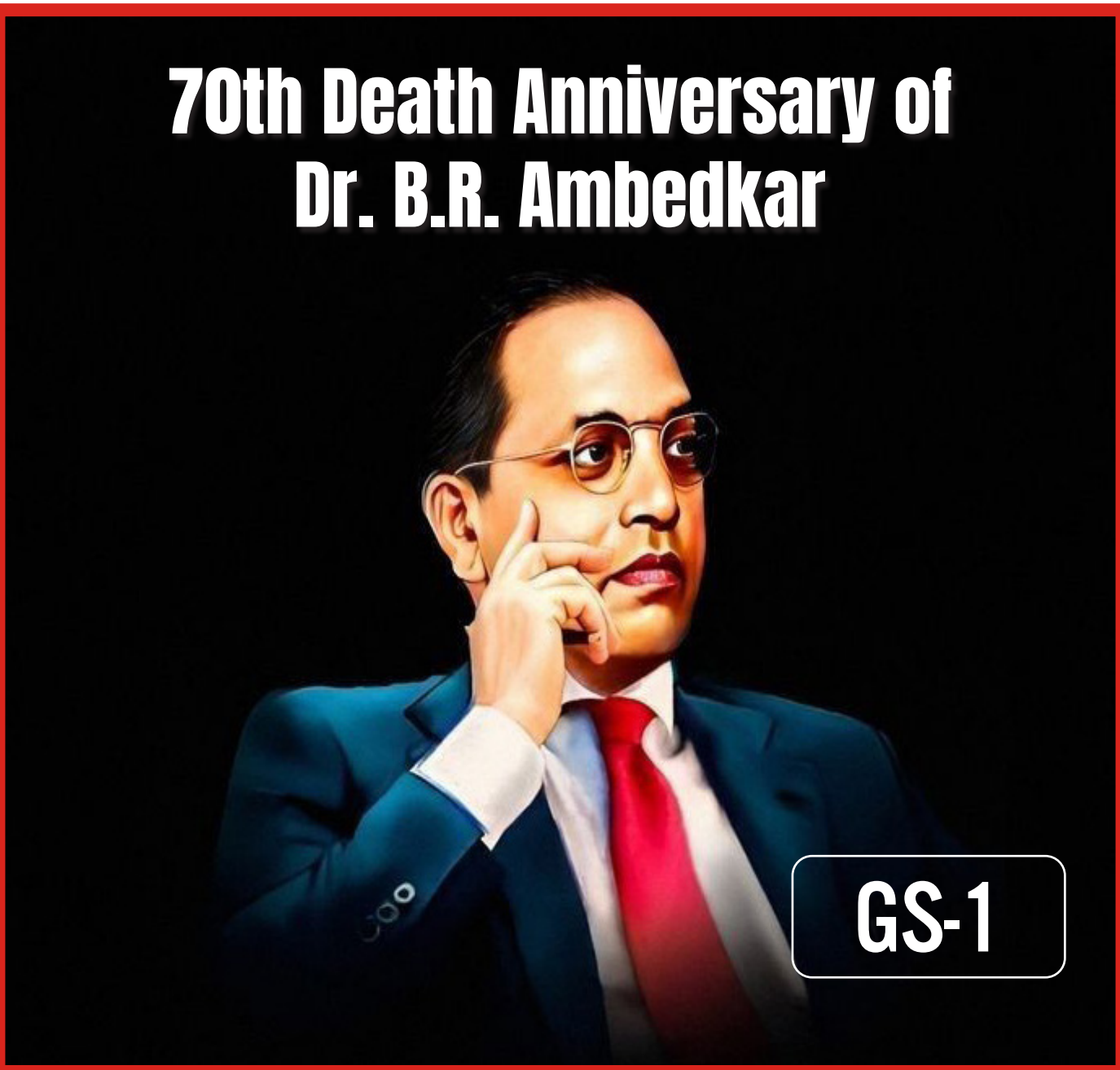
INSIGHTSIAS

SIMPLIFYING IAS EXAM PREPARATION

70th Death Anniversary of Dr. B.R. Ambedkar



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INSIDE

GENERAL STUDIES – 1

Topics: Indian culture will cover the salient aspects of Art Forms, Literature and Architecture from ancient to modern times.

Topics: Modern Indian history from about the middle of the eighteenth century until the present- significant events, personalities, issues.

Topics: Women and women related issues.

Topics: Population and associated issues, poverty and developmental issues.

Topics: Urbanization, their problems and their remedies.

Topics: Salient features of world's physical geography.

Topics: Distribution of key natural resources across the world (including South Asia and the Indian subcontinent)

Topics: Important Geophysical phenomena such as earthquakes, Tsunami, Volcanic activity, cyclone etc., geographical features and their location- changes in critical geographical features (including water-bodies and ice-caps) and in flora and fauna and the effects of such changes.

FACTS FOR PRELIMS; 1.GENERAL STUDIES – 1

ART AND CULTURE; Architecture

Paintings

Religion and Festivals

GENERAL STUDIES – 1

Topics: Indian culture will cover the salient aspects of Art Forms, Literature and Architecture from ancient to modern times.

DECLINE OF INDUS VALLEY CIVILISATION

Context:

A new multi-proxy paleoclimate study has claimed that the Indus Valley Civilisation (IVC) declined due to centuries-long recurring droughts, not a single catastrophic event.

About Decline of Indus Valley Civilisation:

What it is?

- The Indus Valley Civilisation (3300–1300 BCE), also called **Harappan Civilisation**, was one of the world's earliest urban cultures spread across present-day Pakistan and northwest India.
- It originated along the Indus and Ghaggar-Hakra (Sarasvati) river systems, evolving into a sophisticated Bronze Age civilisation known for cities like Harappa, Mohenjo-Daro, Rakhigarhi and Dholavira.

Features of Indus Valley Civilisation:

- **Art & Craft:**
  - Highly developed craftsmanship in bead-making, pottery, terracotta figurines, shell–copper–bronze artefacts, and the iconic "Dancing Girl" and "Priest-King" sculptures.
- **Architecture & Urban Planning:**
  - World-class urban design with grid-pattern streets, multi-storey brick houses, citadels, granaries, and advanced drainage with covered sewerage and soak pits.
- **Script & Literature:**
  - Used a still-undeciphered pictographic script found on seals, tablets and pottery; no surviving textual literature, but inscriptions show a complex symbolic system.
- **Economy:**
  - A diversified economy based on agriculture (wheat, barley, cotton), craft industries, internal trade, and long-distance trade with Mesopotamia, Oman and Iran (evident from seals, weights and boats).
- **Society & Governance:**
  - Urban society with standardised weights, uniform architecture, and planned layouts, implying an efficient civic authority; evidence suggests a largely peaceful, egalitarian society with little social stratification.

Decline of the Indus Valley Civilisation:

New Evidence from 2025 Study:

- **Decline was gradual, triggered by four major mega-droughts (2425–1400 BCE):**
  - The study identifies **four prolonged drought phases**, each lasting **over 85 years**, with the most severe one peaking around **1733 BCE for nearly 164 years**.
  - These droughts did not occur once but in cycles, creating **centuries of hydrological instability**, which progressively weakened agriculture, trade, and urban functioning.
- **Weakening monsoons due to warming of the tropical Pacific:**
  - Climate records show that the tropical Pacific shifted from a **cool, La Niña-like phase** (3000–2500 BCE) to a **warmer, El Niño-like phase**.
  - This directly **reduced monsoon rainfall by 10–20%**, drastically lowering water availability for fields, reservoirs, and rivers.
- **Hydrological changes: rivers shrank and soils dried up:**
  - The study combines lake cores, cave stalagmites, and climate models to show that rivers like the **Sutlej-Ghaggar system**, **Beas**, and many tributaries experienced **reduced flows**.

- Soil moisture declined, leading to **desiccation**, salinity build-up, and reduced crop yields — especially in areas away from the Indus River.

- **Impact on agriculture and food systems:**
  - Crop failures increased, forcing Harappans to **shift from water-intensive crops (wheat, barley)** to drought-resistant ones like **millets**.
  - Agricultural stress weakened the surplus system that supported large urban centres.
- **Breakdown of long-distance trade and economic networks:**
  - Lower river levels made river navigation difficult, reducing connectivity to Mesopotamia, the primary trade partner.
  - Reduced rainfall and shrinking lakes also made overland routes riskier.
  - This decline in external trade undermined urban jobs (bead makers, potters, metalworkers), destabilising the economic base.

Other Classical Theories:

- **Changes in River Systems (Indus & Ghaggar-Hakra shifts)**
  - Tectonic movement altered the courses of key rivers.
  - The **Ghaggar-Hakra (Sarasvati)** dried gradually, leading to the abandonment of major settlements like **Kalibangan** and **Banawali**.
  - The Indus River occasionally **flooded massively**, depositing silt and destroying fields, while later shifting away from some cities.
- **Collapse of Mesopotamian Trade Network:**
  - Around 2000 BCE, Mesopotamia faced internal political turmoil (Akkadian collapse, Ur III decline).
  - As Mesopotamian trade weakened, demand for **Harappan goods (beads, cotton textiles, metals)** fell sharply.
  - Reduced trade cut off a crucial economic pillar of urban Harappan life, contributing to industrial decline.
- **Urban Overcrowding and Declining Civic Maintenance:**
  - Archaeology shows that many cities became **densely crowded**, with houses built over older streets and structures.
  - The once-pristine drainage systems became **clogged and poorly maintained**, signalling administrative weakening.
  - Public buildings like the **Great Bath** were built over or lost importance.
- **No Evidence of Large-Scale Invasion or Warfare:**
  - Earlier theories proposed "Aryan invasion" based on Rig Veda references, but archaeology contradicts this:
    - No mass graves indicating war.
    - No burnt cities or weapons of destruction.
    - Harappan society overall shows **little militarisation**.
  - Most scholars now agree that invasion did **not** cause the collapse.

Significance of Indus Valley Civilisation:

- Gave India its first planned cities, sanitation systems and urban governance models.
- Demonstrated advanced hydrology, craft specialisation, maritime trade, and agricultural adaptation.
- Offers lessons for today on water management, climate resilience, and decentralised settlement planning.
- Its peaceful culture and standardised systems highlight early forms of civil administration, trade regulation and environmental adaptation.

Conclusion:

The new scientific findings show that the Indus collapse was not a mystery or a myth but a slow climatic tragedy worsened by fragile governance and economic stress. Yet the civilisation's adaptability for nearly two millennia underscores its resilience and sophistication. As today's world faces climate extremes, the Indus story serves as a powerful reminder that environmental shifts can reshape even the greatest urban cultures.

Topics: Modern Indian history from about the middle of the eighteenth century until the present- significant events, personalities, issues.

70TH DEATH ANNIVERSARY OF DR. B.R. AMBEDKAR

Context:

India observed the 70th death anniversary

(Mahaparinirvan Diwas) of Dr. B.R. Ambedkar, commemorating his lasting contributions to constitutional governance, social justice, and economic thought.

About 70th Death Anniversary of Dr. B.R. Ambedkar:

Who He Was?

- Dr. B.R. Ambedkar (1891–1956) was a jurist, economist, social reformer, and chief architect of the Indian Constitution. He led pioneering movements against caste discrimination and laid the foundations of India's modern democratic and economic institutions.

Early Life & Education:

- Born on **14 April 1891** in Mhow (MP) into a socially oppressed Mahar family; faced severe caste discrimination since childhood.
- Completed B.A. from Bombay University; supported by a Baroda State scholarship for higher studies abroad.
- Earned **PhD from Columbia University**, **D.Sc. from London School of Economics**, Bar-at-Law in London—becoming one of India's most accomplished scholars of his time.
- His early works—Castes in India, Evolution of Provincial Finance, Problem of the Rupee—established him as a global intellectual.

Contributions to India's Freedom Movement & Social Reform:

- **Led Mass Movements Against Untouchability:** Dr. Ambedkar transformed the social reform landscape by leading historic civil rights agitations, most notably the Mahad Satyagraha (1927) where Dalits asserted their right to drink water from a public tank. This marked the first organised anti-caste mass mobilisation challenging notions of purity–pollution.
- **Fought for Temple Entry and Religious Equality:** He spearheaded the Kalaram Temple Satyagraha (1930) in Nashik to demand Dalit entry into Hindu temples. This campaign directly confronted religious exclusion and became a symbol of the struggle for dignity and the right to worship.
- **Represented Depressed Classes at Round Table Conferences:** At the Round Table Conferences (1930–32) in London, Ambedkar was the foremost voice for Dalits. He articulated their political grievances, demanded separate electorates for adequate representation, and successfully internationalised the issue of caste discrimination.
- **Negotiated the Poona Pact (1932):** Ambedkar's negotiations with Mahatma Gandhi led to the Poona Pact, replacing separate electorates with reserved seats for Dalits in legislatures. This became the basis of modern affirmative action in India and ensured political empowerment within a joint electorate.
- **Championed Labour Rights and Social Justice During Colonial Rule:** As Labour Member in the Viceroy's Executive Council (1942–46), Ambedkar introduced 8-hour workdays, paid leave, maternity benefits, dispute resolution systems, and welfare funds—advancing both workers' rights and social justice during the freedom struggle.
- **Contribution to Drafting the Constitution:** Dr. B.R. Ambedkar ensured the Constitution embodied **justice, liberty, equality and fraternity** by designing a strong framework of fundamental rights, federalism and an independent judiciary. He introduced safeguards such as **abolition of untouchability, reservations, minority protections and social welfare principles.**

Contributions to India's Economic Thought:

- **Father of Monetary Economics in India:** His book The Problem of the Rupee (1923) shaped modern monetary policy and directly influenced the creation of the **Reserve Bank of India (RBI) in 1934**.
- **Fiscal Federalism Pioneer:** His 1921 thesis on provincial finance laid the intellectual foundation for **India's Finance Commission** and fiscal decentralisation.
- **Labour Reforms (as Labour Member, 1942–46):** Introduced **8-hour workday**, maternity benefits, labour welfare funds, and set up **Employment Exchanges** across India.
- **Water & Power Resource Planning:**

Spearheaded key institutions such as the **Central Water Commission**, **Damodar Valley Project**, and promoted multi-purpose river projects for national development.

- **Anti-inflation and welfare economics:** Emphasised monetary stability and warned that inflation disproportionately harms the poor—echoing principles in today's inflation-targeting framework.

Organisations Associated with Ambedkar:

- **Bahishkrit Hitkarini Sabha (1923):** Upliftment of oppressed communities.
- **Independent Labour Party (1936):** Advocated labour rights and social justice.
- **Scheduled Castes Federation (1942):** Political mobilisation of marginalized groups.
- **Republican Party of India (announced 1956):** Vision for an egalitarian polity (formed after his death).

Literary Contributions:

- Ambedkar's works span economics, sociology, politics, religion, and law. Key texts include:
  - Annihilation of Caste
  - The Problem of the Rupee
  - Who Were the Shudras?
  - Buddha and His Dhamma
  - Essays on Untouchables and Untouchability
  - Buddha or Karl Marx
- **Critical journals:** Mooknayak, Bahishkrit Bharat, Janata, Samata
- These writings shaped India's intellectual, social, and constitutional landscape.

Ambedkar's Last Days:

- **Declining Health (1954–56):** From 1954 onward, Ambedkar suffered from diabetes, weakened eyesight, and deteriorating physical health. Despite this, he continued his academic writing, parliamentary work, and Buddhist studies.
- **Completion of The Buddha and His Dhamma:** In the final months of his life, he worked intensely to complete his last and most profound book, "The Buddha and His Dhamma", laying the philosophical foundation of Navayana Buddhism. The book was published posthumously in 1957.
- **Historic Conversion to Buddhism (14 October 1956):** Ambedkar and over 5 lakh followers embraced Buddhism in Nagpur, marking a revolutionary social and spiritual movement. He saw conversion as the final step in rejecting caste oppression and reclaiming dignity.
- **Final Writings and Reflections:** In his last speeches and writings, Ambedkar expressed concern about rising casteism, economic inequality, and the gap between constitutional ideals and social reality. He warned that "**political democracy cannot last unless there lies at the base of it social democracy.**"
- **Mahaparinirvan (6 December 1956):** Ambedkar passed away peacefully in his sleep at his residence, 26 Alipur Road, Delhi, at the age of 65. His death anniversary is observed as Mahaparinirvan Diwas.
- **Cremation and Memorial at Chaitya Bhoomi:** His funeral drew lakhs of followers, and his ashes were enshrined at Chaitya Bhoomi, Mumbai, which has since become an iconic pilgrimage site for Ambedkarites.
- **Bharat Ratna (1990):** Ambedkar was posthumously awarded India's highest civilian honour, the Bharat Ratna, for his monumental contributions to nation-building, constitutional design, social justice, and economic thought.

Conclusion:

Dr. B.R. Ambedkar's legacy extends far beyond drafting the Constitution—he laid the moral, economic, and institutional foundation of modern India. His life remains a testament to the transformative power of knowledge, courage, and constitutionalism. Seven decades after his passing, Ambedkar's ideas continue to light the path towards a more just, equitable, and dignified society.

Topics: Women and women related issues.

CLIMATE STRESS ON WOMEN AND THE EVOLVING GLOBAL HEALTH RESPONSE

Context:

Women face growing health and safety risks from rising heat, a new MSSRF study shows. Meanwhile, WHO signals cautious approval for weight-loss drugs, India intensifies action on antibiotic resistance, and South Africa advances with a promising HIV prevention shot.

About Climate Stress on Women and the Evolving Global Health Response:

What is the issue?

- **Heat-linked morbidity among women** – Rising temperatures are directly correlating with specific reproductive and mental health crises in women, particularly in high-heat districts.

  E.g. A 2024 MSSRF study in **Beed (Maharashtra)** found that female sugarcane workers in high-heat zones reported a **2x higher rate of hysterectomies** and **70%** reported chronic dizziness and fatigue during summer months.
- **Workplace heat adaptation gaps** – Informal sectors lack basic "survival infrastructure" like cooling or hydration, turning workplaces into health hazards.

  E.g. In **Tamil Nadu's textile belts**, female workers reported avoiding water to skip bathroom breaks, leading to a spike in **Urinary Tract Infections (UTIs)** during heatwaves (MSSRF data).
- **Conditional WHO approval of GLP-1 weight-loss drugs** – The WHO has backed drugs like Semaglutide but with strict "last-resort" guardrails.

  E.g. The WHO guideline restricts **Wegovy (Semaglutide)** use to adults with **BMI ≥35** who have failed lifestyle interventions, rejecting it as a cosmetic "quick fix."
- **AMR plan progress with coordination deficit** – India's NAP-AMR 2.0 sets targets, but state-level enforcement remains the weak link.

  E.g. While **Kerala and Gujarat** successfully banned OTC antibiotic sales, other states lack similar enforcement, creating regulatory loopholes for drug resistance.
- **HIV prevention shift to long-acting injection** – A paradigm shift from daily pills to twice-yearly shots for HIV prevention.

  E.g. South Africa secured **400,000 doses** of **Lenacapavir** (a twice-yearly injection) via the Global Fund to target high-risk adolescent girls starting in **early 2026**.
- **Regulatory tightening and AI surveillance** – India is moving from reactive checks to predictive monitoring after global pharma trust deficits.

  E.g. Following the **Maiden Pharma** tragedy in Gambia, India's CDSCO audited **76 pharmaceutical firms**, cancelling 18 licenses for manufacturing violations in a single drive.

Implications:

- **Gendered climate health inequity deepens** – Heat is not just uncomfortable; it is becoming a driver of gender-based violence and economic loss.

  E.g. The MSSRF study noted a **38% increase in domestic violence** reports during peak summer months in surveyed households, linked to economic stress and water scarcity.
- **Therapeutic access divides widen** – Advanced drugs (GLP-1s, Lenacapavir) risk becoming elite-only products without price controls.

  E.g. WHO data projects that even with production scaling, GLP-1 drugs will reach **less than 10%** of the global population needing them by 2030 due to high costs (~$1000/month in US).
- **AMR containment remains structurally fragile** – Without federal-style accountability, national plans fail at the district level.

  E.g. The **"One Health"** approach is stalling because veterinary antibiotic use (regulated by States) remains largely unchecked compared to human health sectors.
- **Urban heat–cardiac vulnerability escalates** – Cities are becoming heat traps, triggering "silent" metabolic and cardiac collapses.

  E.g. Ahmedabad's Heat Action Plan found that all-cause mortality spiked by **43%** during heatwaves, prompting the integration of heat alerts with hospital admission data.
- **Regulatory legitimacy tests intensify** – Export safety is now directly linked to India's "Pharmacy of the World" reputation.

  E.g. In **October 2024**, samples of **Coldrif Syrup** (Sresan Pharmaceuticals) were found to contain **46% Diethylene Glycol** (a toxic solvent) after

causing deaths in Madhya Pradesh.

What can be done?

- **Legislate heat-protective labour conditions** – Mandate specific cooling amenities rather than general "welfare" norms.

  E.g. Kerala's Labour Department mandates a "noon break" (12 PM–3 PM) for outdoor workers between February and April to prevent heatstroke.

- **Convert AMR timelines into binding enforcement** – Move from voluntary state alignment to statutory mandates.

  E.g. Adopting **Kerala's "Operation Amrith"**, which empowers drug inspectors to conduct surprise raids and track antibiotic sales via a digital app, across all states.

- **Ensure equitable access to GLP-1 and Lenacapavir** – Use international licensing mechanisms to lower costs.

  E.g. The **Medicines Patent Pool (MPP)** signed voluntary licensing deals with Indian generic makers (like Cipla/Dr. Reddy's) to produce low-cost versions of Lenacapavir for 120 countries.

- **Embed AI-heat-AQI mapping into urban health plans** – Use technology to predict health risks before they peak.

  E.g. The **Nagpur Metropolitan Surveillance Unit** used AI media scanning to detect an outbreak of **Acute Encephalitis Syndrome (AES)** in Chhindwara days before official reports.

- **Modernise surveillance with unified audit layers** – Combine export checks with domestic safety monitoring.

  E.g. The Integrated Health Information Platform **(IHIP)** now aggregates real-time data from **33 disease conditions**, allowing districts to spot "fever clusters" instantly.

Conclusion:

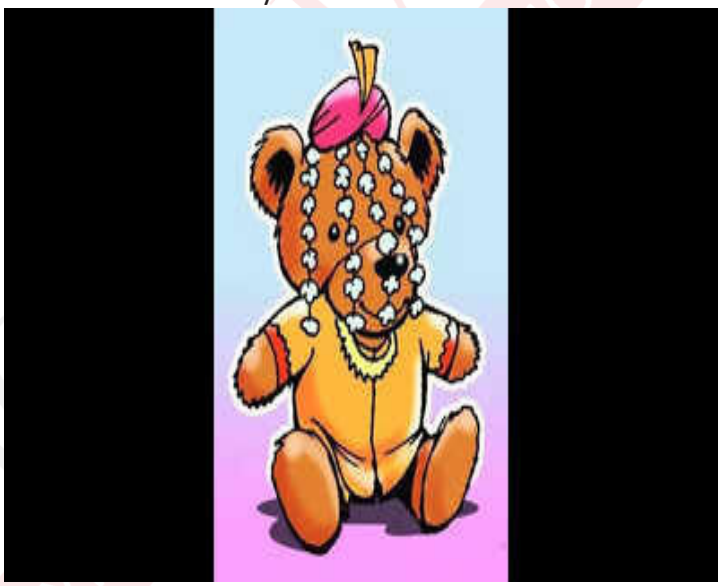
The convergence of heat-linked gender stressors, metabolic drug caution, AMR execution demands, and long-acting prevention signals a decisive turn in health governance. India's resilience now rests not on episodic drug breakthroughs but on climate-aware design (like Kerala's noon breaks), equity-proofing and strict institutional enforcement.

Topics: Population and associated issues, poverty and developmental issues.

CHILD MARRIAGES IN INDIA

Context:

Despite 18 years of the Prohibition of Child Marriage Act, 2006, Andhra Pradesh continues to report a high incidence of child marriage, highlighting gaps between law and social reality.



About Child Marriages in India:

What it is?

- Child marriage refers to the formal or informal union where one or both parties are below 18 years of age, violating children's rights to education, health, protection and choice.
- It disproportionately affects girls, exposing them to early pregnancy, domestic violence, school dropout and long-term economic dependence.

Historical evolution:

- **Colonial era:** Social reform movements (Raja Ram Mohan Roy, Ishwar Chandra Vidyasagar) highlighted early marriage as a social evil.
- **Legislative steps:**
  - Child Marriage Restraint Act, 1929 (Sarda Act) – minimum age fixed but weak enforcement.
  - Prohibition of Child Marriage Act, 2006 – declared child marriage voidable, introduced penalties and Child Marriage Prohibition Officers.
- **Recent push:** National campaigns like Bal Vivah-Mukt Bharat aim to eliminate child marriage by 2030 in line with SDG-5.

Trends of child marriage in India:

- About **16% of girls aged 15–19** are currently married, though prevalence declined from **47% (2005–06) to ~27% (2015–16)**.
- India still accounts for **~1.5 million child marriages annually**, the highest globally in absolute numbers.
- Higher prevalence persists in economically vulnerable regions such as Bihar, Andhra Pradesh, Rajasthan and parts of Madhya Pradesh.

Reasons for child marriage:

1. **Poverty and economic distress:** Poor households perceive early marriage as a way to reduce care costs and secure social protection for daughters.

   E.g. NFHS analysis shows child marriage is far higher among the poorest wealth quintile than the richest.
2. **Lack of awareness:** Limited understanding of the Prohibition of Child Marriage Act and adolescent health risks weakens legal deterrence.

   E.g. Surveys under Bal Vivah Mukt Bharat found low awareness of penalties and the legal marriage age.
3. **Entrenched gender norms:** Patriarchal beliefs treat girls as *paraya dhan*, prioritising marriage over education and autonomy.

   E.g. Social studies show norms change slowly even when female education improves.
4. **School dropouts:** Distance to schools, safety concerns and costs push girls out of secondary education, increasing vulnerability.

   E.g. UNICEF data shows completing secondary education sharply lowers the risk of early marriage.
5. **Social pressure and stigma:** Fear of elopement and loss of "family honour" drives families to arrange early marriages.

   E.g. Authorities report spikes in secret mass marriages on culturally auspicious days.

Challenges associated:

1. **Weak enforcement:** Low conviction rates dilute the deterrent effect of the law despite frequent prevention efforts.

   E.g. Judicial observations highlight severe pendency and slow disposal of child marriage cases.
2. **Family complicity:** Entire families often support early marriage, limiting scope for timely intervention.

   E.g. Courts have noted use of informal betrothals to bypass legal scrutiny.
3. **Institutional gaps:** Inadequate shelters, counselling services and trained officers weaken rescue and rehabilitation.

   E.g. Many Child Marriage Prohibition Officers hold additional charge without specialised capacity.
4. **Gendered health impacts:** Adolescent motherhood raises risks of anaemia, maternal mortality and low birth-weight infants.

   E.g. Nutrition audits link early marriage districts with poor maternal-child health outcomes.

Way ahead:

1. **Education-first strategy:** Retaining girls in secondary education delays marriage and expands life choices.

   E.g. Conditional cash transfers tied to schooling have significantly postponed marriage age.
2. **Economic support to families:** Cash-plus and skill-based interventions reduce poverty-driven marriage decisions.

   E.g. Upgraded Anganwadi centres now provide vocational and life-skills training for adolescents.
3. **Community engagement:** Shifting norms requires panchayats, faith leaders and youth ownership of prevention.

   E.g. Village-level "Child Marriage-Free" declarations have created positive social pressure.
4. **Stronger enforcement:** Dedicated units, digital reporting and swift FIRs improve accountability.

   E.g. Centralised online portals now enable real-time alerts and faster administrative response.
5. **Integrated adolescent empowerment:** Linking protection with health, nutrition and legal awareness ensures sustained impact.

   E.g. Nari Adalats combine community mediation with legal backing to prevent early unions.

Conclusion:

Child marriage is not merely a legal violation but a symptom of poverty, gender inequality and social neglect. While laws and campaigns exist, their success depends on education, economic security and community-level change. Ending child marriage is essential for safeguarding children's rights and breaking intergenerational cycles of deprivation.

THE CHANGING PATTERNS OF INDIA'S STUDENT MIGRATION

Context:

India is witnessing a sharp rise in self-financed student migration, with overseas enrolment projected to reach 13.8 lakh in 2025.

- Recent debates highlight rising debt, underemployment and "brain waste", questioning the developmental gains of this trend.

About The Changing Patterns of India's Student Migration:

What it is?

- Student migration now represents a **mass middle-class phenomenon**, driven less by elite scholarships and more by self-financed education loans and family savings.

Recent trends:

1. By December 2025, **18.82 lakh Indian students** were studying across **153 countries**, with Germany and France emerging as cost-effective alternatives, as Germany alone recorded **~49% growth** amid tighter rules in traditional hubs.
2. The **Kerala Migration Survey (2023–24)** shows student migration doubling from **1.29 lakh (2018) to 2.5 lakh (2023)**, now forming **11.3% of all emigrants**, while Gulf labour migration has stagnated.
3. In **2023–24**, Kerala's outward education remittances touched **₹43,378 crore**, nearly **20% of its inward labour remittances**, marking a measurable economic strain on households.
4. In **2024–25**, stricter norms in Canada, the US, UK and Australia saw Canada's study-visa approval rate fall to **~30%**, triggering a **23% YoY drop in education remittances** as families deferred overseas plans.

Factors Causing the Change in Migration Patterns:

- **Aspirational mobility and PR pathways:** Students increasingly choose destinations that offer post-study work and residency options, even at higher costs, viewing education as a migration ladder rather than a learning goal.

  Eg: In 2024–25, Australia and Germany saw higher Indian enrolments due to clearer PR pathways despite rising visa fees.
- **Gaps in domestic education–employment linkage:** Weak alignment between Indian degrees and labour-market needs pushes graduates to seek foreign credentials for employability.

  Eg: The India Skills Report 2024 found only **51% of Indian graduates employable**, fuelling the "degree-plus-visa" strategy.
- **Aggressive recruitment networks:** Unregulated agents prioritise commissions over student outcomes, steering aspirants to low-quality overseas institutions.

  Eg: In 2024, Punjab Police cracked down on hundreds of fake immigration firms after **700 students faced deportation threats from Canada.**
- **Normalisation of self-financed migration:** Middle-class families increasingly accept high debt as a legitimate investment in global mobility.

  Eg: RBI (2024) recorded a sharp rise in LRS remittances under "Education" and "Maintenance of Close Relatives".

Challenges Associated with Student Migration:

- **Deskilling and underemployment:** Highly educated students often end up in low-skill jobs due to restrictive visa regimes and weak placement support.

  Eg: UK's 2024 limits on skilled-visa switching pushed Indian STEM graduates into gig-economy work.
- **Reverse remittances and household debt:** Instead of earning abroad, students drain domestic savings and incur long-term family debt.

  Eg: Education loans averaged **₹35–40 lakh in 2024**, often mortgaging ancestral land in Punjab and Haryana.
- **Exploitation and informal labour:** Financial stress forces students into unsafe housing and undocumented work.

  Eg: Canada's 2024 housing crisis led to **"hot-**

bedding" and illegal warehouse jobs among Indian students.

- **Mental health and social stress:** Isolation, debt pressure and insecurity severely affect student well-being.

  Eg: Indian consulates in the US and Canada reported a surge in distress calls in 2024 after violent incidents.

- **Brain waste instead of brain gain:** Failure to secure skilled jobs results in debt-burdened returns rather than knowledge transfer.

  Eg: Many returnees face **"circular migration failure"**, coming back with loans instead of advanced skills.

Way Ahead:

- **Regulate education recruitment agents:** Mandatory registration and penalties can curb fraud and misinformation.

  Eg: Proposed amendments to the **Punjab Prevention of Human Smuggling Act** target unregistered study-abroad consultants.

- **Strengthen pre-departure counselling:** Transparent guidance can align expectations with ground realities.

  Eg: MEA's **"Surakshit Jaaye, Prashikshit Jaaye" (2024)** campaign educates aspirants on risks and rights.

- **Bilateral education accountability frameworks:** Structured mobility agreements reduce uncertainty and exploitation.

  Eg: India-Australia MATES programme provides regulated visa quotas for young professionals.

- **Improve domestic higher education outcomes:** Quality global education at home can reduce forced migration.

  Eg: Foreign university campuses at **GIFT City, Gujarat**, offer international degrees at lower cost.

- **Promote return and reintegration pathways:** Returning talent must be absorbed into India's innovation ecosystem.

  Eg: VAIBHAV Fellowship links diaspora and returnees with Indian R&D institutions.

Conclusion:

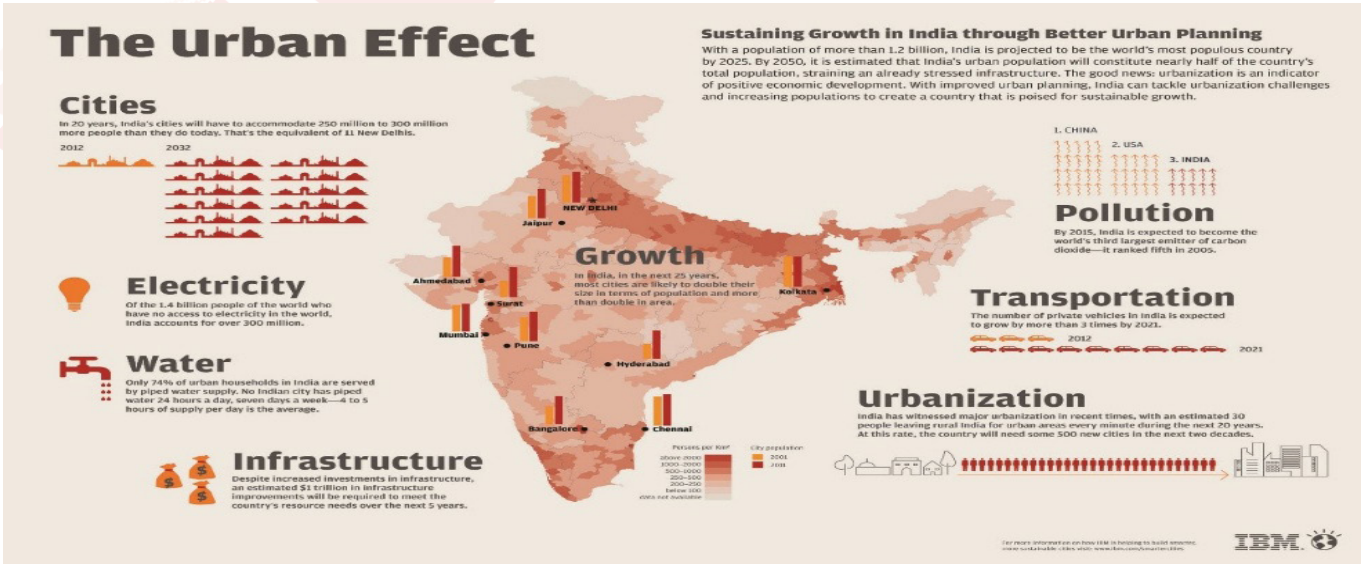
India's student migration reflects rising aspirations but also growing structural vulnerabilities. Without regulation and domestic reform, the promise of global education risks turning into debt-driven underemployment. A balanced approach is needed to convert student mobility into genuine human capital gain rather than brain waste.

Topics: Urbanization, their problems and their remedies.

THE URBAN FUTURE

Context:

Recent opinion pieces and policy debates have highlighted the need to reimagine India's urban future as inclusive, people-centric ecosystems, amid rapid urbanisation and mobility stress.



About The Urban Future:

What is urbanisation?

- Urbanisation is the process by which a growing share of the population shifts from rural to urban areas, leading to the expansion of cities in population, economic activity, and spatial footprint. It is driven by industrialisation, migration, better livelihoods, and access to services.

Data trends in India:

- **Urban population:** ~36% (2024), projected to exceed **50% by 2050–60s**.
- **Economic role:** Urban India contributes **~65–70% of GDP** despite housing a smaller population share.
- **Migration:** Increasing **inter-State and rural–urban migration**, especially to Tier-1 and Tier-2 cities.
- **Transport access:** Only **~37% of urban residents** have easy access to public transport (Economic Survey).
- **Infrastructure gap:** Need for **~2 lakh urban buses**; operational fleet ~**35,000**.

Existing urbanisation pattern:

- **Concentration in metros:** Expansion of Tier-1 cities rather than balanced growth of new towns.
- **Peripheral sprawl:** Growth of informal settlements and urban fringes without commensurate services.
- **Sectoral hubs:** Cities specialising in IT, manufacturing, services, creating uneven regional development.
- **Smart city skew:** Infrastructure-centric planning, often neglecting social inclusion and lived experience.

Challenges Associated with Urbanisation:

- **Exclusion and inequality:** Migrants and informal workers face linguistic, cultural, and documentation barriers, limiting access to jobs, welfare, and civic participation, and pushing them to the urban margins.
  E.g. Gaps in implementing the Inter-State Migrant Workmen Act mean migrant workers in Surat often fail to access PDS benefits due to lack of local proof.
- **Housing deficit:** High land prices and weak rental markets force the urban poor into slums and insecure housing, perpetuating informality and eviction risks.
  E.g. The Dharavi Redevelopment Project reflects the challenge of formalising housing without disrupting livelihoods and social networks.
- **Urban mobility stress:** Inadequate public transport and over-reliance on private vehicles cause congestion, long commute times, and productivity losses.
  E.g. Bengaluru's Outer Ring Road (ORR) illustrates the mismatch between rapid IT-sector growth and lagging transport infrastructure.
- **Governance gaps:** Urban Local Bodies suffer from fragmented authority, overlapping agencies, and weak fiscal autonomy, reducing accountability and efficiency.
  E.g. Recurrent flooding in Chennai and Gurugram exposes poor coordination among municipal, drainage, and road agencies.
- **Environmental stress:** Unplanned expansion creates urban heat islands, air pollution, and water scarcity, threatening public health and sustainability.
  E.g. Delhi's winter smog (AQI 400+) is worsened by dense traffic, construction dust, and limited green cover.
- **Social cohesion:** Rapid urbanisation weakens community bonds and shared identity, leading to alienation and social fragmentation.
  E.g. The gated-community culture in Noida creates physical and social silos separating elites from service-providing populations.

Way Ahead: Transforming Indian Cities

- **People-centric planning:** Cities must be viewed as dynamic ecosystems, where infrastructure design prioritises human well-being over rigid master plans.
  E.g. Bhubaneswar's Child-Friendly City initiative integrates safe play spaces and walkable, inclusive urban design.
- **Inclusive governance:** Multilingual services and representation of migrants in decision-making improve access, trust, and civic participation.
  E.g. Kerala's 'Awas' health insurance scheme uses multilingual outreach to ensure migrant worker inclusion.
- **Sustainable mobility mix:** Strengthening buses, integrating alternative modes like trams, and improving last-mile connectivity reduces congestion and emissions.
  E.g. The Indore iBus (BRTS) boosted ridership through dedicated lanes and efficient feeder services.
- **Fiscal empowerment of ULBs:** Financial autonomy through municipal bonds and rational

user charges enables long-term infrastructure investment.
E.g. Pimpri-Chinchwad Municipal Corporation (PCMC) raised capital via municipal bonds for urban infrastructure.

- **Affordable housing:** Transit-oriented development and in-situ slum redevelopment integrate housing with jobs and services.
  E.g. PM Awas Yojana (Urban) and ARHCs target affordable housing for migrant workers post-pandemic.

Conclusion:

India's urban future will define its economic and social trajectory. Infrastructure alone cannot deliver success without inclusion, empathy, and efficient governance. Designing cities for people—present and future—is the cornerstone of a sustainable, resilient, and equitable urban India.

Topics: Salient features of world's physical geography.

LIGHTNING AN UNDERSTATED DISASTER IN INDIA

Context:

Experts at the 9th National Lightning Conference warned that lightning remains India's deadliest yet underestimated natural disaster, despite a sharp rise in strikes due to climate change.

About Lightning an understated disaster in India:

What it is?

- Lightning is a rapid electrostatic discharge between clouds or between cloud and ground, accompanied by thunderstorms, intense rainfall, winds and sometimes hail. It is sudden, highly localised and instantly lethal, making mitigation challenging compared to slow-onset disasters.

Trends in India:

- Lightning is the single largest killer natural hazard in India, causing over 2,000 deaths annually.
- India has witnessed a ~400% rise in lightning strikes (2019–2025), with a 7–14% annual increase linked to warming.
- New hotspots have emerged in Rajasthan, Gujarat, Haryana, Punjab and Delhi, alongside persistent vulnerability in Madhya Pradesh, Bihar and Odisha.

Why lightning remains ignored as a disaster?

- **Dispersed nature:** Lightning fatalities occur as scattered, single-event incidents across villages and fields, preventing media visibility and policy recognition that usually follows large, concentrated disasters.
- **Low visibility of damage:** Unlike floods or cyclones, lightning rarely leaves large-scale structural destruction, leading to underestimation of its cumulative human and economic toll.
- **Data and research gaps:** Inadequate ground-based sensors, electric-field meters and testing laboratories limit precise mapping, forecasting and scientific understanding of lightning behaviour.
- **Last-mile communication failures:** Although forecasts exist, warnings often fail to trigger timely behavioural change at the village level due to language, access and institutional gaps.
- **Perception bias:** Lightning is widely viewed as an unavoidable "act of nature" rather than a disaster that can be mitigated through science, planning and awareness.

Implications of rising lightning risk:

- **Human loss:** Farmers, labourers, fishermen and pastoral communities working outdoors face disproportionate mortality, making lightning a livelihood-linked hazard.
- **Economic damage:** Lightning damages crops, livestock, power lines, telecom towers and buildings, imposing recurring but underreported economic losses.
- Climate linkage: Rising atmospheric electricity correlates with cloudbursts, extreme rainfall and floods, amplifying compound climate risks.
- **Regional vulnerability:** Semi-arid, plateau and hilly regions with limited shelters and warning infrastructure face increasing exposure and fatalities.

NDMA guidelines and initiatives on lightning

- **Early warning systems:** IMD provides location-specific lightning forecasts up to 48 hours through Damini, Mausam and Sachet apps for timely alerts.
- **Public advisories:** NDMA has issued standardised do's and don'ts to reduce risky behaviour during thunderstorms and lightning events.
- **Community-centric approach:** Training programmes for disaster managers, volunteers and panchayats aim to convert warnings into early action.
- **Lightning Resilient India Campaign:** Focuses on nationwide awareness, education, capacity-building and local mitigation strategies.
- Mitigation Project on Lightning Safety (**MPLS**)**:** Targets high-risk states and districts with risk mapping, electric-field meters, alert poles and lightning protection in schools and anganwadis.

Why lightning must be formally recognised as a disaster?

- **Highest mortality hazard:** Lightning kills more people annually than any other natural hazard in India, warranting priority disaster status.
- Climate change **amplifier:** Rising temperatures directly increase lightning frequency, making future risks systemic rather than episodic.
- **Preventable deaths:** Evidence shows that early warnings combined with behavioural change can sharply reduce fatalities.
- **Localised governance need:** Formal recognition enables funding, district-level action plans and Gram Panchayat integration.
- **Disaster risk reduction alignment:** Inclusion aligns India's policy framework with the Sendai Framework's emphasis on early warning and resilience.

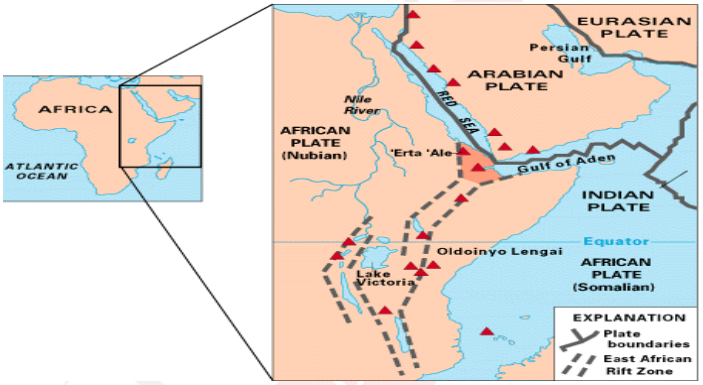
Conclusion:

Lightning is no longer a sporadic weather hazard but a climate-driven, nationwide disaster with severe human costs. Treating it as a mainstream disaster can unlock better science, funding and local preparedness. Integrating lightning risk into disaster management plans is essential to save lives in a warming India.

EAST AFRICAN RIFT VALLEY

Context:

A new study using resurrected 1960s magnetic data shows clear evidence of active seafloor spreading near the Afar triple junction, confirming that Africa is gradually splitting into two plates.



About East African Rift Valley:

- **What it is?**
  - World's largest active continental rift stretches ~3,500 km from the Red Sea to Mozambique, marked by elongate depressions and steep fault scarps produced by crustal extension.
- **Key Features:**
  - **Two distinct branches**: the volcanic-rich Eastern Rift (Ethiopia–Kenya) and the seismically active Western Rift (Uganda–Malawi), each showing advanced stages of crustal thinning.
  - **Tectonic & volcanic zone:** characterised by normal faults, fissures, active volcanoes like Erta Ale, and deep lakes such as Tanganyika formed by subsiding crust.
  - **Afar Triple Junction: a** meeting point of the Red Sea, Gulf of Aden and East African rifts, making it one of Earth's most dynamic tectonic regions.
  - **Divergent plate boundary:** separates the Somali and Nubian plates, with measurable spreading of 5–16 mm/year in the north.

Formation of the Rift Valley:

- **Mantle plume upwelling** increases heat flow and buoyancy, uplifting and thermally weakening the continental lithosphere beneath Ethiopia–Kenya.
- **Tensional plate forces** stretch the brittle crust, causing extensional stress that produces large,

steep **normal faults** on both sides of the rift.

- **Horst–graben structures** form as blocks of crust drop down (grabens) while adjacent blocks rise (horsts), creating deep trough-like rift valleys.
- **Magmatism & basaltic volcanism** accompany crustal thinning, as fissure eruptions and flood basalts fill the widening rift floor over millions of years.
- **Progressive divergence** may eventually rupture the continental crust entirely, allowing **seafloor spreading** to create a new ocean basin.

Factors Causing the African Rift:

- **Deep mantle superplume** beneath East Africa pushes the lithosphere upward, generating uplift, stretching, and widespread magmatic weakening.
- **Divergence between Somali & Nubian plates**, moving 5–16 mm/year, progressively widens the rift and increases extensional strain on the crust.
- **Afar triple-junction dynamics** intensify crustal breakup as three spreading centres mechanically pull the region apart in different directions.
- **High heat flow & magma intrusions** reduce crustal strength, accelerating normal faulting and basin subsidence.
- **Stress transfer from Red Sea & Gulf of Aden** spreading centres propagates southward, reinforcing rifting from the northeast to Mozambique.

Implications of the Rift:

- **Geological Implications:**
  - **Formation of a new ocean basin** is likely once continental rupture completes, separating the Somali plate from the African mainland.
  - **Higher volcanic and seismic activity** will persist along Ethiopia, Kenya, and Tanzania as crustal thinning continues and magma pathways open.
  - **Creation of deep linear lakes & drainage shifts**, altering hydrology and forming new basins such as expanded Lake Turkana or Malawi.
  - **Africa's long-term geographic reconfiguration**, producing two continents with newly emergent coastlines and submerged rift floors.
- **Socio-Economic Implications:**
  - **Frequent fissuring, fault scarps & earthquakes** threaten roads, farms, schools, and settlements across Rift Valley nations.
  - **Damage to public infrastructure**—as seen in Kenya and Ethiopia—will raise disaster-risk, requiring continuous monitoring and adaptation.
  - **Future coastline emergence** may give landlocked nations like Uganda and Zambia potential sea access, reshaping trade patterns.

Conclusion:

The East African Rift Valley represents one of Earth's most active continental breakup zones, gradually reshaping Africa's geography. Though unfolding over millions of years, its seismic and volcanic impacts are already visible today. Understanding this rifting is essential for managing future geological hazards and harnessing new resource opportunities.

Topics: Distribution of key natural resources across the world (including South Asia and the Indian subcontinent)

VIRTUAL WATER EXPORT CRISIS

Context:

India has emerged as the world's largest rice producer and exporter, accounting for nearly 40% of global rice trade, but this export dominance is intensifying groundwater depletion in water-stressed States like Punjab and Haryana.

- The debate has resurfaced around India's growing "virtual water export crisis", where scarce groundwater is effectively exported through water-intensive crops.

About Virtual Water Export Crisis:

What it is?

- The virtual water export crisis refers to the export of water embedded in agricultural commodities, especially water-intensive crops

like rice, from a water-stressed country.
- In India's case, large rice exports mean exporting billions of cubic metres of groundwater, even as domestic aquifers face depletion.

Key trends:
- India exports over **20 million metric tonnes of rice annually**, embedding massive quantities of irrigation water.
- Rice production alone accounts for **34–43% of global irrigation water use**.
- Around **24,000+ million cubic metres of virtual water** is exported annually through rice trade.
- Northern rice belts increasingly rely on **groundwater rather than surface irrigation**.

Reasons behind the virtual water export crisis:
- **Water-intensive rice cultivation model:** Rice requires **3,000–4,000 litres of water per kg**, far exceeding global averages, making it unsustainable in semi-arid regions.
- **Distortionary subsidies:** High MSPs for rice and free or cheap electricity incentivise excessive groundwater extraction and discourage crop diversification.
- **Policy legacy of food security:** Green Revolution-era policies prioritised rice and wheat to ensure food security, but were not recalibrated for water scarcity realities.
- **Weak groundwater regulation:** Groundwater remains poorly regulated, allowing unrestricted borewell drilling and over-extraction by farmers.
- **Global market dependence:** India's dominance in global rice trade makes policy shifts politically and economically sensitive due to price and export implications.

Impacts on India:
- **Rapid groundwater depletion:** In Punjab and Haryana, CGWB data shows most blocks classified as *over-exploited*, with borewell depths increasing from 30 feet to 80–200 feet, sharply raising irrigation costs.
- **Rising farm distress:** Small farmers in rice belts report mounting debt to finance deeper pumps and electricity, reflected in rising input costs despite MSP hikes, as highlighted in recent Reuters field surveys (2025).
- **Climate vulnerability:** Even with good monsoons in 2023–25, excessive extraction prevented aquifer recharge, exposing northern agriculture to severe risk during any future weak monsoon year.
- **Ecological imbalance:** Falling water tables have degraded wetlands and soil moisture regimes in Punjab–Haryana, reducing biodiversity and long-term land productivity, per PAU studies.
- **Inter-generational inequity:** India exports over 24,000 million cubic metres of virtual water annually through rice, effectively transferring future water security costs to coming generations.

Challenges associated:
- **Political resistance to reform:** The rollback of the **2020–21 farm laws** after nationwide protests shows the political sensitivity of reducing MSP dependence and procurement guarantees.
- **Farmer income insecurity:** One-season diversification incentives, such as **Haryana's ₹17,500/ha millet scheme (2024)**, failed to scale due to lack of income certainty.
- **Uneven State capacity:** As water is a **State subject**, groundwater regulation remains weak and fragmented, with enforcement varying widely across Punjab, Haryana and eastern States.
- **Short-term policy design:** Crop-switch schemes limited to a single season have not offset long-term risk, discouraging farmers from abandoning assured rice procurement.
- **Data and enforcement gaps:** Despite **NAQUIM mapping**, absence of real-time extraction monitoring allows unchecked borewell drilling in over-exploited blocks.

Initiatives taken to handle the water crisis:
1. **Jal Shakti Abhiyan (JSA):** Mission-mode water conservation and recharge campaign since 2019, with focus on over-exploited districts.
2. Atal Bhujal Yojana: Community-led groundwater management in water-stressed districts.
3. **Mission Amrit Sarovar:** Rejuvenation of local water bodies to enhance groundwater recharge.
4. **Per Drop More Crop:** Promotion of micro-irrigation to improve farm water-use efficiency.
5. **NAQUIM 2.0:** Scientific aquifer mapping for informed groundwater management decisions.

Way ahead:
- **Reorient MSP and procurement policy:** Expanding assured procurement for millets under International Year of Millets momentum can replicate rice-like income security with lower water use.

- **Price groundwater realistically:** Rationalising free power for agriculture and promoting solar pumps with usage caps can curb wasteful extraction, as piloted in parts of Gujarat.
- **Long-term diversification support:** Experts recommend 5–7 year income assurance, as short-term schemes have failed to induce durable crop shifts in Punjab–Haryana.
- **Promote climate-smart agriculture:** Techniques like Direct Seeded Rice (DSR) promoted by Punjab Agriculture Department reduce water use by 15–20% per hectare.
- **Integrate trade and water policy:** India's export strategy must internalise water footprint costs, shifting exports toward less water-intensive, higher-value crops to reduce virtual water loss.

Conclusion:

India's rice export success masks a silent crisis of groundwater depletion through virtual water exports. Continuing to subsidise water-intensive crops in stressed regions threatens long-term food and water security. Sustainable agriculture now demands aligning farm policy, water governance and trade strategy with ecological limits.

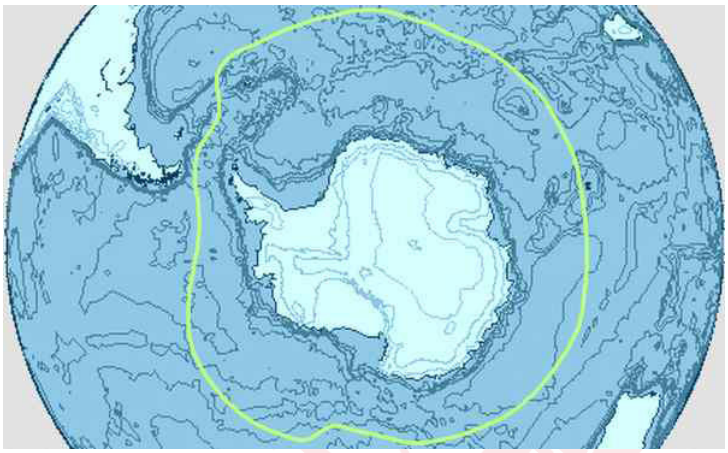
Topics: Important Geophysical phenomena such as earthquakes, Tsunami, Volcanic activity, cyclone etc., geographical features and their location- changes in critical geographical features (including water-bodies and ice-caps) and in flora and fauna and the effects of such changes.

SOUTHERN OCEAN CARBON ANOMALY

Context:

New research published in Nature Climate Change shows that the Southern Ocean has absorbed more carbon dioxide since the early 2000s, contrary to long-standing climate model predictions.

- This unexpected behaviour—termed a Southern Ocean carbon 'anomaly'—reveals key processes that climate models have so far underrepresented.



About Southern Ocean Carbon Anomaly:

What it is?

- The Southern Ocean carbon anomaly refers to the observed strengthening of the Southern Ocean as a carbon sink, even though climate models predicted it would weaken and start releasing carbon dioxide under global warming.
- Instead of emitting more CO_2 due to stronger winds and upwelling, the ocean has continued to absorb an increasing share of human-emitted carbon.

How it occurs?

- **Strengthened westerly winds drive upwelling:** Climate warming intensifies Southern Hemisphere westerlies, pulling carbon-rich deep waters upward toward the Southern Ocean surface.
- **Freshwater input lightens surface layers:** Increased Antarctic ice melt and rainfall add freshwater at the surface, making it less salty and more buoyant.
- **Stratification forms a surface "lid":** The buoyant freshwater layer strengthens vertical stratification, separating surface waters from deeper, carbon-rich layers.
- **Blocked air–sea gas exchange:** Although deep waters rise, stratification prevents them from reaching the surface, stopping CO_2 from escaping to the atmosphere.
- **Carbon gets trapped below the surface:** Upwelled circumpolar deep waters remain **~100–200 m below the surface**, allowing continued **net carbon absorption**.
- **Small-scale processes amplify the effect:** Ocean eddies and ice-shelf cavity dynamics reinforce stratification but are poorly resolved in coarse climate models.

Factors causing the anomaly:

- **Freshening of surface waters:** Increased rainfall and meltwater from Antarctic glaciers have reduced surface salinity, making surface waters lighter and more buoyant.
- **Enhanced stratification:** Fresher, lighter surface layers sit atop warmer, saltier deep waters, limiting vertical mixing and air–sea gas exchange.
- **Trapping of carbon-rich waters below surface:** Upwelled circumpolar deep waters remain **100–200 metres below the surface**, preventing CO_2 release.
- **Incomplete model representation:** Climate models struggled to capture **small-scale processes** such as ocean eddies and ice-shelf cavity dynamics that govern stratification.
- **Data limitations:** Sparse, seasonal observations in the Southern Ocean reduced the ability to validate and refine model behaviour.

Implications of the anomaly:

- **Temporary climate buffer:** Continued carbon uptake has slowed the accumulation of atmospheric CO_2, buying the world limited time.
- **Risk of sudden reversal:** Observations suggest surface stratification is thinning; if it collapses, **stored deep carbon could rapidly outgas**.
- **Model refinement imperative:** Highlights the need to better integrate **ocean chemistry, freshwater inputs, and fine-scale physics** into climate models.
- **Policy relevance:** Reinforces that reliance on natural carbon sinks is risky and cannot substitute for emission reductions.
- **Importance of sustained observation:** Year-round monitoring of polar oceans is essential to anticipate abrupt climate feedbacks.

Conclusion:

The Southern Ocean carbon anomaly shows that nature can temporarily defy model expectations, but not indefinitely. Freshwater-driven stratification has masked deeper vulnerabilities in the climate system. As this protective layer weakens, the Southern Ocean could swiftly shift from carbon ally to climate amplifier, underscoring the urgency of emissions cuts and better observations.

FACTS FOR PRELIMS

1. GENERAL STUDIES – 1

ART AND CULTURE

Architecture

NATIONAL MARITIME HERITAGE COMPLEX (NMHC) AT LOTHAL

Context:

India and the Netherlands have signed an MoU to cooperate on the development of the National Maritime Heritage Complex (NMHC) at Lothal, Gujarat.

About National Maritime Heritage Complex (NMHC) at Lothal:

What it is?

- The National Maritime Heritage Complex (NMHC) is a flagship cultural and heritage project of the Ministry of Ports, Shipping and Waterways (MoPSW) aimed at showcasing India's 4,500–5,000-year-old maritime legacy through a world-class museum and cultural complex.

Location:

Lothal, near Ahmedabad, **Gujarat**

Nodal Ministry:

Ministry of Ports, Shipping and Waterways

- Developed as India's first comprehensive national institution dedicated exclusively to maritime heritage.

Key features:

- **World-class maritime museum** with galleries on ancient navigation, shipbuilding, trade routes, naval history, and coastal cultures
- **International collaboration**, including partnership with the National Maritime Museum, Amsterdam, for design, curation, and conservation
- **Maritime research and training centre** for scholars and professionals
- **Venue for global maritime fairs, exhibitions, and cultural events**
- **Inclusive public outreach** with affordable access for students, local communities, and underprivileged groups
- Integration of **modern technology and immersive visitor experiences**

About Lothal:

- **Located in:**
  - **Lothal**, near Ahmedabad, Gujarat
  - Part of the **Indus Valley (Harappan) Civilization** cultural landscape
- **Excavation:**
  - Excavated in **1957** by the Archaeological Survey of India
  - Dates back to around **2400 BCE**
  - Recognised for the discovery of the **world's earliest known man-made dockyard**
- **Key features and significance:**
  - The Lothal dockyard connected the settlement to ancient maritime trade routes linking Sindh, Saurashtra, Mesopotamia, Egypt, and beyond.
  - Evidence of advanced town planning, tidal regulation, and maritime engineering.
  - A major port town that facilitated not only trade in goods but also the exchange of cultures, ideas, and technologies.
  - Demonstrates India's continuous maritime tradition spanning over 4,500–5,000 years.

ELLORA CAVES

Context:

Scottish historian urged the Maharashtra government to spotlight the neglected yet significant heritage sites around the Ellora Caves, such as Malik Ambar's tomb, the first Peshwa's tomb, and the empty tomb of the last Ottoman Caliph.

About Ellora Caves:

What it is?

- Ellora Caves are a UNESCO World Heritage Site comprising 34 monumental rock-cut temples and monasteries representing Buddhist, Hindu, and Jain traditions. They form one of the largest rock-cut cave complexes in the world.

Location:

Situated in Chhatrapati Sambhajinagar (Aurangabad), Maharashtra.

History:

- Constructed between **600 CE to 1000 CE**.
- **12 Buddhist caves (caves 1–12): ~200 BCE to 600 CE:** Early monastic caves with viharas, meditation cells and chaitya halls, marking the shift from simple rock shelters to more structured prayer and learning spaces.
- **17 Hindu caves (caves 13–29): ~500 CE to 900 CE:** Rashtrakuta-era caves with bold iconography, massive pillars and grand sculptures, culminating in the Kailasa temple—the finest example of Indian rock-cut engineering.
- **5 Jain caves (caves 30–34): ~800 CE to 1000 CE:** Later additions marked by intricate carvings, ornate pillars and themes of asceticism, showcasing Ellora's spirit of multi-religious coexistence and artistic refinement.
- Designated UNESCO World Heritage Site in **1983**.

Key Features:

- **Kailasa Temple (Cave 16):**
  - Largest **single monolithic rock excavation** in the world.
  - Carved from top to bottom, removing **1,50,000–2,00,000 tonnes** of rock.
  - Chariot-shaped monument dedicated to **Lord Shiva**.
- **Notable carvings:** Nandi Mandapa, Life-size

elephants, Ravana shaking Mount Kailasa, and Narasimha slaying the demon.

- **Multi-Religious Harmony:**
  - Rare archaeological site exhibiting **Hindu–Buddhist–Jain coexistence** across centuries.
- **Architectural Excellence:**
  - **Complex includes:** Elaborate facades, multi-story halls, Sculptures, pillars, windows and stairways carved from solid basalt.
  - **Nearby Heritage Cluster:**
  - **Khultabad:** Naga veneration sites, Sufi shrines.
  - Malik Ambar's tomb, First Peshwa's tomb, Empty tomb of the last Ottoman Caliph.

Paintings

BOREENDO

Context:

UNESCO has inscribed Pakistan's Boreendo, a rare clay vessel-flute linked to the Indus Valley musical tradition, on the Intangible Cultural Heritage in Need of Urgent Safeguarding list.

About Boreendo:

- **What it is?**
  - The Boreendo is a **spherical clay vessel-flute**, producing mellow, breathy tones used in folk melodies, pastoral songs and winter gatherings in Sindh.
- **Origin:** It originates from **Keti Mir Muhammad Lund in Sindh**, with roots tracing back to Mohenjo-daro artefacts, indicating a long sonic lineage from the Indus Valley Civilization.
- **Characteristics:**
  - **Terracotta Craft:** Handmade from sun-dried and kiln-fired clay, keeping the instrument fully eco-friendly.
  - **Spherical Vessel Design:** Egg-shaped hollow body with 1 inlet and 3–5 holes enables simple melodic variation.
  - **Tilt-Based Sound Control:** Pitch and tone shift by tilting the mouthpiece rather than complex fingering.
  - **Community Decoration:** Women paint natural motifs, embedding local aesthetics into each instrument.
  - **Haunting Acoustic Tone:** Produces soft, breathy notes traditionally played at bonfires, weddings, and festivals.
  - **Size-Linked Sound Range:** Larger Boreendos give deeper resonance; smaller ones create sharper tones.
  - **Oral Transmission of Skills:** Craft and playing techniques taught in artisan families, now also via schools and festivals.
  - Cultural Symbolism: Represents Thari pastoral identity and strengthens community-nature bonds.
- **Cultural Significance:** It survives through only a **single maestro (Zulfikar Loond)** and one potter, making safeguarding essential to preserve both music and craft heritage.

About the Indus Valley Flute Tradition:

- **What it is?**
  - Archaeological excavations at **Mohenjo-daro and Harappa** have revealed terracotta and bone flutes, some nearly identical to the modern Boreendo.
- **Discovered in?**
  - Flute fragments were found at **Mohenjo-daro**, Harappa, and adjoining sites of the Indus Valley Civilization (3300–1300 BCE).
- **Key Characteristics:**
  - Made from clay, bone, or shell.
  - Carefully drilled finger holes; sometimes uneven spacing (microtonal scales).
  - Cylindrical or spherical forms similar to today's vessel flutes.
  - Evidence suggests both solo and group musical performances.

Religion and Festivals

DANDAMI MARIA TRIBE

Context:

The Bison Horn Maria dance of the Dandami Madia (Maria) tribe of Bastar, Chhattisgarh, has drawn attention for its enduring cultural vitality despite modern influences.

About Dandami Maria Tribe:

Who they are?

- The Dandami Maria, also known as Bison Horn Maria or Khalpati Maria, are a tribal community belonging to the broader Gond (Koytorias) ethnic group.
- They are recognised for their distinctive ceremonial dance and headgear resembling bison horns, which has become a cultural marker of their identity.

Origin:

- The Dandami Maria trace their lineage to the **ancient Gondwana region**, once spread across central India.
- They identify as part of the **Gond tribal tradition**, one of the oldest indigenous groups of the Deccan plateau.
- Linguistically, they speak **Dandami Maria**, with many also using **Gondi dialects**, an oral language of **Dravidian origin**.

Habitat and Distribution:

- Predominantly inhabit the **Bastar region of southern Chhattisgarh**, especially in **Darbha, Tokapal, Lohandiguda, Dantewada**, and surrounding forested tracts.
- Their settlements are closely integrated with **dense forests**, shaping their subsistence patterns, rituals, and worldview.
- They practice **agriculture**, supplemented by **hunting and fishing**.

Key Cultural Characteristics:

- **Bison Horn Maria Dance:**
  - Performed by both men and women during festivals, rituals, and communal gatherings.
  - Men wear **horn-shaped bamboo headgear** decorated with bison or cattle horns, feathers, cowries, and cloth strips, along with bead necklaces and ankle bells.
  - Women wear **handwoven saris**, heavy **silver and brass jewellery**, coin ornaments, and ceremonial crowns.
- **Social and Cultural Life:**
  - The **ghotul (youth dormitory)** plays a vital role in socialisation, cultural transmission, and community cohesion.
  - Distinct hairstyles, traditional ornaments, and ceremonial objects such as tobacco boxes and combs are culturally significant.
  - They permit **divorce and widow remarriage**, reflecting flexible social norms.

Significance:

- Represents a living tribal heritage that preserves Gond identity and pre-Aryan cultural traditions.
- Embodies a nature-centric worldview, celebrating hunting traditions, seasonal cycles, and forest deities like Budhadev and Danteshwari Mai.

HORNBILL FESTIVAL

Context:

The 26th Hornbill Festival (2025) in Nagaland is underway, with day three showcasing vibrant cultural performances by 18 Naga tribal troupes at Kisama Heritage Village.

About Hornbill Festival:

What it is?

- A premier cultural festival of Nagaland, known as the **"Festival of Festivals,"** celebrating the heritage, traditions, and artistic expressions of all major Naga tribes.

Celebrated in:

- Held annually from December 1–10 at Kisama Heritage Village, near Kohima in Nagaland.

History:

- Started in **2000** by the Government of Nagaland to promote inter-tribal unity, preserve indigenous culture, and boost tourism.
- Named after the **Hornbill**, a revered bird in Naga folklore symbolising valour, beauty, and tradition.

Key Features:

- Daily cultural shows featuring traditional dances, folk songs, war cries, and indigenous sports.
- **Display of Naga arts:** wood carving, textiles, crafts, paintings, sculptures.
- Food festivals, herbal medicine stalls, flower shows, and traditional archery & wrestling.
- **Major events:** Hornbill International Rock Festival, Morung exhibitions, fashion shows, and craft bazaars.
- Participation from international partner countries and neighbouring states.

Significance:

- Revives, preserves, and promotes the diverse cultural identity of Nagaland's 17 major tribes.
- Acts as a platform for cultural assimilation, where village elders and youth interact and exchange traditions.
- Enhances tourism, economic activity, and global cultural ties.

Textiles

NARSAPURAM LACE CRAFT

Context: The Prime Minister highlighted Narsapuram Lace Craft in *Man Ki Baat* as a model of women-led economic empowerment and cultural continuity.

- The craft's Geographical Indication (GI) tag has renewed national attention on this traditional livelihood of the Godavari region.

About Narsapuram Lace Craft:

What it is?

- Narsapuram Lace Craft is a handmade crochet lace tradition, where fine threads are transformed into intricate lace products using a single crochet hook, reflecting high skill and patience.

Region:

West Godavari and Dr. B.R. Ambedkar Konaseema districts of Andhra Pradesh

- **Key centres:** Narsapur, Palacole, Razole and Amalapuram

History:

- Introduced in **1844** when lace-making techniques were taught to local women by European missionaries.
- The craft survived major historical shocks such as **famines and economic depressions**, sustaining women's livelihoods across generations.
- Over time, it evolved into a globally recognised hand-crafted textile tradition.

Key characteristics:

- **Raw materials:** Uses fine cotton threads, along with silk, rayon or synthetic yarns for decorative and export-quality products.
- **Tools:** Crafted using crochet hooks of varying sizes to produce different textures and lace densities.
- **Technique:** Involves looping and interlocking stitches manually to form delicate lace structures without machinery.
- **Design motifs:** Features floral, paisley and geometric patterns inspired by nature and traditional aesthetics.
- **Product range:** Includes garments, home furnishings and accessories such as doilies, bedspreads, table linen, cushion covers, stoles and wall hangings.

Significance:

- The craft provides regular income to thousands of women, making them primary contributors to household economies.
- It safeguards an indigenous textile tradition passed down through generations.

Dance

HAKA DANCE

Context:

The Māori haka recently drew global attention after being performed as a protest gesture in New Zealand—both during a counter-protest against a Sikh Nagar Kirtan in Auckland.

About Haka Dance:

What it is?

- Haka is a traditional Māori posture dance involving vigorous rhythmic movements—stamping feet, slapping thighs and chest, chanting (waiata), and intense facial expressions. It conveys strength, unity, pride, challenge, or protest.

Origin:

- Originates from the **Māori**, the indigenous Polynesian people of **Aotearoa (New Zealand)**.
- Rooted in Māori mythology: the dance is associated with **Tāne-rore**, son of the sun god Tama-nui-te-rā and summer goddess Hine-raumati.
- The shimmering air on hot days is believed to be Tāne-rore dancing—symbolised by trembling hand movements in haka.

Key characters / contributors:

- **Te Rauparaha** (Ngāti Toa chief): Composer of the most famous haka **"Ka Mate"** (c. 1820).
- **Māori iwi (tribes)**: Custodians and performers of diverse haka traditions.

Types of Haka:

- **Ka Mate:** Celebrates survival and resilience.
- **Peruperu:** War haka performed before battle.
- **Ngeri:** Short, informal haka to energise participants.
- **Pōwhiri:** Welcoming haka during formal greetings.
- **Manawa wera:** Performed at funerals or memorials to express grief.

Significance:

- Cultural identity**:** Symbol of Māori heritage, ancestry, and collective memory.
- **Social function:** Used in welcomes, protests, celebrations, mourning, and storytelling.
- **Political expression:** A non-violent, culturally rooted form of dissent and assertion of indigenous rights.

NATYASHASTRA

Context:

During the 20th Session of UNESCO's Intergovernmental Committee for Safeguarding Intangible Cultural Heritage (ICH) in New Delhi, IGNCA organised an academic programme on Natyashastra.

About Natyashastra:

What it is?

- The Natyashastra is the foundational Sanskrit treatise on drama (natya), dance (nritya and nritta), music (sangita), aesthetics, and stagecraft in the Indian tradition.
- It is regarded as the Natya Veda (Fifth Veda)—intended to communicate ethical, aesthetic, and social values to all sections of society through performance.

Authored by:
Traditionally attributed to **Bharata Muni**.

Language: Composed in **Classical Sanskrit**, primarily in **śloka (verse) form**, with a few prose explanations in later recensions.

History and Composition:

- Broadly dated to **c. 200 BCE – 200 CE** (scholarly consensus range).
- The text evolved from an **oral performance tradition** before being codified.
- The most influential classical commentary is **Abhinavagupta's Abhinavabharati (c. 10th–11th century CE)**.

Key features of the text:

- Consists of **36 chapters** (some traditions count 37).
- Covers the entire lifecycle of theatrical production.
- **Rasa theory (core contribution):** Explains aesthetic experience through Rasa–Bhava framework; classical rasas include Shringara, Hasya, Karuna, Raudra, Veera, Bhayanaka, Bibhatsa, Adbhuta (later tradition adds Shanta).
- **Four-fold acting tools (Abhinaya):** Describes Angika (body), Vachika (speech), Aharya (costume/props), Sattvika (inner emotion) as essential to performance.
- **Dramaturgy & stagecraft:** Details plot construction, roles, performance styles, theatre space, costumes, make-up, and direction—making it a complete production manual.
- **Dance & gesture codification:** Elaborates mudras/hastas, body positions, facial/eye movements, and units like karanas, enabling standardised training.
- **Integration of arts:** Treats performance as a synthesis of music + rhythm + movement + expression, making "theory and praxis" inseparable.

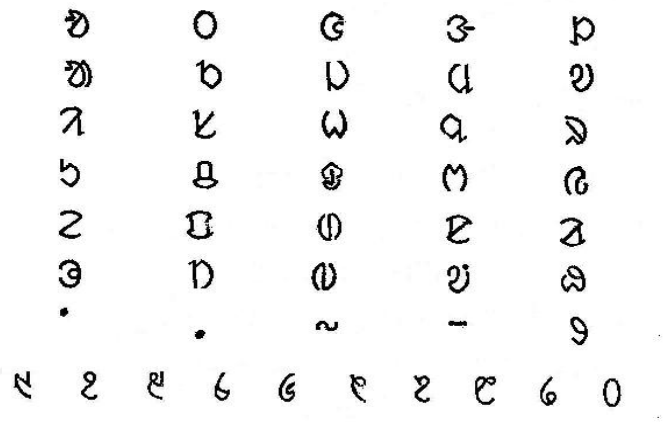
Significance:

- **Civilisational foundation:** Provides the theoretical base for India's classical performing arts ecosystem—dance, theatre, music pedagogy and aesthetics.
- **Cultural continuity:** Helps reinterpret classical forms for contemporary theatre and performance training without breaking tradition.

Miscellaneous

THE SANTHALI LANGUAGE

Context:
President of India highlighted the role of language and literature in binding communities during the centenary celebrations of the Ol Chiki script and Santali Language Day.



About The Santhali Language:

What it is?

- Santhali is one of India's most ancient living tribal languages, primarily spoken by the Santhal community and recognised in the Eighth Schedule of the Constitution.

Origin:

- Belongs to the **Munda branch of the** Austroasiatic language family, distinct from Indo-European languages.
- Traditionally transmitted through **oral literature, songs, folklore and rituals**.
- Acquired its own script, **Ol Chiki**, in **1925**, developed by **Pandit Raghunath Murmu**, giving the language a written identity.

Current status:

- Included in the Eighth Schedule through the **92nd Constitutional Amendment Act, 2003**.
- Spoken by about **7 million people in India**, mainly across Jharkhand, Odisha, West Bengal and Bihar, and also in Nepal and Bangladesh.

Key features:

- **Distinct script – Ol Chiki:** A phonetic and scientific script designed to accurately represent Santhali sounds, unlike earlier borrowed scripts.
- **Austroasiatic linguistic traits:** Agglutinative structure, tonal elements, and word formation

through suffixes, shared with related Munda languages like Ho and Mundari.

- **Strong oral tradition:** Rich corpus of folk songs, myths and storytelling that preserves Santhal history, ecology and social values.
- Cultural identity **marker:** Language and script function as symbols of tribal self-respect, cohesion and continuity.

ARCHAEOLOGISTS FIND 2,000-YEAR-OLD LABYRINTH REVEALING INDIA'S ROLE IN ANCIENT GLOBAL TRADE

Context:

Archaeologists have uncovered a 2,000-year-old circular stone labyrinth in Maharashtra's Solapur district, the largest of its kind in India.

About Archaeologists find 2,000-year-old labyrinth revealing India's role in ancient global trade:

What it is?

- The find is a massive circular stone labyrinth constructed using carefully laid concentric stone circuits.
- It is dated to nearly 2,000 years ago and linked to the Satavahana dynasty (1st–3rd century CE).

Discovered at:

- Located in the Boramani grasslands, Solapur district, **Maharashtra**.
- The semi-arid grassland ecosystem limited excavation, aiding long-term preservation of the structure.

Key features:

- **Size:** Approximately **50 feet × 50 feet**, making it the **largest circular labyrinth in India**.
- **Design:** Comprises **15 concentric stone circuits**, the highest number recorded so far in Indian circular labyrinths.
- **Form:** Circular layout, distinct from the larger but square labyrinth found at **Gedimedu, Tamil Nadu**.
- **Setting:** Situated in open grasslands, not within settlements, temples, or forts.

Connections within India:

- Similar, smaller labyrinths have been found in **Sangli, Satara, and Kolhapur**, indicating a **regional network** across western Maharashtra.
- Their alignment suggests links between **inland Deccan routes and** western coastal ports such as those used in Roman trade.
- Maharashtra's location made it a **trade conduit** between interior production centres and Arabian Sea ports.

Significance:

- The circular motif resembles labyrinth designs on ancient Roman coins from Crete, many of which have been found in Indian trade hubs.
- Likely served as navigational or symbolic signposts for merchants transporting spices, textiles, and precious stones.
- Reinforces Maharashtra's role as a key crossroads in ancient global commerce.

PARAM VIR CHAKRA (PVC)

Context:

On Vijay Diwas 2025, President Droupadi Murmu inaugurated the 'Param Vir Dirgha' at Rashtrapati Bhavan, where portraits of all 21 Param Vir Chakra awardees were displayed.

- This replaced portraits of British Aide-de-Camps, symbolising India's continued effort to shed colonial legacies.

About Param Vir Chakra (PVC):

- **What it is?**
  - The Param Vir Chakra is **India's highest**

military gallantry award, conferred for the most conspicuous bravery, valour, and supreme sacrifice in the presence of the enemy during wartime.

- **Instituted in:** 26 January 1950, coinciding with the enforcement of the Constitution of India.
- **Key features:**
  - Open to **personnel of all ranks** of the Army, Navy, Air Force, Territorial Army and other lawfully constituted armed forces.
  - Can be awarded **posthumously**; the majority of recipients have received it after martyrdom.
  - Comes with a **monthly honorarium of ₹3,000**, with an additional ₹3,000 for each bar awarded.
- **Criteria for award:**
  - Awarded only in wartime.
  - Recognises exceptional courage, indomitable spirit, and self-sacrifice in the face of the enemy.
- **Winners so far:**
  - **21 awardees** till date.
  - **14 awarded posthumously**.
  - Conferred across **four major wars** fought by India.

About Aide-de-Camps (ADCs):

- An Aide-de-Camp is a personal military officer attached to high constitutional authorities such as the President, Governors, or Chiefs of Services.
- **Rank and background:**
  - Typically, a Major (Army), Lieutenant Commander (Navy), or Squadron Leader (Air Force).
- **Key functions:**
  - Managing the daily schedule and official engagements of the dignitary.
  - Coordinating ceremonial duties, state visits, and protocol events.
  - Acting as a liaison between Rashtrapati Bhavan and civil or military authorities.
  - Assisting in protocol, coordination, and security arrangements.

EMPEROR PERUMBIDUGU MUTHARAIYAR II

Context:

Prime Minister of India has welcomed the release of a commemorative postage-stamp honouring Emperor Perumbidugu Mutharaiyar II (Suvaran Maran), recognising his administrative excellence and patronage of Tamil culture.

About Emperor Perumbidugu Mutharaiyar II:

Who he was?

- Perumbidugu Mutharaiyar II, also known as Suvaran Maran or Shatrubhayankar, was a prominent ruler of the Mutharaiyar lineage who ruled during c. 705–745 CE.

Kingdom Associated With:

- Belonged to the **Mutharaiyar dynasty**, a powerful Tamil ruling lineage.
- Functioned as **feudatories of the Pallavas**, particularly under **Pallava king Nandivarman II**.
- Controlled the central Cauvery region, including Thanjavur, Tiruchirappalli, Pudukkottai, Perambalur, and surrounding areas.
- Ruled primarily from Tiruchirappalli, exercising authority for nearly four decades.

Key Contributions:

Administrative & Military Achievements:

- Known as a **formidable administrator** with strategic foresight and governance stability.
- Fought several battles alongside Pallava forces, helping maintain regional order during Pallava decline.

Temple Building & Architecture:

- The Mutharaiyars were among the **early temple builders of Tamil Nadu**, contributing to rock-cut and structural temples.

- Their architectural innovations influenced the **early Chola temple tradition**, even before the rise of Vijayalaya Chola.

Cultural & Religious Patronage:

- Patronised **Shaivism**, while also hosting philosophical debates involving **Jain scholars** such as **Acharya Vimalachandra**, reflecting religious pluralism.
- Supported Tamil language, literature, and religious institutions, as evidenced by inscriptions.

Public Works:

- Inscriptions attest to his contributions to temple endowments, irrigation systems, and agrarian infrastructure, strengthening the Cauvery delta economy.

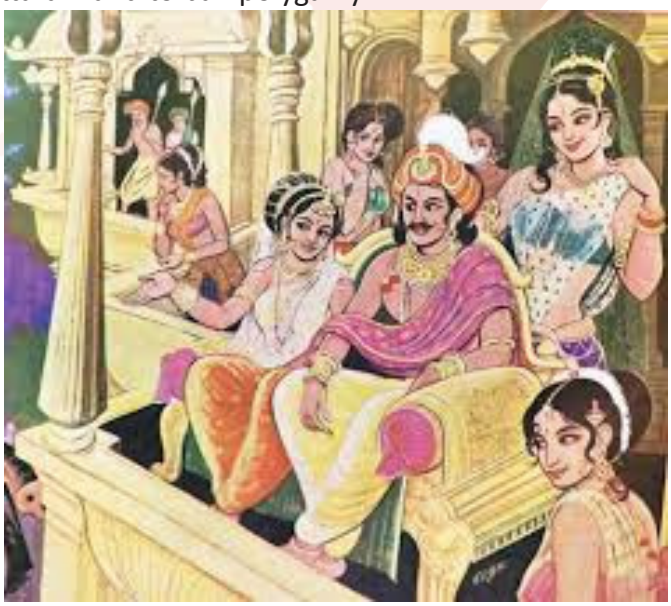
Significance:

- **Historical significance:** Represents the rise of powerful regional chieftains during the weakening of imperial Pallava authority.
- **Cultural legacy:** Acts as a bridge between Pallava and Chola traditions, especially in temple architecture and governance.
- **Social relevance:** Revered as an icon by the Mutharaiyar community, classified among Most Backward Classes (MBCs) in Tamil Nadu.

POLYGAMY IN INDIA

Context:

Assam has passed the Assam Prohibition of Polygamy Bill, 2025, becoming the second state after Uttarakhand to ban polygamy.



About Polygamy in India:

What it is?

- Polygamy refers to a marital system where one person has more than one spouse at the same time. In India, it is regulated differently across religions, states, and tribal customs.

Historical Context:

- Traditionally practiced in several communities, polygamy was restricted over time through religion-specific reforms — e.g., the Hindu Marriage Act (1955) outlawed bigamy for Hindus.
- Muslim personal law historically permitted up to four wives; tribal groups followed customary practices recognized by the Constitution.

Laws Governing:

- **Hindus, Buddhists, Jains, Sikhs** – Bigamy prohibited under the Hindu Marriage Act, 1955; second marriages deemed void.
- **Parsis** – Prohibited under Parsi Marriage & Divorce Act, 1936.
- **Christians** – Prohibited under the Indian Christian Marriage Act, 1872.
- **Muslims** – Muslim Personal Law (Shariat) Act, 1937 allows Muslim men to have up to four wives; hence not criminal under BNS Section 82.
- **Goa** – Under the Portuguese Civil Code, monogamy is the rule for all; a unique historical clause allows a Hindu man a second marriage under rare conditions (unused since 1910).
- **Tribal Groups** – Exempt under the Constitution (Fifth & Sixth Schedule); customary laws prevail.

Recent State-Level Bans:

- **Uttarakhand UCC (2024):** Outlaws bigamy for all residents except Scheduled Tribes.
- **Assam Bill (2025):** Makes polygamy a cognisable, non-bailable offence; penalties up to 7–10 years; bars convicts from government jobs and elections; tribal areas exempt.

Significance:

- Reflects push toward gender justice and uniform legal standards in marriage.
- Tests the legal boundary between personal law autonomy and legislative reform.
- Raises questions on minority rights, state powers, and the future trajectory of UCC in India.

MODERN HISTORY

Socio–Religious Reform Movements

MAHAD SATYAGRAHA

Context:

The Mahad Satyagraha has returned to public discourse as scholars revisit its profound role in shaping constitutional morality and human rights ethics in India.

About Mahad Satyagraha:

What it is?

- A historic non-violent movement led by **Dr. B. R. Ambedkar** asserting Dalit rights to access public water and reject caste-based exclusion—one of India's earliest human rights struggles.

Launched in:

March 19–20, 1927 (Mahad 1.0) and December 25–26, 1927 (Mahad 2.0) at Mahad, Bombay Presidency (now Raigad, Maharashtra).

Causes:

- **Denial of access to public water sources** such as the Chavdar Tank due to caste-based untouchability.
- **1923 Bole Resolution** legally allowed Dalits to use public facilities, but local caste elites resisted implementation.
- Rising caste violence in villages like Goregaon and Dasgaon reinforcing the need for collective assertion of rights.

Key Features of Mahad Satyagraha:

- **Assertion of Civil Rights:** Ambedkar and thousands of followers marched to Chavdar Lake and drank water to affirm equality as a human right.
- **Challenge to Brahmanical Hegemony:** Upper castes performed "purification rituals," prompting Ambedkar's stronger mobilisation in Mahad 2.0.
- **Burning of Manusmriti:** On December 25, 1927, Ambedkar symbolically rejected the scriptural basis of caste oppression.
- **Birth of Constitutional Morality:** Ideas of liberty, equality, fraternity—later embedded in the Constitution—were explicitly articulated at Mahad.
- **Participation of Women:** Ambedkar addressed women directly, making gender equality central to the anti-caste struggle.
- **Non-violent Democratic Protest:** Inspired by the French Revolution's ideals, but rooted in Buddhist ethics of dignity and maitri (compassion).

Outcome:

- **Legal victory (1937):** Courts held no valid custom existed to bar Dalits from public tanks, affirming equal civic rights.
- **Strengthened Dalit political consciousness:** Mahad became the birthplace of a new rights-based movement.
- **Foundation for later struggles:** Directly influenced Ambedkar's arguments in Annihilation of Caste and shaped the moral core of India's Constitution.
- **December 25 recognised as Indian Women's Liberation Day**, reflecting the gendered nature of Ambedkar's social revolution.

Freedom Movement

140TH FOUNDATION DAY OF INDIAN NATIONAL CONGRESS (INC)

Context:

The Indian National Congress (INC) marked its 140th Foundation Day on December 28, 2025, prompting renewed reflection on its historical role in India's freedom struggle and post-Independence politics.

About 140th Foundation Day of Indian National Congress (INC):

What it is?

- The Indian National Congress is one of India's oldest and most influential political parties, which spearheaded the national movement against British colonial rule and later dominated India's post-Independence political landscape.

Founded in: 28 December 1885

- **First session:** Gokuldas Tejpal Sanskrit College, **Bombay (Mumbai)**
- **First President:** W. C. Bonnerjee

Origin:

- Founded by **Allan Octavian Hume**, a British civil servant, along with Indian leaders such as Dadabhai Naoroji, Surendranath Banerjee, Pherozeshah Mehta, and Gopal Krishna Gokhale
- Initially conceived as a **platform to voice Indian grievances** and influence British policy through petitions and constitutional methods
- Gradually evolved into a **mass nationalist movement**, especially under **Mahatma Gandhi**

Key features:

- **Broad-based nationalist platform:** Brought together Indians across regions, religions, and linguistic groups
- **Ideological evolution:** From moderate constitutionalism → mass civil disobedience → democratic socialism
- **Mass mobilisation:** Led movements like **Non-Cooperation**, **Civil Disobedience, Quit India**, and **Purna Swaraj (1929)**
- **Post-Independence role:** Advocated **secularism, parliamentary democracy, planned economy, and non-alignment**
- **Organisational depth:** Longest-running nationwide political organisation in India

Significance:

- Central force in ending nearly 200 years of colonial rule.
- Provided leadership in framing the **Constitution**, establishing democratic institutions, and shaping early economic and foreign policy.

Post-Independence

VIJAY DIWAS MARKS INDIA'S VICTORY IN 1971 WAR

Context:

India is observing Vijay Diwas on 16 December 2025 to commemorate the 1971 victory and honour the armed forces' sacrifice and valour.

- The day marks the surrender of Pakistan's Eastern Command in Dhaka (16 Dec 1971) and the birth of Bangladesh.

About Vijay Diwas Marks India's Victory in 1971 War:

Background of the war:

- **Electoral mandate denied (1970):** The **Awami League** won a decisive majority in Pakistan's 1970 elections, but transfer of power was blocked, triggering mass agitation in East Pakistan.
- **Military crackdown (25 March 1971):** Pakistan Army launched **Operation Searchlight** in Dhaka and elsewhere, intensifying violence and driving the liberation movement.
- **Refugee crisis in India:** Around **~10 million refugees** crossed into India creating major humanitarian and fiscal pressure.
- **Rise of Mukti Bahini + Govt-in-exile:** Bengali resistance consolidated as **Mukti Bahini**; India provided training, logistics and sanctuary while preparing for escalation.

Key events during the war (3–16 Dec 1971):

- **Trigger — 3 Dec 1971:** Pakistan launched pre-emptive air strikes (**Operation Chengiz Khan**) on multiple Indian airfields, after which India formally entered full-scale war.
- **Air superiority in the East:** Indian Air Force quickly neutralised East Pakistan's limited air capability, enabling unhindered close air support and interdiction.
- **Naval blockade in Bay of Bengal:** Indian Navy isolated East Pakistan; **INS Vikrant** supported strikes on ports/coastal targets, choking reinforcement and resupply.
- **Karachi strikes:** Indian Navy hit Karachi in **Operation Trident (4/5 Dec)** and **Operation Python (8/9 Dec)**—major blows to fuel storage/ shipping capacity.
- **Surrender — 16 Dec:** With Dhaka encircled and East Pakistan strategically isolated, **Eastern Command surrendered**, ending the war decisively in **13 days**.

Outcomes:

- **Bangladesh created:** East Pakistan became the sovereign state of **Bangladesh**, fundamentally altering South Asian geopolitics.
- **Mass surrender/POWs:** **~93,000** Pakistani troops/personnel surrendered—one of the biggest capitulations since WWII.
- **Strategic realignment:** Pakistan lost its eastern wing; India emerged as the dominant conventional military power in the region, with strengthened deterrence credibility.
- **Post-war settlement:** The 1971 outcome directly shaped subsequent diplomacy, including **Simla Agreement (1972)** framework and long-term India–Bangladesh relations.

Significance:

- **National remembrance:** Symbol of armed forces' bravery, jointness (Army-Navy-Air Force) and decisive leadership in warfighting.
- **Doctrine & deterrence:** Demonstrates the value of clear political objectives, rapid manoeuvre, air superiority, and maritime choke-point control.

Important Movements

THE COMMUNIST PARTY OF INDIA (CPI)

Context:

The Communist Party of India (CPI) has **completed 100 years** since its founding, marking a century of organised Communist politics in India.

About The Communist Party of India (CPI):

What it is?

- The Communist Party of India (CPI) is one of India's oldest political parties, rooted in Marxist ideology, committed to representing the interests of workers, peasants, and marginalised classes through both mass movements and parliamentary politics.

Established in:

December 26, 1925, at Kanpur (then Cawnpore)

- Founded through a national conference of Indian Communist groups active within India

  Note: An earlier émigré CPI was formed in **Tashkent in 1920**, a point of historical debate

Aim:

- Liberation of India from British imperialism (pre-1947).
- Socialisation of means of production and distribution.
- Creation of a socially just, egalitarian society free from exploitation.

Evolution:

- **1920s–30s:** Influenced by the **Russian Revolution (1917)**; faced repression through conspiracy cases (Kanpur, Meerut).
- **1930s–40s:** Participation in trade unionism,

peasant struggles, and United Fronts with socialist forces.

- **1940s:** Led major agrarian movements like **Tebhaga (Bengal)** and **Telangana**.
- **Post-Independence:** Shifted largely to **parliamentary democracy**, forming elected governments in **Kerala, West Bengal, and Tripura**.
- **1964:** Major ideological split leading to the formation of **CPI (Marxist)** amid debates over constitutionalism and the Sino-Soviet split.

Leaders associated:

- **M. N. Roy:** International Marxist theorist; linked to Comintern and Tashkent phase
- **S. A. Dange:** Key organiser of Indian Communism; associated with Kanpur foundation
- **Muzaffar Ahmad:** Pioneer of Communist movement in Bengal
- **P. C. Joshi:** Early General Secretary; emphasised united front politics
- **A. K. Gopalan, E. M. S. Namboodiripad:** Post-Independence parliamentary leaders

Key features:

- **Marxist ideological foundation:** Class struggle, anti-imperialism, and social equality
- **Mass-based politics:** Strong links with **trade unions (AITUC)** and peasant movements
- **Dual strategy:** Combination of extra-parliamentary movements and electoral participation
- **Internationalist influence:** Inspired by global Communist movements, yet adapted to Indian conditions
- **Federal presence:** Regional strength varies, with influence concentrated in specific States

Important Personalities

115 YEARS OF SAVARKAR'S POEM 'SAGARA PRAN TALAMALALA'

Context:

Union Home Minister and Minister of Cooperation addressed a cultural programme in Sri Vijayapuram to mark 115 years of Swatantryaveer Vinayak Damodar Savarkar's poem Sagara Pran Talamalala.

About 115 Years of Savarkar's Poem 'Sagara Pran Talamalala':

What it is?

- 'Sagara Pran Talamalala' (often rendered as Sagara Pran Talmalala / Ne Majasi Ne…) is a **Marathi patriotic poem** expressing an exiled revolutionary's torment, homesickness and yearning for the motherland, with the sea personified as a messenger between the patriot and India.

Written by:

Swatantryaveer **Vinayak Damodar Savarkar** (1883–1966), revolutionary, social reformer, writer and Hindutva ideologue.

- The poem was later immortalised in song form by **Lata Mangeshkar**, with music by Hridaynath Mangeshkar.

Circumstances of Composition:

- Composed around **1909** on the shores of **Brighton**, England, when Savarkar was a young revolutionary at **India House, London**.
- Savarkar was under surveillance and facing imminent repression after the arrest of his elder brother and the revolutionary assassination of **Curzon Wyllie** by **Madan Lal Dhingra**, whom he had influenced at India House.
- The poem captures his **inner conflict**—torn between commitment to armed struggle in foreign land and a desperate desire to return to **"Matru-bhoomi"** (motherland).
- The opening invocation to the sea—urging it to carry him back to India—has since come to symbolise the anguish of countless exiles and political prisoners in the freedom movement.

Other Literary Works of Savarkar:

- **The Indian War of Independence 1857:** A landmark reinterpretation of the 1857 uprising as a national war of independence, countering British narratives of a "mutiny".

- **Hindutva: Who is a Hindu?**
    - Lays out his idea of Hindutva as a cultural–civilisational identity based on common nation (rashtra), heritage and geography, encompassing Hindus, Buddhists, Jains and Sikhs.
- **My Transportation for Life (Mazi Janmathep)**: Autobiographical account of his incarceration in Cellular Jail, Andamans, describing brutal conditions, psychological suffering, and resolve.
- **Six Glorious Epochs of Indian History:** A civilisational narrative highlighting periods of Hindu resistance and resurgence, written from a distinctly nationalist–militant lens.
- **Hindu Pad-Padshahi & Other Historical Works**: On the Maratha empire and Hindu political power.
- **Poetry & Plays:**
    - Patriotic poems (including 'Sagara Pran Talamalala', 'Jayostute', 'Ne Majasi Ne…') and plays such as Sanyast Khadga, Uttarkriya, combining themes of liberty, duty, sacrifice, and rationalism.

C. RAJAGOPALACHARI (RAJAJI)

Context:

Prime Minister of India paid tribute to C. Rajagopalachari (Rajaji) on his birth anniversary, recalling his role as a freedom fighter, thinker, statesman, and India's last Governor-General.

About C. Rajagopalachari (Rajaji):

Who he was?

- C. Rajagopalachari (1878–1972), popularly known as **Rajaji**, was a freedom fighter, jurist, writer, statesman, and **the first and only** Indian Governor-General of India. Gandhi famously called him *"the keeper of my conscience."*

Early Life:

- Born on **10 December 1878** in Thorapalli, Tamil Nadu; educated in Hosur, Bangalore, and Presidency College, Madras.
- Began his career as a successful criminal lawyer in Salem before joining public life in 1917 as Chairman of Salem Municipality.

Key Contributions to India's Freedom Movement:

- Rowlatt Satyagraha **(1919):** Led major protests in Madras Presidency; addressed mass meetings on Marina Beach.
- **Non-Cooperation Movement:** Among the first to give up a thriving law practice; mobilised Tamil Nadu against British rule.
- **Khilafat Movement:** Earned the esteem of Muslims by actively supporting Khilafat committees and provincial agitations.
- Vedaranyam Salt March **(1930):** Led the Tamil equivalent of Gandhi's Dandi March, inspiring thousands across the region.
- **Civil Disobedience & Quit India:** Imprisoned multiple times; remained a close strategist of Gandhi throughout.

Post-Independence Roles:

- **Governor of West Bengal (1947–48)** during the turbulent post-partition phase.
- **Governor-General of India (1948–50):** Last person to hold the office, abolishing it upon India becoming a republic.
- **Home Minister of India (1950):** Succeeded Sardar Patel.
- **Chief Minister of Madras State (1952–54):** Implemented administrative reforms, dealt firmly with police strikes, and introduced contentious education policies.

Unique Facts:

- Only Indian to serve as **Governor-General of India**.
- Founder of the Swatantra Party **(1959)** — India's first major liberal-conservative, pro-market political party.
- Gandhi's closest ideological counsellor,

described as his "moral compass."
- Coined the slogan: **"English ever, Hindi never"** in later years, advocating linguistic choice.
- Known for his sharp intellect, minimalism, wit, and uncompromising integrity.

200TH ANNIVERSARY OF DADABHAI NAOROJI

Context:

India celebrated the 200th birth anniversary of Dadabhai Naoroji in 2025, honouring his legacy as a nationalist leader, economic thinker and early architect of the freedom movement.

About 200th anniversary of Dadabhai Naoroji:

Who he was?

- Dadabhai Naoroji (1825–1917) was an Indian nationalist leader, economic theorist, social reformer, scholar, and the first Indian Member of British Parliament.

Early Life & Education:

- Born on **4 September 1825** in Bombay (some sources say Navsari), in a middle-class Parsi family.
- Educated at **Elphinstone Institute**, where he excelled in mathematics and English.
- Became the **first Indian Professor** at Elphinstone College, symbolising modern Indian intellectual awakening.

Contributions to the Indian Freedom Movement:

- **Economic Contributions:**
  - **Drain of Wealth Theory:** Systematically demonstrated how British rule drained India's resources through salaries, pensions, remittances, and unequal trade.
  - **Authored major works:**
    - Poverty and Un-British Rule in India
    - Poverty of India
  - His advocacy led to the creation of the **Welby Commission (1895)** on Indian expenditure, where he served as a member.
  - Popularised economic nationalism and laid foundations for **Swadeshi and fiscal self-reliance**.
- **Political Contributions:**
  - Founding member of **Indian National Congress (INC)** and its President in **1886, 1893, and 1906**.
  - Elected **first Indian MP in British Parliament (1892)** from Central Finsbury on a Liberal Party ticket.
  - Advocated **self-government**, constitutional methods, and parliamentary democracy.
  - Played a unifying role between **Moderates and Extremists**, presiding over the 1906 Calcutta Session that adopted the demand for **Swaraj**.
  - Mentored future leaders including **Tilak, Gokhale, and Mahatma Gandhi**.
- **Social Reform:**
  - Champion of **women's education**—helped run special classes at Elphinstone and supported girls' schooling.
  - Founded **Rast Goftar**, a Gujarati newspaper promoting social reform.
  - Co-founded **Rahnumai Mazdayasan Sabha (1851)** to reform Parsi society.
  - Led efforts for **compulsory primary education**, submitting recommendations (with Jyotiba Phule) to the **Hunter Commission (1882)**.
- **Organisational Building:**
  - Founded or co-founded key institutions to internationalise India's cause:
    - **London Indian Society (1865)**
    - **East India Association (1866)**
  - These groups later merged with the INC and served as platforms for India's political diplomacy.

Unique Facts:

- Known worldwide as the **"Grand Old Man of**

India."

- Called the **"Unofficial Ambassador of India"** for championing India's cause in Britain.
- Taught **Gujarati at University College London**, breaking academic barriers.
- Among the first to scientifically analyse poverty in India using data-based methods.
- His 1906 INC presidential address was the **first to adopt "Swaraj" as the national goal**.

GEOGRAPHY

Origin and Evolution of Universe

BRAZIL HAVE IDENTIFIED THE YOUNGEST RHYNCHOSAUR

Context:

Palaeontologists in Brazil have identified the youngest rhynchosaur ever recorded, based on a hatchling fossil of Macrocephalosaurus mariensis.

About Brazil have identified the youngest rhynchosaur:

What it is Macrocephalosaurus mariensis?

- *Macrocephalosaurus mariensis* is a species of rhynchosaur—beaked, herbivorous, archosaur-like reptiles belonging to the clade Rhynchosauridae.
- It lived during the Late Triassic period (Carnian stage) and is known exclusively from southern Brazil.

Habitat:

- Fossils are found in the Santa Maria Formation, Rio Grande do Sul, Brazil.
- Rhynchosaurs were among the dominant land herbivores in Gondwana during the Triassic.

Key characteristics:

- **Beaked skull** adapted for plant-based diet.
- **Highly specialised dentition** with multiple tooth rows; adults show extreme tooth wear due to herbivory.
- Diagnostic features include a **single maxillary sulcus**, **two rows of dentary teeth**, and an **open infraorbital foramen**.
- Adult individuals could reach **over 2 metres in length**, whereas the newly found hatchling skull measures **less than 2.5 cm**.
- Juvenile specimen shows **unworn teeth**, indicating death shortly after hatching.

Significance:

- Represents the first perinate (newborn) fossil of Hyperodapedontinae, the most diverse rhynchosaur sub-clade.
- One of the oldest archosauromorph hatchlings recorded from continental settings.
- Provides insights into early reptile development, growth patterns, and life history during the Triassic.

Climatology

FOG

Context:

The India Meteorological Department has issued a Red Alert for dense to very dense fog over Uttar Pradesh, with similar conditions forecast across north and eastern India.

About Fog:

What it is?

- Fog is a meteorological phenomenon in which **tiny water droplets or ice crystals** remain

suspended near the Earth's surface, **reducing visibility to below 1 km** due to scattering of light.

Types of Fog:

- **Radiation fog:** Forms during clear, calm nights when the Earth rapidly loses heat by radiation, cooling the air near the surface to the dew point. It is common in winter over plains and usually dissipates after sunrise.
- **Valley fog:** A special type of radiation fog where cold, dense air flows downslope and accumulates in valleys. The trapped air cools further, making valley fog denser and longer-lasting than fog over flat terrain.
- **Advection fog:** Occurs when warm, moist air moves horizontally over a colder surface such as snow, land, or cold ocean currents. Cooling from below causes condensation, and the fog can persist even during daytime.
- **Freezing fog:** Composed of supercooled liquid droplets that freeze instantly upon contact with surfaces. It creates a thin ice coating on roads, trees, and power lines, making travel extremely hazardous.
- **Evaporation (mixing) fog:** Forms when water vapour added by evaporation mixes with cooler, drier air until saturation is reached. Common examples include steam fog over warm water bodies and frontal fog during rainfall.
- **Upslope fog:** Develops when moist air is forced to rise along hills or mountain slopes. As the air ascends, it cools adiabatically, condenses, and forms fog, often covering large elevated areas.
- **Hail fog:** A rare fog that forms after heavy hailstorms when melting hail cools the warm, moist air near the ground to its dew point. It is usually shallow, patchy, and short-lived.

How fog is formed?

- Fog forms when **air temperature falls to the dew point** or when **moisture content increases** enough for saturation.
- Key mechanisms include radiational cooling, horizontal movement of moist air, evaporation, or orographic uplift.
- Calm winds, high humidity, long winter nights, and temperature inversions favour fog formation.

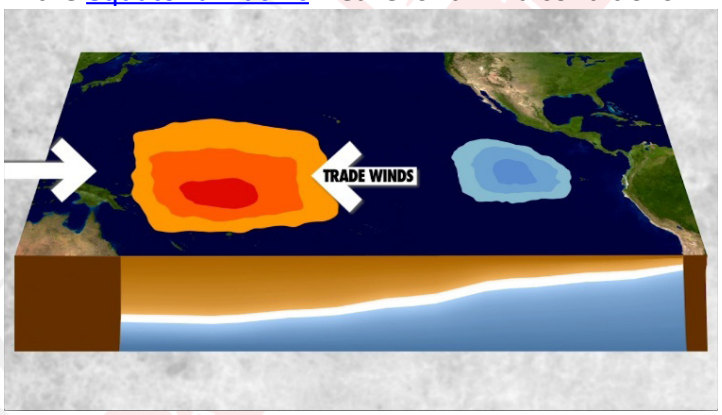
Impacts on local weather and society:

- **Visibility reduction:** Near-zero visibility disrupts road, rail, and air transport, increasing accident risk.
- **Temperature moderation:** Fog can suppress daytime heating, prolonging cold conditions.
- **Air quality deterioration:** Fog traps pollutants near the surface, worsening smog and respiratory issues.

EL NIÑO

Context:

Climate models and ocean observations show early signals of a possible El Niño return in 2026**,** as warming in the equatorial Pacific weakens La Niña conditions.



About El Niño:

- **What it is?**
  - El Niño is the warm phase of the El Niño–Southern Oscillation (ENSO), marked by abnormal warming of surface waters in the eastern and central equatorial Pacific Ocean.
  - It occurs irregularly every 2–7 years and tends to raise global average temperatures.
- **How it forms?**
  - **Trade winds weaken** along the equator, allowing warm surface waters to shift **eastward from the western Pacific** toward South America.
  - The **thermocline deepens** in the eastern Pacific, **suppressing upwelling** of cold, nutrient-rich water.
  - This alters atmospheric circulation, linking oceanic warming with pressure changes known as the **Southern Oscillation**.
- **Indicators:**
  - **Sea Surface Temperature (SST) anomalies** in the Niño regions.
  - **Subsurface ocean heat build-up** (warm water pools at 100–250 m depth).
  - **Oceanic Niño Index (ONI):** SST anomalies

of ≥ **+0.5°C (or +0.9°F)** for at least five consecutive three-month periods.
    - Weakening or reversal of **Walker Circulation** and trade winds.
- **Factors affecting El Niño:**
    - Strength and persistence of **trade winds**.
    - **Subsurface heat content** of the Pacific Ocean.
    - Interaction between ocean temperatures and atmospheric pressure systems.
    - Natural climate variability and long-term **global warming**, which can amplify impacts.
- **Implications:**
    - **Global warming boost**, often making El Niño years among the **hottest on record**.
    - **India:** Increased risk of **weaker monsoons and droughts**.
    - **South America:** Heavy rainfall, floods and coastal erosion.
    - **Australia & Southeast Asia:** Droughts, heatwaves and wildfires.

World Geography of India

GANDIKOTA CANYON

Context:

Gandikota Canyon has drawn renewed attention as a spectacular yet underdeveloped natural–heritage site, despite recent state plans to boost tourism infrastructure.

About Gandikota Canyon:

What it is?

- Gandikota Canyon is a dramatic river gorge carved by the Penna (Pennar) River, often called the "Grand Canyon of India" for its sheer cliffs and striking geological formations.

Located in:

- **Kadapa district, Andhra Pradesh.**
- About **77 km from Kadapa town** and ~300–380 km from Bengaluru, Hyderabad, and Chennai.
- Lies within the **Erramala Hills** on the banks of the Penna River.

Historical origin:

- The canyon overlooks the **Gandikota Fort**, dating back to **1123 CE.**
- The fort rose to prominence under the **Pemmasani Nayaks**, feudatories of the **Kakatiya dynasty.**
- Later ruled by the Vijayanagara Empire, Qutb Shahis of Golconda, Mughals, Nawabs of Kadapa, Kingdom of Mysore, and finally the British.
- Mentioned in historical records like the **Mackenzie Kaifiyat** and travelogues of **Jean-Baptiste Tavernier.**

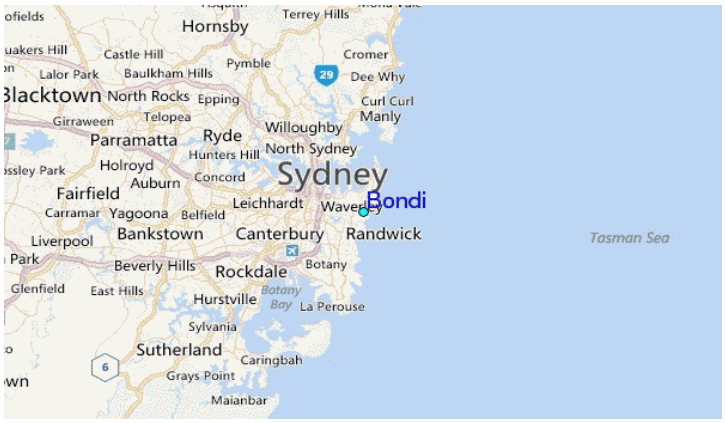
Key features:

- **Spectacular geomorphology:** Steep red sandstone and quartzite cliffs forming a ~200-metre-wide gorge.
- **Riverine landscape:** Penna River flowing sinuously through the canyon, offering dramatic sunrise and sunset views.
- **Architectural heritage:** Gandikota Fort complex with Madhavaraya Temple, Ranganatha Temple, Jama Masjid, granary, jail, step wells, and gun foundry.
- **Cultural significance:** Linked to Vijayanagara art, Indo-Islamic architecture, and local folklore; associated with **poet Yogi Vemana.**
- **Tourism potential:** Panoramic viewpoints, heritage trails, and proximity to Tirupati make it ideal for integrated cultural–eco tourism.

BONDI BEACH

Context:

Australia was shaken by a deadly terror-linked mass shooting at Sydney's Bondi Beach during a Jewish festival, prompting the government to consider tougher gun laws.



About Bondi Beach:

What it is?

- Bondi Beach is a world-famous ocean beach and adjoining suburb in Sydney, known for its surf culture, tourism, and public recreation. It is among the most visited beaches in Australia and a major symbol of the country's coastal lifestyle.

Location:

- Situated **7 km east of Sydney's Central Business District (CBD)**.
- Lies in the **Eastern Suburbs** of Sydney within the **Waverley Council** local government area.
- Neighbouring suburbs include North Bondi, Bondi Junction, Rose Bay, and Bellevue Hill.

Key features:

- **Natural setting:** Crescent-shaped sandy beach facing the Tasman Sea, popular for surfing and swimming.
- **Cultural prominence:** Featured in global TV series such as Bondi Rescue and Bondi Vet.
- **Demographics:** Historically multicultural, with a strong **Jewish community** and migrant heritage.
- **Indigenous heritage:** Traditionally inhabited by **Bidjigal, Birrabirragal, and Gadigal Aboriginal peoples**.
- **Name origin:** Derived from the **Dharawal word "Bondi"**, meaning a loud thud, like waves crashing on rocks.

Significance:

- **Tourism & economy:** A key contributor to Sydney's tourism-driven economy and international image.
- **Cultural history:** Site of major social movements, including early 20th-century debates on public decency and beach culture.
- **Public safety relevance:** The recent attack highlights challenges of urban security, counter-terrorism, and public space safety.