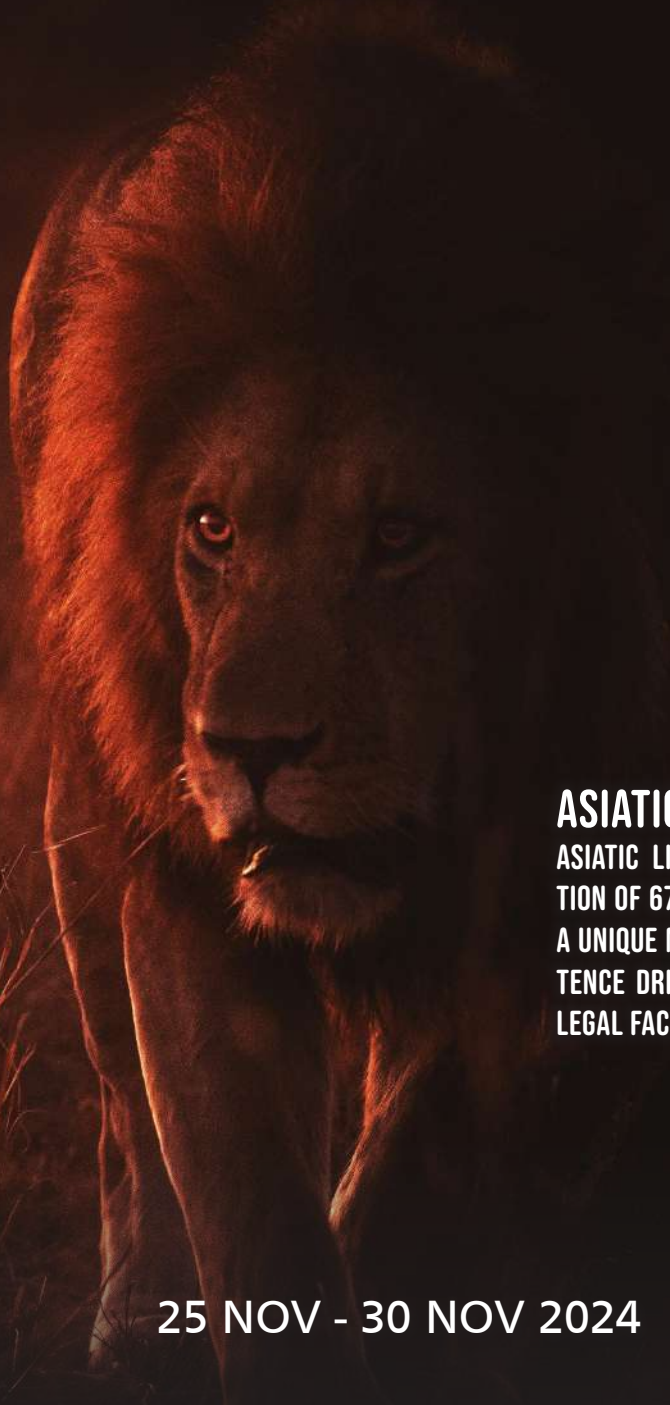




# INSIGHTSIAS

SIMPLIFYING IAS EXAM PREPARATION



## ASIATIC LIONS

ASIATIC LIONS, WITH THEIR ENTIRE POPULATION OF 674 RESIDING IN GUJARAT, EXEMPLIFY A UNIQUE MODEL OF HUMAN-WILDLIFE COEXISTENCE DRIVEN BY CULTURAL, ECONOMIC, AND LEGAL FACTORS.

25 NOV - 30 NOV 2024

# WEEKLY CURRENT AFFAIRS

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# INSIDE

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Topics: Indian Constitution- historical underpinnings, evolution, features, amendments, significant provisions and basic structure; Comparison of the Indian constitutional scheme with that of other countries.

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## GENERAL STUDIES – 2

Topics: Indian Constitution- historical underpinnings, evolution, features, amendments, significant provisions and basic structure; Comparison of the Indian constitutional scheme with that of other countries.

### 1. PREAMBLE

#### Context:

The Supreme Court dismissed petitions challenging the inclusion of “socialist” and “secular” in the Preamble of the Indian Constitution, added through the 42nd Amendment during the Emergency in 1976.

#### Case and Its Judgment:

- **Case Names:**
  1. Dr. Balram Singh v. Union of India
  2. Dr. Subramanian Swamy v. Union of India
  3. Ashwini Upadhyay v. Union of India

#### Judgment Highlights:

- The Supreme Court upheld the inclusion of “socialist” and “secular,” affirming their consistency with the Constitution’s basic structure, as established in **Kesavananda Bharati v. State of Kerala (1973)** and **S.R. Bommai v. Union of India (1994)**.
- The Court clarified that the amendment power of Parliament extends to the Preamble under Article 368.
- It dismissed the petitions as flawed and lacking a legitimate cause after 44 years since the 42nd Amendment.

#### Preamble Amendment:

- The Preamble of the Indian Constitution was revised only once through the **42nd Amendment Act of 1976**, following the **Sardar Swaran Singh Committee’s** recommendations.
- **Passed in 1976** during the Emergency by the Indira Gandhi government.
- This amendment introduced the terms **Socialist and Secular** between *Sovereign* and *Democratic*, while **Unity of the Nation was updated to Unity and Integrity of the Nation**.
- While the **44th Amendment (1978)** reversed many Emergency-era changes, it retained these terms.

#### Meaning of “Socialist” and “Secular”:

- **Socialist:** Represents a **welfare state** ensuring economic and social justice, reducing inequalities, and promoting collective well-being without eliminating private enterprise.
- **Secular:** Implies **equal treatment of all reli-**

**gions** without favor or discrimination, ensuring religious freedom while maintaining the state’s neutrality in religious matters.

#### Reasons Behind Inclusion:

1. **Strengthening Constitutional Values:** To emphasize principles already embedded in the Constitution’s framework (e.g., Fundamental Rights, Directive Principles).
2. **Addressing Emergency-Era Criticism:** To project India’s commitment to inclusivity and equality during politically challenging times.
3. **Global Alignment:** Align India with modern states that prioritize democratic socialism and secularism.

#### Socialist and Secular Programs by the Government:

- **Socialist Initiatives:**
  - **MGNREGA:** Guaranteeing rural employment.
  - **Public Distribution System (PDS):** Food security for all.
  - **Right to Education (RTE):** Ensuring free and compulsory education.
  - **Awas Yojana:** Housing for economically weaker sections.
- **Secular Initiatives:**
  - **Minority Welfare Programs:** Scholarships and skill development for minorities.
  - **Places of Worship Act, 1991:** Protecting the religious character of sites.
  - **Special Courts for Communal Violence:** Ensuring justice and harmony.
  - **Constitutional Safeguards:** Equal religious rights under Articles 25-28.

#### Limitations and Challenges:

- **Misuse of Secularism:** Politicization of the term for electoral gains.
- **Economic Inequality:** Persistent income gaps challenge socialist goals.
- **Religious Intolerance:** Increasing communal tensions hinder secular ideals.
- **Implementation Issues:** Inefficient delivery mechanisms for welfare programs.

#### About Preamble:

- **Features of the Preamble:**
  - **Introduction to the Constitution:** Provides a concise overview of the philosophy and objectives of the Indian Constitution.
  - **Core Values:** Highlights the commitment to sovereignty, socialism, secularism, democracy, and a republican form of government.
  - **Guaranteed Ideals:** Ensures justice (social, economic, and political), liber-

ty (thought, expression, belief, faith, and worship), equality (status and opportunity), and fraternity (national unity and dignity).

- **Guiding Principle:** Reflects the aspirations and ideals of the people, acting as the moral and philosophical essence of the Constitution.
- **Components of the Preamble:**
  - **Source of Authority:** Declares that the Constitution derives its power from the people of India.
  - **Nature of the State:** Defines India as a Sovereign, Socialist, Secular, Democratic, and Republic entity.
  - **Objectives:** Establishes justice, liberty, equality, and fraternity as the goals.
  - **Date of Adoption:** Specifies November 26, 1949, as the date of adoption.
- **Preamble as an Integral Part of the Constitution:**
  - **Berubari Union Case (1960):** Initially ruled that the Preamble is not part of the Constitution but could aid in interpretation.
  - **Kesavananda Bharati Case (1973):** Reversed the earlier view, declaring the Preamble an integral part of the Constitution and pivotal for interpreting its provisions.
  - **LIC of India Case (1995):** Reaffirmed the Preamble's status as part of the Constitution, though not enforceable in courts.

### Conclusion:

The inclusion of "socialist" and "secular" in the Preamble underscores India's commitment to justice, equality, and inclusivity. While challenges persist, these principles remain pivotal in guiding India's democratic journey. Strengthening their practical implementation will uphold the vision of the Constitution.

### Insta Links:

- |  |
|--|
| 1. <a href="#">Preamble-is-a-powerful-expression</a> |
|--|

### PYQ:

1. What was the exact constitutional status of India on 26th January, 1950? (UPSC-2021)
  - a) A Democratic Republic
  - b) A Sovereign Democratic Republic
  - c) A Sovereign Secular Democratic Republic
  - d) A Sovereign Socialist Secular Democratic Republic

**Answer: b)**

2. Discuss each adjective attached to the word 'Republic' in the 'Preamble'. Are they defensible in the present circumstances? (UPSC-2016)

## 2. 75 YEARS OF INDIAN CONSTITUTION

### Context:

On November 26, 2024, India celebrates the 75th anniversary of the adoption of its Constitution. This moment serves as a reminder of the historic contributions made by the Constituent Assembly and the enduring framework that has guided the world's largest democracy toward justice, equality, and progress.

### Background of the Indian Constitution:

- **Government of India Act, 1935:** Laid a basic constitutional framework but was rejected by the Indian National Congress for perpetuating British control.
- **Cabinet Mission Plan, 1946:** Proposed a Constituent Assembly with representatives from Congress, the Muslim League, and princely states.
- **Constituent Assembly:**
  - First session: **December 9, 1946.**
  - Chaired by **Dr. Rajendra Prasad**, with **Dr. B. R. Ambedkar** heading the Drafting Committee.
  - Draft completed in 1949 with **243 articles** and **13 schedules.**
  - Experts like **B. N. Rau** (constitutional advisor) and **S. N. Mukherjee** (chief draftsman) provided critical assistance.

### Framework of the Indian Constitution:

- **Parliamentary System:** Aligns with India's traditions and ensures collective responsibility.
- **Federal Structure:** Balances central and state powers, granting greater authority to the Union.
- **Comprehensive Design:** Details roles for the legislature, executive, and judiciary.
- **Fundamental Rights and Directive Principles:**
  - **Fundamental Rights** safeguard individual freedoms.
  - **Directive Principles of State Policy (DP-SPs)** aim for socio-economic justice.

### Key Achievements of India's Constitution in 75 Years:

- **Democratic Foundation:**
  - Established a sovereign, socialist, secular, and democratic republic.
  - Ensures checks and balances among the executive, legislature, and judiciary.
- **Protection of Rights:**
  - Guarantees Fundamental Rights, promoting equality and social justice.
  - Enabled landmark judgments like **Kesavananda Bharati (1973)** upholding the Basic Structure Doctrine.
- **Social Transformation:**
  - Facilitated affirmative action, including **reservation policies** for marginalized

communities.

- Empowered women with **33% reservation in local bodies** and recent legislation for **Lok Sabha and Vidhan Sabhas**.
- **Economic Reforms:**
  - Enabled LPG (Liberalization, Privatization, Globalization) reforms under a constitutional framework.
  - Encouraged policies balancing development with constitutional principles.
- **Civic Responsibility:**
  - Strengthened civic literacy and responsibilities through movements like **Digital India** and environmental safeguards.
- **Independent Institutions:**
  - Maintained the autonomy of bodies like the **Supreme Court, Election Commission, and CAG**.

### Threats to Constitutional Values:

- **Decline in Press Freedom:**
  - Ranked **159th in World Press Freedom Index 2024**.
  - Increasing censorship and intimidation of dissent.
- **Erosion of Individual Rights:**
  - Alleged misuse of laws like **UAPA** and **sedition laws**.
  - Cases such as **Stan Swamy** and **Umar Khalid** highlight rights violations.
- **Weakened Parliamentary Debates:**
  - Decline in debates and discussions; **2023 Budget passed without discussion**.
- **Criminalization and Corruption in Politics:**
  - Over **46% of MPs in 2024 Lok Sabha** have criminal cases.
- **Corporate-Driven Policies:**
  - Allegations of policies prioritizing corporate interests over citizens' rights, e.g., labor reforms and environmental clearances.

### Way Forward:

- **Limit State Power:** Strengthen institutional checks to prevent overreach.
- **Enhance Democratic Values:** Democracy must emphasize accountability and free speech beyond elections.
- **Uphold Directive Principles:** Policies must align with socio-economic goals outlined in DPSPs.
- **Judicial Independence:** Safeguard **judiciary's** autonomy for upholding constitutional morality.
- **Parliamentary Reforms:** Revive debates, discussions, and oversight mechanisms in Parliament.
- **Civic Engagement:** Promote constitutional literacy and citizen participation in governance.

### Conclusion:

India's Constitution remains a beacon of demo-

cratic values and social justice. By addressing emerging challenges, safeguarding institutions, and fostering inclusivity, the nation can ensure that the Constitution continues to guide its progress for generations to come.

**NOTE:** 75 years of constituent assembly is significant, so try to cover info on constituent assembly and constitution as much as possible.

### Insta Links:

1. [Indian-Constitution](#)

### PYQ:

1. What can France learn from the Indian Constitution's approach to secularism? (UPSC-2019)
2. Examine the scope of Fundamental Rights in the light of the latest judgement of the Supreme Court on Right to Privacy. (UPSC-2017)

[Topics: Functions and responsibilities of the Union and the States, issues and challenges pertaining to the federal structure, devolution of powers and finances up to local levels and challenges therein.](#)

## 3. URBAN CIVIC BODIES

### Context:

A recent RBI report highlights challenges in municipal corporations' revenue generation, heavy dependence on government transfers, and insufficient capacity to meet urban development demands.

**Data Facts on Urban Civics** (Source: [RBI Report on Municipal Finances](#))

- **Property Tax Revenue:**
  - Contributes 0.12% of GDP (2023-24).
  - Accounts for 16% of municipal revenue receipts and 60% of own tax revenue.
- **Revenue Receipts:**
  - Municipal receipts: 0.6% of GDP in 2023-24, compared to 9.2% (Central) and 14.6% (State governments).
  - Top 10 MCs generate 58% of municipal revenue receipts.
- **Grants and Transfers:**
  - Central government grants increased by 24.9% (2022-23).
  - State transfers grew by 20.4%.
- **Municipal Bonds:**
  - Total outstanding bonds: ₹4,204 crore (March 2024), only 0.09% of total corporate bonds.
- **Digitalisation:**
  - GIS-based property tax mapping can improve compliance and reduce revenue leakages.

**Issues Plaguing Urban Bodies:**

- **Low Revenue Generation:**
  - Property tax collection remains abysmally low.
  - Dependence on government transfers undermines financial autonomy.
- **Operational Inefficiencies:**
  - Poor enforcement of tax laws.
  - Leakages in revenue collection systems.
- **Underutilized Financing Options:**
  - Limited use of municipal bonds and PPPs.
- **Infrastructure and Service Delivery Gaps:**
  - Insufficient funds to maintain roads, drainage, and sanitation systems.
- **Dependence on Upper Tiers:**
  - Over-reliance on state and central transfers stifles long-term planning.

**Way Ahead:**

- **Strengthen Own Revenue Sources:**
  - Reform property tax structures to reflect real valuation.
  - Introduce GIS-based property tax mapping.
- **Enhance Non-Tax Revenues:**
  - Regularly revise user charges for services like water and waste management.
  - Adopt digital platforms for efficient fee collection.
- **Leverage Innovative Financing:**
  - Expand municipal bond market participation.
  - Promote PPPs in urban transport, waste management, and renewable energy.
- **Optimize Expenditures:**
  - Digitize operations to streamline costs.
  - Automate processes to free resources for capital investments.
- **Ensure Timely Transfers:**
  - Develop rule-based frameworks for predictable state and central transfers.
- **Capacity Building:**
  - Provide technical training for local bodies to improve planning and enforcement.

**Conclusion:**

Strengthening revenue sources, leveraging technology, and fostering collaborative frameworks can enhance their capacity to deliver essential services. This transformation is essential for sustainable urban growth and improved quality of life.

**Insta Links:**

2. [Report-on-municipal-finances](#)

**PYQ:**

1. Consider the following: (UPSC-2023)
  1. Demographic performance
  2. Forest and ecology

3. Governance reforms
4. Stable government
5. Tax and fiscal efforts

For the horizontal tax devolution, the Fifteenth Finance Commission used how many of the above as criteria other than population area and income distance?

- a) Only two
- b) Only three
- c) Only four
- d) All five

**Answer: b)**

2. According to the Constitution of India, it is the duty of the President of India to cause to be laid before the Parliament which of the following? (UPSC-2012)
  1. The Recommendations of the Union Finance Commission
  2. The Report of the Public Accounts Committee
  3. The Report of the Comptroller and Auditor General
  4. The Report of the National Commission for Scheduled Castes

Select the correct answer using the codes given below:

- a) 1 only
- b) 2 and 4 only
- c) 1, 3 and 4 only
- d) 1, 2, 3 and 4

**Answer: c)**

[Topics: India and its neighbourhood- relations.](#)

**4. INDIA - BANGLADESH**

**Context:**

A day after Bangladesh police arrested Hindu monk on sedition charges and a court on Tuesday denied him bail, India expressed “deep concern” and urged authorities “to ensure the safety and security of Hindus and all minorities” in the neighbouring country.



### History Between India and Bangladesh:

- **Pre-Partition Bond:** Cultural and linguistic ties were disrupted by the Partition of 1947, leading to large-scale family separations and migration.
- **1971 Liberation War:** India's military and moral support were instrumental in Bangladesh's independence from Pakistan, marking the foundation of strong bilateral relations.
- **Post-Independence Cooperation:** India was the first country to recognize Bangladesh and continues to share deep people-to-people connections.
- **Shared Sacrifices:** Historical and cultural links have been reinforced through mutual respect for shared histories, such as the commemoration of Vijay Diwas.

### Areas of Cooperation:

- **Economic Partnership:** Bangladesh is India's largest trade partner in South Asia, with bilateral trade reaching \$18.2 billion in 2021-22.
- **Connectivity:** Restoration of rail links, inland waterways like the Protocol on Inland Water Transit and Trade (PIWTT), and Agartala-Akhaura rail link.
- **Development Assistance:** India extended \$8 billion in Lines of Credit (LoCs) to Bangladesh for infrastructure development.
- **Cultural Exchange:** Institutions like the Indira Gandhi Cultural Centre (IGCC) foster shared cultural heritage.
- **Defence Collaboration:** Joint exercises like CORPAT and the Bangosagar naval drills enhance security ties.

### Challenges:

- **Water Sharing:** Disputes over rivers like Teesta and Brahmaputra remain unresolved, impacting livelihoods and trust.
- **Illegal Immigration:** Cross-border migration creates socio-economic and political strain in bordering Indian states.
- **China's Influence:** Bangladesh's growing ties with China, including investments in infrastructure under the Belt and Road Initiative, pose strategic challenges for India.
- **Terrorism and Insurgency:** Cross-border movements of insurgent groups and alleged support for extremist elements affect security.
- **Non-Tariff Barriers:** Trade growth is hindered by lengthy customs procedures and regulatory obstacles.

### Way Ahead:

- **Resolve Water Disputes:** Prioritize agreements on Teesta and other rivers through mutual dialogue and time-bound solutions.
- **Enhance Connectivity:** Develop coastal, road, and rail networks to boost economic and cultural ties.

- **Energy Collaboration:** Strengthen cooperation in clean energy and finalize initiatives like the India-Bangladesh Friendship Pipeline.
- **Counter China's Influence:** Provide technological, financial, and strategic support to Bangladesh to balance regional geopolitics.
- **Address Refugee Issues:** Collaborate on a regional framework for managing refugee crises through SAARC initiatives.

### Conclusion:

India and Bangladesh's relationship is marked by shared histories and future potential. By addressing challenges and fostering cooperation, both nations can strengthen their partnership, benefiting not just themselves but the region as a whole.

### Insta Links:

- |   |
|---|
| 1. <a href="#">India-Bangladesh-Relations</a> |
|---|

### PYQ:

- |   |
|---|
| 1. Analyze internal security threats and transborder crimes along Myanmar, Bangladesh and Pakistan borders including Line of Control (LoC). Also discuss the role played by various security forces in this regard. (UPSC-2018) |
|---|

## GENERAL STUDIES – 3

Topics: Indian Economy and issues relating to planning, mobilization of resources, growth, development and employment.

### 5. PRODUCTION LINKED INCENTIVE SCHEME

#### Context:

India's Production Linked Incentive (PLI) Scheme, launched in 2020, aims to transform the country's manufacturing sector into a global hub by encouraging investments, innovation, and self-reliance.

#### What is the PLI Scheme?

The PLI Scheme incentivizes companies (domestic and foreign) to manufacture in India by offering financial rewards based on incremental production and revenue over five years. Initially targeting three industries, it was later expanded to 14 critical sectors to drive import substitution, employment generation, and high-tech industrial development.

#### Features and Sectors Covered

##### 1. Features:

- Performance-driven financial incentives.
- Promotes advanced technologies and economies of scale.
- Focus on self-reliance and boosting exports.
- Encourages job creation and import substitution.

##### 2. Sectors Covered:

- Large-scale electronics manufacturing (LSEM).
- Pharmaceuticals and medical devices.
- Automobiles and auto components.
- Telecom and networking products.
- Renewable energy and solar PV modules.
- Advanced chemistry cell (ACC) batteries.
- White goods, drones, textiles, food products, and specialty steel.

#### Budget Outlay:

- Total allocation: ₹1.97 lakh crore (~\$24 billion).
- Strategic funding across 14 sectors to enhance domestic manufacturing, exports, and technological development.



#### Achievements and Impact:

##### 1. Overall Impact:

- ₹1.46 lakh crore investments realized by August 2024.
- ₹12.50 lakh crore production generated.
- ₹4 lakh crore exports and 9.5 lakh jobs created.

##### 2. Sector-Specific Achievements:

- **Electronics:** Transition from a net importer to a net exporter of mobile phones. Production grew to 33 crore units (2023-24), with exports reaching 5 crore units.
- **Pharmaceuticals and Medical Devices:** India became the 3rd largest producer by volume, exporting 50% of production and reducing import dependency on bulk drugs.
- **Automotive:** Attracted \$8 billion in investments and boosted production of high-tech automotive components.
- **Renewable Energy:** Solar PV module production expanded with 65 GW manufacturing capacity under the second tranche.
- **Telecom:** Achieved 60% import substitution and became a major exporter of 4G and 5G equipment.
- **Drones:** Sector witnessed seven-fold growth, driven by MSMEs and start-ups.

#### Challenges:

1. **Limited Value Addition:** Over-reliance on assembly rather than end-to-end manufacturing.
2. **WTO Constraints:** Rules limit tying incentives to domestic value addition.
3. **Ambiguity in Disbursal:** Lack of standardized parameters for fund allocation.
4. **Data Gaps:** Absence of centralized databases for tracking outcomes.
5. **Complex Supply Chains:** Difficulty in developing high-tech industries like semiconductor manufacturing.

#### Way Ahead:

1. **Policy Evaluation:** Assess cost per job, production outcomes, and export growth.
2. **Transparent Incentives:** Standardize criteria for fund disbursal and maintain accountability.
3. **Strengthening Value Addition:** Focus on entire supply chains to deepen domestic manufacturing.
4. **Database Development:** Create centralized systems for tracking investments, jobs, and exports.
5. **Expand Sectors:** Target emerging industries like green hydrogen, semiconductors, and AI.

#### Conclusion:

The PLI Scheme has significantly bolstered India's manufacturing capabilities, attracting investments, increasing production, and fostering innovation. Addressing challenges and building a robust ecosystem will en-

sure sustained growth and secure India's position as a global manufacturing powerhouse.

### Insta Links:

1. [PLI](#)

### PYQ:

- Consider the following statements: (UPSC-2023)  
**Statement-I:** India accounts for 3.2% of global export of goods.  
**Statement-II:** Many local companies and some foreign companies operating in India have taken advantage of India's 'Production-linked Incentive' scheme.  
 Which one of the following is correct in respect of the above statements?
  - Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I
  - Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I
  - Statement-I is correct but Statement-II is incorrect
  - Statement-I is incorrect but Statement-II is correct

**Answer: d)**

[Topics: Conservation related issues, environmental pollution and degradation, environmental impact assessment.](#)

## 6. COP 29 - OUTCOME

### Context:

The 29th UN Climate Change Conference (COP29) concluded in Baku, Azerbaijan, focusing on scaling up climate finance, adaptation, and global cooperation to combat climate change.

### Outcomes of COP29:

- Climate Finance:**
  - New Collective Quantified Goal (NCQG):**
    - Triple climate finance for developing countries to **USD 300 billion annually by 2035**.
    - Scale finance from public and private sources to **USD 1.3 trillion annually by 2035**.
- Carbon Markets (Article 6 of the Paris Agreement):**
  - Finalized frameworks for **country-to-country trading** of carbon credits (Article 6.2).
  - Operationalized the **Paris Agreement Crediting Mechanism** (Article 6.4), ensuring environmental and human rights safeguards.

- Supported capacity-building for least developed countries to participate in carbon markets.
- Transparency:**
    - 13 countries submitted their **Biennial Transparency Reports (BTRs)** under the Enhanced Transparency Framework.
    - UNFCCC organized **#Together4Transparency**, promoting transparent climate action with 42 events.
  - Adaptation:**
    - Baku Adaptation Roadmap** launched to expedite National Adaptation Plans (NAPs).
    - Established a support program for NAP implementation in least developed countries (LDCs).
    - High-level dialogues emphasized financing and technical support for adaptation.
  - Indigenous Peoples and Local Communities:**
    - Adopted the **Baku Workplan** and renewed the **Local Communities and Indigenous Peoples Platform (LCIPP)** Facilitative Working Group.
  - Gender and Climate Change:**
    - Extended the **Lima Work Programme on Gender and Climate Change** for another 10 years.
    - Mandated a new **Gender Action Plan** to be developed by COP30.
  - Civil Society and Inclusivity:**
    - Over **55,000 attendees**, including civil society, Indigenous Peoples, youth, and businesses.
    - Strengthened **Action for Climate Empowerment (ACE)** for integrating public engagement into national climate policies.
  - Global Climate Action:**
    - Showcased real-world solutions under the **Marrakech Partnership for Global Climate Action**.
    - Launched the 2024 **Yearbook of Global Climate Action**, emphasizing non-Party stakeholder contributions.
  - Forests and REDD+:**
    - UK pledged **£3 million** to enhance REDD+ transparency and implementation for halting deforestation by 2030.
  - Nationally Determined Contributions (NDCs):**
    - Stronger climate plans (NDC 3.0) due in 2025, covering all greenhouse gases and sectors.
    - UK and Brazil committed to ramping up climate action in their updated NDCs.

### India's Initiatives at COP29:

- Resilient Infrastructure:** Highlighted [CDRI](#) and [IRIS](#) initiatives for disaster-resilient infrastructure and SIDS adaptation.

- **Industrial Decarbonization:** Co-hosted LeadIT Member Meet with Sweden; promoted hydrogen-based solutions and CO2 capture.
- **SIDS Adaptation Finance:** Advocated finance unlocking and disaster-resilient support for SIDS.
- **Solar Energy Leadership:** Promoted solar adoption with ISA, targeting a 20-fold increase by 2050.
- **Gender-Inclusive Action:** Showcased women-led clean energy solutions and gender-inclusive climate policies.
- **LeadIT Summit:** Reaffirmed commitment to heavy industry decarbonization under the Paris Agreement.

#### Limitations of COP29:

- **Inadequate Finance:** Funding commitments termed “too little, too distant”, failing to meet immediate needs.
- **Private Sector Dependency:** Heavy reliance on non-guaranteed private contributions.
- **Unmet Emission Goals:** Insufficient pledges to meet the **1.5°C target**, with global emissions rising in 2023.
- **Geopolitical Conflicts:** Disputes over **CBAM** and unfair procedural practices highlighted mistrust.

#### Way Ahead:

- **Strengthen Finance:** Ensure **binding, timely, and grant-based** funding mechanisms.
- **Boost Cooperation:** Improve negotiation fairness and address trade disputes in separate forums.
- **Accelerate NDCs:** Expand **Nationally Determined Contributions (NDCs)** to include all sectors.
- **Focus on Adaptation:** Increase support for LDCs and SIDS with **dedicated resources**.
- **Science-Driven Action:** Align decisions with **scientific assessments** and expand renewable energy.

#### Conclusion:

COP29 achieved critical milestones in scaling up climate finance, operationalizing carbon markets, and advancing adaptation and transparency. While significant progress was made, challenges remain, necessitating stronger global efforts at COP30 and beyond.

#### Insta Links:

2. [COP-29-climate-finance-and-carbon-markets](#)

#### PYQ:

1. In light of COP-29 discussions, critically analyse how climate finance can be a pathway for both adaptation and mitigation in developing countries. Discuss the barriers faced by these countries in accessing climate finance and achieving equitable carbon market participation.” (250 words)

## 7. MENACE OF MICROPLASTIC

#### Context:

As the world moves toward the finalization of the Global Plastics Treaty, reducing microplastic pollution has become an urgent priority, demanding a multi-pronged approach involving regulations, innovative technologies, and global cooperation.

#### What are Microplastics and Their Classifications

- **Definition:** Plastics less than 5 mm in diameter, formed through fragmentation or intentionally manufactured for specific uses.
- **Classifications:**
  1. **Primary Microplastics:** Manufactured for commercial use, such as microbeads in cosmetics, plastic pellets, and synthetic fibers.
  2. **Secondary Microplastics:** Formed from the breakdown of larger plastics, such as water bottles, due to solar radiation, ocean waves, and mechanical forces.

#### Applications of Microplastics

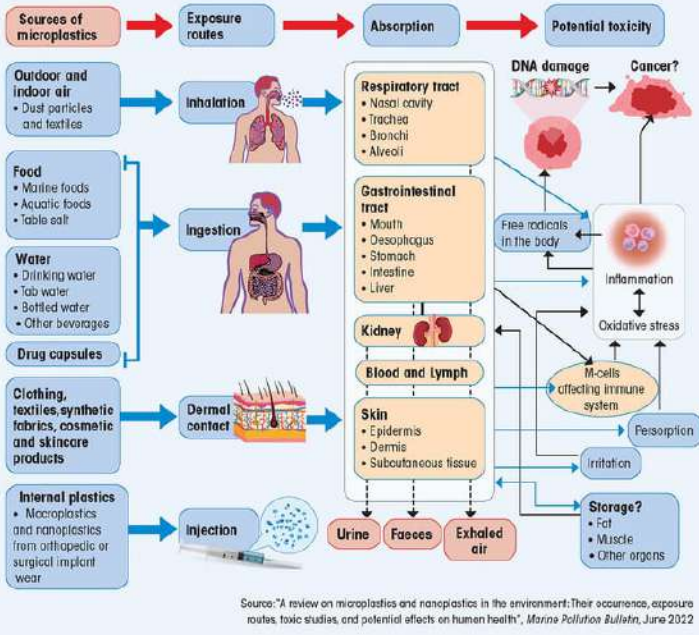
1. **Medical and Pharmaceutical:** Used in drug delivery systems due to their ability to absorb and release chemicals effectively.
2. **Industrial:** Utilized in air-blasting technology and in producing synthetic textiles.
3. **Personal Care Products:** Found in exfoliating agents like facial scrubs, toothpaste, and other cosmetics.

#### Impacts of Microplastics:

1. **On the Environment:**
  - **Soil Degradation:** Reduces soil quality, alters chemical properties, and disrupts water retention and nutrient cycles.
  - **Aquatic Pollution:** Bioaccumulates in marine organisms and contributes to toxic chemical leaching into water bodies.
2. **On Animals:**
  - **Trophic Transfer:** Microplastics consumed by smaller organisms are passed through the food chain, affecting higher predators.
  - **Reproductive and Growth Impacts:** Causes stunted growth, reduced fertility, and cell damage in aquatic and terrestrial species.
3. **On Humans:**
  - **Health Risks:** Linked to oxidative stress, inflammation, DNA damage, and disruptions in metabolism and reproduction.
  - **Organ Accumulation:** Detected in the brain, lungs, placenta, and even heart tissues, increasing risks of stroke, heart attacks, and immune disorders.

### POTENTIAL HEALTH HAZARD

Health implications of microplastics in humans are not fully known, but some risks are indicated



**Best Practice:** The EU's REACH Regulation (2023) bans intentionally added microplastics in products like detergents, cosmetics, and fertilizers, aiming to reduce their environmental and health impacts.

### Conclusion

Microplastics represent a global challenge with significant risks to ecosystems, wildlife, and human health. While efforts like the Global Plastics Treaty and national policies are steps in the right direction, a collective approach involving innovation, regulation, and public awareness is crucial to mitigate this threat and protect our environment.

### Insta Links:

2. [Managing-microplastic-pollution-in-India](#)

### PYQ:

1. What are the impediments in disposing the huge quantities of discarded solid waste which are continuously being generated? How do we remove safely the toxic wastes that have been accumulating in our habitable environment? (UPSC-2018)

### Measures Taken:

- **Global Level:**
  - **UNEA Resolution:** Mandated the creation of the Global Plastics Treaty to combat plastic pollution, including microplastics.
  - **New Zealand Microbead Ban (2017):** Banned sale and manufacture of products containing microbeads.
- **India Level:**
  - **Plastic Waste Management Rules (2016, 2018, 2024):** Provides frameworks to manage and reduce plastic waste.
  - **Ban on Single-Use Plastics:** Nationwide ban on items like plastic straws and cutlery to reduce plastic pollution.
  - **India Plastics Pact:** Encourages industries to minimize plastic use and enhance recycling practices.

### Measures to Mitigate Microplastics:

- **Innovative Technologies:** Develop advanced filtration systems like electrocoagulation for wastewater treatment to remove microplastics.
- **Regulating Production:** Ban microbeads and control the use of secondary plastic sources in consumer products.
- **Recycling and Waste Management:** Promote efficient recycling systems and reduce overall plastic production.
- **Awareness Campaigns:** Educate industries and consumers about the impact of microplastics and encourage sustainable alternatives.
- **Standardized Monitoring:** Implement global protocols for detecting and assessing microplastic concentrations in the environment.

## 8. BIOMEDICAL WASTE

### Context:

HIV epidemic and incidents like the "Syringe Tide" highlighted the hazards of improper biomedical waste disposal, prompting global and national reforms to safeguard public health and the environment.

### Historical Background

1. **HIV Epidemic (1983):** Identification of HIV by Luc Montagnier and Robert Gallo triggered global fear and stigma, emphasizing the risks of medical waste.
2. **Syringe Tide (1987):** Beaches in the U.S. were polluted with medical waste, sparking public outrage and highlighting the need for regulatory action.
3. **India's Scenario:** The first HIV case in India (1986) and lack of biomedical waste legislation exposed gaps in waste management.

### Outcomes of Global and National Responses:

#### United States:

1. **Medical Waste Tracking Act (1988):** Categorized hospital waste as hazardous, enforcing systematic handling and disposal protocols.
2. **Transparency and Accountability:** Benchmarked regulatory frameworks for other nations.

#### India:

1. **Judicial Interventions:** Supreme Court in **Dr. B.L. Wadehra vs. Union of India (1996)** criticized Delhi's waste mismanagement, prompting

nationwide action.

2. **Biomedical Waste (Management and Handling) Rules (1998):** First regulation recognizing biomedical waste as hazardous, empowering pollution control boards.
3. **Amendments and Updates:** Strengthened protocols in **2016** and integrated technology advancements in **2020**.

### Key Features of India's Biomedical Waste Management:

1. **Waste Segregation and Color-Coding:**
  - Mandated segregation of waste at the source into distinct categories.
  - Use of color-coded containers (**yellow, red, blue, white**) for easy identification and handling.
2. **Treatment and Disposal Technologies:**
  - Implementation of advanced waste treatment methods:
    - **Incineration:** For infectious and pathological waste.
    - **Autoclaving and Microwaving:** For disinfection of sharps and other categories.
    - **Chemical Disinfection:** For liquid waste like blood and contaminated fluids.
  - Adoption of **deep burial** in rural and resource-limited areas where incineration is not feasible.
3. **Occupational Safety for Healthcare Workers:**
  - Provision of personal protective equipment (PPE) for handling hazardous waste.
  - Regular training programs to ensure adherence to safety protocols.
  - Immunization against diseases like Hepatitis B for workers handling infectious waste.
4. **Monitoring and Compliance Mechanisms:**
  - Empowerment of **Central and State Pollution Control Boards** to monitor waste generation and disposal.
  - Requirement for healthcare facilities to obtain authorization and submit annual reports on waste management practices.
  - Surprise inspections and audits to ensure compliance with the rules.
5. **Mandatory Reporting and Record-Keeping:**
  - Healthcare facilities must maintain records of waste generated, treated, and disposed of.
  - Use of **barcode tracking systems** in some states to enhance accountability.
6. **Common Biomedical Waste Treatment Facilities (CBWTFs):**

- Establishment of shared facilities to treat biomedical waste from smaller healthcare units, reducing individual facility costs.

### Limitations in Biomedical Waste Management in India:

1. **Inadequate Infrastructure:** Limited number of biomedical waste treatment facilities, especially in rural and remote areas, leading to unsafe disposal practices.
2. **Weak Enforcement and Compliance:** Poor adherence to segregation and disposal protocols, coupled with lax monitoring and enforcement by authorities.
3. **Occupational Hazards:** Insufficient training and lack of personal protective equipment (PPE) expose healthcare workers and waste handlers to health risks.
4. **Low Public Awareness:** Limited knowledge among the public and informal waste handlers about the dangers of biomedical waste leads to unsafe handling practices.
5. **Inefficiency in Common Treatment Facilities:** Uneven distribution and overburdening of CBWTFs hinder effective waste management in certain regions.

### Way Ahead:

1. **Strengthen Infrastructure in Rural Areas:** Establish additional Common Biomedical Waste Treatment Facilities (CBWTFs) in underserved regions to reduce unsafe disposal practices.  
Eg: **Tamil Nadu's model of CBWTFs** catering to multiple smaller healthcare units can be replicated nationwide.
2. **Enhance Monitoring and Accountability:** Implement real-time tracking systems using barcoding and GPS to ensure compliance.  
Eg: **Kerala's Integrated Biomedical Waste Management Monitoring System (IBMWMS)** effectively tracks waste from generation to disposal.
3. **Improve Capacity Building and Occupational Safety:** Regular training for healthcare workers, mandatory use of PPE, and immunization for waste handlers to reduce exposure risks.  
Eg: **Mumbai's municipal hospitals incorporate safety training and PPE provision** into their biomedical waste protocols.
4. **Promote Technological Innovations:** Encourage eco-friendly technologies like plasma pyrolysis and waste-to-energy plants for treating non-recyclable waste.  
Eg: **AIIMS, New Delhi, employs advanced autoclaving and disinfection methods** to minimize environmental impact.
5. **Raise Public Awareness and Community Par-**

**Participation:** Conduct campaigns to educate the public and informal waste handlers on biomedical waste risks and proper disposal.

Eg: **Expand the Swachh Bharat Abhiyan** to include biomedical waste awareness drives, building on its sanitation success.

**Conclusion:**

The HIV epidemic and incidents like the Syringe Tide marked a turning point in biomedical waste management globally. **India’s legislative and policy reforms since the 1990s highlight the potential to address challenges** through sustained effort. While gaps persist, the progress reflects the criticality of leveraging crises for long-term solutions.

**Quote:** “A crisis often serves as the foundation for transformative reform.”

**Insta Links:**

- |                                      |
|--------------------------------------|
| 1. <a href="#">Bio-medical waste</a> |
|--------------------------------------|

## 9. AIR POLLUTION CRISIS

**Context:**

Delhi’s persistent air pollution crisis has highlighted the severe impact of air pollution on public health, the environment, and socio-economic conditions, emphasizing the urgency for collective measures to mitigate this issue.

**What is Air Pollution?**

Air pollution refers to the contamination of the atmosphere by harmful substances, such as gases, particulates, and biological molecules, which pose risks to human health, ecosystems, and climate stability.

**Categorization of Pollution:**

- **Primary Pollutants:** Emitted directly into the air (e.g., carbon monoxide, sulfur dioxide).
- **Secondary Pollutants:** Formed through chemical reactions in the atmosphere (e.g., smog, ground-level ozone).

**Sources of Air Pollution:**

- **Industrial Emissions:** Burning fossil fuels for energy and manufacturing processes.
- **Vehicle Emissions:** Exhaust from automobiles contributes to urban air pollution.
- **Domestic Combustion:** Burning wood, coal, or biomass for cooking and heating.
- **Agricultural Practices:** Stubble burning and fertilizer use release harmful chemicals.
- **Natural Sources:** Dust storms, forest fires, and volcanic eruptions.

**Impacts of Air Pollution:**

- **Health:**
  - Respiratory diseases (asthma, **bronchitis**).
  - Cardiovascular issues and reduced life expectancy.
  - Cognitive impairments, especially in children.
- **Environment:**
  - Damage to ecosystems and biodiversity.
  - Acid rain affecting soil and water quality.
  - Contribution to climate change through greenhouse gases.
- **Economy:**
  - Increased healthcare costs.
  - Reduced agricultural productivity.
  - Property and infrastructure damage.

**Government Measures:**

1. **Legislative Steps:**
  - **National Clean Air Programme (NCAP):** Targets reducing air pollution by 20-30% by 2024.
  - **Pollution Under Control (PUC) Certificate:** Mandatory for vehicles.
2. **Technological Interventions:**
  - Adoption of CNG for public transport in Delhi.
  - Encouragement of electric vehicles and renewable energy sources.
3. **Awareness Campaigns:**
  - Promoting individual actions like tree plantation and reduced vehicle usage.
4. **Infrastructure Development:**
  - Installation of air quality monitoring systems.
  - Development of green belts in urban areas.

**Role of Multinational Cooperation:**

- **Shared Solutions:** Transboundary pollution necessitates collaborative efforts among South Asian nations.
- **Technology Sharing:** Exchange of air pollution mitigation technologies.
- **Policy Coordination:** Joint regulations to control industrial and vehicular emissions.
- **Global Initiatives:** Participation in frameworks like the Paris Agreement and Climate Action Plans.

**Way Ahead:**

- **Stronger Implementation:** Enforcing stricter regulations and penalties for non-compliance.
- **Public Participation:** Encouraging citizen-driven initiatives like carpooling and waste composting.
- **Sustainable Practices:** Promoting renewable energy and efficient waste management systems.
- **Regional Collaboration:** Developing joint air quality management plans with neighboring countries.

**Conclusion:**

Addressing air pollution demands a comprehensive, multi-faceted approach involving government policies, technological innovation, and global cooperation. Only through concerted efforts can we ensure clean air and a sustainable future.

**Insta Links:**

3. <a href="#">Online-schooling-due-to-air-pollution</a>
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**PYQ:**

1. Describe the key points of the revised Global Air Quality Guidelines (AQGs) recently released by the World Health Organisation (WHO). How are these different from its last update in 2005? What changes in India's National Clean Air Programme are required to achieve revised standards? (UPSC-2021)
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**CONTENT FOR MAINS ENRICHMENT**

Topic in News	Usage in Answers
<p><b>1. NAYI CHETNA 3.0 – PAHAL BADLAAV KI</b></p>	<p><b>Context:</b> Union Ministers will launch Nayi Chetna 3.0 – Pahal Badlaav Ki, a month-long campaign against gender-based violence, under DAY-NRLM to promote awareness and grassroots action.</p> <p><b>About Nayi Chetna – Pahal Badlaav Ki:</b></p> <ul style="list-style-type: none"> <li>• <b>Launched By:</b> Ministry of Rural Development under DAY-NRLM.</li> <li>• <b>Campaign Duration:</b> 25th November to 23rd December 2024.</li> <li>• <b>Slogan:</b> “Ek Saath, Ek Awaaz, Hinsa Ke Khilaaf.”</li> <li>• <b>Objectives:</b> <ul style="list-style-type: none"> <li>○ <b>Awareness:</b> Raise understanding of all forms of gender-based violence.</li> <li>○ <b>Action:</b> Encourage communities to report and demand action.</li> <li>○ <b>Support Systems:</b> Strengthen access to support and legal mechanisms.</li> <li>○ <b>Empower Institutions:</b> Enable local bodies to respond decisively.</li> </ul> </li> <li>• <b>Outreach:</b> <ul style="list-style-type: none"> <li>○ Supported by 9 Ministries/Departments.</li> <li>○ Involves <b>Self-Help Groups (SHGs)</b> as part of a <b>Jan Andolan</b> spirit.</li> <li>○ Previous editions reached <b>3.5 crore (1st)</b> and <b>5.5 crore (2nd)</b> participants.</li> </ul> </li> </ul> <p><b>Relevance in UPSC Exam:</b></p> <ul style="list-style-type: none"> <li>• <b>Women’s Empowerment and Gender Justice:</b></li> <li>• <b>Government Schemes and Campaigns:</b> <ul style="list-style-type: none"> <li>○ Nayi Chetna exemplifies “<b>Jan Andolan</b>” and inter-ministerial convergence for social reform.</li> </ul> </li> <li>• <b>Ethics and Governance:</b> <ul style="list-style-type: none"> <li>○ Illustrates ethical governance models and social inclusion strategies.</li> </ul> </li> <li>• <b>Essay Writing:</b> <ul style="list-style-type: none"> <li>○ Serves as a case study for topics on gender equality, women’s empowerment, and participatory governance.</li> </ul> </li> </ul>

## 2. RISE OF YASHASVI JAISWAL

Yashasvi Jaiswal's rise to cricketing fame is a tale of grit and determination. Born to a shopkeeper in rural India, Jaiswal left for Mumbai at the age of 11 to pursue his cricketing dreams. With no stable shelter, he initially worked at a dairy but was thrown out for prioritizing cricket over chores. Homeless, he lived in a tent at the Muslim United Club and sold pani puri at Azad Maidan to survive, often praying his teammates wouldn't see him. While others were supported by their families, Jaiswal cooked his own meals, often going without breakfast. Through relentless hard work and resilience, he transitioned from selling street food to being India's most promising young batter since Virat Kohli.

### Relevance in UPSC Exam:

- **Inspirational Leadership:** Demonstrates **perseverance and determination**, relevant for ethics and essay topics on resilience and ambition.
- **Sports and Governance:** Reflects the role of grassroots support and policies in nurturing sports talent, relevant for **GS-II** topics on welfare policies.
- **Case Study Material:** Serves as an example for **ethics case studies** on hard work, humility, and overcoming adversity.
- **Essay Themes:** Applicable for essays on **dreams, societal change**, and individual grit.

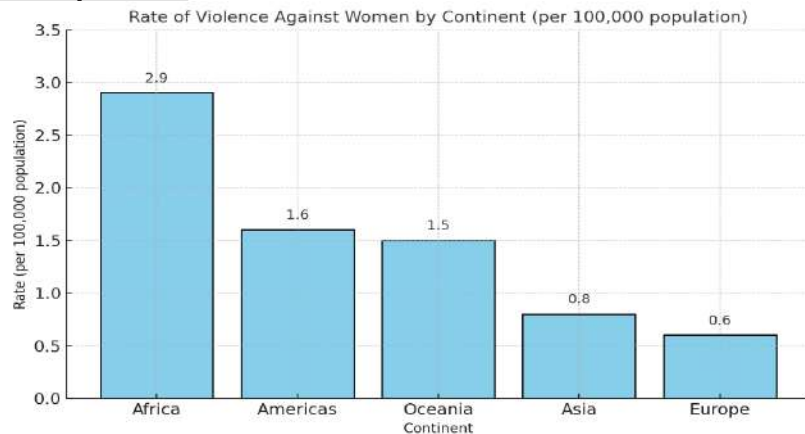
## 3. VIOLENCE AGAINST WOMEN

### Context:

The United Nations has highlighted the alarming rise in violence against women and girls in domestic settings, emphasizing that homes remain the most dangerous place for them globally.

### About UN Report on Women Violence:

- **Global Statistics (2023):**
  - 51,100 women and girls killed globally by intimate partners or family members (up from 48,800 in 2022).
  - On average, 140 women are killed daily in domestic settings.
- **Regional Disparities:**



- **Key Insights:**
  - 60% of female homicide victims were killed by intimate partners or family members.
  - **Men constitute 80% of global homicide** victims, but most male deaths occur outside the home.
  - **Gender stereotypes, societal norms, and impunity** for perpetrators are major drivers of violence.

### Relevance in UPSC Exam

- **GS Paper I (Society):** Issues of gender inequality, patriarchy, and social norms contributing to violence.
- **GS Paper II (Governance):** Policies addressing domestic violence, role of international organizations like the UN, and comparative analysis of global initiatives.
- **GS Paper IV (Ethics):** Ethical dilemmas in family justice systems and protection of vulnerable groups.

## 4. E-DAAKHIL PORTAL

### Context:

India has fully implemented the E-Daakhil portal for consumer grievance redressal, operational nationwide, including remote areas like Ladakh.

### About E-Daakhil Portal:

- **Introduced Under:** Consumer Protection Act, 2019.
- **Purpose:** Paperless and hassle-free mechanism for filing and resolving consumer complaints online.
- **Key Features:**
  1. File complaints, pay fees, and track case statuses online.
  2. Accessible via mobile number or email registration.
  3. Reduces the need for physical visits to consumer forums.
- **Impact:** Successful case rulings include compensation for faulty products and refund disputes, e.g., Sambalpur District Commission and Andaman District Commission.

### Relevance in UPSC Exam:

- **Consumer Rights and Governance:**
  - Highlights digital transformation in grievance redressal mechanisms.
- **E-Governance:**
  - A case study example for **GS-II (Governance)** and **Ethics (Transparency and Accountability)**.
- **Digital India Initiative:**
  - Reflects the success of **Digital India** in ensuring inclusivity and efficiency.
- **Inclusive Development:**
  - Coverage in remote areas like Ladakh shows commitment to **equity and accessibility**.

## 5. DARK TOURISM

### Context:

Amid the ongoing war in Ukraine, the concept of dark tourism has gained traction, with visitors exploring war-torn locations like the destroyed Irpin bridge and tank graveyards.

### About Dark Tourism:

- **Definition:** Visiting locations associated with death, tragedy, or suffering, such as battlefields, disaster zones, or memorials.
- **Origins:** Defined by John Lennon and Malcolm Foley as the interpretation of inhuman acts for visitors.
- **Popular Sites:** Auschwitz (Poland), Chernobyl (Ukraine), Ground Zero (USA), Hiroshima Peace Memorial Park (Japan).
- **Types:**
  1. **Disaster Tourism:** Focused on areas affected by major disasters.
  2. **War Tourism:** Visits to conflict zones or post-war regions.
- **Controversy:**
  - **Positive View:** Acts as a form of memorialization, education, and awareness.
  - **Criticism:** Seen by some as unethical or profiting from human suffering.
- **Emerging Market:** Increasing popularity in countries like Ukraine due to global attention and curiosity.

### Insta Links:

1. [Dark-Tourism](#)

## 6. STORY OF FALGUNI NAYAR

In 2012, Falguni Nayar left her successful investment banking career at 50 to start Nykaa with \$2 million and a vision to make quality beauty products accessible to Indian women. From her father’s small office, she meticulously studied consumer behavior, onboarded trusted brands, and built a seamless online platform despite skepticism. Her efforts paid off when Nykaa became India’s first woman-led unicorn in 2020, valued at \$2.3 billion. Today, as one of India’s two self-made female billionaires, Nayar’s journey exemplifies resilience, proving that success has no age limit and dreams are worth pursuing.

### Relevance in UPSC Exams:

- **General Studies Paper I:**
  - **Role of Women in Society:** Example of women breaking barriers in entrepreneurship.
- **General Studies Paper III:**
  - **Economic Growth and Startups:** Case study on Nykaa as a successful Indian unicorn.
- **Ethics Paper (GS IV):**
  - **Case Study on Leadership and Vision:** Highlighting values like perseverance, innovation, and social responsibility.
- **Essay Writing:**
  - Topics such as “Women Entrepreneurs as Agents of Change” or “The Role of Startups in India’s Economic Transformation.”

## 7. CAG REPORT ON BIHAR’S HEALTHCARE

### Context:

The Comptroller and Auditor General (CAG) report on Public Health Infrastructure and Management of Health Services (2016-22) highlights critical gaps in **Bihar’s healthcare** system, including a shortage of doctors, paramedical staff, and issues with blood banks and drug supplies.

### Key Findings of CAG Report (2016-22):

Category	Key Findings
<b>Shortage of Doctors</b>	53% fewer doctors than WHO norms; only 58,144 doctors available against the required 1,24,919.
<b>Vacancies in Healthcare</b>	61% (primary), 56% (secondary), 49% (tertiary), and 82% (AYUSH) positions vacant. Overall, 60% shortage.
<b>Blood Banks</b>	Many operating without valid licenses due to critical equipment shortages.
<b>Drug Supply Issues</b>	35%-74% shelf life remaining for medicines supplied; cases of near-expiry drugs not withdrawn.
<b>Ambulance Shortfalls</b>	None of the 25 inspected ambulances had the required equipment, medicine, or consumables.

### Relevance in UPSC Exams:

- **General Studies Paper II:**
  - **Health Infrastructure:** Issues in health service delivery at state levels.
  - **Government Policies:** Role of auditing in assessing the effectiveness of public healthcare programs.
- **General Studies Paper III:**
  - **Disaster Management:** Implications of inadequate medical infrastructure during emergencies.
  - **Science and Technology:** Relevance of modernizing healthcare equipment and drug supply chains.

## 8. ONLINE GAMING ADDICTION

### Context:

The Indian government, addressing online gaming addiction concerns, has introduced policies and mechanisms to ensure safe gaming and protect children from addiction, financial risks, and mental stress.

Measure	Description
<b>IT Rules, 2021</b>	Cast due diligence obligations on intermediaries, ensuring removal of harmful or illegal content related to gambling, addiction, or child harm.
<b>Advisory by Ministry of Education (2021)</b>	Educated parents and teachers about gaming addiction and disorder, emphasizing mental and physical stress prevention.
<b>Guidelines for Gaming Advertisements by MIB (2020, 2024)</b>	Restricted ads targeting children, emphasized financial risk disclaimers, banned depiction of gaming as employment or success alternatives.
<b>Advisory Against Online Betting Ads by MIB (2024)</b>	Instructed media platforms to avoid advertisements promoting online betting or surrogate products/services.
<b>Cyber Crime Coordination by MHA</b>	Established Indian Cyber Crime Coordination Centre (I4C) and National Cyber Crime Reporting Portal for addressing gaming-related crimes.
<b>Toll-Free Helpline</b>	Operationalized helpline '1930' for assistance in lodging cyber complaints, including financial and gaming-related frauds.

### Relevance for UPSC Exam:

- **Governance and Policy Making:** Covers government measures like IT Rules 2021 and regulatory frameworks for managing digital spaces and online gaming addiction.
- **Ethics and Society:** Explores issues of digital addiction, child safety, and ethical advertising practices relevant for GS-IV and Essay.
- **Cybersecurity:** Demonstrates India's approach to tackling cybercrimes, including tools like I4C and the National Cyber Crime Reporting Portal.
- **Education and Awareness:** Highlights the role of advisories for parents and teachers in protecting children, aligning with GS-II (Welfare Schemes).
- **Technology and Regulation:** Showcases India's regulatory mechanisms in digital spaces, relevant for GS-III (Science & Technology).

## FACTS FOR PRELIMS

### GS-1

#### Art & Culture

### 1. BRIHADEESWARAR TEMPLE

**Context:** The Sadhaya Vizha, celebrated in Thanjavur, Tamil Nadu, commemorates the birth anniversary of Raja Raja Chola I, a visionary Chola emperor known for his administrative acumen, and monumental contributions to architecture and culture.



#### About Brihadeeswarar Temple (Rajarajeswaram)

- **Location:** Thanjavur, Tamil Nadu, part of the UNESCO “Great Living Chola Temples.”
- **Era:** Built in **1009 CE** by Raja Raja Chola I, it is the largest and tallest Indian temple.
- **Design:**
  - Features a massive **70-meter pyramidal vimana** with an **octagonal dome-shaped stupika**.
  - Two large **gopuras** adorned with intricate sculptures.
  - Sanctum houses a **two-storey lingam of Lord Shiva**.
- **Cultural Significance:** Repository of Tamil inscriptions detailing rituals, gifts, and the temple’s construction overseen by Raja Raja Chola himself.
- **Artistry:** Painted murals, sculptural narratives, and **stucco figures** (added later during the Maratha period).
- **Other Chola Temples:**
  - **Gangaikonda Cholapuram** (by Rajendra I).
  - **Airavatesvara Temple** (by Rajaraja Chola II).

#### Insta Links:

1. [Chola-empire](#)

### 2. ISKCON

#### Context:

The Dhaka High Court declined a suo motu order to ban ISKCON in Bangladesh, citing government action already taken.

#### About ISKCON:

- **Full form:** International Society for Krishna Consciousness.
- **Founder:** A.C. Bhaktivedanta Swami Prabhupada.
- **Founded In:** New York City, USA.
- **Year:** 1966.
- **Aim:** To promote Krishna Consciousness and devotional service to Krishna as the Supreme Godhead.
- **Features:**
  - Largest branch of **Gaudiya Vaishnavism**, rooted in 16th-century India.
  - Emphasizes chanting the **Hare Krishna Mahamantra**.
  - Engages in public bhakti practices like **Sankirtan, yoga seminars**, and festivals.
  - Runs social initiatives, including free food distribution, schools, eco-villages, and hospitals.

#### Insta links:

1. [ISKCON](#)

### 3. NOTRE-DAME CATHEDRAL

#### Context:

Notre-Dame Cathedral in Paris, a renowned symbol of French Gothic architecture and cultural heritage, is set to reopen on December 7, 2024, after extensive renovations following the devastating fire in April 2019.

#### About Notre-Dame Cathedral:

- **Location:** Situated on an island in the Seine River, Paris, France.
- **Architecture:** An iconic example of French Gothic style, featuring rib vaults, flying buttresses, stained-glass windows, and carved gargoyles.
- **Historical Significance:**
  - Construction began in 1160 and completed by 1260.
  - Hosted Napoleon I’s coronation as Emperor in 1804.
  - Holds the Holy Crown of Thorns and relics from the crucifixion of Jesus.
- **Cultural Importance:** Setting of Victor Hugo’s *The Hunchback of Notre-Dame* and celebrated worldwide in literature and film.

#### Insta links:

1. [Notre dame](#)

## 4. SHAHI JAMA MASJID IN SAMBHAL

### Context:

The Supreme Court of India has directed a temporary halt to the survey of the Shahi Jama Masjid in Sambhal, Uttar Pradesh, amid claims by Hindu petitioners that it was built on a demolished Hindu temple.



### About Sambhal Mosque:

- **Construction:** Built during the reign of Mughal Emperor Babur (1526–1530) by his general, Mir Hindu Beg.
- **Architecture:**
  - Positioned on a hill in Sambhal.
  - Features a square mihrab hall with a dome, surrounded by arches.
  - Constructed with stone masonry and plaster, similar to the Budaun mosque.
- **Historical Repairs:** Renovated during the reigns of Jahangir and Shah Jahan in the 17th century.
- **Cultural Beliefs:**
  - Local Hindu tradition claims it incorporates remnants of a Vishnu temple.
  - Believed to be linked to Kalki, the tenth avatar of Vishnu.
- **Historical Debate:** Some scholars suggest earlier Tughlaq-era origins, with modifications by Babur.

### Insta links:

2. [Places-of-worship-act-1991](#)

## 5. GREAT STUPA AT SANCHI

### Context:

The two-day Mahabodhi Mahotsav is being held at the Great Stupa at Sanchi, Madhya Pradesh, a UNESCO World Heritage Site.

- The event includes religious ceremonies honoring the relics of Lord Buddha's chief disciples, **Sariputra and Maudgalyayana**, highlighting the cultural and spiritual significance of Sanchi Stupa.



### About Sanchi Stupa:

- **Historical Significance:** Commissioned by Emperor Ashoka in the 3rd century BCE and later expanded by Shunga and Satavahana rulers.
- **Architectural Features:**
  - Large hemispherical dome (**Anda**) symbolizing the universe.
  - **Chatras** (umbrella structures) on top, signifying royalty and divine protection.
  - **Harmika** (balcony) atop the dome representing the abode of the gods.
  - **Medhi** stores relics and serves as the base of the stupa.
  - **Toranas:** Four elaborately carved gates depicting Buddha's life events and Jataka tales, pointing to four cardinal directions.
  - **Vedica:** Railings enclosing the stupa for sacred protection.
  - **Paradakshinapatha:** Pathways for circumambulation by devotees.
- **Symbolism:** Early Buddhist aniconism; Buddha represented through symbols like footprints, wheels, or empty thrones rather than direct depictions.
- **Inscriptions:** Includes Ashokan Lion Capital and inscriptions in Brahmi and Kharosthi scripts.
- **UNESCO Status:** Declared a World Heritage Site in 1989.

### Insta Links:

1. [Great-Stupa-of-Sanchi](#)

### History

## 6. KANHAIYALAL MANEKLAL MUNSHI

### Context:

The article was published regarding K M Munshi contribution in freedom movement.

### Kanhaiyalal Maneklal Munshi (Ghanshyam Vyas)

- **Birth:** Born on 30th December 1887, in Gujarat.
- **Freedom Fighter:**

- Active in **Indian Home Rule Movement** as Secretary in 1915.
- Participated in **Civil Disobedience Movement (1930, 1932)** and **Individual Satyagraha (1940)**; jailed twice.
- **Political Roles:**
  - Elected to **Bombay Legislative Assembly (1927, 1937)**; resigned during Bardoli Satyagraha.
  - Served as **Home Minister of Bombay Presidency**, managing communal riots.
- **Educational Contributions:**
  - Founded **Bharatiya Vidya Bhavan** in 1938, a renowned educational trust.
- **Literary Achievements:**
  - Authored over **50 books in Gujarati and English**, including *Krishnavatara* and *Saga of Indian Sculpture*.
- **Philosophical Influences:**
  - Influenced by **Shri Aurobindo**, aligning with revolutionary ideas initially.
- **Death:** Passed away on 8th February 1971.

**Insta Links:**

1. [K M Munshi](#)

- **Background:** Born in Travancore, Latin Christian family; academic brilliance led her to law.
- **Contributions:** Advocated for universal adult franchise and a strong Centre while promoting local government autonomy.

**Begum Qudsia Aizaz Rasul (1909-2001)**

- **Background:** From a royal family in Punjab; opposed purdah after marriage.
- **Contributions:** Opposed separate electorates for religion and debated Muslim upliftment and Indian nationalism.
- **Post-independence:** Elected to the Rajya Sabha; promoted women’s hockey.

**Dakshayani Velayudhan (1912-1978)**

- **Background:** First Dalit woman graduate in science; Pulaya community.
- **Contributions:** Opposed separate electorates, emphasizing nationalism and equality.

**Renuka Ray (1904-1997)**

- **Background:** Born in Pabna, now Bangladesh; studied at LSE after meeting Gandhi.
- **Contributions:** Advocated for Hindu Code Bill, women’s rights to inheritance, and opposed women’s reservation as a barrier to growth.

**Insta Links:**

1. [Constituent-assembly](#)

Society

## 7. WOMEN IN THE CONSTITUENT ASSEMBLY

**Context:**

The Indian Constitution, a monumental framework for governance, was shaped by the contributions of **299 members** of the Constituent Assembly, including **15** remarkable women from diverse backgrounds.



**About Women in the Constituent Assembly:**

**Ammu Swaminathan (1894-1978)**

- **Background:** Hailed from Palakkad, Kerala; married Subbarama Swaminathan.
- **Contributions:** Advocated for gender equality and spoke on the Hindu Code Bill despite male-dominated ridicule.

**Annie Mascarene (1902-1963)**

**Context:**

Rhythm of Dammam spotlights the marginalized Siddi community, descendants of African slaves brought to India centuries ago, through the lens of 12-year-old Jayaram Siddi, played by Chinmaya Siddi.



**About the Siddi Tribe:**

- **Descendants:** Primarily of Bantu peoples from East Africa, brought to the Indian subcontinent through the slave trade, as well as soldiers, sailors, and merchants.
- **History:**

1. First arrived at Bharuch port in 628 AD with Arab merchants.
  2. Later brought as slaves by Arab conquerors, Portuguese traders, and Deccan Sultanates.
  3. Prominent historical figures include Malik Ambar and Jamal-ud-Din Yaqut.
- **Distribution in India:** Concentrated in Karnataka, Goa, Gujarat, Maharashtra, Andhra Pradesh, and Tamil Nadu, often in rural or forested areas.
  - **Features:**
    1. Diverse religions—Muslims, Hindus, and Christians.
    2. Unique cultural practices like the use of *dammam, duf, and gumte* instruments, and shared rituals like ancestor worship.
    3. Languages include Konkani, Urdu, Marathi, and regional dialects.

**Insta Links:**

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|-------------------|
| 2. Tribes-in-news |
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## 9. BAL VIVAH MukT BHARAT CAMPAIGN

**Context:**

The Union Minister for Women and Child Development recently launched the “Bal Vivah MukT Bharat Campaign”, a national initiative aimed at eradicating child marriage in India by engaging multiple stakeholders and leveraging technology.

- The campaign focuses on reducing child marriage **rates to below 5% by 2029.**

**About Bal Vivah MukT Bharat Campaign:**

- **Objective:** To eliminate child marriage through collective efforts and focus on high-burden states and districts.
- **Target States:** West Bengal, Bihar, Jharkhand, Rajasthan, Tripura, Assam, and Andhra Pradesh, along with nearly 300 high-burden districts.
- **Child Marriage Free Bharat Portal:** A platform to raise awareness, report cases, and monitor progress with real-time tracking by Child Marriage Prohibition Officers (CMPOs).
- **Monitoring Mechanism:** Central nodal officers and state-level CMPOs will ensure accountability and support for affected individuals.
- **Goal:** Reduce child marriage rates to below 5% by 2029; rates have already dropped from 47.4% (2006) to 23.3% (2019-21).
- **Awareness Drive:** Public access to information and complaint registration via the portal.

**Insta Links:**

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|-------------------|
| 2. Child-marriage |
|-------------------|

Geography

## 10. COLOR CODED ALERTS FOR CYCLONE

**Context:**

Cyclone Fengal is expected to make landfall near Puducherry on Saturday afternoon, bringing heavy rainfall and strong winds to several districts in Tamil Nadu and Puducherry.

**About Color-Coded Alerts of IMD:**

- **Green (All is well):** Indicates no severe weather; no action required.
- **Yellow (Be Aware):** Warns of potential disruptions due to moderately bad weather; advises caution.
- **Orange (Be Prepared):** Highlights the likelihood of extremely bad weather with significant disruptions to transport, power, and daily life.
- **Red (Take Action):** Signals certainty of hazardous weather posing risks to life, demanding urgent action and preparedness.

**Cyclone Warning Stages:**

- **Pre-Cyclone Watch (72 hours):** Early alert of a potential cyclone, issued by the Director General of Meteorology.
- **Cyclone Alert (48 hours):** Details the storm’s location, direction, and areas likely to be affected.
- **Cyclone Warning (24 hours):** Includes specific landfall details, expected intensity, and safety advisories.
- **Post-Landfall Outlook (12 hours):** Predicts the storm’s inland movement and associated adverse weather impacts.

**Insta Links:**

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| 2. IMDs-color-coded-weather-warnings |
|--------------------------------------|

## GS-2

Salient features of Indian Constitution

## 11. CONSTITUTION MUSEUM

**Context:**

India’s first Constitution Museum was inaugurated at OP Jindal Global University in Sonapat, Haryana, to commemorate and celebrate the drafting, principles, and evolution of the Indian Constitution.

**About Indian Constitution Museum:**

- **Location:** OP Jindal Global University, Sonapat, Haryana.

- **Maintained by:** OP Jindal Global University in collaboration with the Centre for Museums.
- **Features:**
  - **Photolithographic constitution copy:** A centerpiece featuring one of 1,000 original reproductions.
  - **360-degree visual display:** Chronicles pre-Independence India and significant events in drafting the Constitution.
  - **Busts of Constituent Assembly Members:** Nearly 300 sculptures honoring their contributions.
  - **Dr. BR Ambedkar section:** Hologram and interactive displays featuring his philosophies, speeches, and writings.
  - **Multimedia presentations:** Interactive insights into the drafting and evolution of the Constitution.

**Insta links:**

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| 1. <a href="#">Constitution-avoids-the-tight-mould-of-federalism</a> |
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[Functioning of Parliament and State Legislatures](#)

## 12. PLACES OF WORSHIP ACT, 1991

**Context:**

The Shahi Jama Masjid in Sambhal, Uttar Pradesh, faces disputes over claims it was built on a Hindu temple site, raising protests and invoking the Places of Worship Act, 1991.

**About Places of Worship Act, 1991:**

- **Objective:** Prohibits the conversion of a place of worship and ensures its religious character as on **August 15, 1947**.
- **Key Provisions:**
  - **Section 3:** Bars conversion of a place of worship, either wholly or partly, to a different denomination or segment.
  - Maintains the **religious status quo** of all places of worship as of Independence Day, 1947.
  - Prohibits legal suits or claims to alter the status of any place of worship.
- **Exemptions:**
  - **Ayodhya dispute:** Excluded as the case was sub-judice at the time.
  - **Ancient monuments:** Covered under the Ancient Monuments and Archaeological Sites and Remains Act, 1958.
  - Disputes resolved by **mutual consent** or settled before the law's enforcement.
- **Significance:** Aims to maintain **communal harmony** by preventing religious conflicts over historical claims.

**Insta Links:**

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| 3. <a href="#">The-places-of-worship-act</a> |
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[Governance](#)

## 13. NATIONAL MISSION ON NATURAL FARMING

**Context:**

The Union Cabinet, approved the National Mission on Natural Farming (NMNF), promoting sustainable, chemical-free farming to improve soil health, cut input costs, and ensure nutritious food.

**About National Mission on Natural Farming (NMNF):**

- **Ministry:** Ministry of Agriculture & Farmers' Welfare.
- **Central Sponsored Scheme:** Total outlay of ₹2481 crore (GoI share ₹1584 crore; State share ₹897 crore) till FY 2025-26.
- **Aim:** To promote natural, chemical-free farming practices for sustainability, climate resilience, soil health rejuvenation, and nutritious food production.
- **Key Features:**
  - Implementation in **15,000 clusters** across Gram Panchayats, covering **7.5 lakh Ha** and reaching **1 crore farmers**.
  - Establishment of **10,000 Bio-input Resource Centres (BRCs)** and **2000 NF Model Demonstration Farms** at KVKs, Agricultural Universities, and farmers' fields.
  - Training of **18.75 lakh farmers** and deployment of **30,000 Krishi Sakhis/CRPs** for mobilisation and handholding support.
  - Certification system and common branding for marketing NF produce.
  - Real-time geo-tagged monitoring via an online portal.

**Insta links:**

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|---|
| 2. <a href="#">Organic-and-natural-farming-in-India</a> |
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## 14. ONE NATION ONE SUBSCRIPTION

**Context:**

The Union Cabinet has approved the One Nation One Subscription (ONOS) scheme to provide universal access to international scholarly research articles and journals.

- This initiative aligns with the vision of Atmanirbhar Bharat and Viksit Bharat@2047, fostering a robust research and development culture in India.

### About One Nation One Subscription (ONOS):

- **Ministry:** Department of Higher Education, Ministry of Education.
- **Central Sector Scheme:** ₹6,000 crore allocated for 2025–2027.
- **Aim:** To provide access to top-quality international research journals to government higher education institutions (HEIs) and central government R&D institutions.
- **Key Features:**
  - Coverage of **30 major international publishers** and nearly **13,000 e-journals**.
  - Access for **6,300 government HEIs and R&D institutions** benefiting **1.8 crore students, faculty, and researchers**.
  - Entirely **digital process** coordinated by **INFLIBNET** under UGC.
  - Promotes interdisciplinary and core research, especially in **tier-2 and tier-3 cities**.
  - Aligned with **NEP 2020** and supported by **Anusandhan National Research Foundation (ANRF)**.

### Insta links:

2. [HEI](#)

## 15. ATAL INNOVATION MISSION 2.0

### Context:

The Union Cabinet has approved the continuation of the Atal Innovation Mission (AIM) under NITI Aayog as AIM 2.0, with an allocated budget of ₹2,750 crore until March 31, 2028.

### About Atal Innovation Mission 2.0:

- **Ministry/ Department:** NITI Aayog.
- **Budget:** ₹2,750 crore till March 2028.
- **Aim:** To strengthen India's innovation and entrepreneurship ecosystem by improving input, throughput, and output quality in innovation.
- **Key Features:**
  - **Language Inclusive Program of Innovation (LIPI):** Establish 30 Vernacular Innovation Centers in 22 scheduled languages.
  - **Frontier Program:** Develop customized innovation templates for J&K, Ladakh, NE states, and aspirational districts with 2,500 new ATIs.
  - **Human Capital Development Program:** Train 5,500 professionals to build and sustain innovation ecosystems.
  - **Deeptech Reactor:** Pilot research sandboxes for deep tech startups requiring long-term investment.
  - **State Innovation Mission (SIM):** Strengthen innovation ecosystems in states/UTs, integrated with NITI Aayog's State Support Mission.
  - **International Innovation Collaborations:** Host Global Tinkering Olympiad, engage in 10 bilateral/multilateral collaborations, support **WIPO** for the Global South, and anchor Startup20 Engagement Group.
  - **Industrial Accelerator Program:** Create 10 PPP-mode accelerators for scaling startups in critical sectors.
  - **Atal Sectoral Innovation Launchpads (ASIL):** Build 10 sector-specific platforms for startup integration and procurement across key ministries.

### Insta links:

3. [AIM](#)

## 16. PAN 2.0

### Context:

A day after the Cabinet Committee on Economic Affairs approved PAN 2.0, the Income Tax Department issued a detailed clarification on the project.

### About PAN:

- **Origin:** Introduced in 1972; revamped in 1995 for improved tax compliance.

- **Department:** Issued and managed by the Income Tax Department under the Central Board of Direct Taxes (CBDT).
- **Aim:** To link individuals and entities with their tax-related transactions, ensure transparency, and streamline tax compliance.

**Comparison of PAN and PAN 2.0:**

Aspect	PAN	PAN 2.0
<b>Introduction Year</b>	1972 (revamped in 1995)	2024 (Planned Upgrade)
<b>Issuance System</b>	Hosted on multiple platforms	Unified portal for all PAN/TAN services
<b>Application Process</b>	Partially online with paper-based options	Fully online, paperless process
<b>QR Code</b>	Introduced in 2017, basic validation	Enhanced dynamic QR code with real-time data
<b>Updates/Corrections</b>	Fee-based updates	Free updates for details like name, DOB, address
<b>Data Security</b>	No centralized data vault	Mandatory PAN Data Vault for enhanced cybersecurity
<b>Business Identifier</b>	PAN used for tax-related activities	Unified business identifier for multiple systems
<b>Grievance Redressal</b>	Limited, through individual portals	Streamlined grievance system via unified portal
<b>Existing PAN Validity</b>	Remains valid	Remains valid but upgrade available for free

**Insta links:**

4. PAN
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## 17. NETWORK READINESS INDEX, 2024

**Context:**

India has climbed 11 ranks to secure the 49th position in the Network Readiness Index 2024 (NRI 2024), showcasing significant advancements in digital transformation and telecommunications.

**About Network Readiness Index 2024:**

- **Published by:** Portulans Institute, a non-profit research institute based in Washington, DC.
- **Scope:** Evaluates 133 economies on four pillars: **Technology, People, Governance, and Impact**, across 54 variables.
- **India's Rank:** Improved from 60th (2023) to 49th (2024), with a score increase from 49.93 to 53.63.
- **India's Leadership:**
  - 1st rank in **AI scientific publications, AI talent concentration, and ICT services exports.**
  - 2nd rank in **FTTH/Building Internet subscriptions and Mobile broadband internet traffic.**
  - 4th rank in **investment in telecommunication services.**

- **Global Grouping:** Ranked 2nd among lower-middle-income countries, after Vietnam

**Insta links:**

3. <a href="#">Human-development-index-HDI-2023-24</a>
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[International Relations](#)

## 18. ICA GLOBAL COOPERATIVE CONFERENCE 2024

**Context:**

Prime Minister will inaugurate ICA Global Cooperative Conference 2024 and launch the UN International Year of Cooperatives 2025 on 25th November at Bharat Mandapam, New Delhi.

**About International Cooperative Alliance:**

- **Origin:** Established in 1895 during the 1st Cooperative Congress in London, England.
- **History:** One of the oldest NGOs, representing over 1 billion cooperative members globally across 105 countries.
- **Aim:** To unite cooperatives worldwide, promote sustainable development, and support member

organizations.

- **Headquarters:** Brussels, Belgium.
- **Summits:** Regular global and regional summits foster collaboration and address cooperative challenges.

#### 2024 ICA Global Conference:

- **Host:** India, for the first time in ICA's 130-year history.
- **Location:** New Delhi.
- **Organizers:** Indian Farmers Fertiliser Cooperative Limited (IFFCO), ICA, and other cooperative entities.
- **Theme:** "Cooperatives Build Prosperity for All."
- **Aim:**
  - Showcase the role of cooperatives in promoting inclusive, sustainable development.
  - Explore innovative strategies for global cooperative growth.
  - Launch the **UN International Year of Cooperatives-2025**.

#### Insta links:

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| 4. <a href="#">Indias-cooperative-movement</a> |
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## 19. RIYADH DESIGN LAW TREATY

#### Context:

After nearly two decades of deliberations, the World Intellectual Property Organization (WIPO) member states have adopted the Riyadh Design Law Treaty (DLT).

- A landmark agreement aimed at harmonizing procedural frameworks for industrial design protection.

#### About Riyadh Design Law Treaty (DLT):

- **Organization:** Adopted by the World Intellectual Property Organization (WIPO) member states.
- **Aim:** To standardize and streamline procedural requirements for industrial design registration globally.
- **Key Features:**
  1. Simplified registration processes across jurisdictions.
  2. Relaxed time limits and reinstatement of lost rights.
  3. Simplified procedures for recording assignments and licenses.
  4. Option to file multiple designs in a single application.
  5. Encouragement for electronic systems and exchange of priority documents.
- **India's Participation:** India signed the treaty to enhance its global competitiveness in design protection and strengthen its policy emphasis on design-driven innovation.

- **Other Treaties on Industrial Design:** The [Hague Agreement](#) on Industrial Designs, facilitating international registration of industrial designs.

#### Insta links:

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| 5. <a href="#">Intellectual-property-rights</a> |
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## 20. ORGANISATION FOR THE PROHIBITION OF CHEMICAL WEAPONS

#### Context:

The Indian Chemical Council (ICC) was awarded the 2024 OPCW-The Hague Award during the 29th Session of the Organisation for the Prohibition of Chemical Weapons (OPCW) at The Hague.

#### About Organisation for the Prohibition of Chemical Weapons:

- **Established:** 1997; implementing body of the Chemical Weapons Convention (CWC).
- **Headquarters:** The Hague, Netherlands.
- **Membership:** 193 States Parties.
- **Mission:** Achieve a world free of chemical weapons and promote international chemical safety.
- **Recognition:** Awarded the Nobel Peace Prize in 2013 for efforts to eliminate chemical weapons.
- **The Hague Award:** Established in 2014 to honor individuals and organizations advancing the goals of the CWC.

#### About Indian Chemical Council (ICC):

- **Establishment:** Founded in 1938, ICC is the apex national body representing India's chemical industry.
- **Industries Represented:** Organic & Inorganic Chemicals, Plastics, Petrochemicals, Petroleum Refineries, Dyestuffs, Fertilizers, Pesticides, Specialty Chemicals, Paints, and more.
- **Mission:** Dedicated to the growth and sustainable development of India's \$220 billion chemical industry.
- **Key Initiatives:**
  1. **Chemical Weapons Convention Help-desks:** Enhancing compliance and facilitating e-filing for chemical declarations.
  2. **Nicer Globe:** Ensuring chemical transportation safety with real-time monitoring and emergency response.
  3. **Responsible Care (RC) Program:** Promoting sustainable practices with a focus on chemical safety and industry security.

#### Insta links:

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| 3. <a href="#">Indian Chemical Council</a> |
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## GS-3

### Energy and Infrastructure

## 21. COMMISSIONER OF RAILWAY SAFETY

### Context:

India's first vertical-lift Pamban Bridge aims to boost connectivity between Rameswaram and Tamil Nadu. However, safety concerns and planning lapses raised by the CRS have drawn scrutiny.

### About Commissioner of Railway Safety (CRS):

- **Role:** Ensures the safety of rail travel and operations as outlined in the Railways Act, 1989.
- **Responsibilities:** Investigates train accidents and makes safety recommendations to the government.
- **Reporting Structure:** Under the **Ministry of Civil Aviation** (MoCA) to remain insulated from the Railway Ministry's influence.
- **Leadership:** Headed by the Chief Commissioner of Railway Safety, with headquarters in Lucknow, Uttar Pradesh.
- **Independence:** Structured to avoid conflicts of interest within the railway establishment.

### New Pamban Bridge:

- **Unique Feature:** India's first vertical-lift railway sea bridge with a span that moves vertically for navigational clearance.
- **Location:** Connects Rameswaram Island to Mandapam on Tamil Nadu's mainland.
- **Specifications:**
  - Total Length: 2.078 km with 99 spans.
- **Technology:** Features electromechanical control interlocked with the train control system for vertical lifting.
- **Design Innovations:** Designed for double railway lines and future electrification, replacing the old Pamban Bridge built in 1914.

### Insta Links:

2. [Commission-of-railway-safety-CRS](#)

## 22. ANIMAL QUARANTINE AND CERTIFICATION SERVICES

### Context:

Cochin International Airport Ltd (CIAL) recently facilitated its first successful import of a pet under the Animal Quarantine and Certification Services (AQCS) certification.



### About Animal Quarantine and Certification Services:

- **Established:** Initiated during the Fourth Five-Year Plan (1969-70) under a central sector scheme by the Government of India.
- AQCS certification under **central animal husbandry department**.
- **Objectives of AQCS:**
  - **Disease Prevention:** Prevent the entry of exotic livestock diseases into India via imports, as per the Livestock Importation Act.
  - **Defense Against Veterinary Diseases:** Implement policies on import regulation, restriction, and prohibition of livestock, products, and microorganisms.
  - **Export Certification:** Provide internationally accepted certifications to boost exports and increase national income.
  - **Inspection and Registration:** Inspect and register plants/mills exporting animal by-products to meet international standards.
- **Primary Functions:**
  - Implementation of the Livestock Importation Act.
  - Detention, testing, and observation of imported/exported livestock and products.
  - Destruction of infected imports posing health threats.
  - Certification for livestock exports to meet international standards.

### Insta Links:

3. [AQCS](#)

Agriculture

## 23. NATIONAL GOPAL RATNA AWARDS, 2024

**Context:**

The Department of Animal Husbandry and Dairying (DAHD) declared the winners of the National Gopal Ratna Awards (NGRA) this is one of the highest National Awards in the field of livestock and dairy sector for the year 2024.

**About National Gopal Ratna Award 2024:**

- **Department:** Presented by the Department of Animal Husbandry and Dairying (DAHD), Ministry of Fisheries, Animal Husbandry, and Dairying.
- **Origin:** Initiated to promote and recognize excellence in the livestock and dairy sector.
- **Aim:** To encourage farmers, technicians, and co-operatives working in dairy and indigenous cattle rearing to achieve excellence and boost development in the sector.
- The Award is conferred in **three categories**, namely,
  - Best Dairy Farmer Rearing Indigenous Cattle/buffalo Breeds,
  - Best Artificial Insemination Technician (AIT) and
  - Best Dairy Cooperative/ Milk Producer Company/ Dairy Farmer Producer Organization.
- Special awards introduced for North Eastern Region (NER) States in all categories.
- **Cash rewards:**
  - ₹5 lakh (1st rank), ₹3 lakh (2nd rank), ₹2 lakh (3rd rank).
  - ₹2 lakh for NER Special Award.
  - Includes a certificate and memento (for first two categories).

**Insta links:**

5. <a href="#">Gopala Ratna Award</a>
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## 24. DAIRY SECTOR PERFORMANCE

**Context:**

The Department of Animal Husbandry and Dairying (DAHD), under the Ministry of Fisheries, Animal Husbandry & Dairying, celebrated the National Milk Day 2024 at Manekshaw Centre, New Delhi.

**About Dairy Sector Performance:**

Category	Performance Details
Milk Production (2023-24)	239.3 million tonnes, a 3.78% increase over 2022-23 estimates.

<b>Compound Annual Growth Rate</b>	5.62% (milk), 6.8% (eggs), 4.85% (meat) over the last 10 years.
<b>Per Capita Milk Availability</b>	459 grams/day (India) vs. 323 grams/day (global average) in 2022-23.
<b>State Rankings (Milk)</b>	Uttar Pradesh (16.21%), Rajasthan (14.51%), Madhya Pradesh (8.91%), Gujarat (7.65%).
<b>Egg Production (2023-24)</b>	142.77 billion, with Andhra Pradesh leading at 17.85%, followed by Tamil Nadu (15.64%).
<b>Meat Production (2023-24)</b>	10.25 million tonnes; poultry accounts for 48.96%, followed by buffalo and goat meat.
<b>Global Position</b>	1st in milk production ( <b>24% global share</b> ); 2nd in egg production.

**SOURCE:** Basic Animal Husbandry Statistics 2024

**Insta links:**

1. <a href="#">Dairy-industry-in-India</a>
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Health

## 25. INTERNATIONAL PATHOGEN SURVEILLANCE NETWORK

**Context:**

The International Pathogen Surveillance Network (IPSN), led by the WHO, has awarded catalytic grants totaling nearly \$2 million to 10 global projects aimed at improving pathogen genomic surveillance.

**About International Pathogen Surveillance Network (IPSN):**

- **Established by:** WHO through the Hub for Pandemic and Epidemic Intelligence.
- **Origin:** Launched to advance pathogen genomic surveillance globally, especially in LMICs.
- **Aim:** To improve public health decision-making by tracking pathogen evolution, spread, and impact, ensuring equitable access to genomic tools.
- **Functions:**
  1. Strengthens genomic surveillance systems globally.
  2. Facilitates international cooperation and capacity-building in LMICs.
  3. Funds projects addressing local pathogen priorities, such as avian flu and wastewater surveillance.
  4. Supports the development of open-source

bioinformatics tools.

- **Funding:** Hosted by the UN Foundation, supported by the Gates Foundation, The Rockefeller Foundation, and Wellcome.

## 26. ANTIBIOTIC CONTAMINATION IN MILK

### Context:

Antibiotic contamination in milk affects 180 million Indians daily, despite regulations. Unregulated antibiotic use, low awareness, and fragmented milk collection systems drive this issue, posing health risks and impacting dairy processing.

### About Contamination Found in Milk:

- **Source of Contamination:**
  1. Antibiotic residues from treatments like mastitis control.
  2. Contaminated feed and improper veterinary drug use.
  3. Mixing contaminated milk during collection.
- **Health Impacts:**
  1. Antimicrobial resistance (AMR) and allergic reactions.
  2. Disorders in intestinal flora.
  3. Economic loss due to compromised dairy product quality.
- **Antibiotics Detected:** Beta-lactams (e.g., penicillin), aminoglycosides (e.g., gentamycin), tetracyclines, macrolides (e.g., erythromycin), quinolones, sulphonamides.

### Insta Links:

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| 4. <a href="#">Milk Contamination</a> |
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## 27. NAFITHROMYCIN

### Context:

In a ground breaking step for India's biotechnology sector, Union Minister Dr. Jitendra Singh formally launched the first indigenous antibiotic "Nafithromycin" for resistant infections.

### About Nafithromycin:

- **Purpose:** Targets **Community-Acquired Bacterial Pneumonia (CABP)** caused by drug-resistant bacteria, addressing **Antimicrobial Resistance (AMR)**.
- **Developed By:** Wockhardt with support from the **Biotechnology Industry Research Assistance Council (BIRAC)** under the Department of Biotechnology.
- **Efficacy:**

- **10x more effective** than azithromycin.
- Requires only a **3-day regimen**.
- Effective against both **typical and atypical pathogens**.

- **Features:**

- Minimal gastrointestinal side effects.
- No significant drug interactions.
- Unaffected by food intake.
- First new antibiotic in its class globally in over 30 years.

- **Significance:**

- A milestone in combating AMR, with potential to save lives worldwide.
- Demonstrates India's scientific advancement and innovation.

- **Awaiting Approval:** Currently pending final clearance from the **Central Drugs Standard Control Organization (CDSCO)** for manufacturing and public use.

### Insta Links:

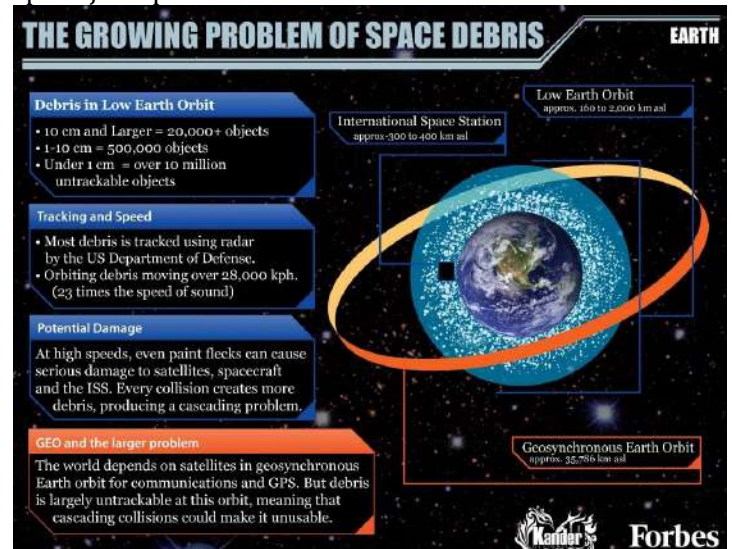
- |   |
|---|
| 4. <a href="#">Antimicrobial-resistance</a> |
|---|

### Space

## 28. SPACE JUNK AND ITS IMPACT

### Context:

The exponential growth in satellite launches, with over 10,000 active satellites in orbit today, is contributing to space junk pollution.



### About Space Junk and Its Impact:

- **Definition:** Space junk includes defunct satellites, rocket stages, and other debris left in orbit or disintegrated during re-entry.
- **Pollutants Released:** Burning satellites release **aluminum, nitrogen oxides, carbon monoxide, and black carbon**, which accumulate in the stratosphere.
- **Ozone Layer Threat:** Aluminum oxide acts as

a catalyst for ozone depletion, counteracting the success of the **Montreal Protocol** that reduced CFCs.

- **Stratospheric Changes:** Pollutants like **copper** and other metals can alter atmospheric chemistry and promote cloud formation.
- **Climate Impacts:** Soot particles absorb solar energy, potentially warming the atmosphere and disrupting natural climate patterns.
- **Long-Term Ripple Effects:** Alterations in the upper atmosphere may indirectly harm ecosystems, weather patterns, and human health on Earth.

**Insta Links:**

3. [Space-debris](#)

## 29. GAMMA RAYS

**Context:**

The MACE telescope, the world’s highest imaging Cherenkov telescope, was inaugurated in Hanle, Ladakh, on October 4 to study cosmic gamma rays and advance high-energy astrophysics research.

**About Gamma Rays:**

- **Definition:** Gamma rays are the shortest wavelength and highest energy form of electromagnetic radiation.
- **Sources:** Produced by pulsars, supernovae, black holes, gamma-ray bursts, and potential dark matter particle interactions.
- **Properties:** Energy > 100,000 eV, hazardous to living cells, and blocked by Earth’s atmosphere.
- **Detection:** Indirectly observed on Earth using Imaging Atmospheric Cherenkov Telescopes (IACTs) like MACE.
- **Cherenkov Radiation:** Faint blue light emitted when gamma rays interact with atmospheric molecules, creating electron-positron showers.

**About the MACE project:**

- **Location:** Hanle, Ladakh, at an altitude of ~4,300 m, making it the highest imaging Cherenkov telescope in the world.
- **Development:** Indigenously built by Bhabha Atomic Research Centre (BARC) with support from ECIL and other Indian partners.
- **Objective:** To study high-energy gamma rays and contribute to the understanding of the universe’s most energetic phenomena, such as supernovae, black holes, and gamma-ray bursts.
- **Technology:** Uses Cherenkov imaging technology to detect cosmic rays and observe high-energy astrophysical events.
- **Significance:** Enhances India’s cosmic-ray research capabilities and strengthens its position in multi-messenger astronomy on a global scale.

**Insta Links:**

4. [MACE-Project](#)

[Science & Technology](#)

## 30. NEW MOIRÉ SUPERCONDUCTOR

**Context:**

Scientists have discovered superconductivity in twisted bilayer tungsten diselenide (tWSe<sub>2</sub>), a new moiré material made from semiconductors, marking a significant advancement in quantum materials research.

**About New Moiré Superconductor:**

- **What it is:** A moiré material formed by twisting two layers of tungsten diselenide (tWSe<sub>2</sub>) by a small angle, creating a unique electronic structure with flat energy bands.
- **Material Used:** Twisted bilayer tungsten diselenide (tWSe<sub>2</sub>), a semiconductor.
- **Properties and Features:**
  1. Exhibits superconductivity at **-272.93° C** with zero resistance.
  2. Driven by **strong electron-electron** interactions and half-band filling.
  3. Robust superconducting state with a coherence length 10 times longer than other moiré materials.
  4. In typical materials, electrons gain or lose kinetic energy when they move across different energy levels, which affects their speed and momentum. But in moiré materials the **electrons experience very little variation** in energy
- **Significance:**
  1. Demonstrates stable superconductivity in semiconductors, paving the way for future quantum materials.
  2. Offers insights into unique electron interactions and electronic structure changes in twisted 2D layers.
  3. Opens avenues for semiconductor-based quantum applications.

**Insta Links:**

5. [Nobel-prize-in-physics, 2023](#)

[Environment & Ecology](#)

## 31. GLOBAL MATCHMAKING PLATFORM

**Context:**

At **COP29**, the Global Matchmaking Platform for Industrial Decarbonization (GMP) was launched by UNIDO and the Climate Club.

- It is a pioneering initiative to **decarbonize heavy-emitting industries** in developing and emerging economies by connecting countries with global technical and financial resources.

**About Global Matchmaking Platform:**

- **Origin:** Conceptualized at COP28 (December 2023) under the Climate Club framework to drive industrial decarbonization globally.
- **Launch:** Officially launched at COP29 with key donor and partner organizations.
- **Agencies Involved:** UNIDO, Climate Club, German Ministry of Economic Cooperation and Climate Action, World Bank, GIZ, and other international partners.
- **Aim:** To provide financial and technical support to decarbonize high-emission industrial sectors in developing and emerging economies, advancing climate goals.
- **Key Features:**
  - **Tailored Support:** Country-specific guidance for industrial decarbonization.
  - **Global Partnerships:** Involves financiers, technology providers, and experts.
  - **Delivery Partners:** Includes World Bank, Climate Investment Funds, and GIZ.
  - **Pilot Countries:** Includes Argentina, Chile, Egypt, Indonesia, Kenya, and others.
  - **Technology Transfer:** Facilitates adoption of low-carbon industrial technologies.
  - **Funding:** Supported initially by German climate cooperation funds.
- **Significance:**
  - Accelerates decarbonization in “**hard-to-abate**” sectors.
  - Strengthens North-South climate cooperation.
  - Promotes innovative, sustainable industrial practices in developing economies.
  - Supports the Paris Agreement and a global net-zero emissions pathway.

**Insta Links:**

3. [UNIDO](#)

## 32. TRACKING STUBBLE BURNING

**Context:**

Stubble burning in Punjab and Haryana heavily pollutes NCR air. While satellites monitor fires, farmers burning outside detection windows raise concerns about tracking methods and government measures.

**About Satellites Used to Track Stubble Burning:**

- **NASA Satellites:**
  - **Aqua** (2002) and **Suomi-NPP** (2011)

with MODIS and VIIRS instruments detect fires via visible and infrared imaging during overpasses at 1:30 p.m. and 1:30 a.m. local time.

- **Ozone Mapping and Profiler Suite** measures aerosol levels to assess smoke impact on air quality.
- **South Korea’s GEO-KOMPSAT 2A:**
  - Provides continuous geostationary observations to capture fires missed by Aqua and Suomi-NPP.
- **European Space Agency’s Sentinel II:**
  - Offers burnt area data every five days.
- **Indian Satellites:**
  - **INSAT-3DR:** Tracks fire activity but with coarse resolution, limiting accuracy.
  - **RESOURCESAT Series:** LISS-3, LISS-4, and AWiFS sensors detect fires with varying spatial resolutions.

**NOTE:** Basic information on stubble burning has been covered in the previous article; kindly cover it as well.

**Insta Links:**

5. [List-of-Earth-observation-satellites](#)

## 33. GLOBAL PEATLAND HOTSPOT ATLAS, 2024

**Context:**

The Global Peatland Hotspot Atlas, 2024, published by UNEP’s Global Peatlands Initiative, provides actionable insights for their conservation and sustainable management, placing them at the heart of global environmental discussions.

**About The Global Peatland Hotspot Atlas, 2024:**

- **Published by:** UNEP under the Global Peatlands Initiative.
- **Aim:**
  - Provide data and insights into the global state of peatlands.
  - Highlight threats and opportunities for conservation and sustainable management.
  - Bridge the gap between science and policy for informed decision-making.
- **Key Insights:**
  - Updated hotspot maps intersecting data on biodiversity, climate change, and land use.
  - Identifies 488 million hectares of peatlands globally, with **12% highly degraded**.
  - Peatlands emit **1,941 Mt CO<sub>2</sub>e per year** due to human activity.

**About Peatland:**

- **What is Peatland?**
  - Peatlands are unique wetland ecosystems characterized by waterlogged conditions that slow the decomposition of plant material, leading to the formation of peat soils.
  - These ecosystems consist of both the **organic-rich soil (peat)** and the wetland vegetation thriving on the surface.
- **Distribution of Peatlands:**
  - Found in nearly all countries, peatlands cover at **least 3% of the Earth's** land surface.
  - The **Congo Basin** hosts the largest known tropical peatland, discovered in 2017.
- **Significance of Peatlands:**
  - **Carbon Storage:** Peatlands store more carbon than all the world's forests combined, acting as a natural buffer against climate change.
  - **Climate Regulation:** They provide a cooling effect by sequestering atmospheric carbon.
  - **Water Management:** Regulate and purify water supplies, supporting human consumption and ecosystems.
  - **Biodiversity:** Provide habitats for rare and endangered species of flora and fauna.
  - **Cultural Importance:** Preserve archaeological and cultural heritage due to their waterlogged conditions.
  - **Livelihoods:** Support local communities through ecosystem services and resources.

**Insta Links:**

4. [Peat Soil](#)

**34. SUKPAK: A SIBERIAN DEMOISELLE CRANE**

**Context:**

A Siberian Demoiselle crane, nicknamed Sukpak, has set a new migratory record by flying 3,676 km to Khichan in Rajasthan, surpassing the previous distance of 2,800 km.



**About Siberian Demoiselle Crane:**

- **Scientific Name:** *Anthropoides virgo* (also referred to as *Grus virgo*).
- **Breeding Range:** Central Asia to Mongolia, east to Northeast China.
- **Wintering Range:** Primarily western India, with large congregations in Gujarat and Rajasthan.
- **Migration Path:** Traditionally via Himalayan valleys, with notable reverse routes like Sukpak's journey through Russia, Kazakhstan, Turkmenistan, Afghanistan, and Pakistan.
- **Cultural Significance:** Known as *koonj* or *kurjaa* in Indian culture, symbolically important in Gujarat and Rajasthan.
- **IUCN Status:** Listed as Least Concern.
- **Conservation Efforts:** Khichan in Rajasthan is **India's first Demoiselle crane conservation reserve**, hosting 20,000 cranes annually during their winter migration.

**Insta Links:**

5. [Migration-in-India-status](#)

**35. NAYAKKARPATTI TUNGSTEN BLOCK**

**Context:**

Tamil Nadu's Nayakkarpatti Tungsten Block, auctioned to Hindustan Zinc Ltd., faces controversy over its overlap with the Arittapatti Biodiversity Heritage Site, raising ecological and cultural concerns.

**Nayakkarpatti Tungsten Block:**

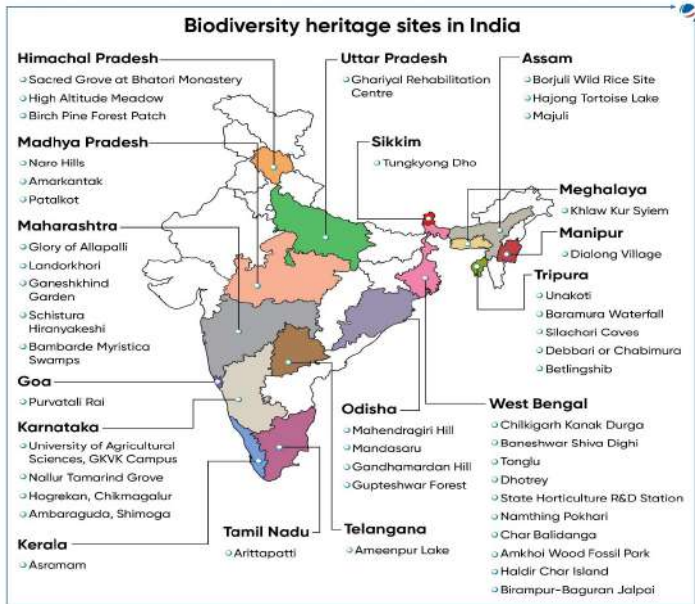
- **Location:** Spread across 20.16 sq. km in Tamil Nadu, covering villages like Kavattayampatty, Ettimangalam, and Arittapatti.
- **Critical Mineral:** Tungsten is categorized as a critical and strategic mineral, essential for national development.
- **Clearances Required:** Mining can only proceed after obtaining forest and environmental clearances, excluding sensitive areas like biodiversity sites.

**Arittapatti Biodiversity Heritage Site:**

- **District:** Madurai.
  - Includes Arittapatti and Meenakshipuram villages.
- **Ecological Importance:**
  - Home to 250 bird species, including **Lagar Falcon, Shaheen Falcon, and Bonelli's Eagle**.
  - Wildlife includes Indian Pangolin, Slender Loris, and Pythons.
- **Water Resources:**
  - Notable waterbody: **Anaikondan Lake**,

built during the Pandiyana era.

- **Cultural Significance:**
  - Hosts megalithic structures, Tamil Brahmi inscriptions, Jain beds, and rock-cut temples.



**About Tungsten:**

- **Properties:**
  - Known for its high melting point (highest among metals) and exceptional strength.
  - Resistant to corrosion and thermal expansion, making it ideal for industrial applications.
- **Uses:**
  - Used in manufacturing cutting tools, heavy machinery, and electrical components.
  - Essential for defense (armor-piercing projectiles) and aerospace industries.
  - Key component in lighting (filaments) and electronics.
- **Global Supply:**
  - China dominates global tungsten production, contributing over 80% of the supply.
  - Tungsten is categorized as a critical mineral due to its strategic importance.
- **Indian Resources:**
  - Major reserves in Karnataka (42%), Rajasthan (27%), Andhra Pradesh (17%), and Maharashtra (9%).
  - Smaller deposits in Tamil Nadu, Haryana, Uttarakhand, and West Bengal.
- **Recent Auctions in India:**
  - First tungsten blocks successfully auctioned in 2024 at Nayakkarpatti (Tamil Nadu) and Balepalyam (Andhra Pradesh).
  - Hindustan Zinc Limited won mining rights, marking a milestone in India’s critical mineral strategy.

**Insta links:**

4. [Biodiversity-heritage-site](#)

## 36. ASIATIC LIONS

**Context:**

Asiatic Lions, with their entire population of 674 residing in Gujarat, exemplify a unique model of human-wildlife coexistence driven by cultural, economic, and legal factors.

**Why Asiatic Lions Are Only Found in Gujarat?**

- **Historic Habitat Shrinkage:** Asiatic Lions, once widespread from the Middle East to India, are now confined to Gujarat’s Gir Forest due to hunting, habitat loss, and poaching.
- **Legal Protection:** Gir National Park and nearby areas ensure strict legal safeguards for the lions.
- **Cultural Acceptance:** Gujarat’s Maldhari herders revere lions due to cultural ties and income from wildlife tourism.
- **Abundant Prey Base:** Old livestock and carrion outside protected areas sustain the lions.
- **Lack of Translocation:** Supreme Court orders to relocate lions to Madhya Pradesh remain unimplemented due to political and logistical challenges.



**About Asiatic Lion (*Panthera leo persica*):**

- **Distribution:**
  - Historically ranged from southwest Asia to northern India.
  - Currently found only in Gir National Park and surrounding areas in Gujarat, India.
- **Protection Status:**
  - **IUCN Red List:** Endangered
  - **CITES:** Appendix I
  - **Wildlife Protection Act (India):** Schedule I
- **Physical Characteristics:**
  - Slightly smaller than African lions; males weigh 160–190 kg, females 110–120 kg.
  - Distinct fold of skin along the belly, less developed mane, and visible ears in males.
  - Fur varies from tawny to sandy-grey with a silvery sheen in some lights.

- Larger tail tuft and less inflated auditory bullae compared to African lions.
- **Habitat and Behavior:**
  - Adapted to dry deciduous forests and savannas.
  - Preys on deer, antelope, and livestock; scavenges on carrion.
  - Coexists with humans in Gujarat through cultural tolerance and conservation measures.

#### Insta Links:

5. [Census-of-Asiatic-Lion](#)

#### Defence

## 37. SABAL-20 LOGISTICS DRONE

#### Context:

The Indian Army has inducted the Sabal-20 logistics drone, developed by IIT-Kanpur-incubated EndureAir Systems, to enhance its operational capabilities in rugged terrains, especially in the eastern sector.

#### About Sabal-20 Drone:

- **Design:** Electric unmanned aerial vehicle (UAV) with variable pitch technology and large rotors, inspired by Chinook helicopters.
- **Payload:** Capable of carrying up to 20 kg, about half its own weight.
- **Technology:** Features tandem rotor configuration for improved lift and stability in high-altitude and rugged terrains.

#### Features of Sabal-20 Drone:

- **VTOL (Vertical take-off and landing) Technology:** Enables vertical take-off and landing, suitable for confined and challenging environments.
- **Stealth Operations:** Low RPM design minimizes noise, ideal for sensitive missions.
- **Long-Range and High-Altitude Capability:** Supports delivery of critical supplies like ammunition, food, and medical equipment in inaccessible areas.
- **Durability:** Designed for tough terrains and extreme operational demands.

#### Significance:

- Enhances the Indian Army's logistical efficiency in remote and high-altitude regions.
- Promotes indigenous defense manufacturing under "Make in India" and "Atmanirbhar Bharat".

#### Similar Drones:

- **Global Counterparts:** Comparable to heavy-lift drones like the **K-Max** (USA) but tailored for Indian defense needs.

## 38. EKLAVYA PLATFORM

#### Context:

General Upendra Dwivedi, the Chief of the Army Staff (COAS), launched the Eklavya online learning platform for the Indian Army.

- This initiative aligns with the Army's vision of a "**Decade of Transformation**" and the 2024 theme, "**Year of Technology Absorption.**"

#### About Eklavya Platform:

- **Developed by:** Bhaskaracharya National Institute of Space Applications and Geoinformatics (BIS-AG-N), with support from the Directorate General of Information Systems.
- **Launched in:** 2024 by the Chief of the Army Staff, General Upendra Dwivedi.
- **Aim:** To facilitate continuous professional military education, decongest physical courses, and encourage domain specialization.
- **Features:**
  - Hosted on the Army Data Network with scalable architecture.
  - Includes a "**Knowledge Highway**" for accessing journals, research papers, and articles.
  - Registration delinked from physical nominations; accessible throughout an officer's career.
  - Focuses on **contemporary content and emerging concepts** aligned with modern warfare.

#### Insta links:

5. [Honorary-Army-General](#)

## 39. SAREX-24

#### Context:

The 11th edition of the Indian Coast Guard's National Maritime Search and Rescue Exercise (SAREX-24) is being held in Kochi, Kerala.

#### About SAREX-24:

- **Location:** Kochi, Kerala.
- **Theme:** "Enhancing Search and Rescue Capabilities through Regional Collaboration."
- **Activities:**
  - Sea exercise involving contingencies with participation from Coast Guard, Navy, Air Force, Cochin Port Authority, and Customs.
- **Objectives:**
  - Evaluate operational efficiency and coordination.
  - Strengthen collaborative efforts among

regional and international maritime agencies.


- **Significance:** Largest-ever simulations, enhancing cooperative engagement with littoral states and friendly nations.

**Insta Links:**

6. [Military Exercises-in-News](#)

**MAPPING**

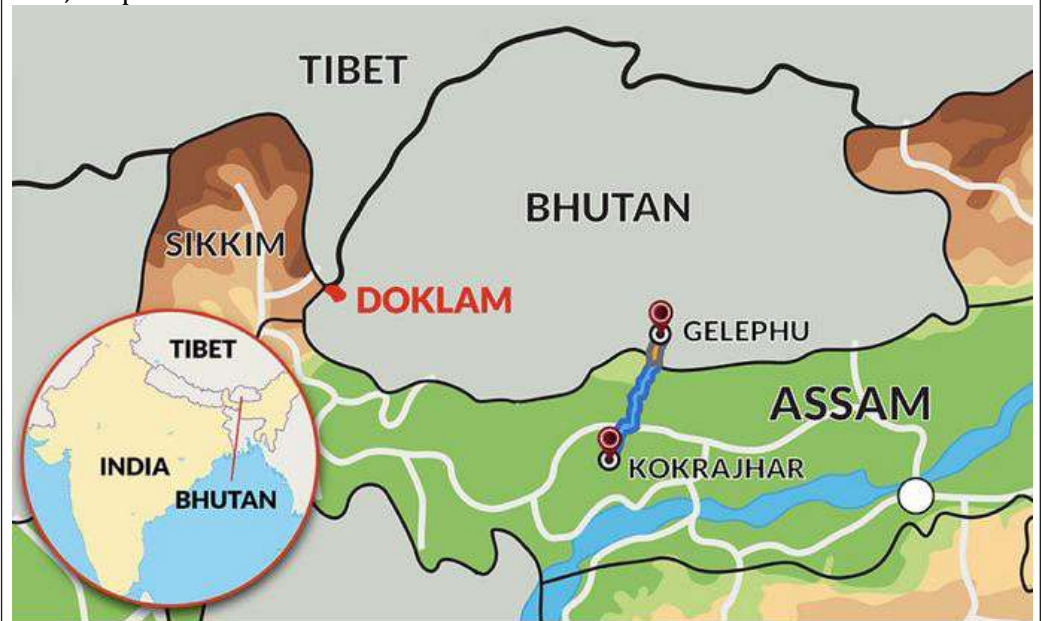
INTERNATIONAL

Place	Why in News?
<p><b>1. KURRAM DISTRICT OF PAKISTAN</b></p>	<p><b>Context:</b> Sectarian violence has escalated in the Kurram district of Pakistan, following a massacre of Shia travelers, resulting in days of clashes and significant casualties.</p>  <p><b>About Kurram District:</b></p> <ul style="list-style-type: none"> <li>• <b>Location:</b> <ul style="list-style-type: none"> <li>○ Situated in <u>Khyber Pakhtunkhwa</u>, northwestern Pakistan.</li> <li>○ Borders Afghanistan with multiple crossings along the <b>192-km Durand Line</b>.</li> </ul> </li> <li>• <b>Key River:</b> <ul style="list-style-type: none"> <li>○ The district is named after the <b>Kurram River</b> (Pashto: Kwarma), derived from the Sanskrit word <b>Krumu</b>.</li> </ul> </li> <li>• <b>Geographical Features:</b> <ul style="list-style-type: none"> <li>○ Lies in the <b>Kurram Valley</b>, a strategically significant and mountainous region.</li> <li>○ Shares borders with Afghan provinces like Logar, Paktia, and Nangarhar.</li> </ul> </li> <li>• <b>Demographics:</b> <ul style="list-style-type: none"> <li>○ Predominantly <b>Pashtun tribes</b>: Turi, Bangash, Orakzai, Wazir, and others.</li> <li>○ <b>Shia-Sunni composition</b>: Shia Turis dominate Upper Kurram, while Sunnis inhabit Lower and Central Kurram.</li> </ul> </li> <li>• <b>Why Conflict:</b> <ul style="list-style-type: none"> <li>○ <b>Tribal rivalries</b> over land and resources exacerbated by governance failures.</li> <li>○ <b>Sectarian tensions</b> fueled by external influences (Saudi-Iran rivalry) and local grievances.</li> <li>○ <b>Historical factors</b>: Zia-ul-Haq's Sunni Islamisation policies and Cold War geopolitics.</li> </ul> </li> </ul> <p><b>Insta Links:</b></p> <p>1. <a href="#">Shia - Sunni</a></p>

## 2. GELEPHU MINDFULNESS CITY

### Context:

Bhutan's PM Tshering Tobgay highlighted the Gelephu Mindfulness City as a major "Zero Carbon" project, thanking India for supporting its development as a sustainable, cooperative initiative.



### About Gelephu Mindfulness City:

- **Vision:** To create a sustainable, zero-carbon city promoting harmony, sustainability, and Bhutan's Gross National Happiness philosophy.
- **Origin:** Envisioned by **King Jigme Khesar Namgyel Wangchuck** to improve Bhutanese lives and build a global model for sustainable living.
- **India's Role:** Strategic collaboration with India for investment and infrastructure, strengthening India-Bhutan ties; viewed as a cooperative project benefiting both nations.
- **Key Features:**
  - Spread over **2,500 sq. km**, comprising 2.5% of Bhutan's landmass.
  - Includes protected national parks, wildlife sanctuaries, and renewable energy facilities generating 4,000-5,000 MW.
  - Self-governed **Special Administrative Region (SAR)** with independent judiciary and lawmaking powers.
  - **Mandala-style neighbourhoods** connected by inhabitable bridges over 35 rivers and streams.
  - Infrastructure for hydroelectric power, hydroponic farming, spiritual centers, markets, and healthcare (both traditional and modern).
  - Designed as a **low-rise, eco-friendly city** prioritizing personal well-being and environmental sustainability.

### **Insta Links:**

2. [Bhutan's-Gelephu-Project](#)

### 3. BALTIC SEA

**Context:** The cutting of undersea cables in the Baltic Sea has escalated geopolitical tensions, particularly in the context of the ongoing Ukraine war.



**About Baltic Sea:**

- **Location:** Part of the North Atlantic Ocean, situated in Northern Europe, separating the Scandinavian Peninsula from continental Europe.
- **Surrounding Countries:** Denmark, Germany, Poland, Lithuania, Latvia, Estonia, Russia, Finland, and Sweden.
- **Connections:** Links to the Atlantic Ocean through the Danish Straits, facilitating global trade and connectivity.
- **Depth and Area:** Average depth is 55 meters; deepest point is 459 meters.
- **Gulfs:** Contains the Gulf of Bothnia (north), Gulf of Finland (east), and Gulf of Riga (south).
- **Rivers:** Over 250 rivers drain into it, with the **Neva River** being the largest contributor.
- **Islands:** Hosts over 20 islands and archipelagos, with **Gotland (off Sweden's coast)** as the largest.

**Insta links:**

6. [Baltic-sea](#)

## 4. UGANDA

**Context:** Heavy rains in eastern Uganda triggered devastating landslides in the Bulambuli district, claiming 20 lives, displacing 750 people, and destroying 125 homes.

### About Places in News:

- **Bulambuli District, Uganda:**
  - Site of the landslides that destroyed six villages and displaced hundreds.
  - Located in the eastern mountainous region, vulnerable to heavy rains and mudslides.



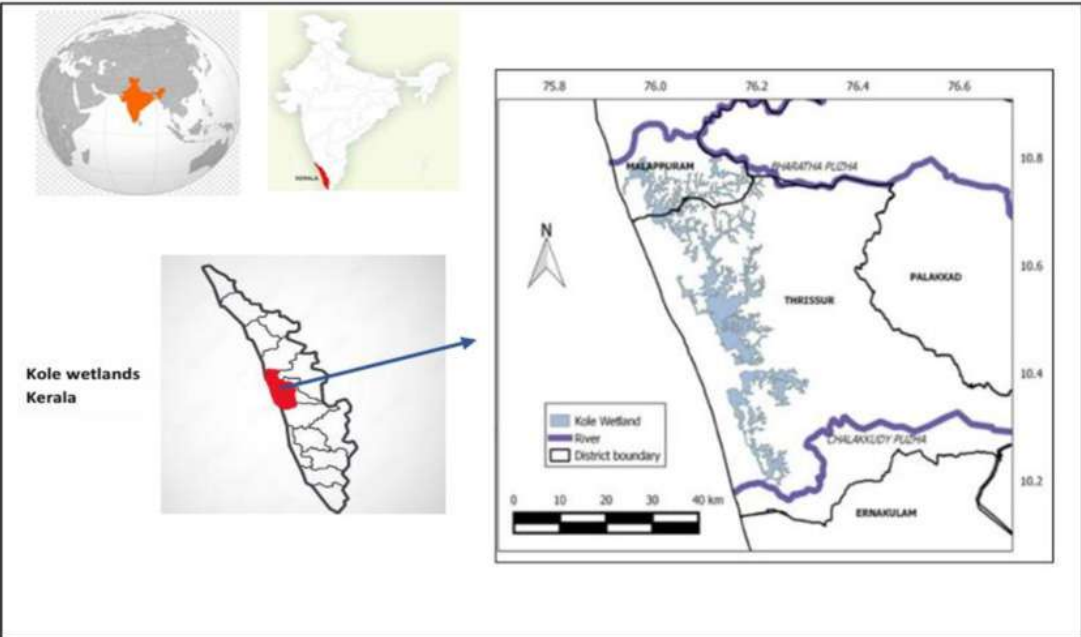
### About Uganda:

- **Geography:**
  - Landlocked country in East Africa, located in the African Great Lakes region.
  - Lies within the Nile basin, with fertile lands and significant water bodies.
- **Borders:**
  - Shares borders with Kenya (east), South Sudan (north), Democratic Republic of Congo (west), Rwanda (southwest), and Tanzania (south).
- **Rivers:**
  - Includes the Nile, Kafu, Semliki, and others like Albert Nile, Agago, and Katonga.
- **Mountains:**
  - Home to the Rwenzori Mountain range (highest peak: Margherita on Mount Stanley) and Mount Elgon.
- **Lakes:**
  - Features Africa's largest freshwater lake, Lake Victoria, shared with Kenya and Tanzania.
  - Other major lakes include Lake Albert and Lake Edward.
- **National Parks:**
  - Includes Bwindi Impenetrable Forest, Rwenzori Mountains, Kibale, and Mgahinga National Parks, rich in biodiversity.

### Insta Links:

3. [Places-in-News](#)

INDIAN

Place	Why in News?
<p><b>5. THRIS-SUR-PONNANI KOLE WETLANDS</b></p>	<p><b>Context:</b> The Eastern Imperial Eagle (<i>Aquila heliaca</i>), a rare and vulnerable bird of prey, was recently sighted in the Pulluzhi kole wetlands, a <b>Ramsar</b>-protected area in Kerala.</p>  <p><b>About Eastern Imperial Eagle:</b></p> <ul style="list-style-type: none"> <li>• <b>Scientific Classification:</b> Member of the family Accipitridae; subfamily Aquilinae.</li> <li>• <b>Habitat:</b> Found in old forests, mountain and riverine forests, and isolated tall trees for nesting.</li> <li>• <b>Range:</b> Breeds in southeastern Europe, West, and Central Asia; migrates to north-eastern Africa, Middle East, and South/East Asia in winter.</li> <li>• <b>Physical Features:</b> <ul style="list-style-type: none"> <li>○ Large eagle with a wingspan of 1.76 to 2.2 m and length between 68 to 90 cm.</li> <li>○ Reverse sexual dimorphism: females larger than males.</li> <li>○ Golden crown and nape, grey base to the tail, white “braces” on scapulars.</li> <li>○ Keen eyesight, strong legs with curved talons for prey capture.</li> </ul> </li> <li>• <b>Conservation Status:</b> Listed as <b>Vulnerable</b> on the IUCN Red List.</li> </ul> <p><b>About Thrissur-Ponnani Kole Wetlands:</b></p> <ul style="list-style-type: none"> <li>• <b>Location:</b> Spreads across <b>Thrissur</b> and <b>Malappuram</b> districts in Kerala, India.</li> <li>• <b>Area:</b> Covers <b>13,632 hectares (33,690 acres)</b>.</li> <li>• <b>Significance:</b> <ul style="list-style-type: none"> <li>○ Provides <b>40% of Kerala’s rice</b> requirement.</li> <li>○ <b>Acts as a natural drainage system</b> for Thrissur city, Ponnani city, and surrounding districts.</li> <li>○ Part of the <b>Central Asian Flyway</b>, supporting migratory bird species.</li> </ul> </li> <li>• <b>Boundaries:</b> Lies between <b>Chalakydy River (South)</b> and <b>Bharathappuzha River (North)</b>, extending to <b>Ponnani Taluk</b>.</li> <li>• <b>Hydrological Network:</b> Connects to <b>Enamavu River, Canoli Canal, Chettuva River</b>, and flows into the <b>Arabian Sea</b>.</li> <li>• <b>Soil Fertility:</b> Enriched by <b>alluvium soil</b> deposited by <b>Kechery</b> and <b>Karuvan-noor rivers</b> during monsoons.</li> </ul> <p><b>Insta links:</b></p> <ol style="list-style-type: none"> <li>1. <a href="#">Three-new-wetlands-in-the-Ramsar-site-tag</a></li> </ol>

## 6. UTTARA-KHAND STATE'S RIVERS

**Context:** A report by the Spring and Rejuvenation Authority (SARA) highlights alarming threats to 5,428 water sources, with significant declines in water levels across the Uttarakhand state's rivers.



### About Rivers in News:

1. **Song River**
  - **Origin:** Lesser Himalayas, near Mussoorie, Uttarakhand.
  - **Tributary of:** Seasonal feeder to the Ganga River system.
2. **Western Nayar River**
  - **Origin:** Pauri district, Uttarakhand.
  - **Tributary of:** Ganga River.
3. **Eastern Nayar River**
  - **Origin:** Pauri district, Uttarakhand.
  - **Tributary of:** Ganga River.
4. **Shipra River**
  - **Origin:** Nainital district, Uttarakhand.
  - **Tributary of:** Kosi River.

**NOTE:** Madhya Pradesh also has one of the rivers named Shipra, which joins Chambal.

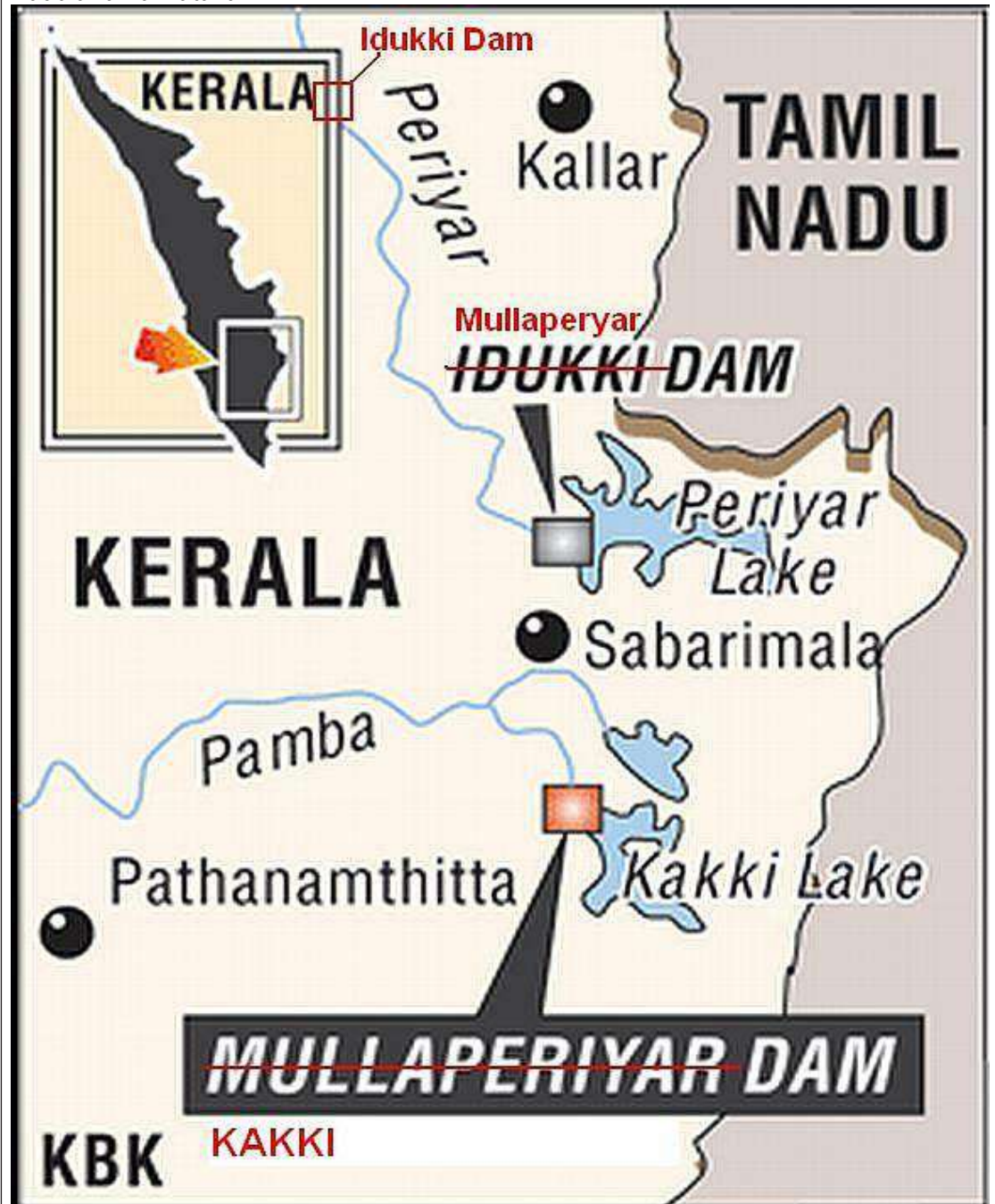
5. **Gaudi River**
  - **Origin:** Champawat district, Uttarakhand.
  - **Tributary of:** Tributary of the Saryu River.

### Insta Links:

4. [Rivers-in-news](#)

## 7. PENNAIYAR RIVER

**Context:** The Supreme Court has asked the Union government to produce a report from the Negotiation Committee addressing the Pennaiyar river water dispute between Tamil Nadu and Karnataka.



### About Periyar River:

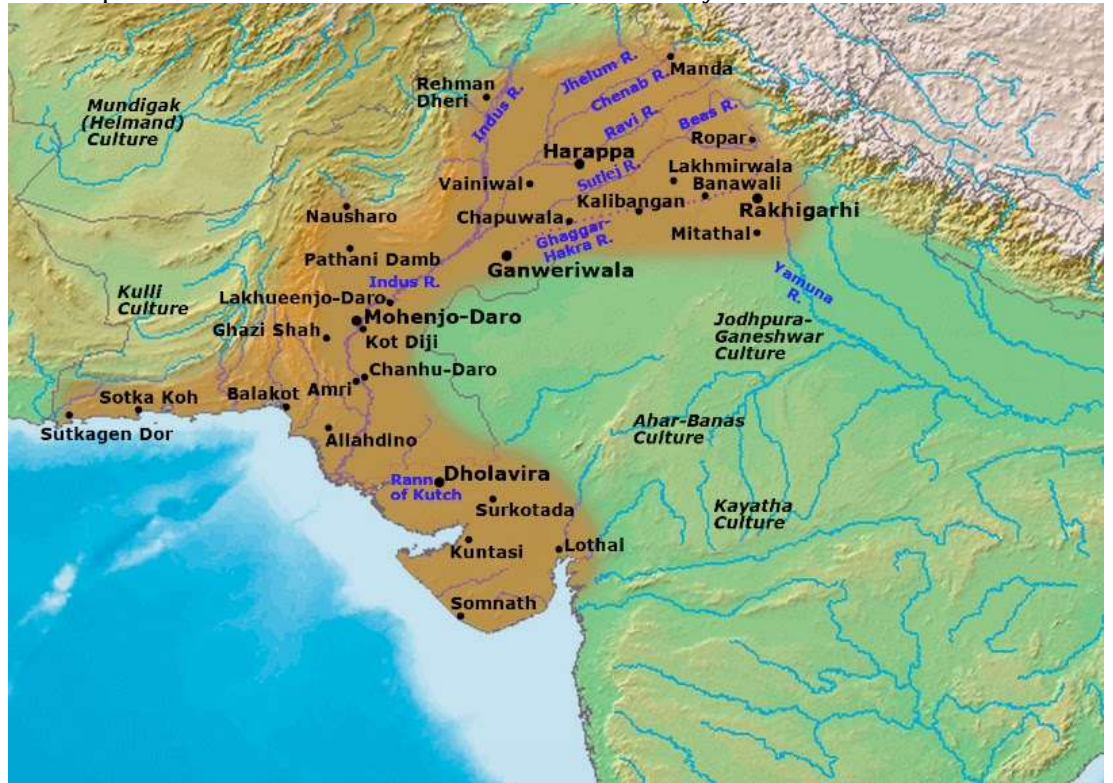
- **Origin:** Sivagiri Hills, Western Ghats.
- **Flow:** Passes through the Periyar National Park, flows into Vembanad Lake, and empties into the Arabian Sea.
- **Tributaries:** Muthirapuzha, Mullayar, Cheruthoni, Perinjankutti.
- **Significance:**
  1. Provides drinking water for major towns and Kochi city (via Aluva).
  2. Powers Kerala's Idukki Dam, generating significant electricity.
  3. Supports 25% of Kerala's industries along its banks.
- **Unique Feature:** One of Kerala's few perennial rivers, sustaining agriculture, industry, and biodiversity.

### Insta Links:

5. [Mullaperiyar-Dam-Issue](#)

## 8. LOTHAL

**Context:** The tragic incident at Lothal highlights the risks researchers face while uncovering historical knowledge. Lothal, a prominent Harappan-era port city, represents a critical chapter in India's ancient maritime and trade history.



### About Lothal:

- **Historical Significance:** Southernmost Indus Valley Civilization site, built around 2200 BCE, known for its advanced trade and bead-making industry.
- **Unique Features:** Home to the world's earliest known dockyard, linking it to ancient trade routes.
- **Discovery:** Excavated between 1955-1960 by SR Rao; marine microfossils confirmed its dockyard purpose.
- **Heritage Status:** Nominated as a UNESCO World Heritage Site in 2014; remains on the tentative list.
- **Modern Development:** The National Maritime Heritage Complex (Rs. 3,500 crore project) recreates Harappan architecture and showcases India's maritime legacy.

### Insta Links:

6. [Harappan-Indus-Valley-Civilization](#)