

## UPSC Daily Current Affairs| Prelim Bits 18-02-2025

### Chief Election Commissioner

#### Why in News?

*Prime Minister Narendra Modi, Home Minister Amit Shah and Leader of Opposition Rahul Gandhi met recently to appoint Gyanesh Kumar as the Chief Election Commissioner.*

- **Election Commission (EC)** - It is an **autonomous constitutional** authority responsible for administering election processes in India.
- The body administers elections to the Lok Sabha, Rajya Sabha, State Legislative Assemblies, and the offices of the President and Vice President.
- It is a **3-member body** made up of one Chief Election Commissioner (CEC) and 2 Election Commissioners.
- Although all 3 election commissioners are equal, the CEC, like the Chief Justice of India, is the first among equals.
- **Chief Election Commissioner** - Earlier, there was no law passed by Parliament for the appointment of the CEC and ECs.
- The appointments were done by the President on the advice of the Prime Minister.
- Traditionally, the successor to the incumbent CEC has been the next senior-most Election Commissioner.
- The new CEC is being appointed under a new law, Chief Election Commissioner and Other Election Commissioners (Appointment, Conditions of Service and Term of Office) Act, 2023.

### CEC and Other Election Commissioners Bill, 2023

- The Bill replaces the Election Commission (Conditions of Service of Election Commissioners and Transaction of Business) Act, 1991.
- It provides for the appointment, salary, and removal of the Chief Election Commissioner (CEC) and Election Commissioners (ECs).
- The CEC and ECs will be **appointed by the President** upon the recommendation of a Selection Committee.
- The **Selection Committee** will consist of the
  - Prime minister,
  - A union cabinet minister, and
  - Leader of opposition/leader of the largest opposition party in Lok Sabha.
- Recommendations of the Selection Committee will be valid **even when there is a vacancy** in this Committee.
- A Search Committee **headed by the Cabinet Secretary** will propose a panel of names to the Selection Committee.
- Eligibility for the posts includes holding (or having held) a post equivalent to the

Secretary to the central government.

- The salary and conditions of service of the CEC and ECs will be equivalent to that of the Cabinet Secretary.
- In contrast, it was comparable to the salary of a Supreme Court Judge Under the 1991 Act.

## References

1. [The Indian Express | Chief Election Commissioner](#)
2. [Hindustan Times | Who is Gyanesh Kumar?](#)

## Earthquakes

### Why in News?

*Recently the National Capital Region, Delhi and adjoining regions faces a shallow earthquake of 4.0 magnitude with a focal depth of five kilometers.*

- An earthquake is a phenomenon that occurs without warning and involves **violent shaking of the ground** and everything over it.
- It results from the release of accumulated stress of the moving lithospheric or crustal plates.
- An earthquake is the sudden movement of Earth's crust at a fault line.
- It is also called as quakes, tremors, or temblors.
- **Epicenter** - The location where an earthquake begins is called the epicenter. An earthquake's most intense shaking is often felt near the epicenter.
- However, the vibrations from an earthquake can still be felt and detected hundreds, or even thousands of miles away from the epicenter.
- The energy from an earthquake travels through Earth in vibrations called seismic waves, measured by seismometer.
- **Types of energy**

<b>P waves or primary waves</b>	<ul style="list-style-type: none"><li>• These are the first waves to be detected.</li><li>• These are compressional waves that push and pull as they move through rock and fluids.</li></ul>
<b>S waves or secondary waves</b>	<ul style="list-style-type: none"><li>• These are the second waves to be detected.</li><li>• These waves move <u>only through rock</u>.</li><li>• They move up and down or side to side, perpendicular to the direction in which the wave is moving.</li></ul>
<b>Surface waves</b>	<ul style="list-style-type: none"><li>• It follows P and S waves.</li><li>• They travel along the surface of the earth and thus cause the most damage.</li><li>• Surface waves can be characterized as Love waves, which are faster and move the ground from side to side.</li></ul>

- **Types Of Earthquake** - Along with the tectonic earthquakes, there are also 3 types of earthquakes.
  - **Volcanic** - Earthquakes that occur in conjunction with volcanic activity
  - **Collapse** - Smaller-scale earthquakes that result from the subterranean collapse

of caverns or mines

- **Explosion** - Earthquakes caused by underground explosions of nuclear or chemical devices.
- **Depth**
  - **Shallow earthquakes** - 0 to 70 km deep.
  - **Intermediate earthquakes** - 70 to 300 km deep.
  - **Deep earthquakes** - 300 to 700 km deep.
- **Scenario in Delhi** - Delhi lies in the ***Aravalli-Delhi Fold Belt***, a seismically-active geological belt extending from southern and eastern Rajasthan to Haryana and Delhi.
- Over the years, the tectonic activity in the region has slowed down considerably, leading to greater geological stability. But some faults still remain, which give rise to occasional mild earthquakes.
- **Medvedev-Sponheuer-Karnik scale** - It is a ***measure of intensity***, rather than strength, or energy released, which is described by magnitude.
- Delhi is classified in ***Zone 4***, the 2<sup>nd</sup> highest classification of areas based on their susceptibility to shaking experienced during an earthquake.

## References

1. [The Hindu | What is a shallow earthquake?](#)
2. [News 18 | What Is an Earthquake?](#)

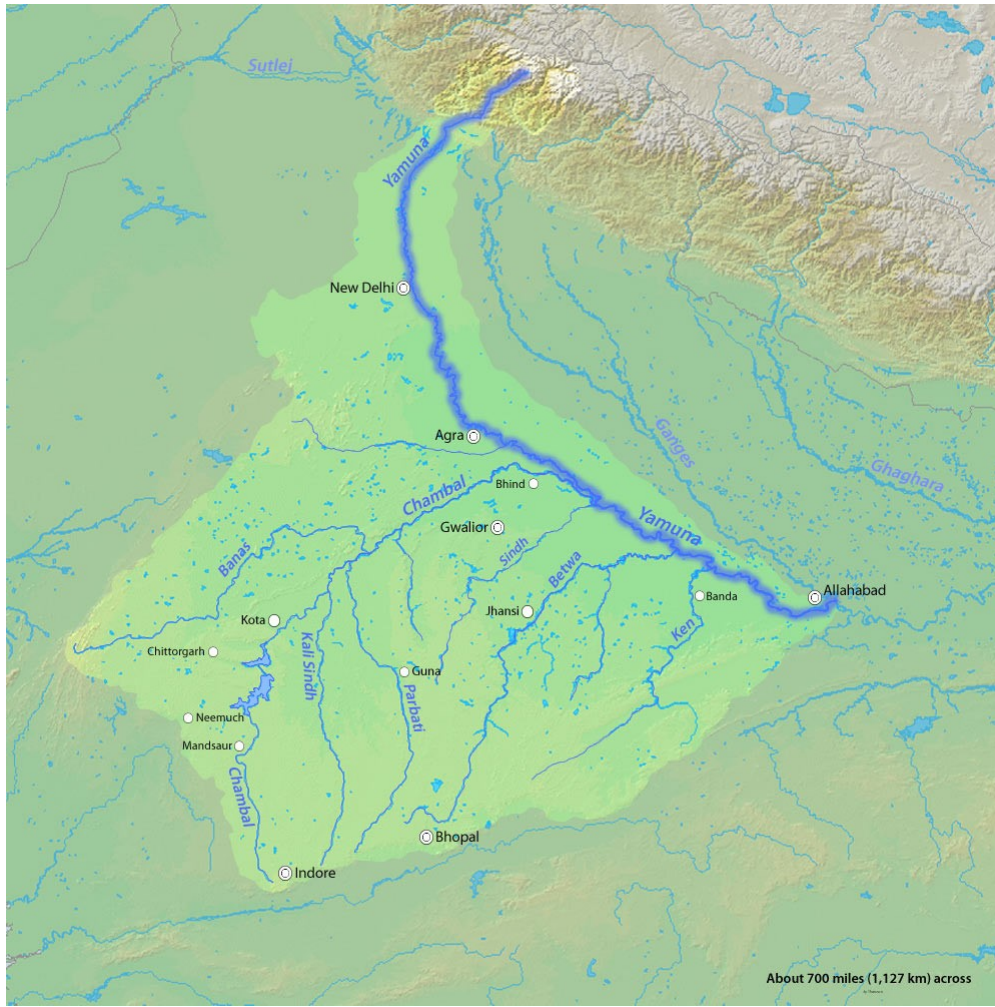
## Yamuna River

### Why in News?

*Delhi Lieutenant Governor VK Saxena, setting an ambitious four-pronged strategy to clean the Yamuna River.*

- It is a major tributary of ***River Ganges***.
- It is one of the ***longest river (1,376 kilometers) in India*** which does not directly flow to the sea.
- It is the ***largest tributary of the Ganga*** in the northern plains.
- **Origin** - It originates from the ***Yamunotri glacier*** in the Garhwal Himalayas of Uttarakhand.
- **Flowing states** - Uttarakhand, Himachal Pradesh, Haryana, Delhi, Uttar Pradesh and Rajasthan (not a riparian zone) before it merges with the Triveni Sangam, Ganges River in Allahabad.
- **Tributaries in Himalayas** - Rishi Ganga, Kunta, Hanuman Ganga, Tons (largest) and Giri.
- **Tributaries in the plains** - Hindon, Chambal, Sind, Betwa and Ken.

*Gobind Pashu Vihar Sanctuary, Rupin valley is situated on the Tons river.*



- **Historical Cities-** Delhi (the national capital), Mathura (associated with Lord Krishna), Agra (home to the Taj Mahal), and Vrindavan (a revered pilgrimage site).

## Reference

[Live Mint | Yamuna River](#)

## Mononoke Tilefish

### Why in News?

*A Chinese research team has discovered a new fish species, named Mononoke tilefish.*

- **Mononoke Tilefish** - It is a new species of ***deep-water tilefish***.
- **Discovered in** - South China Sea, the continental slope area between Hainan Island and Xisha Qundao at a depth of about 200 meters.
- **Taxonomy**
  - **Scientific name** - Branchiostegus sanae.
  - **Genus** - Branchiostegus, are 19 species only 3 species have been discovered.
- It is known as Ghost Horsehead Fish.
- **Size** - 40 centimeters.
- **Habitat** - Sandy and muddy bottoms on the edges of continental and oceanic plates.
- **Distribution** - South China Sea, East and Southeast Asia.
- Found from warm temperate to tropical oceans.

- **Morphology** - Large body with an eyes close to its head, nostril oval-like shape, mouth terminal and jaws rows with canine-like teeth.
- Its upper part pale orange mixed with yellow stripes, and lower part dark grey with inconspicuous yellow blotch near base.



- **Uniqueness** - Cheek markers are red and white stripes that run vertically from the eyes to the cheeks.
- Approximately light 16 vertical stripes present along the body.
- It is the ***only one with vertical stripes*** on the body.
- **Behavior** - It lives at *great depths*, with some found 600 m below the surface.

### Did You Know?

*Mononoke Tilefish's distinctive cheek stripes, earning it the name of a character from the animated movie "Princess Mononoke."*

- **Threats** - People consume and sell in markets in East and Southeast Asia.
- **Conservation status** - It hasn't yet been concluded.

### References

1. [English News| Mononoke tilefish in South China Sea](#)
2. [Zookeys| Branchiostegus Sanae](#)

### One Liners 18-02-2025

#### Polity & Governance

#### **Pradhan Mantri Matsya Sampada Yojana (PMMSY)**

India is the world's **2<sup>nd</sup> largest fish producer**, with around 8% share across the world.

- **Launched in** - 2020.
- **Nodal Ministry** - Ministry of Fisheries, Animal Husbandry and Dairying.
- **Objective** - To *help the fisheries sector achieve new heights* while ensuring socio-economic welfare of fishers, fish farmers and other stakeholders.
- **Duration** - 5 years (2020-2025).



### **Pradhan Mantri Matsya Kisan Samridhi Sah-Yojana (PMMKSSY)**

- **Launched in** - 2023.
- **Umbrella scheme** - PMMKSSY is a component under the Pradhan Mantri Matsya Sampada Yojana (PMMSY).
- **Nodal Ministry** - Ministry of Fisheries, Animal Husbandry and Dairying.
- **Objectives** - To address the *inherent weaknesses of the sector* through identified financial and technological intervention for bringing in institutional reforms.
- **Duration** - 4 years (2023-2027).

### **Fish Farmers Producer Organizations (FFPOs)**

- **Objective** - To provide *financial assistance* to economically empower the fishers and fish farmers and enhance their bargaining power.
- **Umbrella scheme** - Pradhan Mantri Matsya Sampada Yojana (PMMSY).
- **Nodal Ministry** - Ministry of Fisheries, Animal Husbandry and Dairying.

### **National Geospatial Knowledge-based Land Survey of Urban Habitations (NAKSHA)**

- **About** - It is a pilot program, having technical partnership with *Survey of India*.
- **Aim** - To *create and update land records in urban areas* to ensure accurate and reliable documentation of land ownership.
- **Initiative of** - *Department of Land Resources*, Ministry of Rural Development.
- It will empower citizens, *improve ease of living*, enhance urban planning, and reduce land-related disputes.
- **Nodal Ministry** - Ministry of Rural Development and Ministry Agriculture & Farmers' Welfare.
- **Coverage** - 152 Urban Local Bodies (ULBs) across *26 States and 3 Union Territories (UTs)*.

## **Bilateral Relations**

### **India-Qatar Joint Business Forum**

- **Organized by** - Confederation of Indian Industry (CII) and Department for Promotion of Industry and Internal Trade (DPIIT).
- **Vision** - For *long-term economic cooperation*, reinforcing the countries commitment to fostering trade, investment, and innovation across key sectors.
- **Objective** - To convene top business leaders, policymakers, and industry stakeholders to explore investment opportunities, technological collaboration, and economic partnerships.

## **Economy**

### **Electricity Generation Capacity in India**

- Out of the total electricity generation capacity from thermal power plants, **private sector power plants have a capacity of 36.20%**, the State sector has 32.03% and the central sector has the capacity of 31.77%.
- NITI Aayog data show that India accounts for 20,794.36 kg of carbon emission from electricity generation.
- Electricity is a **Concurrent subject** (Entry 38 of List III of the Seventh Schedule of the Constitution), which allows both the central and State governments to legislate on electricity matters.
- According to the Central Electricity Authority (CEA), **Maharashtra** had the *highest non-renewable electricity generation capacity*, followed by Uttar Pradesh and Gujarat in 2022-23.
- **Rajasthan** had the *highest renewable electricity generation capacity* in India.

## **Science & Technology**

### **Bacterial Cellulose**

- **Bacterial cellulose** - It is a *biodegradable, natural polymer* produced by certain bacteria.
- **Usage** - Human medicines, paper restoration, food, cosmetics textiles, construction materials, electronics and blood vessel regeneration.
- **Potential Applications** - Agriculture, such as facilitating grafting, preserving cut plant material and serving as a growth medium in laboratories.
- It is also known as *microbial cellulose*.

### **Matsya-6000**

- It is the *4<sup>th</sup> Generation deep-ocean human scientific submersible*.
- **Part of** - Samudrayan Project.
- **Capacity** - To accommodate 3 humans within its compact 2.1-meter diameter spherical hull.
- **Design and developed by** - National Institute of Ocean Technology of Ministry of Earth Sciences.
- **Array of components:**
  - A main ballast system for diving
  - Thrusters for movement in all three directions
  - A battery bank for power supply
  - Syntactic foam for buoyancy.

### **Miscellaneous**

#### **Forward Faster Sustainability Awards 2025**

- **Organized by** - UN Global Compact Network India (UN GCNI).
- **Awarded to** - National Thermal Power Corporation (NTPC) Ltd, India's largest integrated power utility.
- **Category** - Water Resilience.
- **Awarded for** - Organizations in India that have made significant strides in advancing sustainability and corporate responsibility, aligning with the United Nations Sustainable Development Goals (SDGs).
- **Eligibility:**
  - Business of any size and sector.
  - Enterprises with less than 10 employees up to multinational corporate with more than 10,000 employees.

### **ANARNET**

- **About** - ANARNET is India's traceability system, ensuring transparency and building consumer confidence in international markets.
- **Developed by** - Agricultural and Processed Food Products Export Development Authority (APEDA).
- **Enhance consumer trust** - It can ensure that Indian agricultural products meet the highest global standards, enhancing consumer trust worldwide.