

# FORTUNE Prelims Precise

JUNE 2024



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# History & Culture

## Vivekananda Rock Memorial & the Thiruvalluvar Statue

- The **Prime Minister meditated for 48 hours** at the memorial on a small island off Kanyakumari, Tamil Nadu, to mark the end of the 2024 Lok Sabha polls.
- **Built in 1970** to honour Swami Vivekananda, who attained enlightenment there, the memorial includes the 'Shripada Mandapam' and the 'Vivekananda Mandapam'.
- The **Shripada Mandapam**, dedicated to goddess Kanyakumari, based on a legend that goddess Kanyakumari prayed to lord Shiva on this rock, which bears the imprint of her feet.
- The **Vivekananda Mandapam** has a meditation hall, assembly hall, and statue section.
- Surrounded by the **Laccadive Sea**, where the Bay of Bengal, Indian Ocean, and Arabian Sea meet, the memorial was funded by both State and Central Governments.

### Thiruvalluvar Statue



- It is adjacent to the Vivekananda Rock Memorial and is a **133 feet** stone sculpture of the Tamil poet and philosopher **Valluvar**, known as Thiruvalluvar, the author of the **Thirukkural**.
- Its height denotes the **133 chapters of the Thirukkural** and is currently the 25th tallest statue in India.
- The statue represents three books of the Kural text - **Virtue, Wealth and Love**.
- The whole design signifies that **wealth and love be earned and enjoyed on the foundation of solid virtue**.
- The statue, with its slight bend around the waist, is reminiscent of a dancing pose of the Hindu deities like **Nataraja**.

## Deciphering Rigveda

- Archaeologists are working with Sanskrit scholars to decipher the Rigveda, carrying on research that could lead to a **relationship between the people of the Vedic age and the Harappan civilization**.

### The Evidence behind the Hypothesis:

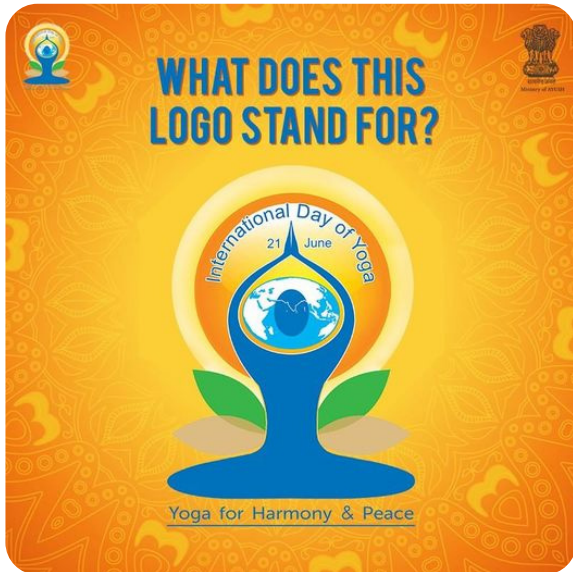
- ♦ **Fire Altars:** At the site of **Rakhigarhi** (Haryana), the archaeologists found evidence of ritual platforms and fire altars. Fire worship is also mentioned in Rig Vedic texts.
- ♦ **River Saraswati:** The mention of the river (now called Ghaggar-Hakra river) is recorded at least 71 times in the Rigvedic text.
- ♦ During archaeological excavations, a majority of Harappan settlements were discovered along the banks of river Saraswati.
- ♦ **Animal bones:** Debate on set of bones found in the Surkotada region of Kutch, Gujarat.
- ♦ Researchers state that these bones belonged to a proper **domesticated horse** (which finds mention in Rig Vedic texts), but another group concluded that these were the bones of **a wild ass**.

## The International Day of Yoga

- Prime Minister Narendra led the **tenth annual International Yoga Day** celebrations in Srinagar on June 21.
- The International Day of Yoga, celebrated globally on **June 21 since its adoption by the UN in 2014**, has the theme "**Yoga for Self and Society**" this year.
- Originating in India, yoga is an ancient practice **uniting body and consciousness**.
- The term 'yoga' means to join or unite in Sanskrit.
- Early yogic philosophy, based on **Patanjali's Yoga Sutras**, emphasised **psychic training for liberation**.
- In the medieval period, tantric schools made yoga exercises more complex, leading to its exclusivity.

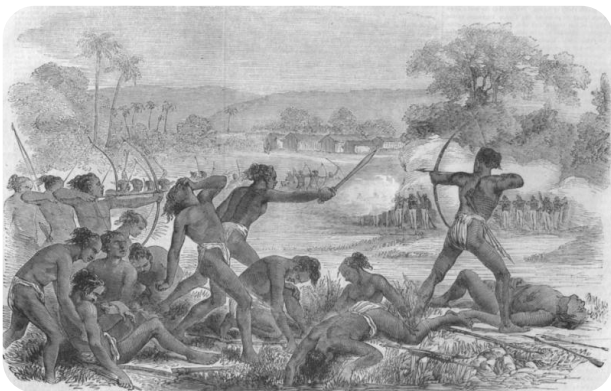
## Yoga Logo

- It reflects the union of individual consciousness with that of universal consciousness.



- A perfect harmony between mind and body, man and nature, the holistic approach to health and well being.
- The **brown leaves** in the logo symbolise the **earth element**, the **green leaves of nature**, **blue the fire element** while the **sun symbolises the source of energy** and inspiration.

## Santhal Hul



- June 30 marked the **169th anniversary** of the Santhal Hul, one of the **earliest peasant uprisings** against the British.
- The **Hul (Revolution) of 1855** was a revolt against imperialism led by four brothers, Sidho, Kanho, Chand, and Bhairav Murmu, along with sisters Phulo and Jhano.
- The Santhal revolution began in the **Santhal Pargana region**, two years before the uprising of 1857.

Santhal pargana is the region in present-day Jharkhand, more specifically, around the **Rajmahal Hills of eastern Jharkhand's Sahibganj district**.

- They also fought against the upper castes, zamindars, darogas, and moneylenders, described by the umbrella term '**diku**', in an attempt to safeguard the economic, cultural, and religious aspects of their lives.
- The British relocated the Santhals to the forested area of **Damin-i-Koh**, dislodging the indigenous Pahariya community, as part of their revenue collection strategy.
- However, the Santhals faced severe colonial oppression, including exploitative moneylenders and the police leading to the rebellion.

## Nalanda University



- The Prime Minister has inaugurated the Nalanda university campus in Rajgir, Bihar near the ancient Nalanda Mahavihara.
- Nalanda mahavihara** was an ancient university **founded by Kumar Gupta** of the **Gupta dynasty in Bihar in the early 5th century**.
- It had many episodes of decline from the fall of **Harshavardhana's rule (647CE)**.
- Nalanda was a **monastic establishment** in the sense that it was primarily a place where monks and nuns lived and studied **as well as a scholastic institution**.
- Subjects such as medicine**, the ancient Indian medical system Ayurveda, religion, **Buddhism, mathematics, grammar, astronomy, and Indian philosophy were taught there**.
- The Chinese monk **Xuan Zang** studied in Nalanda during **Harshavardhana's reign**.
- It is a **UNESCO World Heritage Site**.

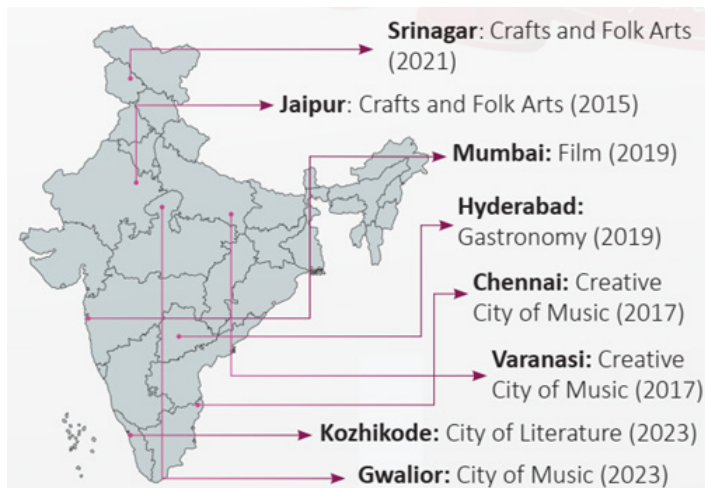
## World Craft Cities

- **Srinagar** has become the **fourth Indian city** to be recognised as a **‘World Craft City’** by the **World Craft Council (WCC)**.
- **Jaipur, Mamallapuram ( stone carvings) and Mysore** are the other Indian cities that have been **previously recognised as World Craft Cities**.
- The **city’s crafts**, ranging from **Pashmina and Kani shawls and Kashmiri carpets to intricate woodwork and papier-mâché, walnut wood carving, etc** reflect the region’s cultural soul and artistic genius.
- The World Craft City (WCC) initiative was launched in 2014 by the World Crafts Council International (**WCCI**), a **Kuwait-based NGO**.
- It acknowledges the contributions of local authorities, craftspeople, and communities to cultural, economic, and social development worldwide.
- **WCC aims to establish a network of craft cities globally**, promoting the principles of the **creative economy and preserving traditional crafts**.

## UNESCO Creative Cities Network (UCCN)

- Recently, **Kozhikode** was officially declared as **India’s first UNESCO ‘City of Literature’**.
- The **UCCN was established in 2004** to promote cooperation with and among cities that have identified creativity as a strategic factor for **sustainable urban development**.
- UNESCO designates the creative cities in **seven fields**.
  1. Crafts and Folk Art
  2. Media Arts
  3. Film
  4. Design
  5. Gastronomy
  6. Literature
  7. Music
- There are around 350 creative cities around the world that currently make up this network.
- **Kozhikode** has been given the **tag of City of Literature**, the **first to hold such a title in the country**.

## Indian cities in the list includes:



## Jagannath temple, Puri



- The **four gates of the Jagannath Temple in Puri, Odisha** have reopened after three were closed for four years due to the pandemic.
- This revered **Vaishnava site is dedicated to Jagannath (a form of Vishnu), Lord Balabhadra, and Devi Subhadra**.
- Built in the **12th century during King Anantavarman Chodaganga Deva’s reign**, it exemplifies **Kalinga architecture**, a sub-school of Nagara.
- The **Ratha Yatra festival and the Nabakalebara ceremony**, where the wooden idol of Jagannath is replaced every 12 or 19 years, are notable events.
- The temple is **part of the Char Dham circuit** and was known as the **“white pagoda”** by European sailors in the 19th century.

# Polity & Governance

## Parole

- Karnataka HC orders release of convict on parole to fulfil wife's conjugal right (sexual relations regarded as exercisable in law by each partner in a marriage) to have progeny.
- It is a conditional, temporary release for specific reasons (**justification is necessary**) before the completion of a sentence.
- There is **only a temporary suspension** of the sentence and granted on the **promise of good behaviour**.
- It is **not a matter of right** and aims to address specific emergencies like medical and other family emergencies.
- It has its legal basis in the **Prison Act, 1894** and is subject to the nature of the crime and behaviour in prison and granted in cases of short-term confinement.
- It is granted by either the prison authorities or the court, depending on the jurisdiction.
- Prisoners convicted of multiple murders or under the anti-terror Unlawful Activities Prevention Act (UAPA) are **not eligible** for parole.

## 50% ceiling on reservation

- Patna High Court set aside notifications by the **Bihar government increasing reservation** in government jobs and educational institutions from **50% to 65%**.

### The Indra Sawhney ruling

- The 50% ceiling was established by the Supreme Court in its **landmark 1992 decision** in Indra Sawhney v Union of India in order to **ensure "efficiency" in administration**.
- The court **allowed for the possibility of exceeding the limit** in extraordinary situations to ensure adequate representation of backward classes.

- The Supreme Court upheld the **27% quota** for socially and economically backward classes (SEBC) and set two important precedents:
- Criteria to qualify for reservation is **"social and educational backwardness"**.
- SC reiterated the 50% limit that the court had laid down in earlier judgments like M R Balaji v State of Mysore, 1963, and Devadasan v Union of India, 1964.
- However, the **103rd Constitutional Amendment, 2019** brought in the 10% reservation for Economically Weaker Sections (EWS).
- SC in **"Janhit Abhiyan v. Union of India"** case, 2022 upheld this inclusion.

## Samvidhaan Hatya Diwas

- The government of India has decided to observe the **25th of June** every year as 'Samvidhaan Hatya Diwas.'
- The day will commemorate the massive contributions of all those who endured the inhuman pains of the **1975 Emergency**.
- The Emergency period spanned for 21-months from 1975 to 1977 when Prime Minister Indira Gandhi had a state of emergency declared across the country citing internal and external threats to the country.
- It was officially issued on 25 June 1975 by **President Fakhruddin Ali Ahmed** under **Article 352**.

## Special Lok Adalat

- To commemorate 75 years of the Supreme Court of India, Chief Justice of India DY Chandrachud announced the commencement of a **special Lok Adalat** from July 29 to August 3.
- **Lok Adalat, or People's Court**, is part of the **Alternative Dispute Resolution (ADR)** system.
- The **first Lok Adalat was held in Gujarat** in 1982, gaining **statutory status under the Legal Services Authorities Act, 1987**.
- Organised by State/District **Legal Services Authorities** or Supreme Court/High Court/

Taluk Legal Services Committees, these courts typically consist of a **judicial officer, a lawyer, and a social worker**.

- They hold the same **powers as Civil Courts** under the Code of Civil Procedure (1908).
- Awards are **final and binding** with no appeal.
- **No court fees** are required, and any paid fees are refunded if settled at Lok Adalat.

### Twin Test under PMLA

- The Enforcement Directorate (ED) challenged a trial court's order granting bail to Arvind Kejriwal on the ground that the court had failed to apply the **'twin test'** under PMLA.

### Prevention of Money Laundering Act (PMLA), 2002

- PMLA, enacted to address India's commitment under the **1988 Vienna Convention**, aims to combat money laundering.
- The **Enforcement Directorate (ED)** investigates money laundering offences, while the **Financial Intelligence Unit – India (FIU-IND)** **gathers intelligence** on suspected financial transactions.
- The Act has **three main objectives**: to prevent and control **money laundering**, to **confiscate property** obtained through laundered money, and to **address related issues**.
- **Section 45** sets conditions for bail, requiring that the **Public Prosecutor be given a chance** to oppose the bail application, and the **court must apply a twin test**: the accused must be reasonably believed not to be guilty and must not be likely to commit further offences while on bail.

### Renaming Kerala

- The Kerala Assembly **unanimously passed a resolution** urging the Centre to rename the state as "Keralam" in the Constitution.
- The name **"Keralam"** comes from Malayalam, Kerala's native language.
- The term **"Keralaputra,"** mentioned in **Emperor Ashoka's Rock Edict II (257 BCE)**,

refers to the Cheras, an ancient southern Indian dynasty, highlighting the name's historical roots.

- Renaming the state to "Keralam" would affirm Kerala's cultural identity and linguistic heritage, **aligning administrative practices with local sentiment**.

### Procedure for name change

- The power to change a state's name lies with the Parliament, though either the state or Parliament can initiate the process via a resolution.
  1. If initiated by Parliament, a resolution **must be recommended by the President**.
  2. The **state legislature can independently pass a resolution** for the proposed change, authorising the state government to present it to the Government of India, including changes to the Hindi name.
  3. The resolution is **then sent to the central government**.
  4. If the central government agrees, **a bill is introduced in Parliament with the President's recommendation**.
  5. The President **refers the bill to the state's legislature** for comments within a specified or extended timeframe.
  6. The state legislature votes on the bill, but the **result is non-binding on the President**.
  7. The bill, with or without amendments, must be passed by **a simple majority in both houses** of the Parliament.
  8. Once the **President signs the bill**, the change is effected as notified.

### New Council of Ministers

- The Union Council of Ministers (COM) headed by Prime Minister Narendra Modi was sworn in on June 9, 2024. Article 75 mentions the appointment, tenure, responsibilities, and powers of the Council.

### Article 75

- The PM shall be **appointed by the President** and the other Ministers shall be appointed by the President on the advice of the PM.

- **91st Amendment Act of 2003** provided that the total number of ministers, including the Prime Minister, in the COM shall not exceed 15% of the total strength of the Lok Sabha.
- A minister who is **not a member** of the Parliament for any period of **six consecutive months** shall cease to be a minister.
- The Council of Ministers shall be **collectively responsible** to the House of the People.

### The Public Examinations (Prevention of Unfair Means) Act, 2024

- The Act that aims to prevent unfair means in public examinations and common entrance tests held across the country came into effect in June.
- The Act aims to **prevent unfair practices in public examinations by bodies** like UPSC, the Staff Selection Commission (SSC), the railways, banking recruitment examinations and the National Testing Agency (NTA) among others.
- Offences will be investigated by officers of **at least the rank of Deputy Superintendent of Police** or Assistant Commissioner of Police.
- All offences are **classified as cognizable, non-bailable, and non-compoundable**.
- Section 11 addresses organised crimes, imposing penalties of **5 to 10 years' imprisonment** and fines up to 1 crore rupees.
- **Institutions** involved in organised crimes may have their assets seized and forfeited.

### Maternity leave in case of surrogacy

- The Centre has notified amended rules to allow women government employees to take **180 days of maternity leave** in case they have children through surrogacy.
- The government has amended the **Central Civil Services (Leave) Rules, 1972** to include provisions for surrogacy.
- The **"commissioning mother" is now entitled to 180 days** of child care leave, and the **"commissioning father" is granted 15 days** of paternity leave.

- Both the surrogate and the commissioning mother can receive 180 days of maternity leave if they have **fewer than two surviving children** and are government servants.
- Previously, there were no maternity leave rules for surrogacy cases.

The **commissioning mother** is the intended mother **who arranges for a surrogate** to carry and give birth to her child

The **surrogate mother** is a woman who carries and **gives birth to a child for another individual** or couple (the commissioning parents) through a legal arrangement.

### Appointments Committee of the Cabinet (ACC)

- The Appointments Committee of the Cabinet (ACC) approved a year's extension in service to the Director, Intelligence Bureau (IB) and the secretary-general of the National Human Rights Commission (NHRC).
- It is responsible for appointing **senior officials** to key positions in the central government and **public sector undertakings**.
- Established in 1950, ACC is chaired by the **Prime Minister** and includes the **Minister of Home Affairs** as a member.
- Some appointments include the **Principal Secretary** to the Prime Minister of India, National Security Advisor (NSA), Cabinet Secretary, Chief of Defence Staff and Secretaries to Government of India, among others.

### Section 197 of the Criminal Procedure Code (CrPC)

- The Kerala High Court has held that sanction of the government under **Section 197 of the Criminal Procedure Code (CrPC) is required to prosecute police personnel** for any alleged illegal act done as part of their official duty.
- The Section defines that **no court is capable of taking cases** against public servants and judges in litigation against crimes committed **except with prior sanction** from the competent authority.
- This Section gives **immunity to public servants** who work for the people with good faith.

- The same provision has been covered under **Section 218** of The **Bharatiya Nagarik Suraksha Sanhita (BNSS)**, 2023.
- In the recent case of **Shadakshari v. State of Karnataka & Anr. 2024**, the Supreme Court observed that Section 197 of the CrPC **does not provide protection for every act** or omission by a public servant during their service.
- The protection is limited **solely to acts or omissions performed in the discharge of official duties**.

## Articles 25 and 26 of the Constitution

- A Division Bench of the Kerala High Court **dismissed a plea by a 10-year-old girl** for permission to go on a pilgrimage to Sabarimala. The court said the restriction of women in places of worship was pending consideration before a larger bench of the Apex Court in a review petition.

### Article 25

- ◆ It grants everyone the equal right to freedom of conscience and the ability to freely profess, practice, and propagate their religion.
- ◆ This right is **subject to restrictions** of public order, morality and health and to the other provisions of Part III of the Constitution.
- ◆ It also provides that the **state has the authority to regulate or restrict secular activities** and bring about social reform.

### Article 26

- ◆ It grants every religious denomination **the right to manage its religious affairs** and administer itself **subject to public order, morality and health**.
- ◆ It includes the right to acquire the **immovable and movable property** and to administer such property according to the law.

## Pro-tem Speaker

- Bhartruhari Mahtab, a seven-term parliamentarian, was appointed as **Pro-tem Speaker of the 18th Lok Sabha by President Droupadi Murmu**.
- The term “pro-tem,” meaning “**for the time being**” in Latin, refers to a temporary role that presides over initial proceedings until a permanent Speaker is elected.
- Though **not explicitly mentioned in the Constitution**, the Pro-tem Speaker is usually the senior-most member of the house.
- The role involves **administering oaths** to new MPs or MLAs and facilitating the **election of the new Speaker**.

## The Office of Speaker of Lok Sabha

- Om Birla has been **re-elected as the Speaker** of the Lok Sabha for a second term, marking the **fourth instance** since 1952 when the Speaker was elected through a formal election.
- The Speaker, as the constitutional and ceremonial head of the Lok Sabha, safeguards members’ powers and privileges and interprets House functions.
- **Article 93** of the Indian Constitution mandates the **election** of the Speaker and Deputy Speaker by a **simple majority** from among the members.
- The Constitution **does not specify election procedures or time limits**, leaving these details to the legislatures.
- The Speaker and Deputy Speaker **remain in office even after the Lok Sabha is dissolved** until new elections are held.

## Leader of Opposition (LoP)

- **Rahul Gandhi** was appointed as Leader of Opposition (LoP) in the 18th Lok Sabha, a role that had been **vacant for 10 years** due to the lack of a party with sufficient numbers.
- The LoP, who represents the largest opposition party with at least one-tenth of the House seats, acts as the voice of the opposition and is **akin to a shadow Prime Minister** with a shadow Cabinet.

- Although **not mentioned in the Constitution**, the position is recognized under the Salaries and Allowances of Leaders of Opposition in **Parliament Act, 1977**, granting equivalent benefits to a cabinet minister.
- The LoP is also a member of key committees and selection bodies for important statutory positions.

IN THE POST IN THE PAST
<b>SUSHMA SWARAJ</b> (DEC 2009 TO MAY 2014)
<b>L K ADVANI</b> (MAY 2009 TO DEC 2009; MAY 2004 TO MAY 2009)
<b>SONIA GANDHI</b> (OCT 1999 TO FEB 2004)
<b>SHARAD PAWAR</b> (MAR 1998 TO APR 1999)
<b>ATAL BIHARI VAJPAYEE</b> (JUN 1997 TO DEC 1997)
<b>RAJIV GANDHI</b> (DEC 1989 TO DEC 1990)

## eSakshya App

- The **Union Ministry of Home Affairs (MHA)** tested the eSakshya (e-evidence) app before implementing three new criminal laws.
- This mobile app **helps police record crime scenes, search and seizure processes, and upload evidence** to a cloud platform.
- Each recording can be up to **four minutes long**, and multiple files can be uploaded per FIR.
- The app, developed by the **National Informatics Centre (NIC)**, aims to improve the quality and reliability of evidence using audiovisual technology and is available to all police stations.

## Opinion poll & Exit poll

- Several exit polls of the 2024 general election conducted by different media organisations were published after the final phase of voting concluded.

Category	Opinion Poll	Exit Poll
Definition	These are conducted well before the election to gauge public voting intentions and preferences.	Exit Poll to be a survey that is conducted based on a set of questions that are asked to voters exiting the polling stations after casting their vote.
Time of survey	It is a <b>pre-election poll</b>	It is a <b>post-election poll</b>

Who participates in the survey?	People or voters who may or may not vote	People or voters who have voted
What are the limitations?	<ul style="list-style-type: none"> <li>• Voters may change their opinions after expressing them. Voting intentions are volatile.</li> <li>• People might lie. It is not considered accurate.</li> <li>• In the poll, non-registered voters may also be included.</li> </ul>	<ul style="list-style-type: none"> <li>• It reveals the political mood of the nation but there have been various instances when exit polls predictions turned out to be wrong.</li> <li>• People might lie.</li> </ul>

### Regulatory frameworks

- ♦ The RP Act, 1951, under Section 126A, stipulates that **exit polls cannot be conducted or disseminated until the final phase of voting concludes.**
- ♦ A person can be punished by up to two years imprisonment, a fine, or both for the violation of Sec 126A.

## Economy

### Financial Services Institution Bureau (FSIB)

- FSIB has recommended CS Setty as the next SBI chairman.
- FSIB is set up under the **Department of Financial Services of the Ministry of Finance** for making **recommendations for the appointment of full-time directors and non-executive chairpersons of State-run financial services institutions.**
- Constituted on 1st July 2022, by **replacing the erstwhile Bank Board's Bureau (BBB).**

#### The FSIB will comprise:

- A **chairperson nominated by the central government.**
- The **secretaries** of the departments of financial services and enterprises.
- The **chairman of the IRDAI.**
- Deputy governor of RBI.

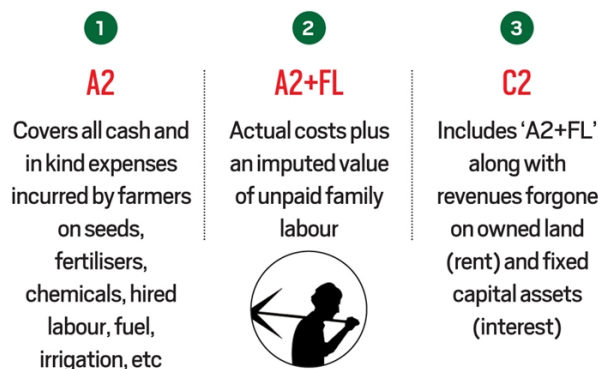
- Additionally, it will have **three part-time members** who are experts in banking and three more from the insurance sector.

### MSP for Kharif crops

- The Cabinet has approved the Minimum Support Prices (MSP) for Kharif Crops for Marketing Season 2024-25, aiming to provide fair remuneration to farmers.
- It is a '**minimum price**' for a crop **that the government considers remunerative** for farmers and hence **deserving of 'support'.**
- It is also the price that **government agencies pay whenever they procure** the particular crop.
- It shields farmers from market fluctuations, offering stability and income security.
- The Cabinet Committee on Economic Affairs (CCEA), **determines the MSP on the recommendations** of the Commission for Agricultural Cost and Prices (CACP) based on production costs, market trends, and demand-supply dynamics.
- The **government is not legally bound to pay** these even if open market rates for the said produce are ruling below their announced floor prices.

The Centre fixes MSPs for every kharif and rabi cropping season based on recommendations of the Commission for Agricultural Costs and Prices (CACP)

● When a farmer grows a crop, he incurs costs, some of it explicit and some implicit or unpaid. The CACP considers the following costs:



#QUIXPLAINED

2

## Composition of India's Forex reserves: As on June 7, 2024

Item	Value
Foreign Currency Assets (FCA)	\$576.3 billion
Gold reserves	\$56.98 billion
Special Drawing Rights (SDR)	\$18.16 billion
Reserve tranche position in the IMF	\$4.34 billion

## SDR allocations: what are they and how are they used?



### What is an SDR?

Special Drawing Rights (SDRs) are international reserve assets created by the IMF to supplement the official reserves of member countries. The value of an SDR is based on a basket of five currencies.

### How are SDRs used?

SDRs are allocated to IMF member countries in proportion to their relative share in the IMF. Countries can exchange SDRs for hard currencies with other IMF members.



INTERNATIONAL MONETARY FUND

IMF.org/SDR

## CROPS COVERED UNDER MSP

### KHARIF CROPS (14)

1. Paddy
2. Jawar
3. Bajra
4. Ragi
5. Maize
6. Arhar
7. Moong
8. Urad
9. Cotton
10. Ground Nuts
11. Sunflower
12. Soyabean
13. Sesamum
14. Nigerseed

### RABI CROPS (7)

1. Wheat
2. Barley
3. Gram
4. Masur
5. Rapeseed & Mustard
6. Safflower
7. Torai

### CALENDAR YEAR CROPS (4)

1. Copra
2. De-husked Coconut
3. Jute
4. Sugar Cane (FRP)

- CACP recommends MSP for 22 crops before the sowing period each year
- MSP derived for Toria based on MSP for Rapeseeds & Mustard and for De-husked Coconut on the Basis of MSP of Copra.
- Fair and Remunerative prices for Sugar is also declared

## Foreign Exchange (FOREX) Reserves

- India's foreign exchange reserves had reached a record high of \$655.82 billion as of June 7.
- Forex reserves are **external assets in the form of gold, SDRs and foreign currency assets** accumulated by India and **controlled by the Reserve Bank of India** to support exchange rate and set monetary policy.

## Significance of Forex reserves

- ◆ Helps to **reduce vulnerability** due to sudden disturbances in foreign capital flows from crises.
- ◆ Allows easier **currency conversions**.
- ◆ A good forex reserve helps in **attracting foreign trade**.
- ◆ Rising forex reserves contribute to **appreciation of the domestic currency**.

## Repo Rate

- The Reserve Bank of India's (RBI) Monetary Policy Committee (MPC) has kept the Repo rate unchanged at 6.5% for the eighth consecutive time.
- **Repo Rate** is the **interest rate at which the RBI provides overnight (short term) loans to banks** against the collateral of government and other approved securities under the Liquidity Adjustment Facility (LAF).
- Repo Rate is also called the **"Policy Rate"**.
- The **MPC decides on changes to it every two months**.
- **Reverse Repo Rate** is the **interest rate at which the RBI absorbs liquidity, on an overnight basis, from banks** against the collateral of eligible government securities under the LAF.
- **LAF refers to the RBI's operations through which it injects/absorbs liquidity into/from the banking system**.
- It consists of **repo/reverse repos, Standing Deposit Facility (SDF) and Marginal Standing Facility (MSF)**.

## GST Council

- The 53rd meeting of the Goods and Services Tax (GST) Council was convened in Delhi. It was the first meeting of the year.
- A **constitutional body constituted by the President** as per **Article 279A** of Constitution to foster fiscal federalism.
- It came into effect in 2017 through the implementation of the **101st Amendment to the Constitution** of India by the Indian government.
- The council is a joint forum of Centre & states **responsible for providing recommendations to both the Union and State governments in matters of GST**.

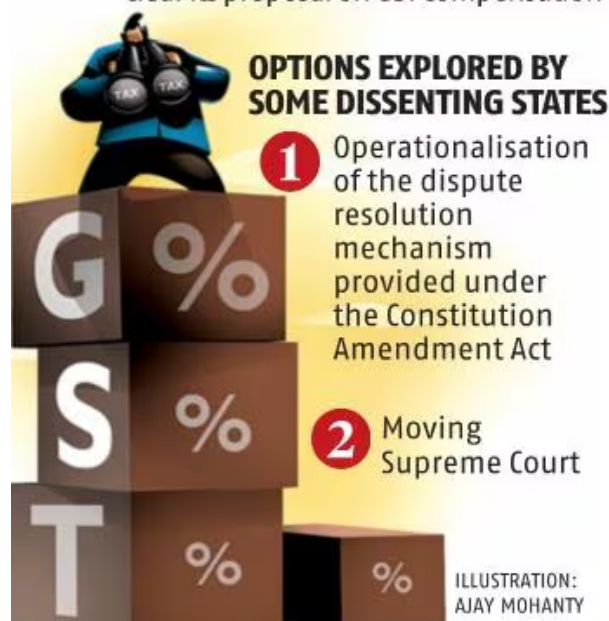
### Objectives:

- ◆ Smooth implementation of GST
- ◆ Harmonisation of taxes
- ◆ Monitoring taxation regime

- **Composition: Chaired by the Union Finance Minister** and members include the Union Minister of State, in-charge of Revenue of finance and ministers in charge of finance or taxation or any other ministers nominated by each state government.
- In 2022, the **Supreme Court** in **Union of India vs M/s Mohit Minerals**, stated that the **recommendations of the GST Council were not binding on the states**.

## VOTING IN GST COUNCIL

- **Not less than 75% of votes** of members present required to pass resolution
- **Centre has weighting of one-third (or 33.3%) of total votes cast**
- **Each state has 2.15% of votes cast, irrespective of size**
- **Centre requires support of 20 states** to clear its proposal on GST compensation



## Financial Stability Report

- The Reserve Bank of India has released the **29th issue of the Financial Stability Report (FSR)**.
- The FSR is **published biannually by the RBI**, provides a comprehensive assessment on the resilience of the Indian financial system and risks to financial stability.
- A **subcommittee of the Financial Stability and Development Council (FSDC)**, led by the RBI Governor, puts together the FSR.

## Ways and Means Advances (WMA)

- Reserve Bank of India (RBI) has increased the Ways and Means Advance (WMA) limit of States/UT to Rs 60,118 crore from existing Rs 47,010 crore.
- WMA is a **temporary loan facility provided by the RBI to the Indian government (both central and state)** to bridge temporary mismatches in their receipts and expenditures.
- Borrowings through WMA are **short-term loans** and **must be repaid within three months** and are usually **offered at the repo rate**.
- There are mainly **two types of WMAs**:
  - ◆ **Special Drawing Facility (SDF) / Special WMA**: These are secured loans provided against government securities as collateral. The interest rate on SDF is typically lower than normal WMA. The SDF is generally availed before availing the WMA.
  - ◆ **Normal WMA**: These are unsecured loans provided against the creditworthiness of the government. It is availed after the exhaustion of the SDF limit.
- When the advances exceed their SDF and WMA limits, **an Overdraft (OD) facility is being provided which is an extension of the WMA**.
- Further, if the WMA exceeds 90 days, it would also be treated as an overdraft (Generally, the interest **rate for an overdraft is repo plus 2%**).
- The borrowing limits for WMA are mutually decided by the RBI and the Government.

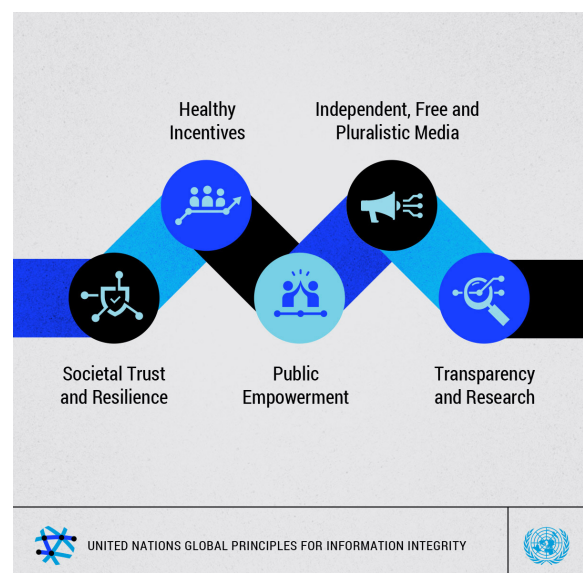
## International Relations

### United Nations Global Principles for Information Integrity Framework

- The United Nations Secretary-General Antonio Guterres unveiled the Global Principles for Information Integrity.
- The Framework aims at addressing the **escalating threats** posed by **misinformation, disinformation, and hate speech** in the digital realm.

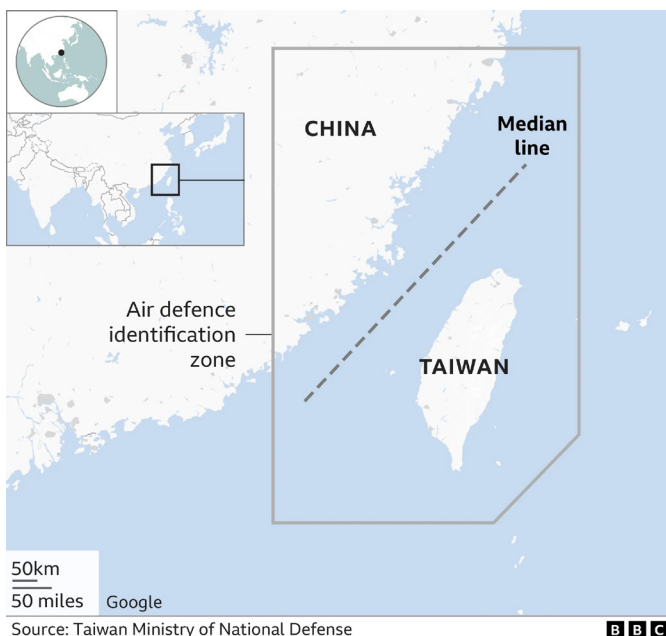
#### The 5 Principles:

- **Societal Trust and Resilience**: Trust is the confidence in the reliability of information sources, while resilience is the ability to handle disruptions and manipulations.
- **Healthy Incentives**: Creating incentives that promote truthful content and discourage misinformation.
- **Public Empowerment**: Ensuring people have control over their online experience, can make informed media choices, and express themselves freely.
- **Independent, Free, and Pluralistic Media**: The press is free when journalists can report safely and openly, including those in vulnerable and marginalised situations.
- **Transparency and Research**: Technology companies should increase transparency to better understand information spread, personal data use, and risks to information integrity.



## Grey zone warfare

- Taiwan, which rejects Beijing's sovereignty, has complained that China has been using so-called grey-zone warfare, which wields irregular tactics to exhaust a foe without resorting to open combat.
- Grey zone warfare are tactics aimed at weakening an adversary over a prolonged period.
- It is a metaphorical state **of being between war and peace**, where state and non-state actors compete using **unconventional strategies** to achieve strategic objectives **without triggering a traditional military response**.
- For example:- China regularly crosses Taiwan's **Air Defence Identification Zone (ADIZ)** and Beijing is testing how far Taipei will go to reinforce it.
- Another example is China demonstrating its ability to fight and win Taiwan through training drills in the People's Liberation Army Eastern Theater Command (PLA ETC).



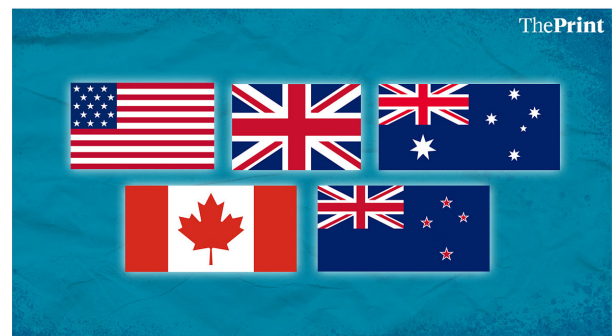
## NATO

- Recently, ambassadors of the **32 NATO members** officially appointed outgoing **Dutch PM Mark Rutte as its next secretary general**.

## About NATO

- NATO, an intergovernmental military alliance of **32 countries from North America and Europe**, was formed in 1949 with the signing of the **Washington Treaty**.
- Headquartered in **Brussels**, Belgium, **Sweden became the 32nd member** in 2024.
- NATO's fundamental goal is to safeguard the Allies' freedom and security by political and military means.
- Article 5, the core of the Alliance**, promises collective defence, stating that an **attack on one ally is an attack on all**.
- Beyond **collective defence**, NATO engages in crisis management, promotes democratic values, and maintains strong military capabilities.
- Article 5 has been invoked only once, **after the 9/11 attacks**.

## The Five Eyes



- Australia has **recently allowed non-citizens from the Five Eyes Alliance** to join its armed forces to address a troop shortage.
- The Five Eyes, an intelligence partnership between the **UK, USA, Canada, Australia, and New Zealand**, originated from the **1941 Atlantic Charter** and the post-World War II **UKUSA Agreement**.
- This alliance cooperates in signal intelligence and monitors electronic communications of citizens and foreign governments.
- One of the Five Eyes' core principles is that members do not spy on other governments in the alliance

## Group of Seven (G7)



### G7 in numbers

- 7** member countries
- 1975** first meeting of the group of six
- 40%** of global GDP
- 1/10** of world's population
- 2014** Russia suspended over annexation of Crimea

Source: BBC research

- Recently, the Prime Minister attended the **annual G7 summit in Apulia, Italy**, where India was invited as an **Outreach Country**.
- The G7, an informal bloc of **industrialised democracies (USA, Canada, France, Germany, Italy, Japan, UK)**, was **founded in 1975** in response to the oil crisis and now addresses global issues like security, trade, climate, development, and AI.
- The **EU attends the summit but is not a member**.
- Previously the G8, **Russia was excluded** due to the Crimean invasion of 2014.
- The G7 has **no formal legislative power**, and decisions are made by consensus.

## International Organization for Migration (IOM)



- Recently, the UN migration agency said at least 49 migrants were killed and more than 140 were missing after a boat capsized off the coast of Yemen.
- The IOM was established in 1951, **as a result of the chaos and displacement of Western Europe following the Second World War**.

- It is the leading **UN affiliated intergovernmental organisation in the field of migration** and works closely with governmental, intergovernmental and non-governmental partners.
- It is **headquartered in Geneva**, currently with **175 member states (including India)** & 8 observer states.
- IOM works in four broad areas of migration management**
  - 👉 Migration and development
  - 👉 Facilitating migration
  - 👉 Regulating migration
  - 👉 Forced migration
- The **World Migration Report** is published every year by IOM.

## Initiative on Critical and Emerging Technology (iCET)

- Recently, the 2nd review meeting of the India-U.S. iCET was held in New Delhi.
- Launched by **India and USA in 2022** to elevate and expand **strategic technology partnership and defence industrial cooperation** between 2 countries.
- The initiative will be spearheaded by the **National Security Council Secretariat in India and the US National Security Council**.
- It focuses on **areas such as AI, quantum computing, 5G/6G, biotech, space, and semiconductors**.
- Under iCET, the countries emphasis on **six focus areas** of co-development and co-production:
  - ◆ Strengthening **innovation ecosystems**
  - ◆ **Defence innovation** and technology cooperation
  - ◆ Resilient **semiconductor supply chains**
  - ◆ Space
  - ◆ **STEM** (science, technology, engineering, and maths) talent
  - ◆ **Next-generation telecom**

## BRICS

### BRICS summit 2023

The five BRICS emerging world economies – Brazil, Russia, India, China and South Africa – aim to develop trade and economic cooperation that can challenge the developed world's dominance



**Brazil**  
President  
*Lula da Silva*

**Russia**  
Foreign Minister  
*Sergey Lavrov*

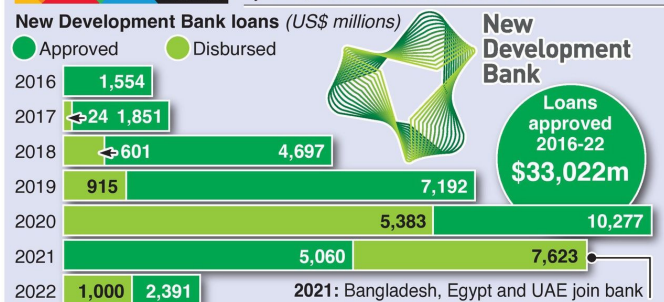
**India**  
Prime Minister  
*Narendra Modi*

**China**  
President  
*Xi Jinping*

**South Africa**  
President  
*Cyril Ramaphosa*

**BRICS 2023**

- **Aug 22-24, 2023:** BRICS 15th summit held in Johannesburg, South Africa
- **Agenda:** Enlargement – 23 countries, including Indonesia, Saudi Arabia and Iran, want to join
- **New Development Bank:** To discuss how NDB – set up in 2015 – can boost fundraising in local currencies to counter U.S. dollar's dominance
- **2016-23:** Of over \$33 billion in loans approved by NDB, two-thirds were in U.S. dollars



Sources: Financial Times, New Development Bank, Reuters Pictures: Getty Images © GRAPHIC NEWS

- India has welcomed Egypt, Iran, UAE, Saudi Arabia, and Ethiopia as new BRICS members at a key foreign ministerial meeting hosted by Russia.
- BRICS, an **acronym for Brazil, Russia, India, China, and South Africa**, is an **association of five major emerging economies** that have come together to foster international collaboration across various key sectors.
- In the **15th BRICS summit** 6 countries namely, **Argentina, Iran, the UAE, Saudi Arabia, Ethiopia and Egypt** were invited to join BRICS. While **Iran, UAE, Ethiopia, Saudi Arabia and Egypt** have joined, **Argentina has decided to stay away**.

### Three Pillars of BRICS:

- ♦ **Political and Security:** Deliberations on important global issues.
- ♦ **Economic and Financial:** Cooperation in economic matters.
- ♦ **Cultural and People-to-People:** Enhancing cultural ties.

### Financial Aspects of BRICS:

- ♦ **New Development Bank (NDB):** Established to finance infrastructure and sustainable development projects.
- ♦ **BRICS Contingent Reserve Arrangement (CRA):** A financial safety net to address balance-of-payments problems.
- ♦ **BRICS PAY:** A mechanism for cross-border transactions.

### Indus Waters Treaty (IWT) 1960

#### Division of rivers as per Indus Waters Treaty

**Eastern rivers to India:** Sutlej, Beas, Ravi

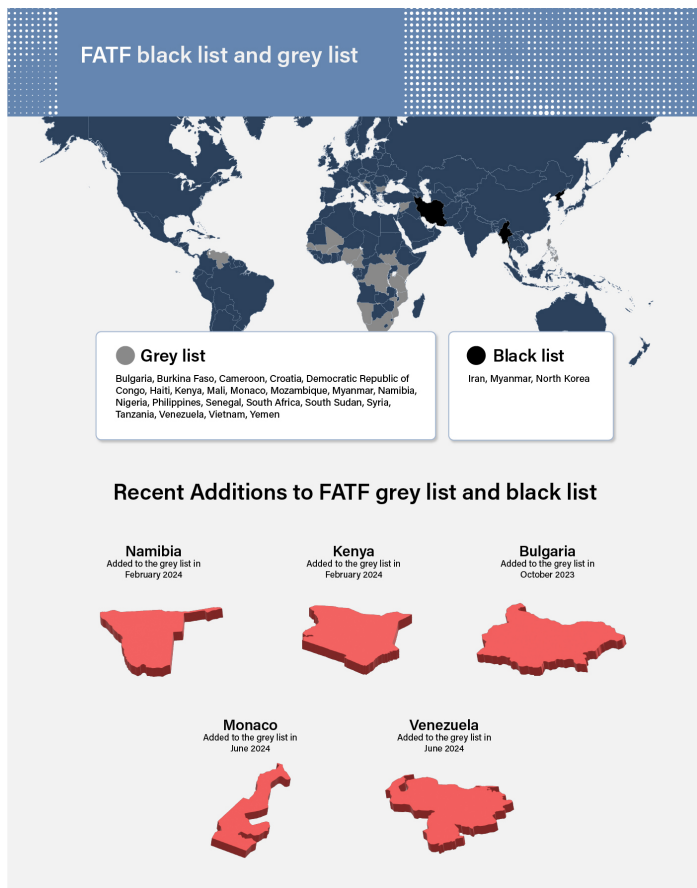
**Western rivers to Pakistan:** Chenab, Jhelum and Indus



- Recently, a five-member Pakistani delegation was flown to Jammu's Kishtwar to inspect power projects set up on the rivers covered under the Indus Water Treaty (IWT) of 1960.
- IWT is a **water sharing agreement** signed between **India and Pakistan, brokered by the World Bank**, regarding the use of the waters of the **Indus River system**.
- The treaty allocates the waters of the **eastern rivers (Ravi, Sutlej, and Beas) to India** for exclusive use, while **Pakistan receives the western rivers (Indus, Jhelum, and Chenab)**, except for non-consumptive uses allowed to India.
- The treaty effectively **gives India 20% of the water** from the Indus River System and the **rest 80% to Pakistan**.
- India has been given the **right to generate hydroelectricity through run of the river (RoR)** projects on the Indus, Jhelum, and Chenab which, subject to specific criteria for design and operational criteria.

- A **run-of-river project**, also called a diversion facility, is a type of hydroelectric power plant that **generates electricity by using the natural flow** of a river without making a dam to store the water.
- **The Permanent Indus Commission**, having Indus commissioners of India and Pakistan, was established to maintain contact, resolve disputes and provide a mechanism for arbitration.

## Financial Action Task Force (FATF)



- India has achieved an outstanding outcome in the Mutual Evaluation by the FATF for 2023-24, placing it in the “regular follow-up” category, shared by only four other G-20 countries.
- FATF is an **intergovernmental watchdog** set up in **1989** out of a G-7 meeting.
- It is **headquartered in Paris, France**.
- **India** joined with ‘observer’ status in 2006 and **became a full member of FATF in 2010**

- FATF **maintains two primary lists** to identify countries with deficiencies in their **anti-money laundering and counter-terrorist financing (AML/CTF) regimes**.
- **Grey list (Jurisdictions under Increased Monitoring)** Includes countries that are considered safe haven for supporting terror funding and money laundering.
- **Black list (High-Risk Jurisdictions subject to a Call for Action)** Includes Non-Cooperative Countries or Territories (NCCTs) that support terror funding and money laundering activities.

## Objectives of FATF

- ✓ Examine and develop measures to combat money laundering
- ✓ Efforts to combat terror financing (added later)
- ✓ Counter the financing of proliferation of Weapon of Mass Destruction (WMD)

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# Environment & Ecology

## Nitrous oxide emission

- India is the world's second largest source of nitrous oxide (N<sub>2</sub>O), according to a global assessment of N<sub>2</sub>O emissions published in the journal **Earth System Science Data**.

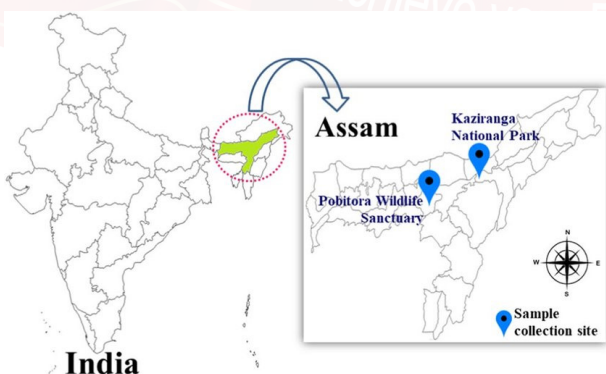
## Nitrous oxide pollution

- ✦ Causes: Human activities such as **agriculture**, fuel combustion, wastewater management, and industrial processes
- ✦ Nitrous oxide molecules stay in the atmosphere for an **average of 121 years** before being removed by a sink or destroyed through chemical reactions.
- ✦ The impact of 1 pound of N<sub>2</sub>O on warming the atmosphere is **298 times** that of 1 pound of carbon dioxide.

## Findings of the report:

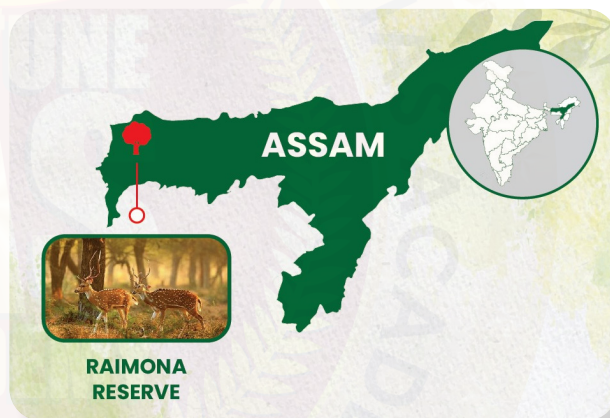
- The top five country emitters by volume of anthropogenic N<sub>2</sub>O emissions in 2020 were **China (16.7%), India (10.9%), the United States (5.7%), Brazil (5.3%), and Russia (4.6%)**.
- The concentration of atmospheric N<sub>2</sub>O reached **336 parts per billion** in 2022 or about **25% above the levels seen before the industrial age**.
- Agricultural production using nitrogen fertilisers, such as ammonia, and animal manure contributed **74% of the total anthropogenic N<sub>2</sub>O emissions** in the last decade.

## Pobitora WLS



- The monsoon has brought a measure of relief to animals in Pobitora Wildlife Sanctuary dealing with extreme heat.
- It is located on the southern bank of the **river Brahmaputra** in Morigaon district, adjacent to Guwahati in Assam and is dubbed as **Mini Kaziranga**.
- It is home to the **highest population density of the Indian One-Horned Rhinoceros**, second only to Kaziranga National Park (KNP).
- The greater one-horned rhino or the Indian rhino is the largest of the rhino species.
- It can be found in **India and Nepal**, particularly in the foothills of the Himalayas, in riverine grasslands and adjacent woodland.
- It falls under the **Vulnerable** category of the IUCN Red List and falls in CITES- Appendix I and Wildlife Protection Act, 1972- Schedule I.
- KNP has the largest population with **2,613 animals**.

## Raimona National Park



- The vulnerable mammal species, Mainland Serow, was recently sighted in Raimona National Park.
- It is the **6th National Park of Assam** located in the **Kokrajhar district**.
- It was declared a national park in 2021 and is located along the **Indo-Bhutan border**.
- It shares contiguous forest patches with **Phibsoo Wildlife Sanctuary and Jigme Singye Wangchuck National Park in Bhutan**.
- It is bounded on the west by the **Sonkosh river** and the **Saralbhangra river** on the east.
- 👉 Both the rivers are tributaries of Brahmaputra.

- The **Pekua river** defines Raimona's southern boundary.
- It is famous for **Golden Langur**, an endemic species which has been named as the **mascot of Bodoland region**.
- It also has Asian elephant, Royal Bengal tiger, Clouded leopard, Indian gaur, Wild water buffalo, Spotted deer, Hornbill, more than 150 species of butterflies, 170 species of birds, 380 varieties of plants and orchids.

### E-Flow

- The Union Jal Shakti Ministry launched an Environmental Flows (E-flows) Monitoring System that allows real-time monitoring of river quality.
- E-Flow was developed by the **National Mission for Clean Ganga** under the **Jal Shakti Ministry**
- This system provides **real-time analysis of the water quality** of the Ganga, Yamuna, and their tributaries, and monitors Namami Gange programme activities at the central level.
- It includes monitoring the **performance of Sewage Treatment Plants (STPs)** to ensure they operate at their rated capacity and uses quarterly reports from the Central Water Commission to track in-flow, out-flow, and mandated E-flow across 11 projects along the Ganga Mainstream.

### The Rhisotope Project

- South African scientists **have injected radioactive material** into live rhinoceros horns in the Rhisotope project.
- Launched in 2021, this nuclear science-based initiative **aims to prevent poaching**.
- The radioactive material makes the horns **poisonous for humans**, since they are largely smuggled for traditional medicines and decorations.
- The dose is strong enough to **trigger global radiation detectors** and lasts **five years**.
- However, the **animal is not affected** and this makes it more cost-effective than dehorning every 18 months.

### Great Nicobar Island Project



#### Project components

- **Galathea Bay International Container Transshipment Terminal (Galathea Bay ICTT):** This is the heart of the project, aiming to handle a massive container cargo volume.
- **Great Nicobar International Airport (GNIA):** A greenfield airport is planned to handle passenger traffic and support logistics.
- **Township Development:** The project includes building townships to accommodate a significantly increased population.
- **Power Plant:** A gas and solar-based power plant is proposed to meet the energy needs of the development.

## Bayesian Convolutional Neural Network

- **Indian National Centre for Ocean Information Services (INCOIS)** has developed a **new product** known as **Bayesian Convolutional Neural Network (BCNN)**.
- BCNN **predicts El Niño and La Niña conditions up to 15 months in advance** using AI, deep learning, and machine learning to improve ENSO phase forecasts.
- The model relies on the **connection between El Niño/La Niña and slow oceanic variations** with atmospheric coupling, providing sufficient lead time for early forecasts.
- It calculates the Nino 3.4 index value, which is the average sea surface temperature (SST) anomaly in the central equatorial Pacific (5°N to 5°S, 170°W to 120°W), to make predictions.

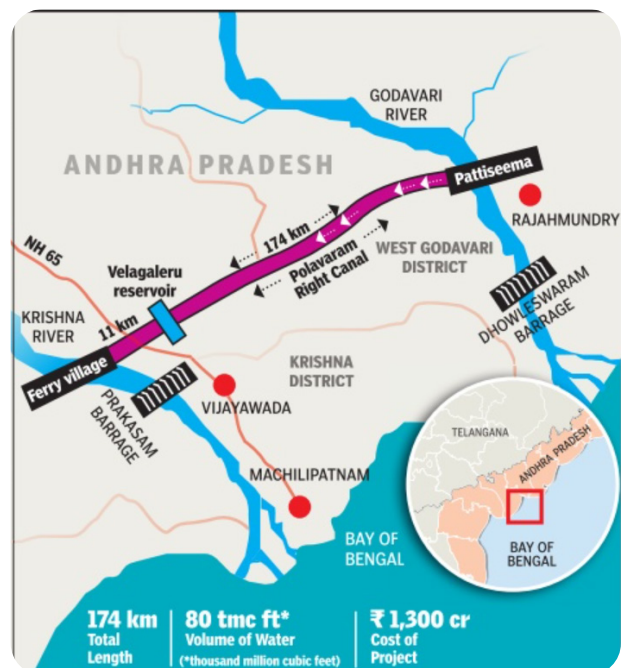
## Hindu Kush Himalayas Snow Update

- Released by the **International Centre for Integrated Mountain Development (ICIMOD)**, a report highlights that the Ganga river basin, India's largest, reached a record low in snow persistence in 2024.
- The Brahmaputra and Indus basins have experienced similar issues, threatening the water supply for millions.
- **Snow persistence**, the fraction of time snow remains on the ground, is crucial as its meltwater sustains people and ecosystems.
- Annually, **snowmelt contributes 23% of the runoff to the Hindu Kush Himalaya (HKH)** region's 12 major river basins.
- The primary reason for the lower persistence in 2024 was **weak western disturbances**.

## Glacial Lake Outburst Flood (GLOF)

- The Uttarakhand State Disaster Management Department (USDMA) initiated a vulnerability study of the 13 glacial lakes, five of them in **"high risk zone"**.
- A **glacial lake outburst flood (GLOF)** is a release of meltwater from glacial lake due to dam failure.
- GLOFs often result in catastrophic flooding downstream.
- GLOFs involve sudden and sometimes **cyclic releases of water** and tend to be rapid events, lasting hours to days.
- Two major glacial lake outburst floods (GLOF) took place in Uttarakhand in the last decade.
- The first was the lake outburst in **Kedarnath valley** in 2013 which led to 6,000 deaths.
- The most recent GLOF occurred in **Chamoli's Rishighanga valley**, in 2021, which claimed 72 lives.

## Polavaram Lift Irrigation Project

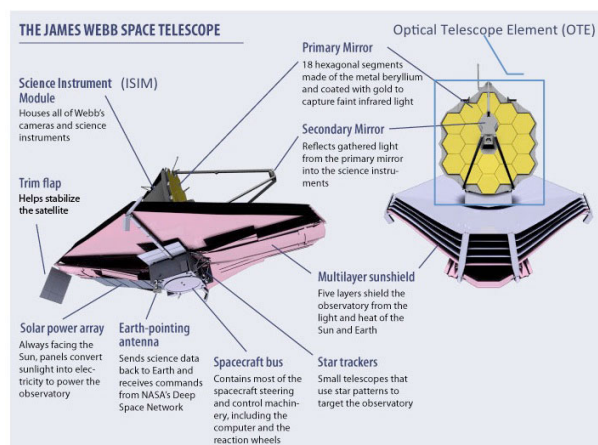


- Andhra Pradesh Chief Minister N Chandrababu Naidu released a White paper on the **Polavaram project**
- It is an **under-construction multipurpose project** on the Godavari River near Polavaram village in Eluru District, Andhra Pradesh.

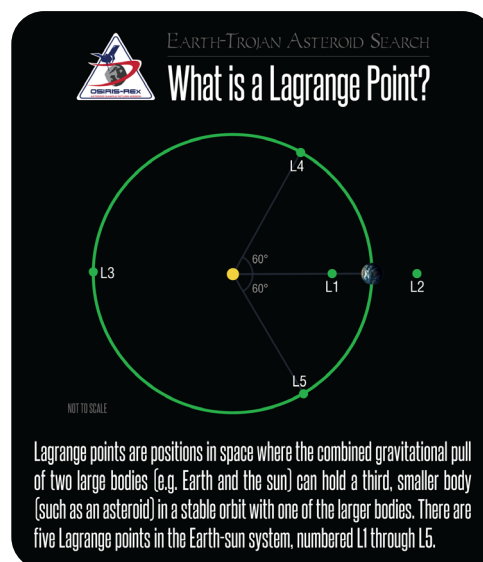
- Given National project status by the Union Government, it aims to lift 80 TMC ft. of water from the **Godavari River to the Krishna River** through its Right Main Canal (RMC) and Left Main Canal (LMC) to supply water to Visakhapatnam.
- Based on the **1980 recommendations of the Godavari Water Disputes Tribunal (GWDT)**, the project benefits upland areas of Visakhapatnam, East Godavari, West Godavari, and Krishna Districts.
- It will create a dam with a **Full Reservoir Level (FRL)** of +45.72 m (+150 ft), submerging some villages in Chhattisgarh and Odisha.
- The project also includes generating **960 MW of hydropower** and providing **drinking water** to 28.50 lakh people in 611 villages.

## Science & Technology

### James Webb Space Telescope (JWST)



- NASA's **James Webb Space Telescope (JWST)** has identified the **earliest-known galaxy**, JADES-GS-z14-0, spanning about 1,700 light-years, approximately 9.5 trillion kilometres.
- As part of the JWST Advanced Deep Extragalactic Survey (**JADES**) program, the international team also discovered the second oldest-known galaxy, JADES-GS-z14-1, dating back to 303 million years post-Big Bang and measuring about 1,000 light-years.
- JWST**, launched in December 2021, is the **largest and most powerful infrared space telescope**, a collaboration between NASA, the European Space Agency (ESA), and the Canadian Space Agency (CSA).
- It is positioned at **Lagrange Point 2 (L2)**, 1.5 million km beyond Earth's orbit.





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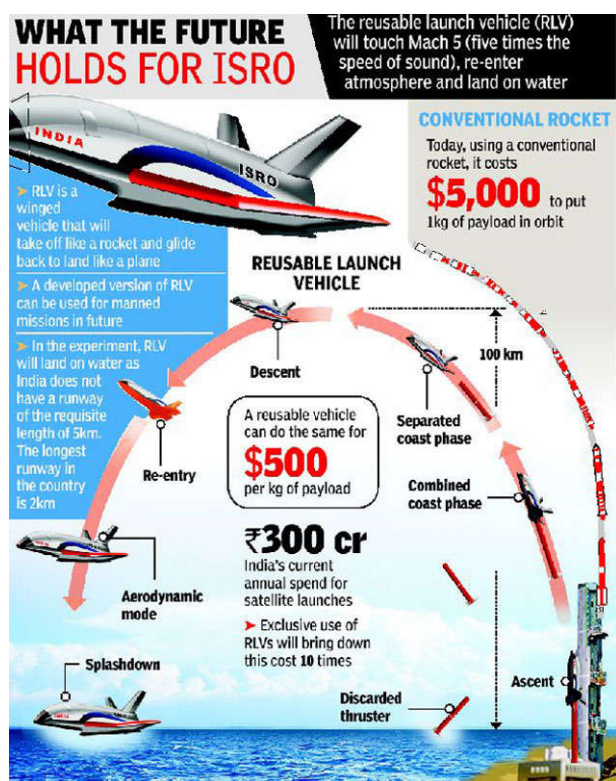
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## Pushpak RLV



- ISRO has successfully completed its **Reusable Launch Vehicle (RLV) technology** demonstrations through the Landing Experiment test (LEX-03) of Pushpak.
- It was held at the **Aeronautical Test Range (ATR) in Chitradurga, Karnataka**.
- India's RLV is named Pushpak after the legendary flying chariot from the Ramayana.
- Unlike traditional expendable launch vehicles, **Pushpak is designed to be recovered and reused** after each mission.
- It aims to be an **all-rocket, Single-Stage-to-Orbit (SSTO) vehicle**, eliminating the need for multiple stages that detach during launch.
- Pushpak is designed to **autonomously land on a runway** after reentry, minimising human intervention and enhancing mission safety.

## KAVACH System

- The recent Kanchanjunga express train collision in Darjeeling, West Bengal has highlighted the need for installation of the KAVACH system to prevent such tragedies.
- It is an **indigenously developed Automatic Train Protection (ATP) system**.

- Kavach was developed by the Research Design and Standards Organisation (RDSO) under Indian Railway (IR) in collaboration with Medha Servo Drives Pvt Ltd, HBL Power Systems Ltd and Kernex Microsystems.
- The Traffic Collision Avoidance System (TCAS)**, with the help of equipment on board the locomotive and transmission towers at stations connected with Radio Frequency Identification (RFID) tags, helps in two way communication between the station master and loco-pilot to convey any emergency message.
- If a red signal is jumped** and two trains come face to face on the same line, the **technology automatically takes over and applies sudden brakes**.
- Additionally, the hooter (siren) activates by itself when approaching a level crossing which helps loco pilots during fog conditions when visibility is low.

## Nagastra-1



- The Indian Army has received the first batch of Nagastra-1, India's first indigenously developed **loitering munition, also known as a "suicide drone"**.
- It is designed and developed by **Economics Explosives Ltd (EEL)**, a subsidiary of Solar Industries Nagpur, in collaboration with Bangalore's Z-Motion.
- Nagastra-1 flies like a small drone, loiters over a target, and can attack with a bomb.
- It has a **'Kamikaze mode'** for search and destroy missions and can carry out precision strikes via GPS with an accuracy of two metres.
- Unlike typical suicide drones, **Nagastra-1 can abort a mission**, be retrieved with a parachute, and be reused.

## Bharat Biotech Patent

- **Bharat Biotech**, maker of the indigenous coronavirus vaccine **Covaxin**, admitted to an “inadvertent error” in their patent filings by **omitting scientists from the Indian Council of Medical Research (ICMR)**.
- In India, patents are a form of **intellectual property granted by the government**, providing the owner with the legal right to prevent others from making, using, or selling an **invention**.
- **Patent is valid for 20 years** from the filing date.
- The **Department for Promotion of Industry and Internal Trade (DPIIT)** under the Ministry of Commerce and Industry administers patents.
- **The Patents Act, 1970**, governs the patenting system and was amended by the Patents (Amendment) Act, 2005, to include product patents for all fields of technology.

## H1N1

**Origin**

Originated in pigs in central Mexico

**Caused by**

Type A strain of influenza virus that usually infects pigs.

First case in India: **May 16, 2009**, Hyderabad

**Signs and symptoms**

- High fever
- Headache
- Muscle pain
- Sore throat
- Chills
- Malaise and fatigue
- Vomiting, nausea, and diarrhoea

**Prevention methods**

- Wash your hands often
- Avoid contact with sick people
- Keep alcohol-based sanitizers handy
- Sanitize frequently touched surfaces
- Stay at home if you feeling sick

**Vaccination**

The quadrivalent flu vaccine is effective for both swine flu and normal flu.

**Does wearing a mask prevent the flu?**

Wearing any mask will reduce the chances of contracting swine flu.

**When should you see a doctor?**

If you are pregnant, have a chronic illness or a compromised immune system, you should visit a doctor right away if you experience signs of flu.

- Several H1N1 fever cases have been confirmed in Kerala in the last month.
- **H1N1, or swine flu**, is a highly **contagious respiratory disease in pigs** caused by **swine influenza A viruses**.
- H stands for **Hemagglutinin** and N stands for **neuraminidase** are proteins found in all types of influenza and they work as a viral team.
- **Transmission to humans is rare but can occur through contact with infected pigs** or contaminated environments.
- The H1N1 virus **spreads between humans via respiratory droplets** from coughing or sneezing.
- In tropical regions, the **primary peak is during the monsoon**.
- **Antiviral drugs can mitigate the illness**, and prevention includes controlling swine influenza in pigs, preventing transmission to humans, and limiting human-to-human spread.

## The Artificial Intelligence Preparedness Index (AIPI)

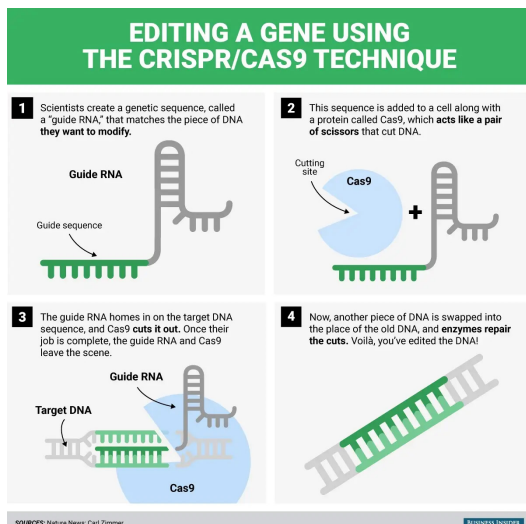
- Recently, the **International Monetary Fund (IMF)** released an Artificial Intelligence Preparedness Index (AIPI) Dashboard.
- The AI Preparedness Index (AIPI) evaluates a **country's readiness for AI adoption** across **four dimensions: Digital Infrastructure, Human Capital, Technological Innovation, and Legal Frameworks**.
- It **assesses 174 countries** and categorises them into **Advanced Economy (AE), Emerging Market Economy (EM), and Low-Income Country (LIC)**.
- **Singapore** (0.80), **Denmark** (0.78), and the **United States** (0.77) are among the highest-rated AEs.
- **India, categorised as an EM** with a 0.49 rating, ranks 72nd.
- **Bangladesh** is 113th (0.38), **Sri Lanka** is 92nd (0.43), and **China** is 31st (0.63).

## Space Variable Objects Monitor (SVOM)

- Recently, **China's Long March 2-C rocket** successfully launched the **French-Chinese satellite Space Variable Objects Monitor (SVOM)** from southwestern China.
- SVOM, designed to **detect and study the most distant and oldest gamma-ray bursts (GRBs)**, orbits over **600 km above Earth** with a planned lifespan of five years.
- GRBs, the **most luminous events** in the universe, are **extremely energetic explosions linked to collapsing stars or merging neutron stars**.

## Sickle Cell Disease (SCD)

- India is advancing in developing a **gene therapy using CRISPR-Cas9** for **sickle cell disease**, a genetic blood disorder prevalent among Scheduled Tribes.
- CRISPR-Cas9 is part of India's mission to eradicate sickle cell disease by 2047
- The technology uses **Cas9 enzymes as molecular scissors** to cut DNA precisely, **allowing guide RNA to insert a new genetic code**.
- Sickle cell disease is caused by a **defective gene producing abnormal haemoglobin S**, leading to **sickle-shaped red blood cells** and impaired oxygen delivery.
- Potential cures include **bone marrow transplants or gene therapy**.
- Recently, the Central Drug Standard Control Organisation (CDSCO) approved **hydroxyurea tablets** for treating Sickle Cell Anaemia (SCA).



## Miscellaneous

### Global Gender Gap Report

- The **World Economic Forum** released the 18th Global Gender Gap Report for 2024.
- The report assesses gender parity across **146 economies**.
- Dimensions:** Economic Participation and Opportunity, Educational Attainment, Health and Survival, and Political Empowerment.
- The **global gender gap score is 68.5%**, a 0.1 percentage point improvement from last year.
- At the current rate, **full parity will take 134 years**.
- India ranks 129th overall (down from 127 in 2023)** and 5th in South Asia.
- The decline is due to **decreases in Educational Attainment and Political Empowerment**, despite a slight improvement in Economic Participation and Opportunity.

### Best and Worst Countries for Gender Equality

Global Gender Gap Index 2024 rankings  
(1 = full gender parity)

			Rank change from 2023
1	Iceland	0.935	→ -
2	Finland	0.875	↗ +1
3	Norway	0.875	↘ -1
43	United States	0.747	→ -
129	India	0.641	↘ -2
144	Chad	0.576	↗ +1
145	Pakistan	0.570	↘ -3
146	Sudan*	0.568	n/a

\* New to index in 2024

Based on the following indicators: Economic participation and opportunity, educational attainment, health and survival, political empowerment  
Source: World Economic Forum



statista

### Ethanol vs Methanol

- Recently, a tragic incident of methanol poisoning has occurred in Kallakurichi district, Tamil Nadu, India.

Ethanol ( $\text{CH}_3\text{CH}_2\text{OH}$ )	Methanol ( $\text{CH}_3\text{OH}$ )
It is known as ethyl alcohol comprising <b>two carbon atoms</b> and a hydroxyl group.	It is known as methyl alcohol comprising <b>one carbon atom</b> and a hydroxyl group.
Ethanol is <b>less acidic than methanol</b>	Methanol is <b>more acidic than ethanol</b>
Ethanol is <b>produced by the fermentation of sugar</b> in the presence of yeasts.	Methanol is <b>synthetically produced</b> by the catalysis of carbon monoxide, carbon dioxide, and hydrogen.
Ethanol is used as an <b>active ingredient in alcoholic beverages</b> .	Methanol is <b>highly toxic and not suitable for consumption</b> .
Affects the central nervous system and <b>can cause sleepiness</b> when ingested or consumed.	Affects the retina of the eye and <b>can cause terminal blindness</b> ; to the extreme <b>can also cause death</b> if ingested mistakenly.
As a <b>fuel</b> , ethanol serves as a cleaner-burning alternative to traditional gasoline.	Methanol is commonly <b>utilised as an industrial solvent in the production of many chemicals</b> such as production of formaldehyde.

### Chenab Rail Bridge



- **Indian Railways** successfully conducted a trial run of an eight-coach MEMU train on the **Chenab Rail bridge**, the **world's highest railway bridge**.
- Located in **Reasi district, Jammu and Kashmir**, the **1.3-km-long bridge** stands 359 metres above the Chenab River.
- Part of the **Udhampur-Srinagar-Baramulla Rail Link project**, it is designed to withstand wind speeds up to 266 km/h and is both blast-proof and earthquake-proof.

### State of Global Air Report

- The State of Global Air report is a yearly publication by the **Health Effects Institute (HEI)**. It provides a comprehensive analysis of air quality and health impacts around the world.

#### Findings

- Air pollution is the **second leading risk factor** for death among children under 5 in 2021, after malnutrition.
- **Non-communicable diseases**, such as heart disease, stroke, diabetes, lung cancer, and chronic obstructive pulmonary disease, account for nearly 90% of the disease burden from air pollution
- Countries in **South Asia and Africa face the highest burden** of air pollution-related deaths, with India and China together accounting for 54% of the global disease burden in 2021
- The report includes data on **nitrogen dioxide (NO<sub>2</sub>) exposure** for the first time.

### Bajau Tribe

- A community of seafaring people in Malaysia, the indigenous Bajau are being evicted to make way for rapid urbanisation in Sabah, **Malaysian Borneo**.

- They are also known as the Sea Nomads or Sea Gypsies.
- They are spread across **Indonesia, Malaysia, the Philippines, and Brunei.**
- **Skilled boat builders and navigators**, the Bajau are known for their traditional boats called **lepa-lepa**.
- **Borneo** is the **third-largest island in the world**, and the largest island in Asia.
- The island is politically divided between three regions: **Indonesia (Kalimantan), Malaysia (Sabah and Sarawak), and the tiny sultanate of Brunei.**



## Places in News

### Pantanal wetland

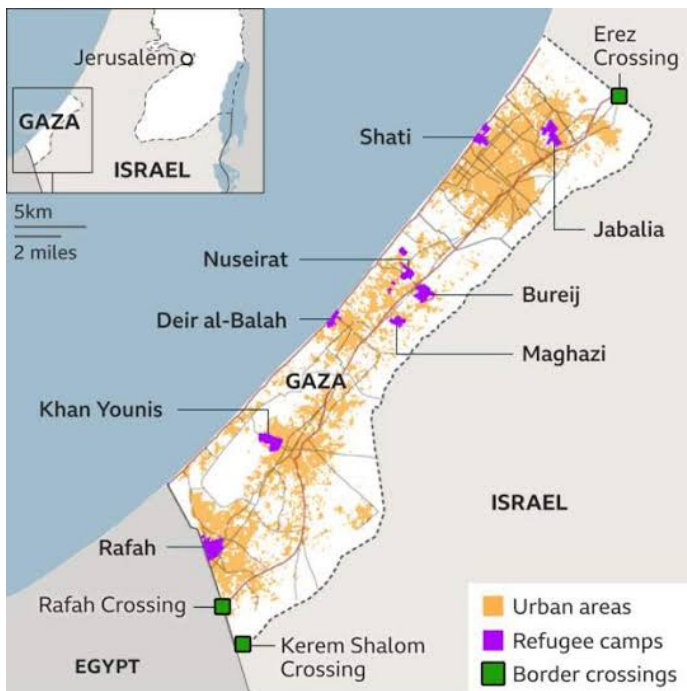


- Brazil's Pantanal wetlands are facing an unprecedented surge in **wildfires** due to extremely dry conditions.
- The Pantanal is the **world's largest tropical wetland**, located primarily in **Brazil**, extending into **Bolivia and Paraguay**.
- A part of Pantanal Wetland was named as a **UNESCO Biosphere Reserve, Ramsar Site of International Importance as well as a UNESCO World Heritage site.**
- Around **95% of the Pantanal** is under **private ownership**, the majority of which is **used for cattle grazing.**
- It is primarily fed by **Paraguay and Cuiabá rivers.**

### Al Shati and Nuseirat Refugee camps

- Hamas media office recently accused that Israeli strikes had killed many people in the Al Shati and Nuseirat refugee camps.
- **Al-Shati**, also known as **Shati or Beach Camp** is located in the **northern Gaza Strip along the Mediterranean Sea** coastline.
- Nuseirat Camp is a **Palestinian refugee camp located in the middle of the Gaza Strip**

- The other **Palestine refugee camps in the Gaza Strip** are:
  - ◆ Bureij camp
  - ◆ Deir El-Balah Camp
  - ◆ Jabalia Camp
  - ◆ Khan Younis Camp
  - ◆ Maghazi camp
  - ◆ Rafah camp



Source: UN Ocha, 2023

BBC

## Jenin Refugee camp



BBC

- The **Jenin refugee camp**, also known as just the Jenin Camp, is a Palestinian refugee camp situated in the city of Jenin, located in the northern part of the West Bank.

- The camp was **established in 1953** to provide shelter for Palestinians who were displaced from their homes during the 1948 Palestine War.
- It gained particular attention during the second Palestinian uprising, also known as the **Al-Aqsa Intifada (2000-2005)**, when it became a stronghold for armed resistance against Israeli occupation.

## Bolivia



- A **coup attempt** by the military has failed in Bolivia recently.
- Bolivia is a country located in **central South America**.
- Its **administrative capital** is **La Paz** while the **constitutional capital** is **Sucre**.
- It is the **largest landlocked country in the Southern Hemisphere** of the world.
- It has varied terrain spanning **Andes Mountains, the Atacama Desert and Amazon Basin rainforest**.

## Chad

- Recently an explosion took place at a military ammunition depot in N'Djamena, the capital of Chad.
- Chad officially **The Republic of Chad** is a **landlocked** and the **fifth largest country in Africa**.

- Its diverse landscape includes the **Sahara Desert** (a vast region of deserts and oases) **in the north**, the **semi arid Sahel** (a hot, treeless plain that extends from the Atlantic coast across central Africa) **in the centre**, and the **Sudanian savanna** (a transition zone between the desert to the north and the humid savannas to the south) **in the south**.
- **Lake Chad**, once one of Africa's largest lakes, dominates the west-central part of the country.



## Armenia (Capital: Yerevan)



- Armenia became the 145th country to recognise the State of Palestine.
- The Republic of Armenia is a **landlocked country located in Asia, south of the Caucasus Mountains and between the Black Sea and the Caspian Sea**.
- It is bordered by Georgia, Azerbaijan, Iran, and Turkey.
- Armenia has a long history of complex ethnic and territorial **conflict with Azerbaijan centred around the Nagorno-Karabakh region**.

## Kuwait



- A fire broke out at one of the apartments in Kuwait killing 49 people, mostly workers, including 46 from India.
- It is a country situated in Western Asia, **at the tip of the Persian Gulf**.
- Bordered by Iraq to the north and Saudi Arabia to the south.
- Kuwait boasts the world's **sixth-largest oil reserves**.
- The **Kuwaiti dinar** is the highest-valued unit of currency globally.

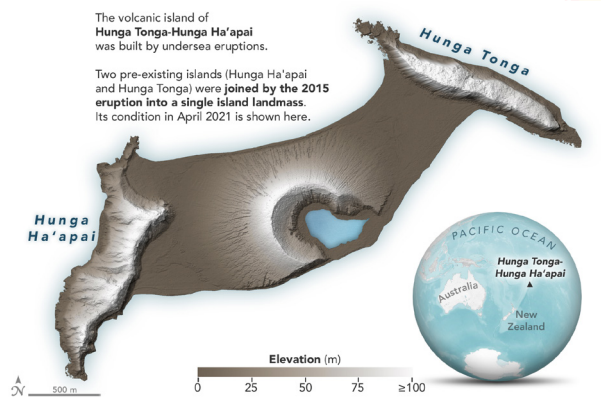
## Bürgenstock, Switzerland



- The **Ukraine peace summit** opened in Switzerland to find a solution to the war.
- Held at the **Bürgenstock resort in Switzerland**.
- A **final joint communiqué** was issued, supported by 80 countries and four organisations out of the 100 attending delegations.

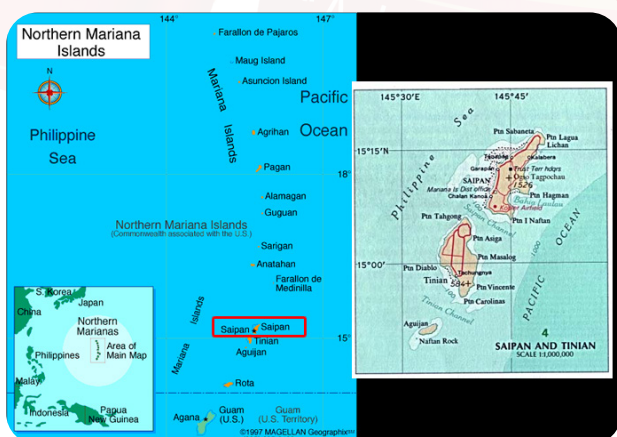
- **India attended** the summit.
- This document outlines the **collective consensus** and recommendations for achieving peace between Russia and Ukraine.
- The three themes of **nuclear safety, food security and prisoner exchanges** featured in the final statement.

## Hunga Tonga-Hunga Ha'apai



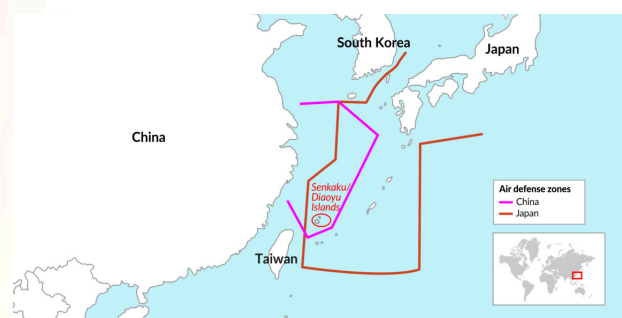
- A study has revealed that the **January 2022 eruption of the Hunga Tonga-Hunga Ha'apai Volcano** has significantly impacted global weather patterns.
- Located in the **western South Pacific Ocean**, the submarine volcano includes **two uninhabited islands** and is part of the Tofua Arc.
- The arc is formed by the **subduction of the Pacific Plate beneath the Indo-Australian Plate**.
- While **pyroclastic clouds can cause short-term cooling** by blocking solar radiation, **volcanic gases like carbon dioxide and water vapour** may contribute to long-term greenhouse effects and global warming.

## Saipan Island



- Julian Assange, founder of WikiLeaks fled to **Saipan, a remote Pacific island**, part of the Northern Mariana Islands (NMI), to appear in court for the final stages of his legal proceedings.
- Saipan Island is the **largest island in the Northern Mariana Islands, a U.S. island in the western Pacific Ocean**.
- Like territories such as Guam or Puerto Rico, the Northern Mariana Islands **are part of the US without the full status of a state**.
- **Mount Tapochau** is the highest point of the Island.

## Senkaku island



- **Japan** protested against Beijing after four armed **Chinese** coast guard vessels entered the waters of the Senkaku island, which Tokyo considers its territory.
- It is also known as the **Diaoyu Islands in China** and the **Tiaoyutai Islands in Taiwan**.
- They are a group of five **uninhabited islands** and three barren rocks in the East China Sea.
- They are currently **administered by Japan**, but their ownership is disputed by China and Taiwan.

## Dagestan



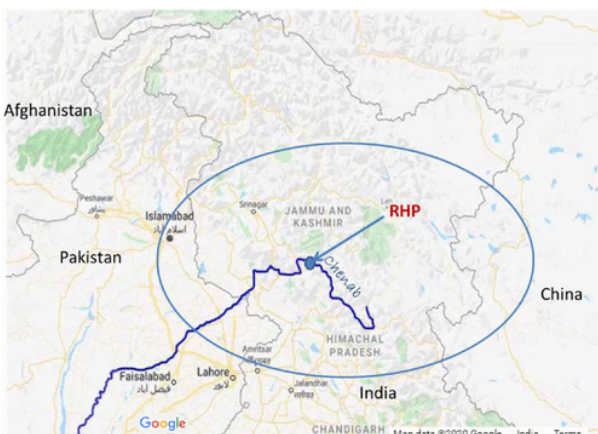
- There were multiple attacks targeting churches, synagogues, and a police station reported in Dagestan of Russia.
- Dagestan, officially known as the Republic of Dagestan, is a **province within the Russian Federation**.
- Bordered by the **Caspian Sea to the east**, Dagestan's **location in the eastern North Caucasus mountains** holds strategic importance for Russia.

## Tashigang village



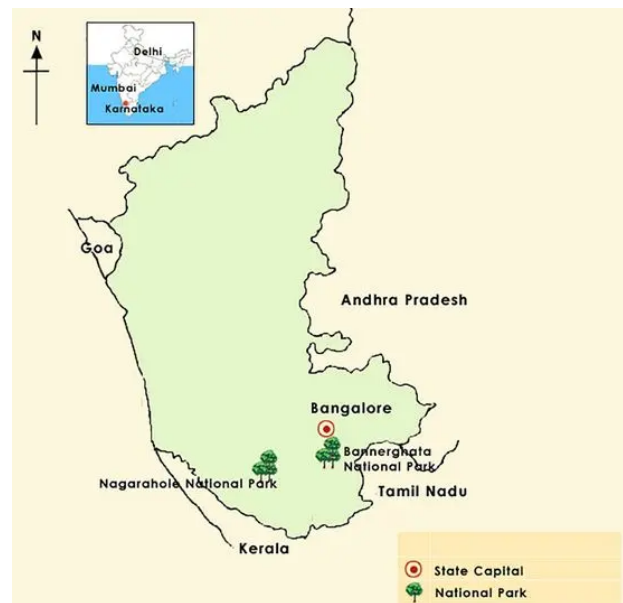
- Tashigang Village in Kinnaur district of **Himachal Pradesh** was in the news recently as it is the **world's highest polling station**.
- The polling station falls **in the Buddhist-dominated Lahaul-Spiti valley** of the state at an altitude of **15,256 feet**.
- Located near the India-China border, this polling station **covers two villages - Tashigang and Gete**, part of Mandi Lok Sabha seat.

## Ratle Hydro Electric Project



- A Pakistani delegation inspected the Ratle power project in J&K.
- RHEP is situated on the **Chenab River in the Kishtwar district**.
- It is a **run-of-the-river hydroelectric power station** with an installed capacity of 850 MW.
- In 2017, the **World Bank** allowed India to construct the dam despite Pakistan's objections.

## Bannerghatta Biological Park (BBP)



- South India's **first and the country's largest leopard safari** was inaugurated at the **Bannerghatta Biological Park (BBP), Karnataka**.
- BBP is located near Bangalore and was established in 2002.
- It is situated **within the larger Bannerghatta National Park**, which covers around 25,000 acres.
- **Suvarnamukhi**, an intermittent stream, is the main source of water for the animals of the park.

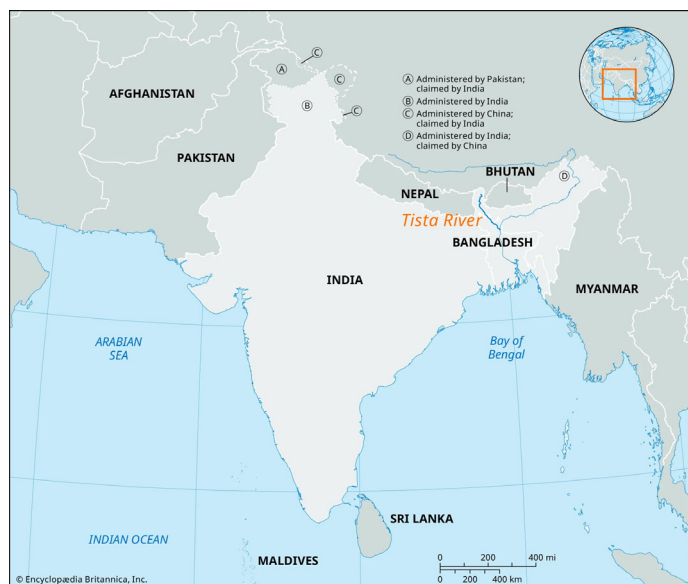
## Mount Kanlaon

- Hundreds of people sheltered in evacuation centres after **Mount Kanlaon volcano erupted** in the central Philippines.
- It is a **stratovolcano** located in the north-central portion of the **island of Negros, Philippines**.

- It is the **highest mountain on the island of Negros** and **part of the Pacific Ring of Fire**.
- Kanlaon has erupted several times since 1886 and typically comprise **phreatic explosions** of small to moderate size that produce minor ash falls near the volcano.



## Teesta River



- The West Bengal CM said that no talks on Teesta water sharing should be initiated without involvement of the state Government.
- The Teesta River is a major **right bank tributary of the Brahmaputra** (Jamuna in Bangladesh), originating in the Himalayas near **Tso Lhamo Lake in Sikkim**.

- The sources of the Teesta River also include the **Pahurni Glacier, Kangse Glacier, and Chho Lhamo Lake**.
- The majority of the Teesta River basin is located in India, with **only 17% of it situated in Bangladesh**.

## Red Sea



- The Yemeni Houthi had attacked two ships in the Red Sea and the Indian Ocean.
- The Red Sea separates the **Arabian Peninsula from northeastern Africa**.
- Normally the water is **blue-green** and **red algae** turns the water **reddish brown**, hence the name.
- On the east it is bordered by the Arabian countries of **Saudi Arabia and Yemen**.
- The African countries of **Egypt, Sudan, and Eritrea** lie to the west.
- In the south **Bab al-Mandab** strait connects the **Red Sea** with the **Gulf of Aden** and then with the **Arabian Sea**.
- In the north the **Suez Canal** connects the **Red Sea to the Mediterranean Sea**.

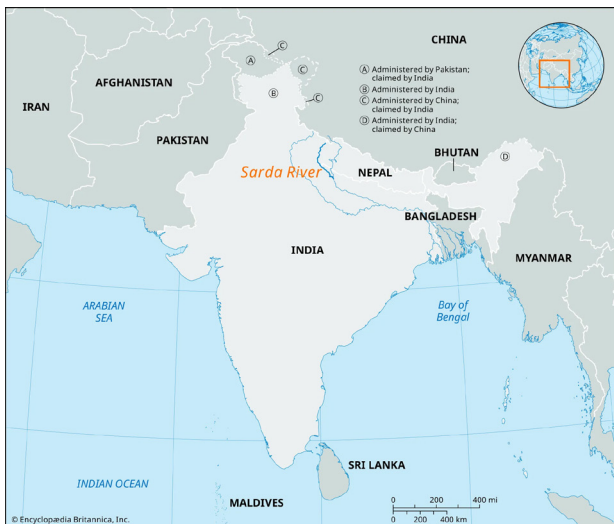
## Kopili & Kushiya Rivers

- The Kopili River is an **interstate river** that flows through **the states of Meghalaya and Assam**.
- It is the **largest south bank tributary of the Brahmaputra River in Assam**.
- The Kopili originates in the **Meghalaya plateau**.
- The Kushiya River is a **transboundary river**, flowing through Bangladesh and the state of Assam in India.

- It forms on the **India-Bangladesh border** as a branch of the **Barak River**.
- An important water sharing agreement was **signed between India and Bangladesh** in 2022 to manage the water flow in the Kushiara River.



## Mahakali River



- Nepal Prime Minister asserted that territories east of the Mahakali River, including Limpiyadhura, Kalapani, and Lipu Pass, belong to Nepal
- These areas are claimed by India.
- Mahakali River is also known as **Sharda river or Kali Ganga** in Uttarakhand.
- It joins **Ghagra river in Uttar Pradesh**, which is a tributary of Ganga.

## Donetsk



- Donetsk was a major industrial centre in **Ukraine** before the conflict.
- Donetsk is currently **occupied by Russia** and designated as the capital of the Donetsk People's Republic (DPR), a breakaway state.
- This annexation is **not recognized** by most of the international community, who consider Donetsk part of Ukraine.

## Gulf of Aden



- Suspected attacks by **Yemen's Houthis targeted a ship in the Gulf of Aden**, while a separate attack claimed by Iraqi militants targeted the **Israeli port city of Eilat**.
- It is an arm of the Indian Ocean bounded to the **south by Somalia and the Socotra Islands**, north by Yemen, east by the Arabian Sea, and west by Djibouti.
- The gulf **connects the Red Sea to the Arabian Sea** via the **Strait of Bab el Mandeb**.
- It forms an essential **oil transport route** between Europe and the Far East.

## Species in News

### Mainland Serow



A lone mainland Serow was sighted at the lowest elevation at **Raimona National Park, Assam**

The mainland serow (*Capricornis sumatraensis* thar) is a species of serow, native to the

**Himalayas, Southeast Asia, and China.**

- It is a **mammal** that looks like a cross between a goat and an antelope with short annulated horns **occurring in forested montane regions**.
- It inhabits areas at altitudes of 200 metres to 3,000 metres, but recently a lone mainland serow was sighted at 96 metres above the mean sea level at the Raimona National Park in western Assam.
- It is listed as **Vulnerable by IUCN**
- The Mainland Serow is active at almost any time, mostly at dawn and mostly solitary in nature.
- There are several **subspecies of mainland serows**, including the **Sumatran Serow, Chinese Serow, and Himalayan Serow** and all of them are found in Asia.

### Hoolock Gibbon

- The **Northeast Frontier Railway (NFR)** is funding the construction of canopy bridges to help India's **only ape species, the Hoolock Gibbon**.
- The canopy bridges will help the gibbons **cross a railway track** dividing its habitat in **Hollongapar Gibbon Sanctuary, eastern Assam**.
- The hoolock gibbon, **native to eastern Bangladesh, Northeast India, Myanmar, and Southwest China**, is one of 20 gibbon species.
- The **Western hoolock gibbon**, found in all northeastern states south of the Brahmaputra River, is classified as **Endangered**, while the

**Eastern hoolock gibbon**, inhabiting pockets of Arunachal Pradesh and Assam, is listed as **Vulnerable**.

- Both species are **protected** under Schedule 1 of the Indian Wildlife (Protection) Act, 1972.

### The Greater One-Horned Rhinoceros

## TYPES OF RHINO

<p><b>SUMATRAN RHINOCEROS</b> <i>Dicerorhinus sumatrensis</i> Closest living relative to the woolly rhinos. Only species to still be covered in hair. IUCN Status: Critically Endangered Population: Less than 100 Habitat: Tropical and subtropical forests</p>	<p><b>BLACK RHINOCEROS</b> <i>Diceros bicornis</i> About two thirds the size of the white rhino, the black rhino is also known as the 'hook lipped' rhino. IUCN Status: Critically endangered Population: 5,000 to 5,500 Habitat: Tropical grassland, Shrublands, deserts</p>	<p><b>WHITE RHINOCEROS</b> <i>Ceratotherium simum</i> Africa's largest species of rhino, also known as the 'square lipped' rhino. IUCN Status: Near Threatened Population: 20,000 to 22,000 Habitat: Grassland and savanna</p>
<p><b>INDIAN RHINOCEROS</b> <i>Rhinoceros unicornis</i> Asia's largest species of rhino, also known as the Indian rhino. IUCN Status: Vulnerable Population: 3,300 - 3,600 Habitat: Tropical grassland, shrublands, savanna</p>	<p><b>JAVAN RHINOCEROS</b> <i>Rhinoceros sondaicus</i> All Javan rhinos in the world survive in Ujung Kulon National Park. IUCN Status: Critically Endangered Population: 72 Habitat: Tropical and subtropical forests</p>	

- Recent heavy monsoon rains in Assam have caused **devastating floods at Pobitora Wildlife Sanctuary**, affecting the greater one-horned rhinoceros, also known as the Indian rhino.
- This large herbivore, native to the Indian subcontinent, is similar in size to the white rhinoceros of Africa but distinguished by its **single large horn and greater size**.
- Indian rhinos are **excellent swimmers** with keen hearing and smell, though their **eyesight is poor**.
- They are mostly **solitary**, found in the riverine grasslands of the **Indo-Nepal Terai and Ganges-Brahmaputra Basins**.
- Classified as **vulnerable** by the IUCN and listed in **Schedule I of the Wildlife Protection Act, 1972**.

- Their main threats are **poaching for their horns**, which are wrongly believed to have medicinal properties, and habitat loss.

### Red Sandalwood

- Several smugglers in Andhra Pradesh were arrested for illegally carrying Red Sandalwood logs worth crores.
- **Red Sandalwood (*Pterocarpus santalinus*) or red sanders** are an Indian endemic species native to the Seshachalam, Veligonda, Lankamalla, and Palkonda hill ranges of Andhra Pradesh.
- It is also found in parts of **Sri Lanka, China, and various Indian states**.
- It is a **very slow-growing tree species** that attains maturity in natural forests after 25-40 years.
- It regenerates well in **dry hot climates**.
- '**Santalin**' is a natural dye obtained from its heartwood and is used in pharmaceutical preparations, food articles, leather, and textile industries
- It is listed as **Endangered by the IUCN**, included in Schedule IV of The Wildlife (Protection) Act of 1972.
- India's foreign trade policy **prohibits the import of red sandalwood and restricts its export**.
- It is listed in **Appendix II under CITES** since 1994



### Parapartrechina Neela



- Parapartrechina Neela is a **new ant species** discovered from **Siang Valley in Arunachal Pradesh**.
- It has been described as a small ant with a total **length of less than 2mm**.
- Its body is predominantly **metallic blue**, except for the antennae, mandibles, and legs.
- The head is sub triangular with large eyes and has a triangular mouthpart (mandible) featuring five teeth.

### Striped Caecilian



- Striped Caecilian, a limbless amphibian, was discovered for the first time in **Kaziranga National Park, Assam**.
- With its worm-like body, **limited vision, and reliance on touch and smell, this carnivorous species** spends most of its life burrowed in soil.
- Its ancient lineage provides **insights into evolution and intercontinental speciation**.
- As an **indicator species**, it helps control pests.
- **Kaziranga National Park**, located between the Brahmaputra River and Karbi Hills, was declared a **National Park in 1974** and a **UNESCO World Heritage Site in 1985**.



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