

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**

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

- **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 2nd 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?](#)

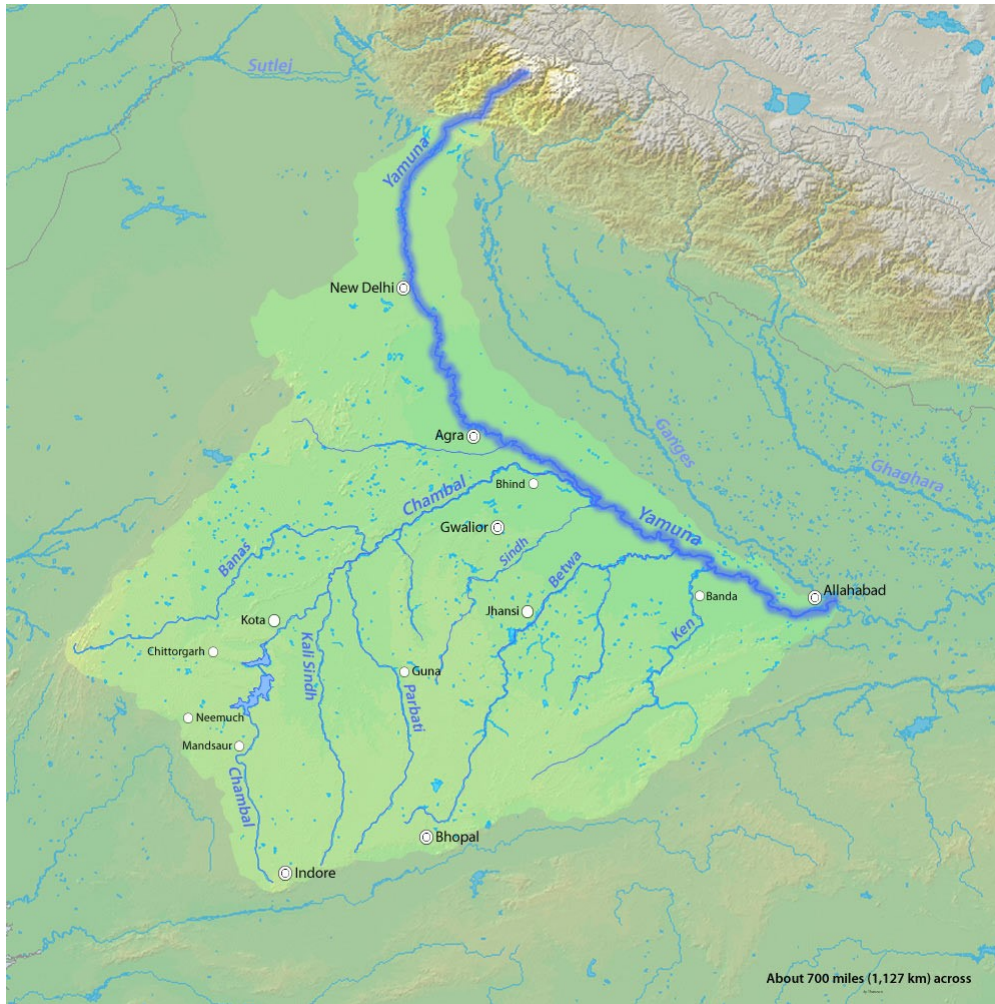
Yamuna River

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 **2nd 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 *4th 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.