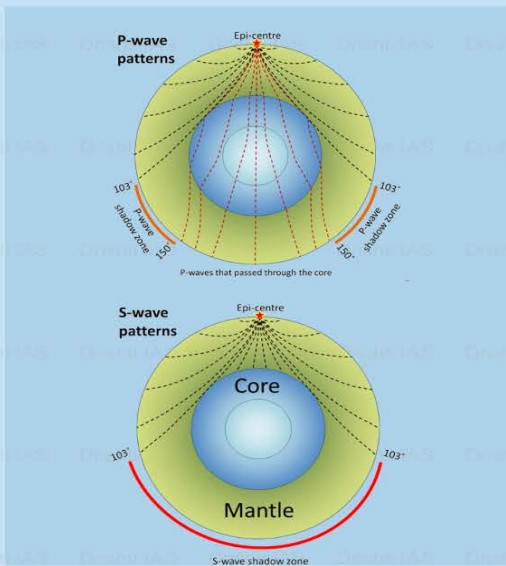
## EARTHQUAKE WAVES

- **Body Waves:** Move in all directions travelling through the body of the earth
  - **P Waves:** Move faster, First to arrive at surface, Similar to sound waves, Travel through gaseous, liquid and solid materials
  - **S Waves:** Arrive at surface with some time lag, Travel only through solid materials
- **Surface Waves:** Last to report on seismographs, More destructive, Cause displacement of rocks
  - **Love Waves:** Same motion as S-waves (horizontal) without vertical displacement, Sideways motion perpendicular to the direction of propagation, Faster than Rayleigh waves
  - **Rayleigh Waves:** Cause the ground to shake in an elliptical pattern, Spread out the most of all seismic waves, Move vertically and horizontally in a vertical plane

## CAUSES OF EARTHQUAKES

- Release of energy along a Fault/Fault Zones (break in the crustal rocks)
- Movement of tectonic plates (most common)
- Volcanic eruption (stress changes in rock-injection/withdrawal of magma)
- Human activities (mining, explosion of chemical/nuclear devices etc.)

## MEASURING EARTHQUAKE

- **Seismometers** - Measures seismic waves
- **Richter Scale** - Measures magnitude (energy released; range: 0-10)
- **Mercalli** - Measures intensity (visible damage; range: 1-12)

## DISTRIBUTION

- **Circum-Pacific Belt** - 81% of earthquakes
- **Alpide Earthquake Belt** - 17% of the largest earthquakes
- **Mid-Atlantic Ridge** - Mostly submerged underwater

### Drishti IAS

## HYPOCENTER

- Location where the earthquake starts (below earth's surface)

## EPICENTER

- Location right above the Hypocenter (on the earth's surface)



## EARTHQUAKE IN INDIA

- India is one of the highly earthquake affected countries due to the presence of technically active mountains - the Himalayas.
- India has been divided into 4 seismic zones (II, III, IV, and V)

# UCC Implementation in Uttarakhand

## *Why in News?*

According to the sources, with the **Uniform Civil Code (UCC)** expected to be implemented in Uttarakhand by the end of 2024, a facility that will **enable live-in and married couples to register their relationship** is in the process of being introduced.

➢ The Uttarakhand Assembly passed the UCC bill on **7th February 2024.**

drishti

### Key Points

➢ UCC calls for the registration of live-in relationships just like marriages and states that **live-in partners must not be under 18.**

   ❍ According to the officials, the **training of the government employees** will be conducted in **both online as well as offline modes.**

   ❍ The **online registration facility** will be beneficial for both government staff as well as the couple since this will reduce the need for visiting the registrar's office several times.

   ❍ However, the **parents of the couples aged between 18 and 21 will be informed** about their children's live-in relationships.

➢ The **bill** that has been passed in the Parliament **says that anyone staying** in a **live-in relationship for more than a month without getting it registered will be punishable** with an imprisonment up to three months or a fine of up to Rs 10,000 or both.

   ❍ If a **woman in a live-in relationship gets deserted** by her partner, she will be **entitled to claim maintenance from him** for which she may approach a competent court having jurisdiction over the place where they last cohabited.

   ❍ The hill **state's small tribal community is exempted from the proposed law**, which also mandates registration of live-in relationships.

# Regulatory System for Chardham Pilgrimage

### Why in News?

Compelled by the heavy rush of pilgrims, the Uttarakhand Government is set to introduce a regulatory system for the **chardham pilgrimage**, similar to the 2019 **'Devasthanam Management Board'** which was abandoned due to protests by the priests.

### Key Points

➢ The government has constituted a **special High-Level Committee (HLC)** to suggest the constitution of a **'new authority or institution'** to **regulate Chardham and other religious pilgrimages to the state.**

➢ The HLC formed by the state government has been mandated to look into the smooth and uninterrupted regulation of the pilgrimages in Uttarakhand in the future.

❍ It will also monitor and regulate the daily flow of devotees in the ongoing Chardham pilgrimage for **Gangotri, Yamunotri, Badrinath, and Kedarnath shrines.**

**Char Dham Yatra**
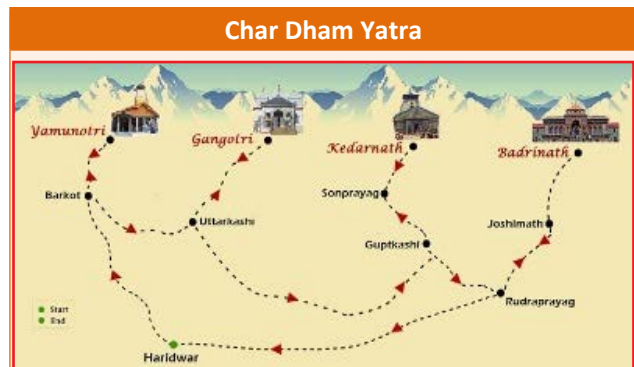


➢ **Yamunotri Dham:**

   ❍ **Location:** Uttarkashi district.

   ❍ **Dedicated to:** Goddess Yamuna.

   ❍ River Yamuna is the second-most sacred river in India after River Ganga.

➢ **Gangotri Dham:**

   ❍ **Location:** Uttarkashi district.

   ❍ **Dedicated to:** Goddess Ganga.

   ❍ Considered the most sacred of all Indian rivers.

➢ **Kedarnath Dham:**

   ❍ **Location:** Rudraprayag district.

   ❍ **Dedicated to:** Lord Shiva.

   ❍ Situated on the bank of the Mandakini River.

   ❍ One of the 12 Jyotirlingas (divine representations of Lord Shiva) in India.

➢ Badrinath Dham:

   ❍ **Location:** Chamoli district.

   ❍ Home to the sacred Badrinarayan Temple.

   ❍ **Dedicated to:** Lord Vishnu.

   ❍ One of the holy shrines for Vaishnavites.

# Abolition of Revenue Police System in Uttarakhand

### Why in News?

Recently, the **Uttarakhand High Court** has directed the state government to totally **abolish the system of revenue police** within a year and hand over areas under its jurisdiction to regular police.

Note:

➢ **Uttarakhand** is the **only state in the country** where the system of **revenue police coexists alongside regular police.**

### Key Points

➢ Revenue police, which is manned by **revenue department officials,** has **limited powers** with only remote rural areas of the hill state coming under its jurisdiction.

➢ The high court had ordered removal of the nearly a **century-old practice of revenue police** from the state also in **2018.**

➢ The **state cabinet also passed** a resolution in **October 2022** for **abolishing the revenue police system** in a phased manner.

➢ In **2004,** **the Supreme Court,** in the case of **Navin Chandra vs State Government**, had felt the **need to abolish this system.**

  ○ The SC had observed that the revenue police are not given training like the regular police.

  ○ **Lack of basic facilities** makes it **difficult for the revenue police to review a crime.**

#### Revenue Police System

➢ The **revenue police system in Uttarakhand** came into existence **in the 1800s** when the **rulers of Tehri lost their territories to Gurkhas.**

  ○ They **requested the British to expel the Gurkhas** from Garhwal in exchange for payment. After the war, the **rulers were unable to pay** and in exchange, the **British kept the western part of Garhwal.**

  ○ In order **to collect revenues** from the natural resources and minerals found in present-day Uttarakhand, the **British put in place a revenue system** with the posts of patwari, kanungo, lekhpal, etc., similar to the Mughal administration.

    ● It was decided that no special police was needed in the hill parts of Uttarakhand because the hills saw little crime, and it was therefore deemed unnecessary to have a dedicated police force.

## Verification Drive of Outsiders in Uttarakhand

### Why in News?

According to the Chief Minister of Uttarakhand, the **Uttarakhand Police** will resume the **verification drive to** confirm the identity of people coming from other states and living in the state after the conclusion of the **Lok Sabha** elections.

### Key Points

➢ The **objective of this drive** is to **maintain law and order and check the credentials of outsiders.**

  ○ It has come to light that people from outside the state commit criminal acts in the state and leave. Many times, terrorists have also been apprehended by the police of Uttarakhand as well as other states.

➢ According to the officials, the verification drive will be restarted once the **Model Code of Conduct (MCC)** imposed by **the Election Commission of India** is lifted after declaration of the results on 4th June 2024.

  ○ **Uttarakhand voted in the first of the seven-phase Lok Sabha elections** on 19th April 2024.

#### Model Code of Conduct (MCC)

➢ The MCC is a **consensus document.** The political parties have themselves agreed to keep their conduct during elections in check and to work within the Code.

➢ It helps the EC in keeping with the mandate it has been given under **Article 324 of the Constitution**, which gives it the **power to supervise** and **conduct free and fair elections** to the Parliament and State Legislatures.

➢ The MCC is operational from the date on **which the election schedule is announced until the date of the result announcement.**

➢ The government **cannot announce any financial grants,** promise construction of roads or other facilities, and make any ad hoc appointments in government or public undertaking during the time the Code is in force.

## SC Stays Project in Uttarakhand Forested Area

### Why in News?

Recently, the Supreme Court has halted a major hotel development in the **Bhimtal-Mukteshwar region** due to concerns raised in a petition about extensive **deforestation** in the lush **Jilling Estate area.**

Note:

# ENVIRONMENTAL IMPACT ASSESSMENT (EIA)

EIA is a study conducted in the early stages of development project planning to predict and address potential environmental impacts

**What are the Objectives of Environment Impact Assessment?**

- To Promote Environment-Friendly and Long-Term Growth
- To Render Detail on the Environmental Impact
- To Predict & Evaluate The Ecological, Economic & Social Effects of Growth Related Activities
- Identification of Legitimate Options and Mitigation Measures.

- **Statutory Status:** Environmental (Protection) Act, 1986 (Made EIA mandatory)
- **Nodal Ministry:** Ministry of Environment, Forest and Climate Change (MoEF&CC)
- **Project Categorisation:** EIA Notification of 2006 categorised the developmental projects in:

- **Category A Project:** Needed prior Environmental Clearance (EC) from MoEF&CC
- **Category B Project:** Needed prior EC from State/UT Govt.
  - **Category B1 projects** (Mandatorily requires EIA)
  - **Category B2 projects** (Do not require EIA)

*There are 39 categories of projects that require an EC process and are subject to EIA*

## EIA Process as per EIA Notification, 2006

| Step | Objective | Carried Out By |
|---|---|---|
| Screening Scoping | Need of EIA / Identifies important issues for EIA | State Expert Appraisal Committee (SEAC) (Category B) / Standard Term of Reference (ToR) prepared by MoEF&CC with EAC/SEAC for Category B Projects" |
| Public Consultation | Addresses concerns of affected people | State Pollution Control Board (SPCB)/ UT Pollution Control Board (UTPCB) |
| Project Appraisal | Scrutiny of Final EIA Report/ Environmental Management Plan (EMP) | EAC for category A Projects and SEAC for category B1 Projects |
| Decision Making | Granting EC | Category A: MoEf&CC / Category B: State EIA Authority (SEIAA) |
| Monitoring (Post EC) | Compliance of general and specific conditions | SPCB / UTPCB and Regional Offices |

## Government Initiatives For EC

- **PARIVESH (Proactive and Responsive facilitation by Interactive, Virtuous, and Environmental Single Window Hub):** Single Window System for EC
  - Developed by MoEF&CC and National Information Centre (NIC)

- **Environmental Information System (ENVIS):** Collect, Collate, Storing, Retrieving and Disseminating Information Related to the Environment Sector
- **Draft Environmental Impact Assessment Notification 2020:** Published by MoEF&CC to replace existing EIA Notification, 2006

Drishti IAS

## Key Points

➢ According to the court, the thickly forested patch was permitted to be deforested for a hotel project, which intends to carry out construction activities on an area of 20,000 square feet.
  ○ It would cause **irreparable damage to the fragile ecology** of the area that could adversely impact the interest of the state to maintain adequate **forest cover.**
➢ The main issue lies here is that the High Court permitted construction to go ahead without the mandatory environmental clearance under the **Environment Impact Assessment Notification of 2006**.
  ○ SC had recently expressed serious concern over the lackadaisical approach of the state government in controlling **forest fires** that recur every year.

Note:

# Snow Leopards Spotted in Gangotri National Park

## *Why in News?*

Recently, a **Snow Leopard** was spotted in **Gangotri National Park** in **Uttarkashi district** of Uttarakhand.



## Snow Leopard
*Panthera Uncia*

Often referred to as the "ghost of the mountains"

### HABITAT
- Mountainous regions of **Central and Southern Asia**
- **12** Range Countries
- In India:
  - **Western Himalayas:** Jammu and Kashmir, Ladakh, Himachal Pradesh
  - **Eastern Himalayas:** Uttarakhand and Sikkim and Arunachal Pradesh

### MAJOR SITES
- Hemis National Park, Ladakh
  - **Snow leopard capital of the world**
- Great Himalayan National Park, Himachal Pradesh
- Gangotri National Park, Uttarakhand
- Khangchendzonga National Park, Sikkim

### PROTECTION STATUS
- **Vulnerable:** IUCN Red List
- **Appendix I:** CITES
- **Schedule I:** Indian Wildlife (Protection) Act 1972

### THREATS
- Human Snow Leopard Conflict
- Climate Change
- Loss of Prey and Habitat
- Poaching

### CONSERVATION EFFORTS
- Global Snow Leopard and Ecosystem Protection (GSLEP) Programme
- Himal Sanrakshak- Community Volunteer Programme
- Project Snow Leopard
- Snow Leopard Conservation Breeding Programme- Padmaja Naidu Himalayan Zoological Park, West Bengal

Note:

### Key Points

- In the latest snow leopard census of India, released earlier in 2024, there are **718 snow leopards in India.** Out of which, **124 are in Uttarakhand.**
  - The hill state has the second highest snow leopard population in India, after **Ladakh (477)**. The **Gangotri National Park** boasts a population of **38–40 snow leopards.**
  - Listed as **vulnerable on the IUCN Red List**, it is estimated that the global population of snow leopards is less than 10,000.
- In Uttarakhand, snow leopards are found in **Uttarkashi, Tehri, Rudraprayag, Chamoli, Pithoragarh, and Bageshwar districts.**

#### Gangotri National Park

- It was established in **1989** and is situated in **Uttarkashi, Uttrakhand** in the **upper catchment of Bhagirathi River.**
- **Gaumukh** at Gangotri glacier, the **origin of river Ganga,** is located inside the park.
- The park area forms a **viable continuity between Govind National Park and Kedarnath Wildlife Sanctuary.**
- **Flora:** The park is enveloped by dense coniferous forests that are mostly temperate. Chirpine, deodar, fir, spruce, oak and rhododendron are the common vegetation.
- **Fauna:** Various rare and endangered species like bharal or blue sheep, black bear, brown bear, himalayan monal, himalayan snowcock, himalayan tahr, musk deer and snow leopard are found in the park.

# Chinese Heron Sighted in Uttarakhand

### Why in News?

Recently, The **Chinese Pond Heron**, a bird usually found in the northeastern states, Rajasthan and Bhutan, has been seen for the first time in Uttarakhand.

### Key Points

- According to experts, there was no record of the presence of the Chinese Pond Heron in Uttarakhand.
  - For the first time, the bird has chosen the **Kotdwar area of Lansdowne forest** division for breeding.

- Many migratory birds are visible in the dense forests of Saneh area of Kotdwar and Lansdowne forest division during the summer.
  - The **arrival of birds from northeastern states** here is an indication that the environment here is favourable for them.

#### Chinese Pond Heron



- The Chinese pond heron (*Ardeola bacchus*) is a**n East Asian freshwater bird** of the heron family.
  - It is one of six species of birds known as "pond herons" (genus Ardeola).
- It is typically **47 cm (19 in) long with white wings, a yellow bill with a black tip, yellow eyes and legs.**
  - Its overall **colour is red, blue and white during breeding season**, and **greyish-brown and flecked with white at other times.**
- It is **found in shallow fresh and saltwater wetlands and ponds.**
- It is **fairly common** and considered a **Least concern (LC)** species by the IUCN Red List.

# Plastic Free Ganga

### Why in News?

The **Wildlife Institute of India (WII)** and **Social Development for Communities (SDC)** Foundation have launched a collaborative initiative titled **"Flowing Towards a Plastic-Free Future"** to free the **Ganga river** and its 15 tributaries from plastic pollution and conserve the aquatic and terrestrial ecosystem.

Note:

### Key Points

➢ The drive will take place over five days in **seven states**, namely **Uttarakhand, UP, Bihar, West Bengal, Himachal Pradesh, Madhya Pradesh, and Jharkhand.**

➢ The initiative focuses on **raising awareness about detrimental effects of plastic on freshwater biodiversity.**

#### Wildlife Institute of India

➢ It is an autonomous institution under the **Ministry of Environment, Forest and Climate Change.**

➢ It was established in **1982.**

➢ It is based in **Dehradun, Uttarakhand.**

➢ It offers training programs, academic courses, and advisory in wildlife research and management.

#### Ganga River



THE GANGA RIVER MAP

➢ It is the longest river of India flowing over 2,510 km of mountains, valleys and plains and is revered by Hindus as the most sacred river on earth.

➢ The Ganga basin outspreads in **India, Tibet (China), Nepal and Bangladesh** over an area of 10,86,000 Sq.km.

➢ In India, it covers states of **Uttar Pradesh, Madhya Pradesh, Rajasthan, Bihar, West Bengal, Uttarakhand, Jharkhand, Haryana, Chhattisgarh, Himachal Pradesh and Union Territory of Delhi** draining nearly 26% of the total geographical area of the country.

➢ It originates in the snowfields of the **Gangotri Glacier in the Himalayas.**

➢ At its source, the river is called the Bhagirathi. It descends down the valley upto **Devprayag** where after joining another hill stream Alaknanda, it is called **Ganga.**

➢ The **principal tributaries** joining the river from **right** are the **Yamuna and the Son.**

➢ The **Ramganga, the Ghaghra, the Gandak, the Kosi and the Mahananda** join the **river from left.** The Chambal and the Betwa are the two other important sub- tributaries.

➢ The **Ganges River Dolphin is an endangered animal that specifically habitats this river.**

➢ The Ganga joins the Brahmaputra (Jamuna) in Bangladesh and continues its run under the name Padma.

➢ **The Ganga widens out into the Ganges Delta in the Sundarbans** swamp of Bangladesh, before it ends its journey by emptying into the Bay of Bengal.

# Additional Virtual Classrooms in Uttarakhand

### Why in News?

The Uttarakhand government plans to introduce **840 additional virtual classrooms** with the assistance of **Telecommunications Consultants India (TCIL)**.

➢ These virtual classrooms will **enable teachers in Dehradun to conduct live online classes** for students.

### Key Points

➢ In the first phase, the scheme is already **extended to 1.9 lakh students between classes 6 to 12.**

   ○ Authorities are currently working to ensure that underprivileged students receive education without any technical issues.

   ○ Coaching will also be provided to students preparing for **medical and engineering entrance exams** to bring socio-economic change.

➢ The program is **currently being implemented in 500 government schools** spread across the **13 districts of the state**.

   ○ It utilizes **Remote Operated Terminals (ROTs)** and **Satellite Interactive Technology** to enable interactive communication in virtual classrooms, enabling students to engage in both online and offline learning.

   ○ Additionally, **parents and teachers have the ability to monitor their progress** through dedicated applications.

Note:

# Lackadaisical Approach: Uttarakhand Forest Fires

## *Why in News?*

Recently, the **Supreme Court** sought an explanation from the Uttarakhand government on why **central funds** were not utilized for dousing fires.

## *Key Points*

➤ The SC summoned the **Uttarakhand chief secretary** to appear before it on 17th May over the **'lackadaisical' approach** shown by the Uttarakhand government in tackling fires.

➤ The top court directed that no state shall deploy forest officials or forest department vehicles for poll duty.

➤ The chief secretary has also been asked to explain large vacancies in the forest department, lack of fire fighting equipment, and deployment of forest officials despite specific exemption granted by the **Election Commission**.

➤ The bench headed by **Justice BR Gavai** and also comprising **Justices SVN Bhatti** and **Sandeep Mehta**, observed that though multiple action plans are prepared, no steps are taken for their implementation.

  ❍ **1,300 hectares of land** were affected due to the forest fires.

➤ Uttarakhand chief minister **Pushkar Singh Dhami** had launched the **Pirul Lao-Paise Pao Mission**.

  ❍ Under this campaign, to prevent forest fires, the **Pirul** (leaves from the Pine Tree) lying in the forest will be collected by the local villagers and youth, weighed, and then stored at the designated **Pirul Collection Centre.**

# Shambhu River

## *Why in News?*

The **Shambhu river** at Kunwari village in **Bageshwar district of Uttarakhand** has once more created a **man-made lake,** covering an area of around 2 square kilometers, **causing concern among the locals about an imminent disaster.**

## *Key Points*

➤ This revival of the significant lake is reminiscent of **previous events in 2022 and 2023** when comparable formations **caused by landslides obstructing the river's course** led to **prompt administrative actions** to **prevent potential flooding downstream.**

➤ The **Shambhu river originates from Bageshwar** and **joins the Pindar river in Chamoli** district.

# Pine Needle Power Projects Prove to be Inadequate

## *Why in News?*

**Bio-energy projects** set up by **the Uttarakhand Renewable Energy Development Agency (UREDA)**, to use the vast quantities of flammable pine needles for generating electricity have been "unsuccessful", with officials saying appropriate technology does not yet exist to use them.

## *Key Points*

➤ State authorities have frequently attempted to mitigate the risk of worsening annual **forest fires** caused by a combination of factors such as **climate change-induced droughts** and increasing stores of organic material like **pine needles and agricultural waste.**

➤ The Uttarakhand government was criticized by **the Supreme Court** following petitions related to the forest fires caused by the accumulation of dry pine due to **low rainfall in April and May 2024.**

  ❍ In 2021, the State government announced a scheme to establish **power projects** utilizing pine needles as fuel to produce electricity.

  ❍ The initial proposal included creating several units ranging from 10kW to 250 kW in three phases (totalling about 150 MW).

  ❍ Despite anticipating the establishment of 58 units, only six 250 kW units (with a total capacity of 750 kW) have been installed so far.

➤ **In 2023, the Uttarakhand government** said it was **unable to meet its renewable power purchase** due to the shortfall in power generated from pine needle projects.

➤ The abundance of pine needles in Uttarakhand offers a valuable resource.

Note:

○ Official records indicate that approximately **16.36% of the State's forest area,** which is around **3,99,329 hectares, is occupied by <u>Chir Pine (Pinus Roxburghii)</u> forests.**

○ Each year, it is estimated that over 15 lakh tonnes of pine needles are produced.

○ If even 40% of this estimated amount, along with other agricultural waste, could be utilized, it would greatly assist the State in meeting its energy needs while also creating employment opportunities and supporting livelihoods.

### Chir Pine (Pinus Roxburghii)
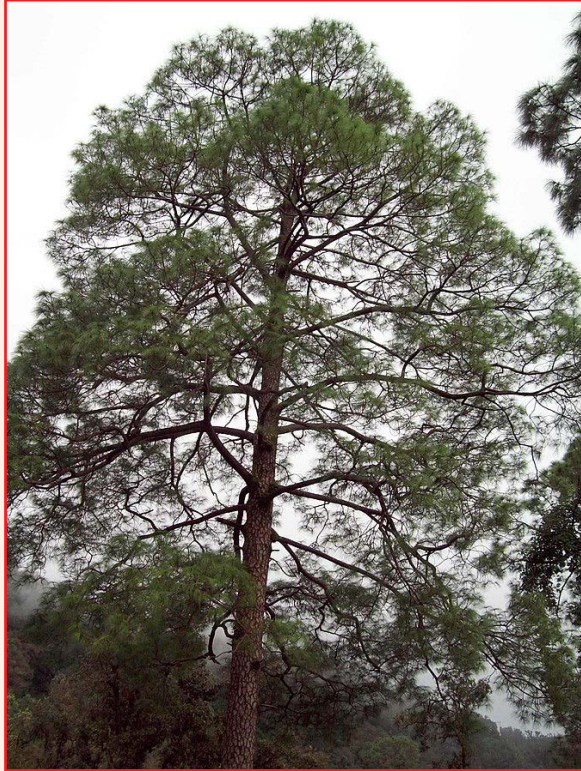


➤ **Pinus Roxburghi**, commonly known as **chir pine**, is a species of pine tree **native to the Himalayan region.** It is an important timber species and is widely used for commercial purposes.

➤ It is native to the Indian subcontinent, particularly in countries like **India, Nepal, Bhutan, and parts of Pakistan.**

➤ It is an **evergreen coniferous tree** that can grow up to 30-50 meters in height.

➤ The **bark** of Pinus Roxburghii is **thick and scaly, with a reddish-brown color.**

➤ The leaves are needle-like, arranged in bundles of three, and can grow up to 20-30 cm long.

➤ The tree produces **oval-shaped cones** that **contain seeds**.

➤ **Conservation Status:**
  ○ **IUCN Status:** Least Concern (LC)

# Forest Fires Threaten Rare Himalayan Fauna

### *Why in News?*

According to the forest department, <u>**Forest fires**</u> that occur annually in Uttarakhand cause **significant damage** to the region's precious forest resources like **trees, plants, bushes, herbs and thick layers of soil.**

➤ It also **threatens rare Himalayan fauna** - wild animals, <u>**reptiles**</u>, **mammals**, <u>**birds**</u>, <u>**butterflies**</u>, **common flies**, <u>**honey bees**</u> **and soil-enriching bacterias**.

### *Key Points*

➤ Avian species like the **cheer pheasant**, **kalij pheasant, rufous-bellied woodpecker**, common rose, **chocolate pansy** and common crow have their **breeding season from March to June**, which is also the period when most fires occur in the region's forest area.

➤ According to a <u>**Non-governmental Organisation (NGO)**</u> working towards **preserving the Himalayan butterflies,** there are a **total 350 species of butterflies** found in the <u>**Himalayan region**</u>, **120 are on the verge of getting endangered** as they breed in host plants that are destroyed in forest fires.

➤ The Dehradun-based **Forest Research Institute** is also researching the impact of forest fires on the <u>**yellow-headed tortoise**</u> that is found throughout the South Asian region.

  ○ It is listed in **schedule 4th of the Wildlife Protection Act, 1972** and also appears in **appendix of the** <u>**Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)**</u> due to its being endangered.

➤ According to the forest department, **Forest fires in Uttarakhand have affected more than 1,437 hectares of forests** since November 2023.

Note:

## Cheer Pheasant



➢ The cheer pheasant *(Catreus wallichii)*, also known as Wallich's pheasant is a vulnerable species of the pheasant family, Phasianidae.

➢ It is the only member in the **genus *Catreus*.**

➢ **IUCN Red List Status:** Vulnerable

➢ **CITES Status:** Appendix I

➢ **WPA**: Schedule I

## Rufous-Bellied Woodpecker



➢ The rufous-bellied woodpecker *(Dendrocopos hyperythrus)* is a species of bird in the family **Picidae.**

➢ It is found along the **Himalayas** in the Indian subcontinent **and Southeast Asia.**

➢ Its natural habitats are **subtropical or tropical moist lowland forests** and **subtropical or tropical moist montane forests.**

➢ **IUCN Red List Status:** Least Concern

➢ **CITES Status:** Not Evaluated

➢ **WPA:** Schedule IV

# Badrinath Temple in Uttarakhand Opens for Devotees

### Why in News?

The doors of the **Badrinath temple** in the Garhwal Himalayas in Uttarakhand opened for devotees on 12th May 2024 after remaining closed during the winter season.

### Key points

➢ The **Chardham Yatra** to **Badrinath, Kedarnath, Yamunotri, and Gangotri** began with the opening of the shrine.

   ○ Following six months of closure, the doors of the Badrinath temple were unlocked while vedic mantras were chanted, rituals were performed, and drums were played.

   ○ The doors of the Kedarnath, Yamyunotri and the Gangotri temples opened for devotees on the occasion of **Akshaya Tritiya**.



## Badrinath Temple

➢ The temple is also one of the **108 Divya Desams dedicated to Vishnu holy shrines** for Vaishnavas who is worshipped as Badrinath.

➢ It is situated along the **banks of Alaknanda river**, in **Chamoli district** of Uttarakhand.

# Government to Spend Money on Roads Along China Border

### Why in News?

According to the sources, The government is likely to spend over **Rs. 2 crore on each kilometre of road** to be **constructed along the China border in Uttarakhand and Sikkim** under **the Vibrant Village Programme (VVP).**

Note:

### Key Points

➢ The **Union Ministry of Home Affairs (MHA)** has sanctioned 113 roads under the VVP **in Arunachal Pradesh, Uttarakhand and Sikkim,** to **improve connectivity** in areas **along the China border.**

  ○ While 105 roads have been sanctioned in Arunachal Pradesh, **five roads in Uttarakhand** and three roads in Sikkim have also been approved.

➢ According to the MHA's sanction letter, 43.96 km of roads are to be built at a cost of Rs. 119 crore at **Pithoragarh district in Uttarakhand.**

  ○ Each kilometre of road is expected to cost Rs. 2.7 crore. Once constructed, the "asset" will have to be maintained by the State government.

  ○ In **Sikkim,** around 18.73 km of roads and 350 metres of steel bridges have been sanctioned under the VVP at the **Chungthang and Mangan block** in north Sikkim at a cost of Rs. 96 crore.

  ○ Each kilometre of road construction will cost Rs. 2.4 crore.

---

**Vibrant Villages Programme**

➢ It is a **Centrally sponsored scheme**, announced in the **Union Budget 2022-23 (to 2025-26)** for development of villages on the **northern border, thus improving the quality of life of people** living in identified border villages.

➢ It will cover the border areas of **Himachal Pradesh, Uttarakhand, Arunachal Pradesh, Sikkim and Ladakh.**

➢ It will cover 2,963 villages with 663 of them to be covered in the first phase.

➢ Vibrant Village Action Plans will be created by the district administration with the help of Gram Panchayats.

➢ There will **not be overlap with the Border Area Development Programme.**

---

# Uttarakhand High Court Asks Government for Relocation

## Why in News?

The **Uttarakhand High Court** has directed the Uttarakhand State Government to locate a **new site for moving its operations out of Nainital** within a month, stating that this move is in the best interest of the public.

### Key Points

➢ The court also **directed the Registrar General to create a portal to take suggestions** from advocates and the general public on the issue.

➢ On the **state government's earlier proposal** for shifting the **High Court to Gaulapar in Haldwani,** the high court observed that the land earmarked for the purpose had **75% forest cover and construction** in the area **would lead to deforestation.**

  ○ The high court also made a few recommendations for the kind of land required for its relocation and facilities, including proper **accommodation for judges, judicial officers, staff and court rooms.**

  ○ The high court's **decision to shift its premises** has drawn a lot of **resistance by** the **bar association.**

---

**Bar Council of India**

➢ **About:**

  ○ The Bar Council of India is a **statutory body** created by Parliament under the **Advocates Act, 1961** to regulate and represent the Indian bar.

➢ **Regulatory Functions:**

  ○ Prescribing **standards of professional conduct** and etiquette for advocates.

  ○ Establishing procedures for disciplinary actions.

  ○ Setting standards for legal education in India and recognizing qualifying law degrees.

➢ **Other Responsibilities:**

  ○ Protecting the **rights, privileges, and interests of advocates**.

  ○ Organising **legal aid** for the underprivileged.

  ○ Conducting elections for Bar Council members.

  ○ To deal with and dispose of any matter which may be referred to it by a State Bar Council.

---

# Early Warning System by IIT-Roorkee Researchers

## Why in News?

Recently, researchers from **IIT-Roorkee** have developed a framework to **predict landslides** in **the Himalayan region** before they occur by **analyzing rainfall patterns**, giving at least a six-hour early warning.

---

Note:

### Key Points

➢ This study has been published in a peer-reviewed scientific journal and is considered the first of its kind in India.

➢ The combined expertise of specialists in various fields like **meteorology, hydrology, geomorphology, remote sensing, and geotechnical engineering** has led to the creation of a method that combines **meteorological modeling with numerical simulations of debris flows.**

➢ Researchers will **gather real-time data** on rainfall patterns in the hills from **weather research agencies.**



Framework to determine rainfall Intensity-Duration (ID) thresholds of debris flows
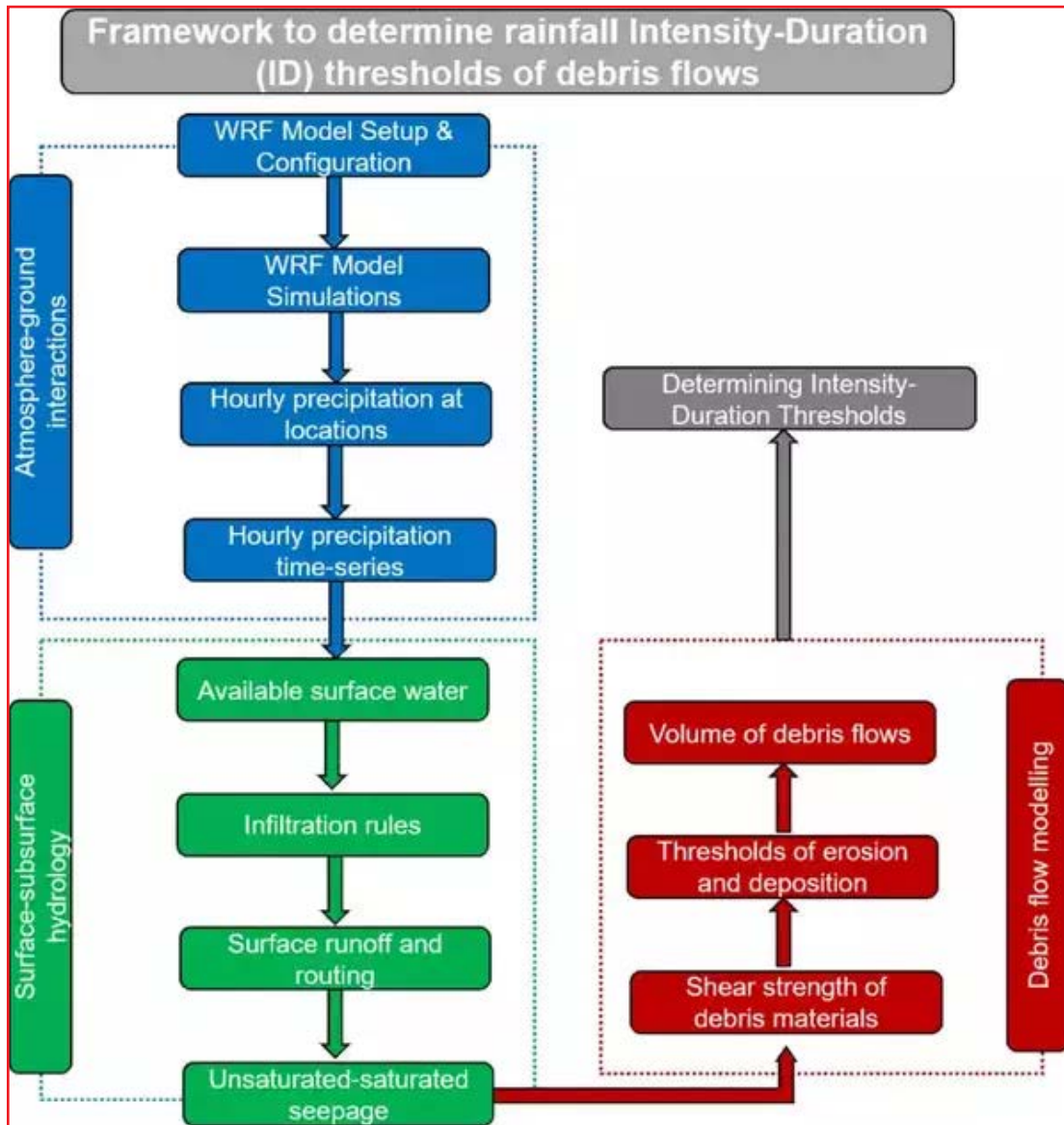
| Landslides |
| --- |

➢ These are **natural disasters occurring mainly in mountainous terrains** where there are conducive conditions of soil, rock, geology and slope.

➢ A **sudden movement of rock, boulders, earth or debris down a slope** is termed a landslide.

➢ Causes:
  ❍ Natural causes that trigger it include **heavy rainfall, earthquakes, snow melting and undercutting of slopes** due to flooding.

Note:

○ They can also be caused by **anthropogenic activities such as excavation, cutting of hills and trees,** excessive infrastructure development, and overgrazing by cattle.
○ Some of the main factors that influence landslides are **lithology, geological structures like faults, hill slopes, drainage, geomorphology,** land use and land cover, soil texture and depth, and weathering of rocks.
○ All these are factored in when a **landslide susceptibility zone is earmarked for planning and making predictions.**

# Low Water Level in Bhimtal Lake
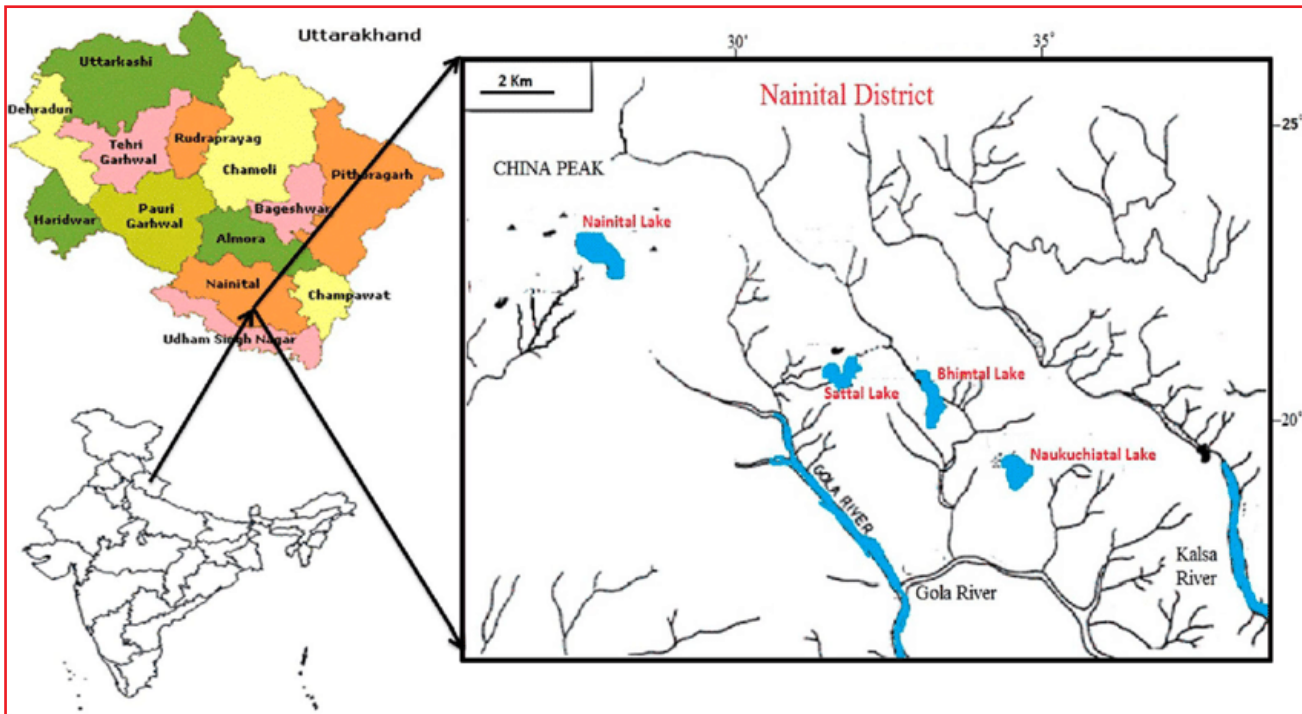
## *Why in News?*

According to the sources, the water level of the **Bhimtal Lake**, located in Uttarakhand's **Nainital district,** has **dropped to 17 metres, from 22 metres** due to the **rainfall and snowfall scarcity** in the state's **Kumaon region.**

## *Key Points*

➤ The prevailing situation has also resulted in a sharp **decline in the number of tourists** in the hill town.
  ○ Low water levels in the lake will **affect the livelihood of thousands** who are **dependent on the tourism industry**, including hotels and resorts.
➤ The continuous neglect of the lake by the authorities and the flushing of many drains across the area in the lake has aggravated the situation.

| **Bhimtal Lake** |
|---|
| ➤ Bhimtal Lake is the **largest lake in the Nainital district**. It is the largest lake in the Kumaon region, known as the **"lake district of India".**<br>○ It is named after the second **Pandava called Bhima** of the famous epic Mahabharata.<br>➤ It is a **natural lake** and its origin is attributed to **several faults** that occurred due to the shifting of the **Earth's crust.**<br>➤ The lake was built during **British time in 1883** and has a **masonry dam** built on it.<br>➤ The lake has rich flora and fauna around it and thick forests of **pine and oak cover** the hill slopes around the lake.<br>○ It is home to **a number of migratory birds** in the winter months.<br>○ Famous species found in the area include **bulbul, wall creeper, Emerald Dove, Black Eagle, and Tawny fish owl.** |



Note:

# IAF Continues to Douse Forest Fire in Uttarakhand

## *Why in News?*

Recently, The Uttarakhand government informed **the Supreme Court** that the **forest fire** emergency is no longer present, with only 15 small to intermediate fires reported.

## *Key Points*

➢ The Chief Minister emphasized the need for an **efficient strategy to gather 'Pirul' (pine leaves) from the forests.**

   ❍ He **urged all residents** of the State to **participate in a widespread campaign** to collect Pirul and safeguard the surrounding forests.

➢ Additionally, he mentioned that the government is implementing the **'Pirul Lao-Paise Pao'** initiative **to incentivize the collection of pine leaves** and prevent forest fires.

   ❍ Under this mission, **Pirul will be purchased at the collection centre at the rate of ₹50/kg** with the aim of reducing forest fire.

➢ Meanwhile, the **Indian Air Force (IAF)** continues to help the State in dousing forest fires. It has taken **23 sorties, for 11 and half hours and used 44,600 litres of water** to douse the raging forest flames in the mountain.

   ❍ In response to the **raging forest fires at the Pauri Garhwal** sector in Uttarakhand, the IAF provided much-needed relief by undertaking **Bambi Bucket operations** by its **Mi17 V5 helicopters.**

### Bambi Bucket operation

➢ The Bambi Bucket, also called a helicopter bucket or a heli bucket, is a specialised container that is suspended by cable under a chopper, and which can be filled by lowering into a river or pond before being flown **above a fire and discharged aerially by opening a valve at the bottom of the bucket.**

➢ The Bambi Bucket is especially helpful in fighting wildfires that are difficult or impossible to reach from the ground. Around the world, helicopters are frequently commissioned to fight forest fires.

# Wildfires Threaten Uttarakhand's Wildlife and Ecological Balance

## *Why in News?*

The **wildfires in Uttarakhand's forests** are **endangering the state's rich wildlife**, which includes **tigers, elephants, leopards,** as well as a range of **birds** and **reptiles.**

## *Key Points*

➢ The ecosystem is under severe pressure, particularly for birds and reptiles who are having difficulty fleeing the fires due to their limited mobility.

➢ According to environmental photographer, wildfires have resulted in the tragic loss of numerous bird species, including nesting ones.

➢ A conservator of forests (research), is concerned about the **critically endangered yellow-headed tortoise** as they are at increased risk during the fire season when they **seek shelter under dried Sal leaves.**

   ❍ The loss of even a small number of these tortoises could have a significant **impact on the survival of the species,** considering their **already declining population.**

➢ Gajendra Pathak, associated with the **Jungle Bachao Jeevan Bachao campaign,** emphasizes the wider ecological consequences of the wildfires.

   ❍ The burning of leaves not only damages wildlife but also interferes with the important **humus layer vital for soil health** and erosion prevention.

   ❍ The **disappearance of insects** such as beetles, ants, and spiders adds to the **challenges of maintaining the fragile ecological equilibrium.**



Note:

### Yellow-Headed Tortoise

➢ **Scientific name:** *Indotestudo elongate.*

➢ **Common name:** Elongated tortoise, Yellow Tortoise and Sal forest tortoise.

➢ **Distribution:** It is a species of tortoise found in **Southeast Asia** and parts of the **Indian Subcontinent,** particularly Northeast India.

➢ **Physical description:** These up to **1 foot-long tortoises** have elongated somewhat narrow **carapaces and yellow heads**. Shells are typically a pale tannish-yellow to caramel color, with blotches of black.

➢ **IUCN Red List Status: Critically Endangered.**

➢ **Population:** According to the **IUCN** the population of the species may have fallen by about 80% in the last three generations (90 years).

➢ **Threats:** It is heavily hunted for food and collected both for local use, such as decorative masks, and international wildlife trade. In china, a **mixture, made by grinding up the tortoise's shell,** also **serves as an aphrodisiac.**

# Thunderstorms

## *Why in News?*

According to the **India Meteorological Department (IMD)**, a fresh **western disturbance** is poised to affect Northwest India, whose influence will surge a myriad of different types of weather over the region.

## *Key Points*

➢ Rain accompanied by thunderstorms, lightning and gusty winds has been forecast over most parts of Jammu and Kashmir, Ladakh, Himachal Pradesh and Uttarakhand from 9th to 12th May 2024.

➢ Western disturbances are **storms that originate in the Caspian or Mediterranean Sea, and bring non-monsoonal rainfall to northwest India**.

➢ They are labelled as an **extra-tropical storm** originating in the Mediterranean, is an area of low pressure that brings sudden showers, snow and fog in northwest India.

➢ It brings winter and pre-monsoon rain and is important for the development of the **Rabi crop** in the Northern subcontinent.

➢ It is not always the harbingers of good weather. Sometimes it can cause extreme weather events like floods, **flash floods, landslides,** dust storms, hail storms and **cold waves** killing people, destroying infrastructure and impacting livelihoods.

### Rabi Crops

➢ These crops are **sown around the Retreating Monsoon and Northeast monsoon season**, which begins in October and are called rabi or winter crops.

➢ The harvest for these crops happens **typically during April and May, during the summer season.**

➢ These **crops are not much affected by the rainfall.**

➢ **Major Rabi crops** are wheat, gram, peas, barley etc.

➢ A **warm climate is required for seed germination** and cold climate for the growth of crops.

# Capacity Building Programme

## *Why in News?*

Recently, a two weeks program on **Capacity Building Programme on Project and Risk Management for Public Works for the officers from Republic of Tanzania** commenced at the **National Centre for Good Governance (NCGG), Mussoorie.**

## *Key Points*

➢ NCGG is committed to **action research, studies, and capacity building** at both the national and international levels.

  ○ Its efforts align with the Indian philosophy of **'Vasudhaiva Kutumbakam'** i.e., "The world is one Family" and emphasizes strengthening bilateral ties and fostering cooperation with other countries.

  ○ The capacity building program focuses on **providing a rich cross country experience and a platform for policy dialogue,** while sharing best practices focusing on project and risk management in various sectors.

  ○ This will result in the officers **gaining valuable insights into the manner in which projects are planned and executed** and institutions are being transformed and people are getting closer to the government.

Note:

➢ The **core objectives of the two-week training program** is to equip officers with essential skills in **Project and Risk Management for Public Works,** while showcasing several projects and works in several important sectors relevant to the participants.

   ○ The program incorporates immersive field visits, with officers slated to **visit key project sites** such as **Dakpathar Hydropower and Irrigation Dam**, NHAI in Uttarakhand, **Dwarka Expressway in New Delhi,** Indira Paryavaran Bhawan, **World Trade Centre NBCC in New Delhi**, and the Delhi Metro Rail Corporation, culminating with a visit to the iconic Taj Mahal.

### The National Centre for Good Governance (NCGG)

➢ It was **set up in 2014** by the Government of India as an **apex–level autonomous institution** under the Ministry of Personnel, Public Grievances and Pensions.

➢ The Centre traces its origin to the **National Institute of Administrative Research (NIAR)**, which was **set up in 1995 by the Lal Bahadur Shastri National Academy of Administration (LBSNAA)**, the Government of India's topmost training institute for civil services.

   ○ NIAR was subsequently rechristened and subsumed into NCGG.

➢ NCGG **deals with a gamut of governance issues** from **local, state to national levels, across all sectors.**

➢ The Centre is mandated to work in the **areas of governance, policy reforms, capacity building and training of civil servants and technocrats** of India and other developing countries. It also works as a **think tank.**

# Abbott Mountain's of Uttarakhand

### Why in News?

Abbott Mountain can be found in the beautiful **Himalayan ranges** of Uttarakhand, in the town of Lohaghat in the Champawat district.

### Key Points

➢ Abbott Mountain holds historical significance, named after **British surgeon Dr. James Abbott,** who served as the **Commissioner of Kumaon during the British Raj era**. His contributions to the development of the region are commemorated through this majestic peak.

➢ Apart from its natural beauty, Abbott Mountain also serves as a paradise for **adventure enthusiasts.**

➢ The region is home to a diverse array of flora and fauna, including rare Himalayan species such as **musk deer, Himalayan black bear,** and a variety of bird species.



### Indian Himalayan Region

➢ The IHR covers **ten states and four hill districts of India**, viz. Jammu & Kashmir, Uttarakhand, Himachal Pradesh, Sikkim, Arunachal Pradesh, Meghalaya, Manipur, Mizoram, Nagaland, Tripura, among the states and the hill districts of Dima Hasao, Karbi Anglong in Assam and Darjeeling, Kalimpong in West Bengal.

➢ The uncontrolled demand-driven economic growth has led to haphazard urbanization, environmental degradation and increased risks and vulnerabilities, seriously compromising the unique values of Himalayan ecosystems.

➢ In addition to a focus on economic growth, the roadmap for sustainable development of the Indian Himalayas needs to be in sync with the relevant **Sustainable Development Goals (SDGs).**

➢ Therefore the development in the Himalayas must be fully embedded in the **environmental, socio-cultural and sacred tenets** of the region.

# Earthquake in Uttarkashi

## *Why in News?*

According to the National Centre for Seismology (NCS) data, an earthquake of 2.6 magnitude on the Richter scale hit Uttarkashi district of Uttarakhand.

## *Key Points*

➤ The **epicentre of the earthquake** was located at **Latitude 31.00 and Longitude 79.31**, at a **depth of 5 kilometres.**

➤ **National Center for Seismology** (under the **Ministry of Earth Sciences**) is the **nodal agency** of the Government of India for monitoring of earthquake activity in the country.

➤ Currently, India has **only 115 earthquake observatories.**

  ○ The most important aspect of the Earthquake Observatory is to be able to accurately predict the time of the earthquake.

# Nepal to Introduce New Currency Note Featuring Indian Territories

## *Why in News?*

**Nepal** recently announced the **printing of a new Rs 100 currency note** featuring a map that includes the Indian territories of **Lipulekh, Limpiyadhura, and Kalapani.**

➤ The Nepal government has authorized the **Nepal Rastra Bank** to replace the current map with the updated version on the currency note.

## *Key Points*

➤ Lipulekh, Kalapani and Limpiyadhura, which India earlier had **included in its November 2019 map.**

  ○ **Tensions between New Delhi and Kathmandu** emerged after Nepal issued a **political map in May 2020**, which **included the same territories.**

  ○ Diplomatic relations came under further strain when Nepal handed over a diplomatic note to

India **objecting to the inauguration of** a **road linking Kailash Mansarovar via Lipulekh** in 2020.

  ○ India's **Ministry of External Affairs** had responded to Nepal's objection, stating that the road, passing through **Uttarakhand's Pithoragarh district**, fell entirely **within the Indian territory.**

➤ Nepal has asserted its claim based on the Sugauli Treaty of 1816**.** According to the treaty **all territories east of the Kali (Mahakali) river, including Limpiyadhura, Kalapani, and Lipulekh, belong to Nepal.**

  ○ The **Sugauli Treaty**, **signed on 4th March 1816**, between the **East India Company and Guru Gajraj Mishra**, delineated the boundary line of Nepal following the **Anglo-Nepalese War of 1814–16.**

  ○ India, however, has stated that the **1950 Treaty of Peace and Friendship between India and Nepal annulled the Sugauli Treaty.**

  ○ Nepal argues that treaties such as the **1923 Nepal–Britain Treaty of Friendship reaffirmed its sovereignty during the era of British rule.**

| Border Dispute Between India and Nepal |
|---|

➤ India and Nepal have border disputes over **Kalapani - Limpiyadhura - Lipulekh trijunction** between India-Nepal **and China and Susta area (West Champaran district, Bihar).**

➤ **Kalapani Region:**

  ○ Kalapani is a valley that is administered by India as a part of the Pithoragarh district of Uttarakhand. It is situated on the Kailash Mansarovar route.

    ● Kalapani is advantageously located at a height of over 20,000 ft and serves as an observation post for that area.

  ○ The Kali River in the **Kalapani region** demarcates the border between India and Nepal.

  ○ The **Treaty of Sugauli** signed by the **Kingdom of Nepal and British India** (after **Anglo-Nepalese War**) in **1816** located the Kali River as Nepal's western boundary with India.

  ○ The discrepancy in locating the **source of the Kali** river led to boundary disputes between India and Nepal, with each country producing maps supporting their own claims.

Note:

# Uttarakhand Wildfires: Threat To Glaciers

### Why in News?

In Uttarakhand, the **wildfires** have taken a toll on the region's forests. From November 2023, 1,107 hectares of forest cover have succumbed to 886 separate incidents of wildfires, sparking

concerns about the **profound impact on the local ecosystems.**

### Key Points

➢ The **Forest Survey of India (FSI)** has issued multiple fire alerts to Uttarakhand, emphasising the severity of the ongoing crisis.

➢ A former scientist from the **Wadia Institute of Himalayan Geology,** sheds light on the increased concentration of **Black Carbon** in the atmosphere, particularly during summer due to forest fires, exacerbates **glacier melting** and disrupts the delicate balance of the entire ecosystem.

➢ A recent study conducted by the **World Bank** underscores the role of black carbon in accelerating glacier melt.

○ According to the report, the accumulation of black carbon not only diminishes the reflectance of glacier surfaces, leading to increased absorption of solar radiation, but also elevates air temperatures, further accelerating glacier retreat.

➢ The **World Meteorological Organisation (WMO)** warns of accelerated glacier retreat in **the Himalayas** and heightened risks of natural disasters like **Glacial Lake Outburst Floods**.

○ Their recent study states the need for concerted efforts to mitigate the impacts of black carbon emissions and safeguard the fragile ecosystems of the Himalayan region.

### Wadia Institute of Himalayan Geology (WIHG)

➢ The Wadia Institute of Himalayan Geology is an **autonomous research Institute of the Department of Science & Technology.**

➢ Established in June, 1968 as a small nucleus in two rooms of the Botany Department, Delhi University, the Institute was shifted to Dehradun during April, 1976.
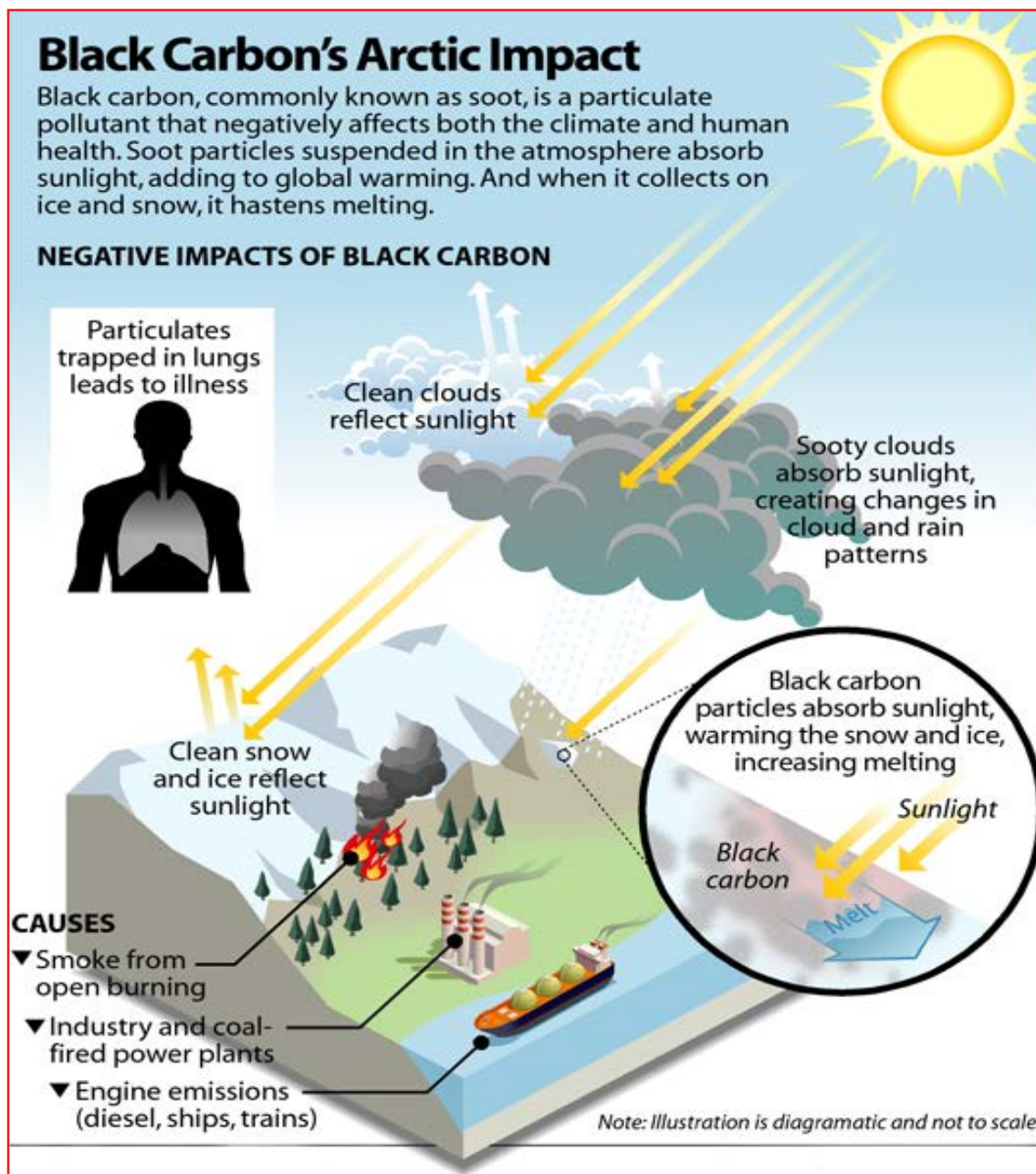
Note:

drishti

### Glacial Lake Outburst Flood (GLOF)

➢ It is a type of catastrophic flood that occurs when the **dam containing a glacial lake fails,** releasing a large volume of water.

➢ This type of flood is **typically caused by rapid melting of glaciers or the buildup of water** in the lake due to heavy precipitation or the inflow of meltwater.

➢ In February 2021, **Chamoli district in Uttarakhand witnessed flash floods** which are **suspected to have been caused by GLOFs.**

➢ **Causes:**
  ○ These floods can be triggered by a number of factors, including **changes in the volume of the glacier,** changes in the **water level of the lake, and earthquakes.**
  ○ According to **NDMA (National Disaster Management Authority), glacial retreat due to climate change** occurring in most parts of the **Hindu Kush Himalayas** has given rise to the formation of numerous new glacial lakes, which are the major cause of GLOFs.



**Black Carbon's Arctic Impact**

Black carbon, commonly known as soot, is a particulate pollutant that negatively affects both the climate and human health. Soot particles suspended in the atmosphere absorb sunlight, adding to global warming. And when it collects on ice and snow, it hastens melting.

**NEGATIVE IMPACTS OF BLACK CARBON**

Particulates trapped in lungs leads to illness

Clean clouds reflect sunlight

Sooty clouds absorb sunlight, creating changes in cloud and rain patterns

Clean snow and ice reflect sunlight

Black carbon particles absorb sunlight, warming the snow and ice, increasing melting

Sunlight

Black carbon

Melt

**CAUSES**
▼ Smoke from open burning
▼ Industry and coal-fired power plants
▼ Engine emissions (diesel, ships, trains)

Note: Illustration is diagramatic and not to scale.

Note:

drishti

# Kumaon Fan Palm Under Conservation

### *Why in News?*

The **Uttarakhand Forest Research Wing** has reached a milestone by **growing 300 seedlings of this native plant** at **Paatalthod nursery in Pithoragarh**.

### *Key Points*

➢ This initiative was started in an effort to **revive and conserve** the **Kumaon palm,** also known as the **Kumaon Fan Palm.**

➢ It is the **only palm species** known **to survive in sub-zero temperatures** and is called the **hardest palm in the world.**

➢ According to the forest research wing, the plant species has been classified as **'threatened'** by both the **International Union for Conservation of Nature (IUCN)** and the **Uttarakhand Biodiversity Board.**



## Kumaon Fan Palm

➢ The palm tree is native to the **Kumaon division of Uttarakhand Province** in northwestern India, and into adjacent western Nepal.

➢ The palm **grows at altitudes of 1,800–2,700 m (5,900–8,900 ft)** and it receives snow and frost on a regular basis in its native habitat.

➢ Its scientific name is *Trachycarpus takil.*

## International Union for Conservation of Nature

➢ It is a **membership union** uniquely composed of **both government and civil society organisations.**

➢ **Created in 1948**, it is the global authority on the status of the natural world and the measures needed to safeguard it.

➢ It is headquartered **in Switzerland**.

➢ The **IUCN Red List of Threatened Species**, is the world's most comprehensive inventory of the global conservation status of plant and animal species.

# Nakshatra Sabha

### *Why in News?*

The **Uttarakhand Tourism Development Board** has joined hands with **Starscapes**, a leading astro-tourism company, to introduce **Nakshatra Sabha**, a new initiative to provide a comprehensive **Astro Tourism experience to people**.

### *Key Points*

➢ The campaign will **offer a range of activities**, including stargazing, special solar observations, astrophotography contests, camping under the stars, and more.

➢ The initiative aims to bring together **astronomy enthusiasts,** adventurers, and **travellrs** to marvel at the wonders of the **cosmos.**

  ○ Uttarakhand is well-positioned to attract Astro Tourists worldwide with its abundant forest cover, nature-based tourism, convenient access to major cities, and well-established hospitality sector, including homestays.

➢ **George Everest in Mussoorie** is set to host Nakshatra Sabha from early June until mid-2025, presenting a range of engaging events at different spots throughout Uttarakhand.

Note:

○ These events will **explore potential night sky sites in** districts such as **Uttarkashi, Pithoragarh, Nainital, and Chamoli,** along with seminars and webinars led by experts in the field.

➢ By creating a community of advocates committed to **conserving dark skies** in Uttarakhand, the Nakshatra Sabha campaign aims to promote professional training, skill development, and support local economies while advocating for the preservation of night skies.

○ It plans to establish a policy for preserving dark skies across the region in 2025.

| Uttarakhand Tourism Development Board (UTDB) |
|---|
| ➢ It is a government body responsible for promoting tourism in the state of Uttarakhand. |
| ➢ It was **established in 1976** and is **headquartered in Dehradun.** |
| ➢ The UTDB works to **develop and promote tourism** infrastructure, attract investment, and market Uttarakhand as a tourist destination. |

■■■

Note:

| Key Points | Details |
|---|---|
| | |

Summary

Note:

| Key Points | Details |
|---|---|
| | |

**Summary**