



# INSIGHTSIAS

SIMPLIFYING IAS EXAM PREPARATION

## **CYCLONE ASNA**

CYCLONE ASNA, WHICH FORMED OVER THE KUTCH COAST IN GUJARAT, MOVED TOWARDS OMAN WITHOUT CAUSING A SIGNIFICANT IMPACT IN THE REGION.

2 SEP - 7 SEP 2024

# WEEKLY CURRENT AFFAIRS

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## GENERAL STUDIES - 2

Topics: Structure, organization and functioning of the Executive and the Judiciary; Ministries and Departments of the Government; pressure groups and formal/informal associations and their role in the Polity.

### 1. SUPREME AT 75: A JOURNEY OF JUSTICE, EQUALITY, AND RIGHTS

**Context:**

Prime Minister Narendra Modi inaugurated the National Conference of District Judiciary in New Delhi, commemorating 75 years of the Supreme Court of India with a new stamp and coin.

**Important Points highlighted by PM:**

- **Supreme Court:** Highest judicial authority in India, responsible for upholding the Constitution and ensuring justice.
- **Judicial Infrastructure:** Significant investments is made in court halls and residential units for the district judiciary.
- **e-Courts Project:** Modernizing courts through digital technology for efficiency has been initiated.
- **Bhartiya Nyaya Sanhita:** New legal framework focusing on ‘Citizen First, Dignity First, and Justice First’.
- **Judicial Training and Wellness:** Enhancing judiciary capabilities and well-being is focused.
- **Modern Technology Integration:** Adoption of AI and Optical Character Recognition for improved case management have been streamlined.
- **District Judiciary:** Modernization and better infrastructure for common citizens.
- **Legal Reforms:** Implementation of stricter laws for crimes against women and children.
- **Coordination and Fast-Track Courts:** Establishment of special courts and District Monitoring Committees for expedited cases.

**Key points about the Supreme Court (SC) and Indian judiciary:**

Aspect	Details
<b>Role</b>	The highest judicial authority, final court of appeal, power of judicial review.
<b>Judicial System</b>	Federal structure with three tiers: Supreme Court, High Courts, and Subordinate Courts.
<b>Brief History</b>	- Established by Regulating Act 1773 in Calcutta. - High Courts created in 1861, Federal Court in 1935. - The Supreme Court of India was established on 28 January 1950.
<b>Constitutional Provisions</b>	- Part V, Chapter 6: Articles 124-147. - CJI and up to seven other judges.
<b>Organisational Structure</b>	- 31 judges currently, including CJI. - Increased to 34 judges by Supreme Court (Number of Judges) Bill, 2019.
<b>Seat</b>	Delhi, with CJI authorized to appoint other seats with Presidential approval.
<b>Appointment of Judges</b>	- Appointed by the President after consultation with CJI and relevant judges. - Senior most judge convention for CJI appointment, modified by Supreme Court judgments.
<b>Controversy and Collegium System</b>	- Evolved interpretations of ‘consultation’ from the exchange of views to concurrence. - Collegium system requires multiple senior judges’ consultation for appointments.
<b>Qualifications</b>	- Citizen of India. - High Court judge for 5 years, advocate for 10 years, or distinguished jurist.
<b>Oaths/Affirmations</b>	- Bear true faith in the Constitution. - Uphold sovereignty, and perform duties without bias.
<b>Tenure</b>	- Until age 65. - Can resign or be removed by the President on Parliament’s recommendation.

<b>Removal Process</b>	- Impeachment by Parliament supported by the special majority for proved misbehaviour or incapacity.
<b>Salaries and Allowances</b>	- Determined by Parliament, cannot be varied to disadvantage except during a financial emergency.
<b>Independence</b>	- Secured by fixed service conditions, security of tenure, financial autonomy, etc.
<b>Jurisdiction and Powers</b>	- Original jurisdiction in federal disputes. - Does not extend to certain matters like pre-Constitution treaties and inter-state water disputes.

**Issues:**

Aspect	Summary
<b>Judicial Accountability</b>	- Allegations of sexual harassment against the CJI.
	- Tension between judicial independence and accountability.
	- Judiciary is retributive, not rehabilitative.
	- Out of RTI's ambit, leading to information asymmetry.
	- Opacity highlighted by the 2019 press conference of 4 judges.
<b>Judicial Overreach</b>	- Concerns over the judiciary encroaching on executive functions.
<b>Contempt of Court</b>	- Excessive use to silence dissent.
<b>Credibility Crisis</b>	- Controversy over the appointment of ex-CJI Ranjan Gogoi to the Rajya Sabha in 2020.
<b>Vacancies and Case Pendency</b>	The judge-population ratio is 20 per million.
	- ~88% case clearance rate leading to 5 crore pending cases (Economic Survey 2018).

**Reforms Needed:**

- Introduction of a new **Judicial Standards and Accountability Bill** for strict judicial standards and accountability.
- Implementation of a **comprehensive Code of Conduct for judicial integrity**.
- Amendment of the **Contempt of Court Act, 1971** to prevent misuse.
- Establishment of an **independent Lokpal for judiciary oversight**.
- Implementation of **Law Commission's formula for addressing judicial vacancies**.
- Expansion of **All India Judicial Service for improved quality and efficiency**.
- Use of **ICT solutions** like LIMBS system and alternative dispute resolution methods.

**Conclusion:**

The accessibility, affordability, and speedy justice are fundamental pillars of an efficient judicial system. Continuous assessment and reform are crucial for strengthening and reinforcing the justice delivery system in India, ensuring it meets the needs of its citizens effectively and fairly.

**Insta Links**

1. Judicial Pendency

**Mains Links:**

**Q. Critically examine the Supreme Court's judgement on the 'National Judicial Appointments Commission Act, 2014' with reference to the appointment of judges of higher judiciary in India. (USPC 2017)**

**Prelims Links:**

With reference to the Indian judiciary, consider the following statements: (USPC 2021)

1. Any retired judge of the Supreme Court of India can be called back to sit and act as a Supreme Court judge by the Chief Justice of India with the prior permission of the President of India.
2. A High Court in India has the power to review its own judgement as the Supreme Court does.

Which of the statements given above is/are correct?

- (a) 1 only

- (b) 2 only
  - (c) Both 1 and 2
  - (d) Neither 1 nor 2
- Ans: (c)

[Topics: Welfare schemes for vulnerable sections of the population by the Centre and States and the performance of these schemes.](#)

## 2. WEST BENGAL'S APARAJITA WOMEN AND CHILD BILL 2024

### Context:

The West Bengal Assembly has passed the 'Aparajita' Bill, introducing the death penalty for rape.

### Salient provisions of the Aparajita Bill:

Category	Provisions
Provisions of BNS Amended	- <b>Maximum Punishment:</b> Adds "or with death" for aggravated rape circumstances.
	- <b>Death Penalty:</b> Mandatory for rape cases resulting in death or permanent vegetative state.
	- <b>Gang Rape:</b> Introduces death penalty for gang rape of women above age 18.
	- <b>Repeat Offenders:</b> Replaces simple imprisonment for life with rigorous imprisonment for life.
	- <b>Victim Identity Disclosure:</b> Increases jail terms for disclosing the identity of rape victims and publishing court proceedings.
Provisions of the POCSO Act Amended	- <b>Penetrative Sexual Assault:</b> Introduces death penalty where the highest punishment was previously life imprisonment.
Provisions of BNSS Amended	- <b>Investigation Time:</b> Reduces investigation time from two months to 21 days (extendable by 15 days if needed).
	- <b>Trial Time:</b> Reduces time to complete the trial after the chargesheet from two months to 30 days.
Task Forces, Special Courts	- <b>Special Task Forces:</b> Establishes a special Aparajita Task Force in each district for rape case investigations.
	- <b>Special Courts:</b> Creates Special Courts in every district for expedited rape case trials and appoints Special Public Prosecutors.

### Comparison of State Rape Laws:

West Bengal, Andhra Pradesh, and Maharashtra

1. West Bengal - Aparajita Bill:
  - Introduces mandatory death penalty for rape resulting in death or permanent vegetative state.
  - Amends existing laws for stricter punishments and establishes Special Task Forces and Courts for expedited trials.
2. Andhra Pradesh - Disha Bills:
  - Mandates the death penalty for rape, including gang rape and repeat offenders.
  - Creates Special Police Teams and Exclusive Special Courts with shortened investigation and trial timelines.
3. Maharashtra - Shakti Bill:
  - Implements the death penalty for severe cases, including heinous acid attacks.
  - Sets up stringent data-sharing requirements for web platforms in criminal investigations.

### Difficulties in Introducing State Laws to Curb Sexual Assaults on Women:

The Aparajita Bill, after being passed by the West Bengal Assembly, awaits the Governor's approval and the President's assent to become law.

### Why is Presidential Assent Crucial?

- The Supreme Court in *Mithu vs. State of Punjab (1983)* ruled that a mandatory death sentence violates **fundamental rights under Article 14 (equality before the law)** and **Article 21 (right to life)**, and constitutes an "unfair, unjust, and unreasonable procedure" that can deprive individuals of their life unjustly.

### Why is Rape Pervasive in India?

Reason	Description
<b>Gender Inequality</b>	Deep-rooted gender inequality and patriarchal attitudes objectify and subjugate women, fostering an environment where sexual violence can thrive.
<b>Societal Norms and Attitudes</b>	Regressive norms and attitudes, such as victim-blaming and the concept of " <b>women's honour</b> ," perpetuate a culture of silence and stigmatization, deterring victims from reporting and seeking justice.
<b>Lack of Awareness</b>	Limited awareness about gender equality, consent, and sexual rights, especially in rural areas, impedes efforts to prevent and address sexual violence. Comprehensive sex education and awareness campaigns are needed.
<b>Inadequate Law Enforcement</b>	Corruption, negligence, and insensitivity in law enforcement and the criminal justice system obstruct effective investigation, prosecution, and conviction of rape cases.
<b>Slow Judicial Processes</b>	Lengthy and complex legal procedures, coupled with a backlog of cases, result in delayed justice and discourage victims from pursuing legal action. Fast-track courts can help address this issue.
<b>Social Stigma and Victim Blaming</b>	Survivors face societal stigma, blame, and discrimination, which can further traumatize them and dissuade reporting. Addressing these attitudes and providing support services are crucial.

### Conclusion

The Aparajita Women and Child Bill marks a **significant shift in West Bengal's approach** to crimes against women and children, introducing stringent penalties. While supporters view it as a crucial step for justice and safety, critics question its necessity given existing laws. The bill has also sparked wider debates on crime reporting, law enforcement, and political accountability.

### Insta Links:

- Criminalisation of Marital Rape

## GENERAL STUDIES - 3

Topics: Major crops cropping patterns in various parts of the country, different types of irrigation and irrigation systems storage, transport and marketing of agricultural produce and issues and related constraints; e-technology in the aid of farmers.

## 1. CABINET GREENLIGHTS DIGITAL AGRICULTURE MISSION: FARMING MEETS INNOVATION

### Context:

The Union Cabinet has approved the **Rs 2,817-crore Digital Agriculture Mission** aimed at creating **Digital Public Infrastructure (DPI)** for the farm sector.

### What is Digital Agriculture?

**Digital Agriculture refers to the use of digital technologies to collect, store, analyze, and share data** throughout the agricultural sector. It includes tools like sensors, drones, GPS, big data analytics, and artificial intelligence to

enhance farm management, improve crop monitoring, optimize inputs like water and fertilizers, and increase yields.

### What is Digital Agriculture Mission?

The Digital Agriculture Mission is a government initiative aimed at **developing Digital Public Infrastructure (DPI) for the agriculture sector**. It seeks to improve farm management, enhance productivity, and provide services to farmers by integrating data and digital tools. The mission focuses on **modernizing Indian agriculture** through the use of digital technologies like **data analytics, geospatial information, and AI** to support decision-making, crop estimation, and efficient resource management.

### Components of Digital Agriculture Mission

Component	Description	Progress/Fact
<b>AgriStack</b>	Digital infrastructure for farmer databases, village maps, and crop registries.	Pilots conducted in 6 districts; Target: 11 crore farmers to receive digital IDs.
<b>Krishi Decision Support System (DSS)</b>	Geospatial system to unify crop, soil, weather, and water data.	Launched; Supports crop pattern identification and drought/flood monitoring.
<b>Soil Profile Maps</b>	Detailed soil maps (1:10,000 scale) of agricultural lands.	29 million hectares of soil mapped; Target: 142 million hectares.
<b>Digital General Crop Estimation Survey (DG-CES)</b>	Improves crop yield estimates and data accuracy for production.	Nation-wide rollout planned; Pilots conducted in 11 states in FY2023-24.

### Issues with Agri-Tech in India:

- Limited Digital Literacy:** Many farmers lack the skills and access needed to adopt agri-tech.
- High Upfront Costs:** Significant initial investment required for agri-tech solutions is a barrier for small-scale farmers.
- Fragmented Land Holdings:** Small, fragmented land makes large-scale mechanization challenging.
- Limited Infrastructure:** Poor access to basic infrastructure like electricity and internet hinders agri-tech adoption.
- Inadequate Government Policies:** Inconsistent or poorly implemented policies affect the effectiveness of agri-tech initiatives.
- Lack of Collaboration:** Limited cooperation among farmers, the private sector, and the government restricts effective solution development.
- Limited Market Access:** Challenges in accessing markets and market information affect the adoption of agri-tech.
- Drone Regulation Issues:** Privacy concerns arise due to sophisticated sensors and cameras on drones.

### Other related Government Initiatives:

Initiative	Explanation
<b>Promotion to Startups</b>	Currently, India has over 1,000 agri-tech startups that play a crucial role in providing innovative solutions for challenges across the agricultural value chain.
<b>Digital Agriculture Mission</b>	A government initiative for projects based on technologies like AI, blockchain, remote sensing, drones, and robots to advance agriculture.
<b>Unified Farmer Service Platform (UFSP)</b>	A platform facilitating seamless interoperability of IT systems in the agriculture ecosystem, enhancing service delivery to farmers.
<b>National e-Governance Plan in Agriculture (NeGPA)</b>	A scheme using ICT for timely access to agriculture-related information, including platforms like Farmers Portal and mkisan for advisories.
<b>Strengthening/Promoting Agricultural Information System (AGRISNET)</b>	A scheme for strengthening the IT infrastructure of the Department and enhancing information dissemination through platforms like mkisan.

### Way Forward for Agri-Tech in India:

- Encourage modern technology adoption.

- Provide subsidies and incentives for advanced farming equipment.
- Prioritize farmer-centric research.
- Improve technology access for small-scale farmers.
- Promote education and training programs.
- Establish clear regulations for drones and enforce privacy laws.

**Insta Links:**

e-Technology in the aid of farmers

**Mains Links:**

Q. Examine the role of supermarkets in the supply chain management of fruits, vegetables, and food items. How do they eliminate number of intermediaries? (UPSC 2018)

Topics: Science and Technology- developments and their applications and effects in everyday life Achievements of Indians in science & technology; indigenization of technology and developing new technology.

## 2. VISHVASYA-BLOCKCHAIN TECHNOLOGY STACK

**Context:**

The Government of India has launched the Vishvasya-Blockchain Technology Stack, offering Blockchain-as-a-Service (Baas) with geographically distributed infrastructure to support permissioned blockchain applications.

**What is Blockchain?**

**Blockchain** is a digital **ledger technology where data (like transactions) is stored in “blocks” that are linked together in a chronological “chain.”** Each block is securely encrypted, making the data tamper-proof. Example: Bitcoin, where blockchain tracks all transactions in a secure, decentralized way.

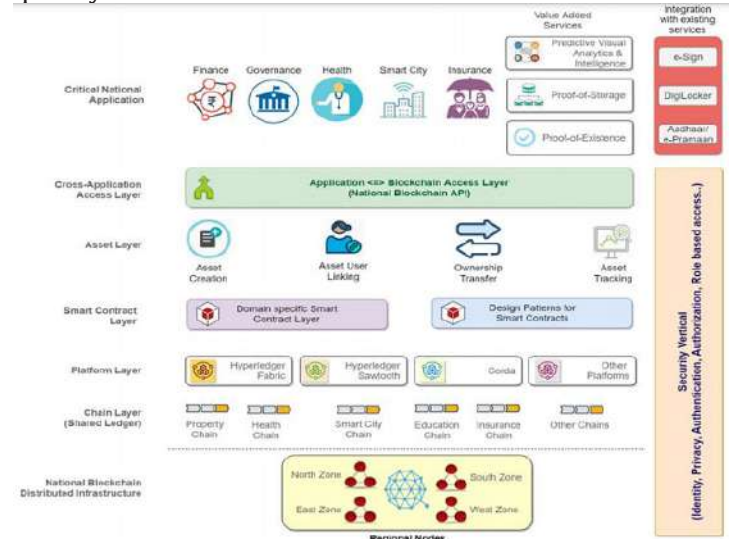
**What is Blockchain Technology Stack?**

It refers to the **layers of technologies needed to build and operate a blockchain.** It includes the infrastructure (servers, networks), core blockchain functionality (protocols, consensus mechanisms), smart contracts (automated, self-executing contracts), and APIs (tools to interact with the blockchain). Example: **Ethereum’s technology stack** enables decentralized apps and smart contracts.

**What is Blockchain-as-a-Service (BaaS)?**

It is a **cloud-based service where third parties provide infrastructure** and tools to build and use blockchain applications without needing to develop or maintain the blockchain themselves. Example: **Microsoft Azure’s**

**BaaS** allows businesses to deploy blockchain applications quickly.



**About Vishvasya (BaaS)**

**Vishvasya offers Blockchain-as-a-Service (BaaS)** using a distributed infrastructure to support permissioned blockchain applications. BaaS provides **cloud-based tools** for companies to build and manage blockchain apps. It is part of the **National Blockchain Framework (NBF)**, which aims to utilize blockchain in areas like health, agriculture, and finance while addressing adoption challenges.

**Features of Vishvasya BaaS:**

- Rapid blockchain application development
- Security-audited containers for production
- Blockchain security audit guidelines
- Geographically distributed infrastructure (Hyderabad, Pune, Bhubaneswar)
- Easy onboarding documentation
- **NBFLite:** Lightweight platform for research and learning

**Additional Launches:**

- **NBFLite:** A sandbox for startups and academia to prototype blockchain apps.
- **Praamaanik:** A blockchain tool for verifying mobile app origins.
- **National Blockchain Portal**

**Blockchain Application:**

Sector	Blockchain Application
Cryptocurrency	Enables decentralized, peer-to-peer digital currency transactions. Examples: Bitcoin, Ethereum.
Energy	Used for peer-to-peer energy trading platforms and streamlining renewable energy access.

<b>Finance</b>	Supports online payments, accounts, and market trading. Example: Singapore Exchange Limited uses blockchain for a more efficient interbank payment system.
<b>Healthcare</b>	Facilitates secure transfer of medical records, manages the drug supply chain, and aids genetic research.
<b>Smart Contracts</b>	Automates contract execution when predefined conditions are met, without human intervention.
<b>Media and Entertainment</b>	Handles copyright data and digital rights management. Example: Sony Music Entertainment uses blockchain for efficient digital rights management.
<b>Retail</b>	Monitors the flow of goods between suppliers and customers. Example: Amazon Retail's blockchain-based system for verifying the authenticity of items sold on the platform.
<b>Blockchain-as-a-Service</b>	Provides cloud-based blockchain infrastructure and tools for creating applications and digital services.
<b>Supply Chain Management</b>	Improves transparency and traceability in supply chains, ensuring authenticity and reducing fraud.
<b>Government Services</b>	Applied in voting systems, personal identification security, and secure data management

### India & Blockchain Technology Initiatives

1. **RBI Regulatory Sandbox:** Supervises blockchain startups in cryptocurrencies and exchanges.
2. **National Strategy on Blockchain:** Promotes state-specific blockchain apps for e-governance services, excluding digital currencies like Bitcoin.
3. **State-specific Initiatives:** States like Telangana, Tamil Nadu, and Maharashtra focus on blockchain centres and incubators (e.g., Telangana Blockchain District, Tamil Nadu Blockchain Policy 2020).
4. **Digital India Initiatives:** Blockchain identified as a key emerging technology.
5. **Centre of Excellence for Blockchain Technology:** Established by NIC for a nationwide interoperable blockchain ecosystem.

### Mains Link:

**Q. What is Cryptocurrency? How does it affect global society? Has it been affecting Indian society also? (USPC 2021)**

### Prelims

**Q. With reference to "Blockchain Technology", consider the following statements: (USPC 2020)**

1. It is a public ledger that everyone can inspect, but which no single user controls.
2. The structure and design of the blockchain are such that all the data in it are about cryptocurrency only.
3. Applications that depend on basic features of blockchain can be developed without anybody's
4. permission.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 1 and 2 only
- (c) 2 only
- (d) 1 and 3 only

**Ans: (d)**

Topics: Awareness in the fields of IT, Computers, robotics, nano-technology, bio-technology and issues relating to intellectual property rights.

## 3. CENTRE'S BIOE3 POLICY: HARNESSING BIOTECHNOLOGY FOR ECONOMIC DEVELOPMENT

### Context:

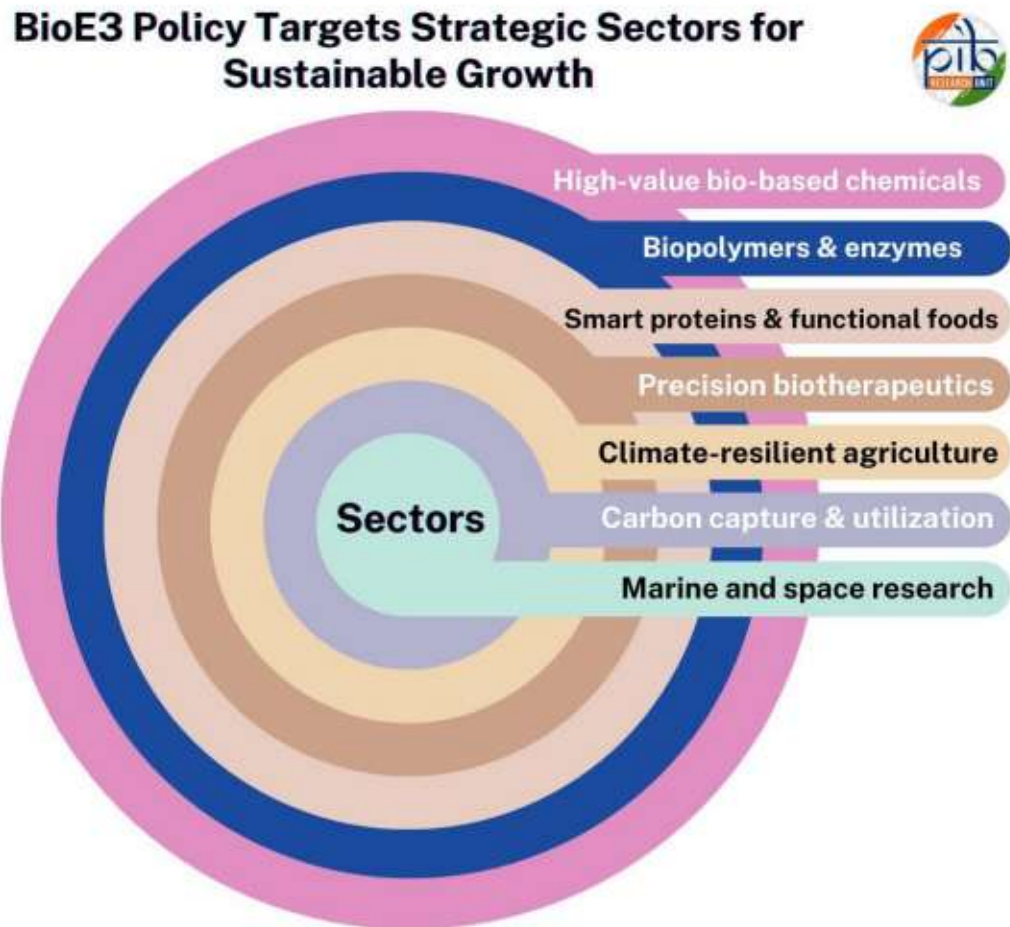
The recently launched **BioE3 (Biotechnology for Economy, Environment, and Employment) policy** aims to transform manufacturing processes across sectors to be more sustainable and less wasteful, utilizing biotechnology to mimic natural biological systems.

This marks the beginning of the "**industrialisation of bi-ology**" with potential economic impacts.

### BioE3 Policy:

Aims to boost biomanufacturing and bio-based products across sectors, aligning with goals like a **'Net Zero' carbon economy and circular bioeconomy**. It focuses on R&D innovation, biomanufacturing hubs, skilled workforce development, and ethical biosafety. Core areas include bio-chemicals, smart proteins, precision biotherapeutics, and climate-resilient agriculture.

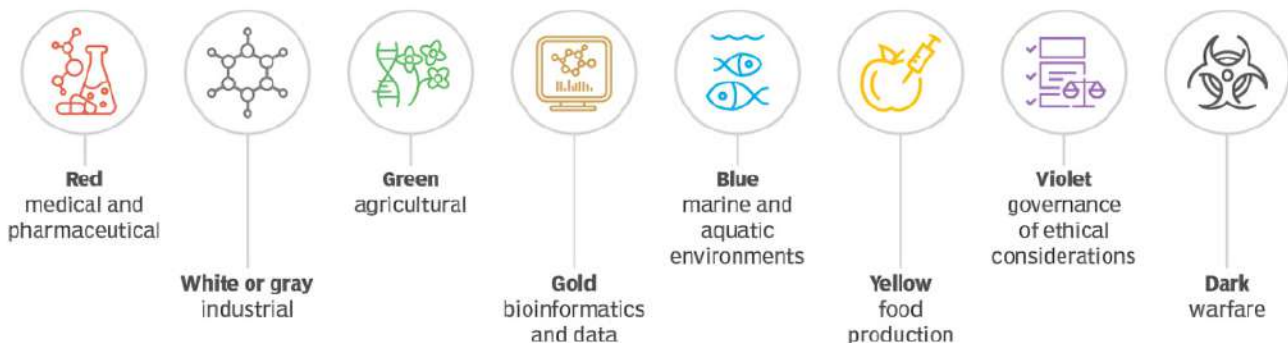
The policy's scope is broad and ambitious, encompassing several strategic sectors:



**Vigyan Dhara Scheme:**

A unified scheme by the Department of Science & Technology to enhance R&D, increase researcher numbers, and improve gender parity in science. It focuses on sustainable energy, water, and promotes innovation across education and industry. Aligns with India's vision of "**Viksit Bharat 2047.**"

## Types of biotechnology



**Challenges in Biotechnology**

**Despite its growth, biotechnology faces significant challenges:**

1. Ownership and Access: Patents on biotechnologies can limit access, especially in developing countries.
2. Ethical Issues: Biotech innovations like cDNA raise concerns about human life and commercialization of genetic material.

3. **Uncertainty:** Emerging genomic techniques bring unknown risks and potential for harm.
4. **Security Threats:** Synthetic biology advancements could be misused for creating biological weapons.
5. **Environmental Impact:** Agricultural biotech may affect ecosystems, non-target species, and pollinators due to changes in pesticide use and pest-resistant crops.

#### Government Initiatives:

- 9 biotech parks and 60 bio-incubators.
- Rs. 2,251 crore allocated to biotech in the 2024-25 budget.
- **National Biopharma Mission and Biotechnology Development Strategy 2020-25** support skill development and innovation.

#### Way Ahead:

India's young, skilled workforce and scientific resources are key to future growth. More biotech incubators and a strong biomanufacturing ecosystem will drive innovation and start-ups, boosting the industry. Though results will take time, BioE3 aligns with India's broader technology missions, positioning the country for future economic benefits

#### Mains Link:

Q. What are the research and developmental achievements in applied biotechnology? How will these achievements help to uplift the poorer sections of the society? (UPSC 2021)

Q. How can biotechnology help to improve the living standards of farmers? (UPSC 2019)

#### Prelims Link:

**Q. Other than resistance to pests, what are the prospects for which genetically engineered plants have been created? (UPSC 2012)**

1. To enable them to withstand drought
2. To increase the nutritive value of the produce
3. To enable them to grow and do photosynthesis in spaceships and space stations
4. To increase their shelf life

**Select the correct answer using the codes given below:**

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

**Ans: (c)**

Topics: Conservation related issues, environmental pollution and degradation, environmental impact assessment.

## 4. ROLE OF METHANE IN CLIMATE CHANGE

#### Context:

Methane, though short-lived (12 years), traps 84 times more heat than CO<sub>2</sub> over 20 years, making it a powerful greenhouse gas.

#### What is Methane?

It is an **Odourless, colourless, and flammable** gas; the second-largest contributor to global warming after Carbon Dioxide and the primary contributor to the formation of ground-level ozone.

**The International Energy Agency (IEA) released its annual** Global Methane Tracker 2024 report

Key Findings of the Report	In 2023, methane emissions from the energy sector remained close to a record high.
	Fossil fuel production and usage, alongside bioenergy, contributed to nearly 120 million tonnes (Mt) of emissions, with approximately 70% originating from the top 10 emitting countries.
	Among these, the United States leads in methane emissions from oil and gas operations, followed by Russia, while China ranks highest in the coal sector.

Recommendations of the Report	Achieving a 75% reduction in methane emissions by 2030 necessitates an estimated investment of around US \$170 billion
	Improved tools for emission tracking, like satellite imagery, have enhanced transparency, yet systematic and transparent data utilization is essential to reduce emission
Global Initiatives to Control Methane	<a href="#">International Methane Emissions Observatory</a> , <a href="#">Global Methane Pledge</a> (India is not part of it), Global Methane Initiative, <a href="#">MethaneSAT</a> .
Indian Initiatives	<a href="#">GobarDhan scheme</a> , National Biogas and Organic Manure Programme.
About IEA	IEA (HQ: Paris; Founded in 1974) is an autonomous intergovernmental organisation to ensure the security of oil supplies. Membership: 31 countries. World Energy Outlook is Published every year and provides critical analysis and insights on trends in energy demand and supply.

### Role of methane in climate change:

Aspect	Details	Example
<b>Heat Trapping Ability</b>	Methane traps about 84 times more heat than CO <sub>2</sub> over a 20-year period.	Methane's short-term heat-trapping effect significantly contributes to global warming.
<b>Duration in Atmosphere</b>	Methane stays in the atmosphere for about 12 years before dissipating.	Despite its short life, its intense heat-trapping impact is substantial during its presence.
<b>Contribution to Global Warming</b>	Methane is responsible for approximately one-third of global warming since the Industrial Revolution.	It has a major impact on rising global temperatures and changing climate patterns.
<b>Sources</b>	Human activities and natural sources. 60% of the methane that makes it into the atmosphere comes from human activities.	<b>Human:</b> Agriculture (e.g., cow burps), landfills, and fossil fuel extraction. <b>Natural:</b> Wetland permafrost thawing.
<b>Energy Sector Emissions</b>	Methane escapes during oil and gas production, transportation, and storage.	Methane leaks occur from rusty equipment or during gas flaring and venting processes.

### Way Forward

To address methane emissions, several strategies can be employed. Adopting **sustainable agricultural practices**, such as **precision farming and conservation tillage**, can reduce emissions from agriculture. Methane-capturing technologies in livestock operations and landfills can capture and convert methane into usable energy. Implementing rice cultivation techniques like **System of Rice Intensification (SRI) and Direct Seeded Rice (DSR)** can cut methane from rice paddies. Additionally, promoting biogas production from organic waste offers a renewable energy source and helps mitigate methane emissions from waste decomposition.

### Mains Link:

Q. "Access to affordable, reliable, sustainable and modern energy is the sine qua non to achieve Sustainable Development Goals (SDGs)". Comment on the progress made in India in this regard. (UPSC 2018)

### Prelims Link:

**Q. Which of the following statements is/are correct about the deposits of 'methane hydrate'? (USPC 2019)**

- 1) Global warming might trigger the release of methane gas from these deposits.
- 2) Large deposits of 'methane hydrate' are found in the Arctic Tundra and under the sea floor.
- 3) Methane in the atmosphere oxidises to carbon dioxide after a decade or two.

Select the correct answer using the code given below.

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

**Ans: (d)**

Topics: [Disaster and management.](#)

## 5. ISSUES WITH THE DISASTER MANAGEMENT (AMENDMENT) BILL 2024

### Context:

The Disaster Management (Amendment) Bill, 2024, introduced on August 1, 2024, seeks to centralize **disaster management, undermining cooperative federalism**. It adds **layers of bureaucracy, complicating disaster response and exacerbating delays**, as seen in past disasters like those in Tamil Nadu and Karnataka.

**Aim of the Bill:** The Bill aims to introduce changes for effective pre-planning of disaster events, integration of disaster preparedness in developmental plans, and give clarity of roles and responsibilities to the authorities handling disasters (aligning with [recommendations of the 15th Finance Commission](#))

### Key Features of the Disaster Management (Amendment) Bill, 2024:

Feature	Description
Creation of Disaster Database	Establishes a disaster database at national and state levels, including disaster assessments, fund allocation, expenditure, preparedness and mitigation plans, and risk registers.
Prepare Disaster Plan	Empowers <b>NDMA and SDMA</b> to prepare disaster plans, replacing the National Executive Committee and State Executive Committees. Plans must be reviewed every three years and updated every five years.
Creation of Urban Disaster Management Authority	Proposes the creation of Urban Disaster Management Authorities for state capitals and large cities with municipal corporations (excluding Delhi and Chandigarh).
Statutory Recognition	Grants statutory status to the National Crisis Management Committee and the High-Level Committee.
State Disaster Response Force	Allows state governments to form State Disaster Response Forces to enhance state-level disaster response.
New Section 60A	Empowers Central and State governments to direct individuals on disaster management actions and impose penalties up to ₹10,000 for non-compliance.

### How Measures in the Disaster Management (Amendment) Bill, 2024 Will Help in Disaster Management?

- Enhanced Disaster Database:** Provides detailed data on disaster assessments and risk, such as tracking the impact of floods in Bihar or cyclones in Odisha, aiding better planning and response.
- Urban Disaster Authorities:** Creates dedicated authorities in cities like Mumbai and Delhi, improving response to urban crises such as building collapses or air pollution emergencies.
- Revised Disaster Planning:** NDMA and SDMA can develop more integrated plans, as seen in coordinated responses to the 2023 Gujarat earthquake, enhancing efficiency and coverage.
- Statutory Recognition:** Strengthens bodies like the National Crisis Management Committee, leading to improved coordination in large-scale disasters such as the 2019 Kerala floods.
- State Disaster Response Force:** Empowers states to form specialized forces, like the proposed response team in West Bengal for riverbank erosion, improving local readiness and response.
- Penalties for Non-Compliance:** Ensures adherence to disaster management protocols, for instance, enforcing building safety standards to prevent disasters similar to the 2013 Uttarakhand floods.

### Key issues with the Disaster Management (Amendment) Bill, 2024:

- Increased Centralization:** Over-centralizes decision-making, which could delay disaster relief and complicate coordination.
- Bureaucratic Complexities:** Adds multiple layers of governance, potentially creating confusion between national, state, and local bodies.
- Leadership Conflicts:** The power imbalance between municipal commissioners and district collectors could hinder disaster management coordination.
- Financial Constraints:** Lack of financial resources for urban local bodies (ULBs) to effectively manage disaster preparedness and mitigation.

5. **Dependence on Central Funds:** Limited clarity on access to the National Disaster Mitigation Fund, undermining local financial autonomy.
6. **Exclusion of Major Cities:** Delhi and Chandigarh are excluded from the UDMA (**Urban Disaster Management Authority**) framework, leading to potential coordination gaps.
7. **Urban Bias:** Focuses primarily on urban areas, potentially neglecting rural disaster management needs.
8. **Challenges with UDMA Expansion:** Potential difficulties in staffing and administrative support as more municipal corporations are included in UDMA.

### Disaster Management Act, 2005: Key Features

Feature	Description
3-Tier Institutional Structure	National Level: NDMA, led by the Prime Minister. State Level: SDMA, headed by Chief Ministers. District Level: DDMA, led by District Collectors, Magistrates, or Deputy Commissioners.
National Disaster Response Force	Established for specialist response to disaster situations.
National Disaster Response Fund	Created to fund and manage response efforts during threatening disaster situations.

### Conclusion:

Though the Disaster Management (Amendment) Bill, 2024, introduces essential reforms aimed at improving preparedness in urban areas, its success will depend on addressing leadership coordination, financial empowerment, and the efficient allocation of resources to local bodies. Without resolving these concerns, the noble intentions of the Bill may not fully translate into effective disaster management across India's rapidly urbanizing landscape.

### Insta Links:

[National Disaster Management Act, 2005](#)

[Topics: Challenges to internal security through communication networks, role of media and social networking sites in internal security challenges, basics of cyber security; money-laundering and its prevention.](#)

## 6. DRONES: THE NEW FACE OF WAR

### Context:

Manipur Chief Minister condemned **recent drone bombings on civilians**, calling them acts of terrorism. His comments followed a second day of grenade-laden drone at-

tacks that injured three people in Imphal West.

### What is a UAV?

A drone or UAV (**Unmanned Aerial Vehicle**) is a remotely controlled flying device that is gradually being adopted in warfare for logistics, surveillance-reconnaissance, and combat roles.

**Drone warfare is becoming asymmetric** as the **capability of launchers** is usually of insurgent/terrorist scale. However, the Russia-Ukraine war also shows some asymmetric nature with drone warfare by a state actor like Ukraine.

### Drone use by state actors:

1. **The USA and Israel** are at the forefront of drone development with Predator and Heron models.
2. The use of **Turkish-made Bayraktar drones** by Ukraine against the Russian invasion has turned the tide of war.
3. **Russia's use of Orion drones** in Syria in 2019 for striking strategic targets.

### Drone use by non-state actors:

1. **Houthi rebels** used drones from Iran to attack Saudi oil facilities.
2. **Islamist terror outfits like ISIS and Palestinian Islamic Jihad (PIJ)** have used drones for surveillance and attack.
3. **Even organised narco-traders** like the CJNG cartel of Mexico have used drones for bombing targets.

### Advantages of Drone Warfare for actors:

#### Security challenges to India:

1. Recently, drones were used for the first time to **drop explosives at the Jammu airbase**.
2. Multiple incidents of **cross-border drone threats from Pakistan-sponsored terror groups** to drop bombs and deliver arms, ammunition, and equipment.
3. **Internal insurgents** too are acquiring DIY (Do-it-yourself) drone kits to increase such capabilities.
4. **Drone Terrorism:** Drones are increasingly used by terrorist groups due to their affordability, manoeuvrability, and payload capacity.
5. **Surveillance and Intelligence Gathering:** Drones monitor military sites, borders, and sensitive government facilities.
6. **Critical Infrastructure Disruption:** They can execute cyber-attacks, jamming, or physical attacks on infrastructure.
7. **Cross-Border Smuggling:** Drones smuggle contraband, drugs, and weapons, particularly from Pakistan.
8. **Privacy Concerns:** Drones with cameras threaten individual privacy and the security of sensitive facilities, like nuclear plants.

**Steps taken:**

1. Drone Rules 2021 to regulate the internal movement of drones while incentivizing the indigenous drone manufacturing industry.
2. **Indian Army Aviation Corp** is being made responsible for offensives and drone counter-measures.
3. **Indigenous anti-drone systems** are being developed like **Indrajaal** by Hyderabad-based Grene Robotics.
4. **Drone development by the DRDO** including **Nishant, Rustom, MALE, et al** and acquisition of foreign-made variants like the Heron.
5. Drone Import Policy 2022; Bans foreign drone imports, but allows drone component imports.
6. PLI Scheme: Incentivizes domestic drone and component manufacturing.

**Mitigating Drone-Related Threats:**

1. Counter-Drone Technology: Neutralizes unauthorized drones.
2. Capacity Building: Improves drone detection and response by security forces.
3. Public-Private Partnerships: Supports indigenous drone technology development.

**Conclusion:**

Drone warfare is causing a revolution in the nature of warfare in the 21<sup>st</sup> century, providing asymmetric warfare capabilities to the smallest of state and non-state actors. India must keep pace with the world for its security.

**GENERAL STUDIES - 4**

**1. FRAGMENTED IDENTITIES: THE COLLAPSE OF GENDER CATEGORIES AND THE CRISIS OF INDIVIDUALISM**

**Context:**

The **collapse of rigid categories**, particularly around gender, is **deepening social fragmentation in the West**. While **gender and sex** were once seen as **fixed biological facts**, newer ideas challenge this, suggesting they are fluid and subject to personal choice. This shift is creating **confusion**, as it clashes with **traditional views of individualism and governance**.

**What is Individualism?**

**Individualism is the belief that the individual** is the fundamental unit of society, emphasizing **personal freedom, autonomy, and self-reliance**. It holds that each person is unique, with their own rights and interests, and these should be protected and valued over collective or

group norms.

**What is the Issue here?**

The issue centres around the **growing tension between traditional categories of identity (like gender and sex) and evolving modern perspectives** that view these categories as fluid and a matter of personal choice. Historically, **gender and sex were seen as fixed categories**, essential for governance, social organization, and personal identity. However, modern ideas challenge these notions, suggesting that sex and gender are not permanent and can be altered to match one's self-perception. This shift is causing a **crisis in both societal norms and individual identity**, as what once were **universally accepted facts** (such as being male or female) are now seen as open to personal interpretation and medical alteration. The broader issue reflects a **paradox between liberalism and individualism**. While liberal values prioritize **personal freedom and individual rights**, they are now grappling with how to reconcile this freedom with long-standing social structures and norms.

**Ethical issues concerned here are:**

1. **Gender-Affirming Interventions:**
  - o Example: A biologically male person transitions to a female through surgery and hormone therapy.
  - o Ethical Issue: Should individuals, especially minors, be allowed to make potentially irreversible changes? The question of informed consent is critical, particularly for minors who may not fully grasp long-term consequences.
2. **Women's Sports:**
  - o Example: The disqualification of Algerian boxer Imane Khelif from the 2024 Olympics over biological sex questions.
  - o Ethical Issue: Is it fair for biological males who identify as female to compete in women's sports, potentially disadvantaging female athletes?
3. **Public Spaces:**
  - o Example: Conflicts over transgender rights in bathrooms or locker rooms.
  - o Ethical Issue: How to balance transgender rights with concerns from others, particularly women, who may feel uncomfortable sharing intimate spaces with biological males.
4. **Public Institutions:**
  - o Example: Schools and healthcare systems providing gender-affirming care to minors.
  - o Ethical Issue: Should public institutions support gender transitions for minors, balancing individual rights with protect-

ing vulnerable populations?

5. Science and Gender Fluidity:

- Example: Medical technologies that alter sex characteristics based on the belief that gender is a spectrum.
- Ethical Issue: Should science be used to alter bodies to fit personal beliefs about gender, or should it uphold traditional biological norms?

## 2. BULLDOZER JUSTICE MUST END: SC WARNS STATES

### Context:

The Supreme Court warned states **against demolishing properties** of accused individuals without due process, calling such **actions unjustified even in cases of conviction**. The court plans to **establish nationwide guidelines to regulate demolitions**, emphasizing the need for legal procedures and protections.

**In the case of “bulldozer justice” and demolitions linked to criminal accusations, several ethical issues arise:**

1. Due Process Violation:

- Issue: Demolishing properties without following legal procedures undermines the right to a fair trial.
- Example: Authorities demolish homes based on accusations without court proceedings, denying the accused the opportunity to defend themselves.

2. Collective Punishment:

- Issue: Punishing families or communities for the actions of an individual is ethically unjustifiable.
- Example: Bulldozing the homes of family members of the accused, even though they were not involved in the alleged crime.

3. Discrimination:

- Issue: The selective use of demolitions disproportionately targeting certain communities could reflect bias and discrimination.
- Example: Demolitions carried out in communal violence cases, particularly targeting minority communities, as seen in instances like Jahangirpuri in Delhi.

4. Abuse of Power:

- Issue: Using demolitions as a tool for quick justice reflects an abuse of state power.
- Example: Governments use bulldozers to demonstrate decisiveness rather than ensuring justice through the legal system.

5. Violation of Property Rights:

- Issue: Destroying someone’s property

without adequate legal backing infringes on their right to ownership and security.

- Example: Properties demolished without a court order or sufficient notice to the owners.

6. Human Rights Concerns:

- Issue: Destruction of homes leaves people homeless and vulnerable, raising concerns about human dignity and the right to shelter.
- Example: Families rendered homeless after demolitions carried out without sufficient cause or alternatives provided.

7. Transparency and Accountability:

- Issue: Lack of transparency and accountability in the decision-making process of demolitions leads to unethical governance practices.
- Example: Authorities claiming properties are illegal without providing adequate documentation or evidence to the property owners.

### Local Laws on Demolitions:

1. Rajasthan: Requires notice and opportunity to respond; governed by Municipalities Act and Forest Act.
2. Madhya Pradesh: Demolitions only after notice and failure to respond; under Municipalities Act.
3. Uttar Pradesh: Requires formal order, notice (15-40 days), and appeal process; under Urban Planning and Development Act.
4. Delhi: Notice and opportunity to contest required; governed by DMC Act.
5. Haryana: Shorter notice period (3 days), with opportunity to appeal; under Municipal Corporation Act.

### Reforms Needed:

1. **Establish Clear Guidelines:** Implement national guidelines to regulate property demolitions, ensuring adherence to due process.
2. **Ensure Due Process:** Mandate judicial oversight and proper legal procedures before demolitions are carried out.
3. **Prevent Collective Punishment:** Prohibit demolitions of properties not directly linked to the accused.
4. **Enhance Transparency:** Require authorities to provide documentation and justification for demolitions.
5. **Protect Property Rights:** Ensure property owners have the right to appeal and contest demolitions.
6. **Address Human Rights:** Provide alternative housing and support for those affected by demo-

litions.

7. **Increase Accountability:** Implement monitoring mechanisms to oversee and review demolition actions.

### 3. CORRUPTION: CVC REPORT

#### Context:

The Central Vigilance Commission's (CVC) 2023 report revealed that the **highest number of graft complaints were against railway employees, followed by Delhi's local bodies and public sector banks.**

**Out of 74,203 corruption complaints received, 10,447** were against railway staff, **7,665 against local bodies in Delhi, and 7,004** against public sector bank employees. The report also noted **6,638 complaints against Delhi government employees** and 5,313 against Delhi Police personnel. Of the total complaints, 66,373 were resolved, with 7,830 still pending.

#### What is Corruption?

Corruption refers to unethical behaviour, which is characterized by misuse of public or organizational power, causing harm not only to organizations but also to society.

- The word corrupt is from the Latin word 'corruptus' meaning to break or destroy
- Corruption is an important manifestation of the failure of ethics
- Corruption misuse of entrusted power for private gain



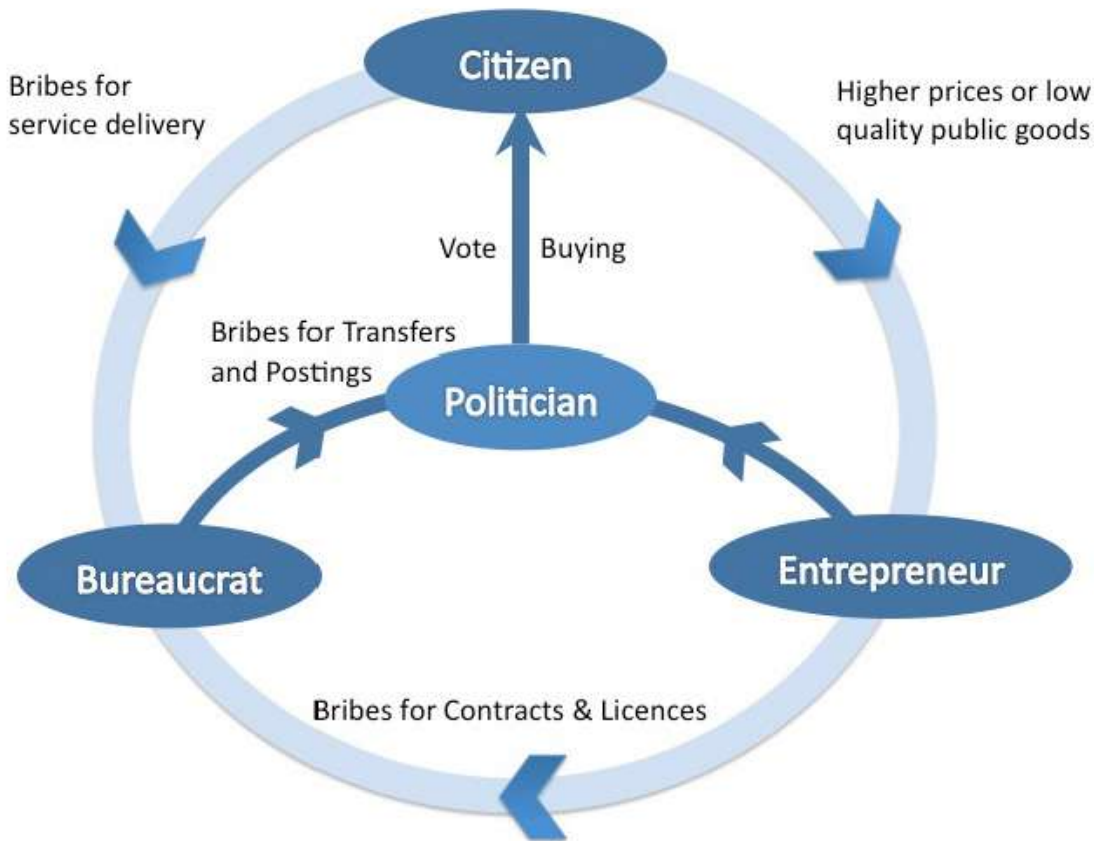
#### The Wheel of corruption:

In India, corruption, and abuse of office are aggravated by the following factors:

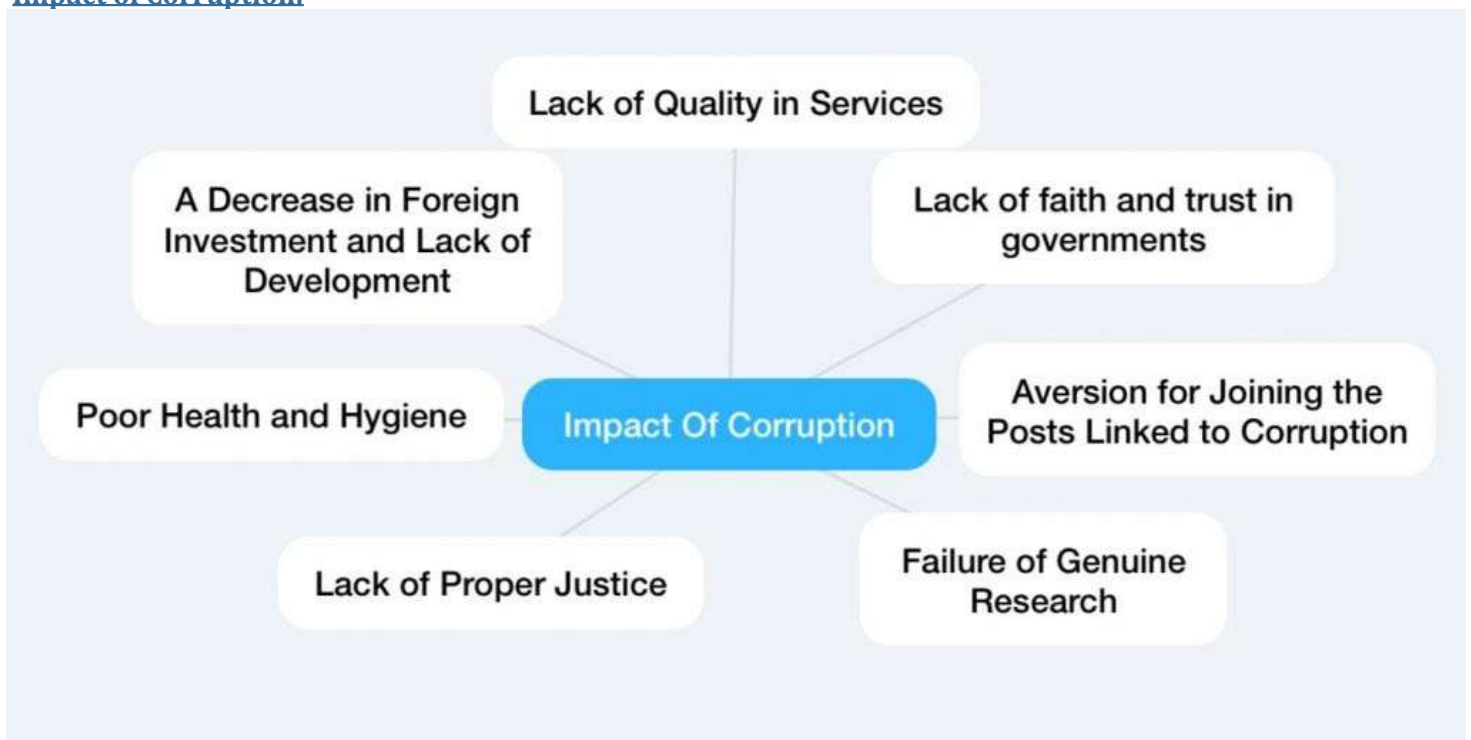
- The colonial legacy of unchallenged authority, the propensity to exercise power arbitrarily – easy to deviate from ethical conduct
- Enormous asymmetry of power – eco, social inequalities, caste legacy, 90% workforce in unorganized sector
- Policies after independence– e.g. State subsidies, and beneficiary-oriented programmes in the situation of asymmetry of power converted public servants into patrons, citizens into mendicant

- Over-centralization increases corruption – a large number of functionaries b/w citizens and decision-makers diffuses accountability
- Quality of politics – criminal-politician nexus
- Politicians secure votes through money, and muscle power & criminals enter politics to interfere in crime investigation, monetary gain creates “acceptance” for criminals to enter politics

## THE WHEEL OF CORRUPTION



### Impact of Corruption:



### Corruption as a Manifestation of Failure of Core Values

Core Values Failing	Examples
Erosion of Honesty and Trust: Integrity declines, trust erodes, leading to corruption.	Societies now depend more on contracts than on personal promises.
Shift in Values and Empathy: Focus on personal gain overshadows social consciousness.	Community welfare projects are often sidelined for personal enrichment.
Lifestyle and Materialism: Growing material desires lead to unethical shortcuts, weakening societal values.	Bypassing regulations for personal luxury projects is common.
Education and Societal Role Models: Failure to instill values of empathy and integrity normalizes corruption.	Youth often look up to successful, yet corrupt, figures as role models.

### Measures to Uplift Core Values

Measures Needed	Examples
Promote Social Engagement: Encourage community interactions to build trust, empathy, and respect.	Community events help bridge cultural and generational gaps.
Emphasize Moral Education: Teach ethics, empathy, and honesty in schools and homes.	The New Education Policy, 2020 stresses moral lessons.
Address Socio-economic Inequality: Reduce disparities to strengthen unity and integrity.	Community-driven initiatives uplift disadvantaged areas.
Champion Societal Values over Personal Greed: Prioritize fraternity, trust, and collective well-being.	Public campaigns promote collective welfare over individual gains.
Create Inclusive Platforms: Foster mutual understanding by providing open spaces for shared experiences.	Storytelling sessions promote empathy through diverse experiences.
Strengthen Community Leaders: Empower leaders who embody societal values to serve as role models.	Training programs prepare leaders to drive value-based initiatives.

### The Commission (CVC) issued guidelines across three vigilance administration areas: Punitive, Preventive, and Participative Vigilance.

- Punitive:** Swift and effective actions against those guilty of misconduct to deter others.
- Preventive:** Proactively aiming for corruption-free governance through measures like rule simplification, officer rotation, and process re-engineering.
- Participative:** Involving stakeholders such as government, civil society, and institutions to raise awareness on the ill effects of corruption, including initiatives like Vigilance Awareness Week.

### Formula For Fighting Corruption

$$C = M + (D - T) - A$$

- C=Corruption**
- M=Monopoly**  
If the MONOPOLY SITUATION (M) in which the decision-maker is situated is broken up, the probability that corrupt behaviour will occur diminishes
- D=Discretion**  
The DISCRETION enjoyed by the decision-maker (D) also increases the probability of corruption because during the act of corruption, corrupt individuals are able to assert their position due to the discretion available to them
- T=Transparency**  
Such situations will decrease as more TRANSPARENCY (T) is introduced in the process. If the process is completely transparent & open, corruption will neither be possible nor required.
- A=Accountability**  
The likelihood of not being discovered & held ACCOUNTABLE (A) plays an important role in corruption. The higher the probability that corruption will be exposed & actually punished, the lower the incentive to indulge in corrupt behaviour.

**Thinkers on corruption:**

Thinker	Country	Views on Corruption
Plato	Greece	Corruption arises when rulers prioritize personal interests over the welfare of the state, undermining justice.
Machiavelli	Italy	Power corrupts when unchecked; leaders often resort to unethical practices to maintain control.
Karl Marx	Germany	Corruption is inherent in capitalist societies, driven by exploitation and class divisions.
John Locke	England	Corruption is a misuse of power and lack of accountability in governance.
Gandhi	India	Corruption is a moral failure rooted in greed; simplicity and moral leadership are solutions.
Kautilya (Chanakya)	India	Corruption is inevitable in large administrations and must be curbed with strict regulations and penalties.
Dr. B.R. Ambedkar	India	Corruption threatens democracy and social justice; education and reform are key to combating it.
Swami Vivekananda	India	Corruption stems from a lack of spiritual and moral values, which can be overcome through ethical leadership.

**Insta Links:**

- A step towards fighting corruption

**Mains Links**

**Q. Fighting corruption is often seen as a crucial step towards building better public institutions and improving the quality-of-service delivery. Comment. (10M)**

## CONTENT FOR MAINS ENRICHMENT

Topic in News	Usage in Answers
<b>1. QUEER &amp; FINANCIALLY CLEAR: OPEN JOINT BANK ACCOUNTS WITH PRIDE!</b>	<p><b>Context:</b> The Union government has <b>clarified that individuals in queer relationships can open joint bank accounts and nominate their partners as beneficiaries</b>. This follows the Supreme Court's October 2023 ruling <b>urging the government to consider equal entitlements for queer partners</b>, though it stopped short of recognizing same-sex marriage.</p> <p>The ethical issues involve <b>balancing individual autonomy with societal norms</b>, ensuring informed consent (especially for minors), fairness in sports, and protecting both individual and group rights. Public institutions face ethical dilemmas over supporting gender-affirming care for minors, while <b>science's role in altering bodies challenges traditional biological norms</b>.</p>

## 2. EMPOWERING PRIDE: GOVERNMENT INITIATIVES FOR THE LGBTQI+ COMMUNITY

The **Department of Social Justice and Empowerment (DoSJE)** invites public and stakeholder inputs to ensure **inclusive policies for the LGBTQI+ community**. Following the Supreme Court’s 2023 judgment, a committee chaired by the Cabinet Secretary was established to define the community’s entitlements.

**Key actions include:**

1. **Ration card access** for queer partners.
2. **Allowing joint bank accounts** and partner nomination rights.
3. **Healthcare measures**, including banning conversion therapy and ensuring access to sex reassignment surgery.
4. Addressing **mental health and discrimination issues**.

**Values exhibited:**

1. **Inclusivity** – Ensuring access to social services and equal treatment for LGBTQI+ individuals.
2. **Non-discrimination** – Addressing biases in ration card issuance, banking, and healthcare.
3. **Dignity** – Recognizing queer relationships and providing legal protections.
4. **Health Rights** – Prohibiting conversion therapy and improving access to healthcare.
5. **Mental Well-being** – Promoting mental health and well-being for the LGBTQI+ community.
6. **Consultation** – Inviting public and stakeholder input to create effective policies.

## 3. 'BLACK COAT SYNDROME'

**Context:** At the **Supreme Court’s National Conference of the District Judiciary**, President Droupadi Murmu **celebrated the court’s 75-year legacy, unveiling its new flag and insignia.**

- She **praised the Supreme Court’s role as the guardian of justice in India** and stressed its commitment to **ensuring justice through its motto, drawn from the Mahabharata, “Where there is Dharma, there is victory.”**
- President Murmu emphasized the **judiciary’s moral responsibility to uphold impartiality, truth, and justice.**

**About ‘Black Coat Syndrome’:**

**“Black Coat Syndrome” is a term used** to describe **the anxiety and fear experienced by ordinary citizens when interacting with the judicial system**, particularly in courtrooms.

The phrase metaphorically **refers to the traditional black coats worn by lawyers, symbolizing the formal and often intimidating nature of court proceedings.**

This syndrome reflects **the emotional and financial burden that many individuals, especially those from marginalized backgrounds, face when seeking justice.**

It highlights the challenges of navigating the legal system, **such as prolonged case delays, adjournments, and high costs, which can discourage people from pursuing justice.**

#### 4. CALIFORNIA'S NEW LAW ON DECEASED PERSONALITIES' LIKENESS

**Context:** California's AB 1836, passed on August 31, 2024, regulates the commercial use of deceased **personalities' likenesses, including their voice and image**. The law aims to protect against unauthorized AI-generated replicas by requiring consent from the deceased's heirs for such uses.

**Key Points:**

1. Consent Required: Using a deceased personality's likeness without consent from their heirs is prohibited.
2. Penalties: Fines range from \$750 to \$10,000, plus potential damages.
3. Scope: Covers digital replicas and excludes uses in artistic, political, or newsworthy works.
4. Rights Transfer: Likeness rights can be transferred through contracts and passed to the deceased's family or are terminated if no heirs are present.

**Ethical Values from California's AB 1836**

1. Respect for Autonomy: The law respects the autonomy of deceased individuals by requiring consent from their heirs before using their likenesses.
2. Protection of Privacy: It protects the privacy of deceased personalities, ensuring their likenesses are not exploited without authorization.
3. Fair Compensation: The law mandates compensation for unauthorized use, reflecting the value of intellectual and personal property.
4. Justice: It seeks to prevent potential exploitation and misuse of deceased personalities' likenesses, upholding fairness for the families.
5. Transparency: By defining clear rules and penalties, the law ensures transparency in the use of digital replicas and likenesses.

## FACTS FOR PRELIMS

### GS-1

#### Art & Culture

### 1. RAMON MAGSAYSAY AWARD

**Context:**

**Hayao Miyazaki, a renowned Japanese filmmaker and co-founder of Studio Ghibli, has won the 2024 Ramon Magsaysay Award, recognized for his contributions to animated films that resonate across ages.**

- His work is **distinguished by its gentle, hand-drawn visuals and deep themes, including pacifism, environmentalism, and strong female characters.**
- Miyazaki's films, such as ***Spirited Away* and *Princess Mononoke***, reflect his concerns about modern society, war, and the destruction of nature.

**About Ramon Magsaysay Award:**

The **Ramon Magsaysay Award, established in 1957, is Asia's highest honor and premier prize**, recognizing individuals with **exceptional dedication to serving the people of Asia, regardless of their background.**

It is **awarded annually on August 31st**, coinciding with the **birthday of Ramon Magsaysay, the third president of the Philippines.**

Recipients receive a **certificate, a medallion with Magsaysay's image, and a cash prize.**

The award, often referred to as **Asia's equivalent of the Nobel Prize.**

## History

## 2. LOTHAL

### Context:

A **new study by IIT Gandhinagar** has **provided fresh evidence supporting the existence of a dockyard at Lothal, Gujarat**, during **the Harappan Civilization**.

- The research **reveals that the Sabarmati River, which now flows 20 km away, once ran close to Lothal, enhancing its significance as a major trade route.**
- The study suggests that **Lothal was connected via waterways to other Harappan sites like Dholavira, facilitating trade with regions as far as Mesopotamia.**

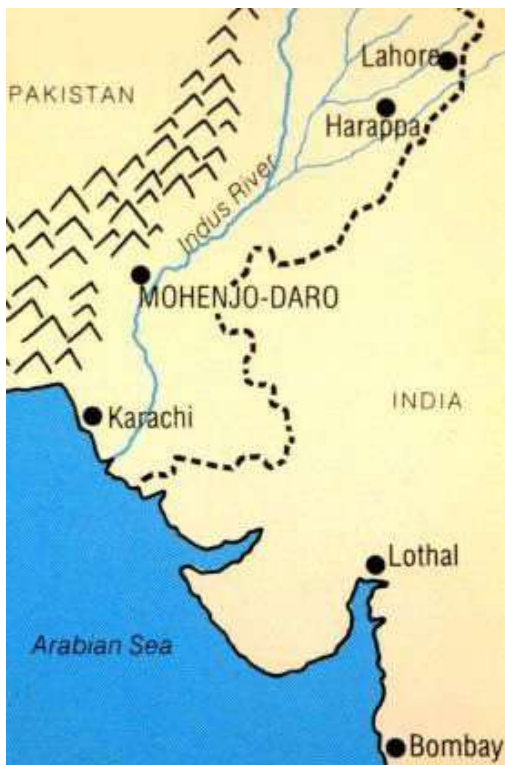
### About Lothal:

Lothal, located in the **Bhāl region of Gujarat**, was one of the **southernmost sites of the Indus Valley Civilization, built around 2200 BC.**

It was a significant trade centre, **known for trading beads, gems, and ornaments with West Asia and Africa.**

The name **“Lothal” means “the mound of the dead” in Gujarati**, similar to the meaning of **“Mohenjo-daro” in Sindhi.**

Lothal is notable for having the **world’s earliest known dock, which connected it to the Sabarmati River**, facilitating trade between **Harappan cities and the Saurashtra peninsula.**



## World History

## 3. MUNICH AGREEMENT

### Context:

The Munich Agreement, was an **accord between Germany, France, Italy, and Great Britain**, allowing **Nazi Germany to annex the Sudetenland, a region in Czechoslovakia with a large ethnic German population.**

- This agreement, **aimed at appeasing Adolf Hitler to maintain peace in Europe**, was strongly supported by British Prime Minister Neville Chamberlain.
- However, Czechoslovakia, **despite being directly affected, was not a party to the negotiations and was pressured into accepting the deal.**
- The Munich Agreement is widely **seen as a disastrous act of appeasement that failed to prevent further aggression.**
- Hitler **violated the agreement within six months by invading the rest of Czechoslovakia**, signalling that expansionist totalitarianism could not be placated.
- **This sequence of events set the stage for World War II**, which began on September 1, 1939, when Nazi Germany invaded Poland, leading Britain and France to declare war on Germany.

## Geography

## 4. CYCLONE ASNA

### Context:

**Cyclone Asna**, which formed over the **Kutch coast in Gujarat, moved towards Oman without causing a significant impact in the region.**

- The cyclone, which originated from a deep depression, **brought some rain and strong winds but caused no major damage or casualties.**

### About Cyclones:

Cyclones are **intense systems of air circulation around a low-pressure center**, characterized by **violent storms and adverse weather conditions.**

In the Northern Hemisphere, **cyclones rotate counter-clockwise, while in the Southern Hemisphere, they rotate clockwise.**

The **term “cyclone” comes from the Greek word “Cyclos,”** meaning the coils of a snake, a reference coined by Henry Peddington due to the appearance of tropical storms in the Bay of Bengal and the Arabian Sea resembling coiled serpents.

### Cyclones are classified into two main types:

1. Tropical Cyclones: These form in tropical regions and include hurricanes and typhoons.
2. Extra-Tropical Cyclones: Also known as temperate,

middle-latitude, or frontal cyclones, these occur in the mid-latitudes and are associated with weather fronts and low-pressure systems.

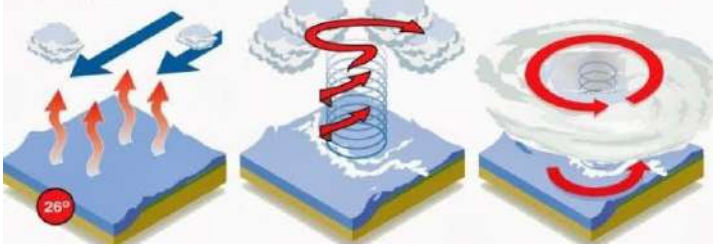
### How tropical storms are formed

High humidity and ocean temperatures of over 26°C are major contributing factors

Water evaporates from the ocean surface and comes into contact with a mass of cold air, forming clouds

A column of low pressure develops at the centre. Winds form around the column

As pressure in the central column (the eye) weakens, the speed of the wind around it increases



## GS-2

### International Relations

## 5. COLOMBO SECURITY CONCLAVE SECRETARIAT

### Context:

India, along with Sri Lanka, Maldives, and Mauritius, **signed a memorandum of understanding (MoU)** and a charter to establish the **Colombo Security Conclave (CSC) Secretariat**.

- The CSC **aims to address transnational threats and enhance cooperation** in areas like **maritime safety, counter-terrorism, cyber security, and disaster relief**.
- This initiative **reinforces the commitment to regional security among these nations**.

### Governance

## 6. DISPUTE RESOLUTION SCHEME (E-DRS)

### Context:

The **Central Board of Direct Taxes (CBDT)** has introduced the **e-Dispute Resolution Scheme (e-DRS) 2022** to **reduce litigation and provide relief to eligible taxpayers**.

Under this scheme, **taxpayers can file applications electronically for dispute resolution with Dispute Resolution Committees (DRCs)** across 18 regional jurisdictions.

- **Eligibility:** Taxpayers can use e-DRS for disputes **involving specified orders where the aggregate variations are under ₹10 lakh** and the returned **income is under ₹50 lakh, excluding cases based on searches or certain agreements**.

- **DRC Procedures:** The **DRCs can modify orders, reduce or waive penalties, and must issue decisions within six months from the end of the month** in which the application is admitted.
- **Filing Process:** Applications are to be **submitted online through the Income Tax Department's portal using Form No. 34BC**.

## 7. POSHAN TRACKER INITIATIVE

### Context:

The Ministry of Women and Child Development **won the National e-Governance 2024 Gold Award for its Poshan Tracker initiative** under **Mission Poshan 2.0**.

### What is the Poshan Tracker?

It is an **ICT-based system, that monitors the growth and nutrition of children aged 0-6 years** in real time, using WHO growth charts and Growth Measuring Devices at Anganwadi Centers. The initiative covers **8.9 crore children** and helps identify health issues for timely intervention.

### Key Points about the Poshan Tracker App:

- **Provides a 360-degree view of Anganwadi activities**, services, and beneficiary management for pregnant women, lactating mothers, and children under six.
- **Digitizes physical registers**, improving workers' efficiency.
- **Anganwadi workers** receive smartphones for enhanced service delivery through **Government e-Market (GeM)**.
- Technical support is available for resolving app-related issues.
- Migrant workers can access services at any Anganwadi, regardless of location.
- Launched by the **Ministry of Women and Child Development (MoWCD)**.

## GS-3

### Indian Economy

## 8. 'NAVRATNA' STATUS TO THE STATE-OWNED COMPANIES

### Context:

**SJVN, NHPC, and RailTel Corporation of India** saw their **shares rise by up to 5.2% following** the Indian government's **decision to grant them 'Navratna' status**.

- This designation, **which enhances their financial and operational autonomy, was also**

**awarded to Solar Energy Corporation of India (SECI), bringing the total number of Navratna Central Public Sector Enterprises (CPSEs) to 25.**

- The status allows these **companies greater decision-making freedom, potentially boosting their market performance and enabling faster growth.**

Criteria for Maharatna Status	Criteria for Navratna Status	Criteria for Miniratna Status
1. Shall have <b>Navratna status</b>	1. Miniratna Category - I or Schedule 'A' CPSEs	Miniratna Category-I status: <ul style="list-style-type: none"> <li>• <b>Made profit</b> in the last 3 years continuously</li> <li>• <b>Pre-tax profit is Rs.30 crores or more</b> in at least 1 of the 3 years</li> <li>• <b>Having Positive net worth status</b></li> </ul>
2. <b>Listed on the Indian stock exchange with prescribed public shareholding</b>	2. 'Excellent' or 'Very Good' rating in 3 of last 5 years	Miniratna Category-II status: <ul style="list-style-type: none"> <li>• <b>Made profit</b> for the last 3 years continuously</li> <li>• <b>Having positive net worth status.</b></li> <li>• <b>Not defaulted</b> in the repayment of loans/interest payment on any loans due to the Government.</li> <li>• <b>Not dependent upon budgetary support</b> or Government guarantees.</li> </ul>
3. <b>Average annual turnover &gt; Rs. 25,000 crore (last 3 years)</b>	3. <b>Composite score of 60 or above</b> in the following 6 performance indicators including Net Profit to Net Worth, Cost of Services, Earning per share, etc.	
4. <b>Average annual net worth &gt; Rs. 15,000 crores (last 3 years)</b>		
5. <b>Average annual net profit after tax &gt; Rs. 5,000 crores (last 3 years)</b>		
6. <b>Significant global presence/international operations</b>		

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## 9. GROSS FIXED CAPITAL FORMATION (GFCF)

### Context:

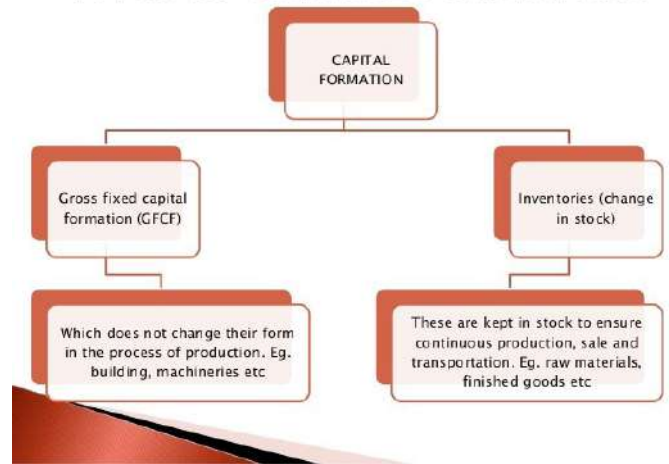
World Bank **projected a decline in** Gross Fixed Capital Formation (GFCF) **in Indian Economy for FY25.**

- **It revised India's GDP growth estimate for FY25 to 7%, up from 6.6%,** driven by public **infrastructure investments and household spending on real estate.**
- Despite this growth, **urban youth unemployment remains high at 17%, and India is losing market share in labour-intensive sectors like apparel and footwear.**
- While **industrial growth is expected to slow slightly in FY26,** agricultural growth is projected to rise sharply.
- The **World Bank emphasized that global trade protectionism and rising tariffs could hinder trade-focused investments.**

Gross Fixed Capital Formation (GFCF) refers to the **total value of a country's investments in fixed assets during a specific period, such as infrastructure, machinery, equipment, and buildings.**

It is an **essential indicator of economic growth and development, as it reflects the level of investment made to enhance productive capacity.**

## TYPES OF CAPITAL FORMATION



## 10. FINANCIALISATION

### Context:

Chief Economic Adviser (CEA) V. Anantha Nageswaran has **cautioned against the financialisation of capital markets,** where financial market dominance could distort macroeconomic outcomes.

### What is Financialisation?

It occurs when financial markets, financial motives, and financial institutions start to dominate economic activities, overshadowing real economic activities like production and investment.

### Risks:

1. **Increased Debt:** High levels of borrowing by both public and private sectors can lead to excessive debt. For example, during the 2008 global financial crisis, many countries faced severe economic downturns due to high levels of debt-fueled by financial speculation.
2. **Asset Price Inflation:** Reliance on financial markets can lead to artificially inflated asset prices. For instance, the dot-com bubble of the late 1990s saw technology stocks trading at unsustainable valuations, leading to a market crash when the bubble burst.
3. **Economic Inequality:** Financialisation can exacerbate income inequality, as gains from financial investments may disproportionately benefit the wealthy. For example, rising stock market values often benefit those who already hold significant financial assets, widening the wealth gap between the rich and the poor.

Example: The 2008 financial crisis exemplifies financialisation risks, where excessive speculation and financial practices led to a global economic meltdown, highlighting the dangers of letting financial markets overshadow real economic fundamentals.

## Agriculture

## 11. AGRISURE FUND & KRISHI NIVESH PORTAL

### Context:

The Union Minister launched the **AgriSURE Fund and Krishi Nivesh Portal**.

- The event also featured the **presentation of the Greenathon AIF Excellence Awards, recognizing top-performing banks and states for their efforts in implementing the Agriculture Infrastructure Fund (AIF) scheme.**

Aspect	AgriSURE – Agri Fund for Start-Ups & Rural Enterprises	Krishi Nivesh Portal
Established	Following the 2022-23 Budget announcement by India's Finance Minister.	Launched on December 5, 2022.
Purpose	To support innovative, high-risk, and high-impact agricultural start-ups.	To simplify agricultural investments and enhance transparency.
Focus Areas	Investment in agriculture, technology-driven start-ups, farm mechanization, and rural enterprises.	Facilitating access to information and applications for various government schemes in agriculture.
Objectives	- Foster investment in agriculture.	- Streamline the investment process.
	- Create employment opportunities.	- Provide guidelines for market entry strategies and regulatory frameworks.
	- Encourage youth participation in agriculture.	- Empower women in agriculture through special provisions and training programs.
	- Strengthen the agricultural value chain.	

## Science &amp; Technology

## 12. MITOCHONDRIA

### Context:

Researchers have been **studying the role of mitochondria, the cell's powerhouses, in Parkinson's disease.**

- Mitochondria are **dynamic, constantly changing in size, number, and location to meet cellular demands.**
- Imbalances in **mitochondrial dynamics have been linked to neurodegenerative diseases, including Parkinson's.**
- The research team focused on a **protein called Drp1, which controls mitochondrial division. Excessive Drp1 activity causes mitochondria to fragment, leading to cellular dysfunction and death.**
- By reducing Drp1 activity in lab models of Parkinson's,** including cell cultures and animal models, researchers were **able to restore normal mitochondrial function, protect neurons from disease, and improve motor function in rats.**

These findings suggest that **targeting Drp1 could be a promising treatment for Parkinson's disease,** and the **researchers are now testing FDA-approved compounds that inhibit Drp1 as potential therapies.**

Parkinson's disease, a neurodegenerative disorder **characterized by the death of brain cells that control movement, leading to the disease's signature tremors.**

Currently, no **treatments exist that can halt or slow down this cell death.**

## 13. INDIA SEMICONDUCTOR MISSION (ISM)

**Context:** The Union Cabinet approved a Rs 3,300 crore **proposal by Kaynes Semicon Pvt Ltd to establish a semiconductor unit in Sanand, Gujarat.**

- This **unit, part of the India Semiconductor Mission (ISM), will produce nearly 60 lakh chips daily for ap-**

- **Applications across various sectors**, including automotive, consumer electronics, and telecom.
- The initiative aligns with **India's goal of developing indigenous semiconductor capabilities**.
- **India's semiconductor market is projected to reach \$64 billion by 2026**, positioning the country as a major global semiconductor hub

ISM is a **specialized, independent division within the Digital India Corporation**.

**Objective:** It aims to **develop a robust semiconductor and display ecosystem** to establish India as a **global hub for electronics manufacturing and design**.

**Responsibilities:** ISM has **full administrative and financial powers** to drive the semiconductor ecosystem in India, **focusing on manufacturing, packaging, and design**.

**Advisory Board:** The division is supported by an **advisory board of leading global semiconductor experts**.

**Role:** ISM serves as the nodal agency for implementing schemes under the Semicon India Programme.

## 14. PROJECT STRAWBERRY

**Context:**

**OpenAI's Project Strawberry** is an **upcoming AI model** expected to be **significantly more advanced in math, programming, and reasoning than existing chatbots**.

- Likely to be **integrated into ChatGPT-5, this model represents a step towards achieving Artificial General Intelligence (AGI), with capabilities akin to the human brain**.
- **Project Strawberry, previously known as Project Q\*, is designed to autonomously conduct internet research, solve complex puzzles, and improve AI's reasoning abilities**.
- It is also **expected to generate high-quality synthetic data, addressing the scarcity of accessible training data on the internet**.
- This synthetic data **aims to reduce biases and errors, potentially leading to breakthroughs in fields like scientific research and personalized education**.

The project **underscores OpenAI's commitment to advancing AI** while addressing security concerns raised by its rapid development.

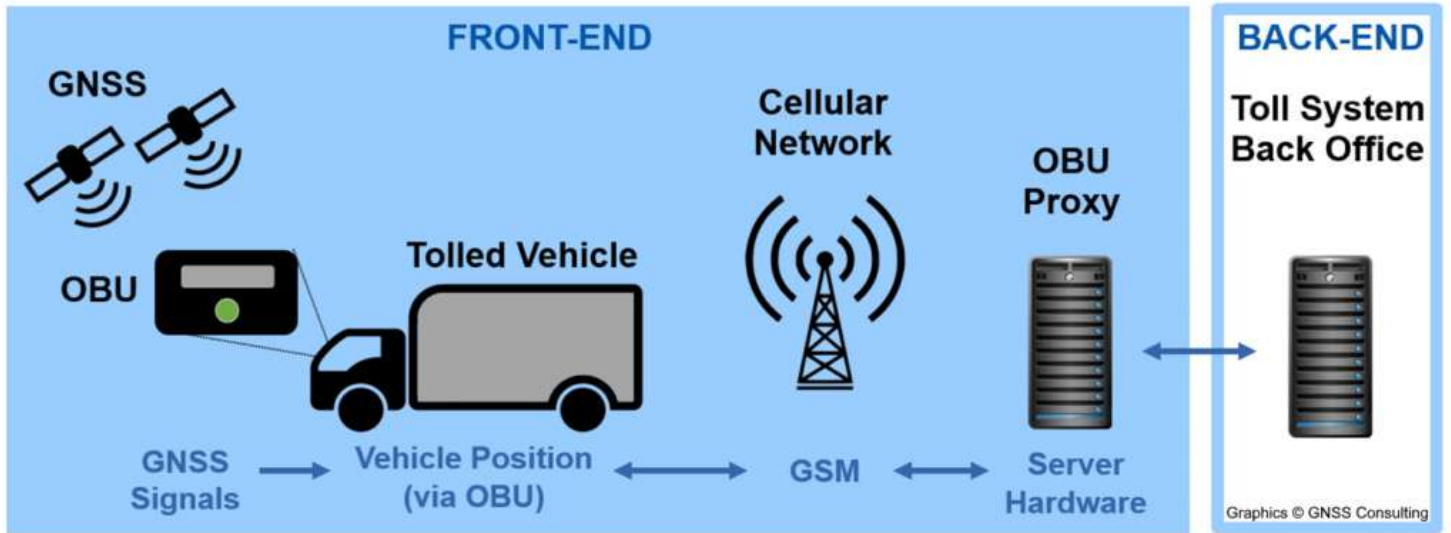
## 15. GNSS-BASED ELECTRONIC TOLL COLLECTION (ETC) SYSTEM

**Context:**

The **introduction of the GNSS-based Electronic Toll Collection (ETC) system** in India aims to **eliminate delays at toll plazas by allowing vehicles to pass without stopping, replacing the current FASTag system**.

- The **Ministry of Road Transport & Highways (MoRTH)** has developed a **GIS-based software for real-time monitoring of congestion at toll plazas, starting with 100 plazas**.
- The **GNSS-based tolling system will charge users based on the distance travelled and will eventually replace toll barriers, allowing for seamless traffic flow**.
- Initially, **it will operate alongside the FASTag system, with dedicated GNSS lanes at toll plazas**.
- Over time, the **entire system will shift to GNSS-based tolling**.

A GNSS-based Electronic Toll Collection (ETC) system leverages Global Navigation Satellite System (GNSS) technology to **enable automatic, location-based toll collection on highways without the need for physical toll booths**. Unlike traditional toll collection systems, where vehicles stop at toll gates, a GNSS-based ETC system **uses satellite positioning to determine the vehicle's location and calculate toll charges based on the distance travelled**.



## 16. FWD 200B

### Context:

Bengaluru-based **company Flying Wedge Defence and Aerospace (FWDA)** announced the successful **maiden flight of India's first indigenous combat unmanned aerial vehicle (UAV), the FWD 200B.**

- This **Medium Altitude Long Endurance (MALE) Unmanned Combat Aerial Vehicle (UCAV)** is equipped with **optical payloads for surveillance and missile-like weapons for air strikes and bombing.**
- Operating at a **cruise altitude of 12,000 feet and a maximum altitude of 15,000 feet,** the UAV can **reach speeds of 250 km/h and has a range of 800 km with 7 hours of endurance.**
- **The FWD 200B requires only a 300-meter runway for takeoff,** allowing for operation from shorter air-strips.

This marks a **major achievement for India's defense sector, reducing dependence on foreign military technology** and overcoming challenges faced by previous initiatives.

## 17. VISHANU YUDDH ABHYAS

### Context:

The "**Vishanu Yuddh Abhyas**" **mock drill, conducted under the National One Health Mission (NOHM),** aimed to **evaluate India's preparedness for zoonotic disease outbreaks.**

- The exercise assessed the **readiness of the National Joint Outbreak Response Team (NJORT),** comprising experts from **human health, animal husbandry, and wildlife sectors.**
- A simulated outbreak scenario was **created to test the response of various agencies, including the National Centre for Disease Control (NCDC), Indian Council of Medical Research (ICMR), and state authorities.**
- The **drill involved virus identification and outbreak control measures,** with independent observers monitoring the response.

## 18. INDIA GRAPHENE ENGINEERING AND INNOVATION CENTRE (IGEIC) LAUNCHED

### Context:

The Ministry of Electronics and IT (MeitY) launched the **India Graphene Engineering and Innovation Centre (IGEIC) under the Graphene Aurora Program (GAP),** which was initiated in 2023 to foster the graphene technology ecosystem.

Located in **Trivandrum, Kerala, IGEIC is a non-profit** that aims to bridge the gap between R&D and commercialization, providing support to startups and industry. This follows the earlier launch of **India's first graphene centre, the India Innovation Centre for Graphene (IICG)** in Kerala.

### Graphene, the material of the future

The so-called "God's material" is tipped to revolutionise electronics, the aerospace industry, energy and medicine

**Composition**  
A one-atom-thick layer of carbon atoms tightly fitted together

**STRONG**  
200 times stronger than steel

**TOUGH**  
Tougher than diamond

**LIGHT**  
1 m<sup>2</sup> weighs less than 1g

**FLEXIBLE**  
More flexible than carbon fibre

**CONDUCTIVE**  
High thermal and electrical conductivity

**BIOCOMPATIBLE**  
Not toxic for biological cells

**ECO-FRIENDLY**  
Made of pure carbon, like graphite

**DAMP-PROOF**  
Repels water and corrosion

Its structure is similar to a honeycomb

**Fake news on graphene**

- Is it a component of Covid-19 vaccines? **NO**
- Does it have natural magnetic properties? **NO**
- Does it become "active" with 5G technology? **NO**
- Does it affect neural functions? **NO**

## 19. SCIENTISTS ADVANCE UNIFICATION OF CLASSICAL & QUANTUM GRAVITY

### Context:

Researchers have made progress in unifying classical gravity with quantum mechanics by deriving an uncertainty relation from gravitons, the hypothetical quantum particles mediating gravity. Their work reveals how quantum effects cause noise in gravitational wave detectors like LIGO, and they have derived an uncertainty relation between position and momentum induced by graviton noise. This finding suggests a true quantum gravitational effect and supports the theory that gravity can be quantized.

### How are scientists trying to unify the two theories?

Scientists are researching how atoms falling into a black hole emit radiation and its quantum behaviour, resembling Hawking radiation. Their calculations on this radiation, known as "horizon brightened acceleration radiation entropy", reveal insights into the Einstein principle of equivalence.

This work aims to unify quantum theory and general relativity into a single theory called "quantum gravity", enhancing our understanding of the universe from tiny particles to immense galaxies.

### Environment & Ecology

## 20. OPERATION BHEDIYA

### Context:

In Bahraich, Uttar Pradesh, a series of wolf attacks have led to the death of a three-year-old girl and injuries to two women, despite ongoing efforts under "Operation Bhediya".

- The operation, aimed at capturing the man-eating wolves responsible for several attacks, has successfully caught four wolves, but the community remains frustrated due to the continued threat.

### About Indian Gray Wolf:

Scientific Name: *Canis lupus pallipes*

### Conservation Status

IUCN: Least Concern

Wildlife (Protection) Act of 1972: Schedule I

CITES: Appendix 1

### Disaster Management

## 21. GLACIAL LAKE OUTBURST FLOOD (GLOF)

### Context:

A central team, as part of the GLOF (Glacial Lake Outburst Flood) Early Warning Systems Mission, visited Tenchungkha Lake in Sikkim, marking the first of 16 planned assessments in the region.

- The NDMA (National Disaster Management Authority) has identified 188 critical lakes across the Indian Himalayan Region, vulnerable to GLOF events, and is working with state governments and experts, including ISRO scientists, to implement early warning systems and risk mitigation strategies.

Glacial lakes are large bodies of water formed by melt-water from glaciers, located in front of, on top of, or beneath melting glaciers.

**Unifying quantum theory and general relativity**

**Context:** A team of scientists have explored quantum effects on radiation from black holes due to falling atoms, shedding light on unifying quantum theory and general relativity.

### About Quantum theory and General Relativity

Aspects	Quantum Theory	General Relativity by Albert Einstein
Scope	Deals with <b>microscopic particles</b> and their interactions	Describes the motion of <b>bigger objects in a gravitational field</b>
Scale	Operates at the <b>quantum (subatomic) level</b>	Applies to cosmological (large-scale) phenomena like Planets, Stars
Fundamental Theory	Explains the behavior of <b>matter and energy at small scales</b>	Describes the <b>force of gravity at a cosmic level</b>
Key Phenomena	Superposition, Entanglement, Wave-particle duality	Time dilation, Gravitational waves, Curved spacetime
Examples	<b>Superposition:</b> A particle can exist in multiple states simultaneously. E.g., <b>Schrödinger's cat</b> , which can be both alive and dead at once	<b>Time Dilation:</b> Time passes slower in a stronger gravitational field e.g., <b>Clocks on GPS satellites</b> run slightly faster than on Earth

**What are the issues of unifying quantum theory and general relativity?**

Both the theories are inherently incompatible as one describes the **microscopic behavior of particles (quantum theory)**, while the other explains the **gravitational interactions at cosmic scales (general relativity)**. This conflict is known as the problem of **quantum gravity**.

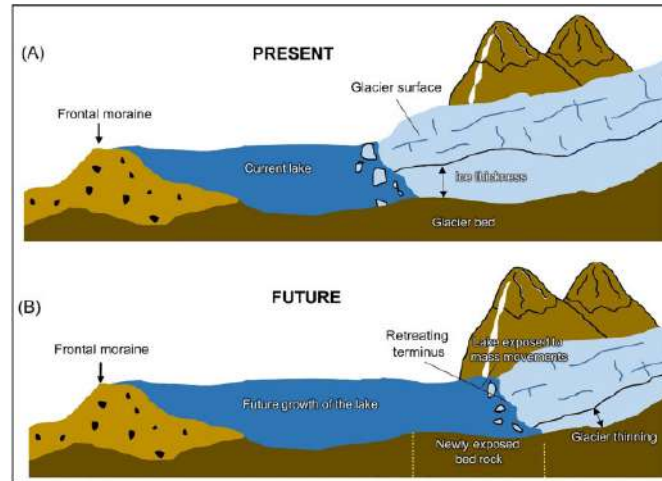
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They develop near the **glacier's snout as meltwater accumulates**.

**Hazard:** As these lakes grow, they are often dammed by **unstable ice or loose sediment, making them dangerous**.

**GLOF (Glacial Lake Outburst Flood):** This occurs when the **dam or boundary around a glacial lake fails, causing a sudden release of water that can flood downstream areas**.

**Triggers:** GLOFs can be caused by earthquakes, heavy rains, or ice avalanches.



[Defence](#)

## 22. 'ARAVALLI' HELICOPTER ENGINES

**Context:**

**Hindustan Aeronautics Limited (HAL)** has partnered **with SAFHAL Helicopter Engines Pvt. Ltd.** to jointly develop and manufacture a **new high-power helicopter engine named 'Aravalli'**.

- This collaboration is **focused on supporting the Indian Multi-Role Helicopter (IMRH) and the Deck-Based Multi-Role Helicopter (DBMRH)**, both of which are being developed by HAL.
- **Purpose:** These engines are **intended for the 13-ton Medium Lift class, IMRH, and DBMRH helicopters**.
- **Strategic Impact:** The partnership aims to **boost India's self-reliance in aerospace and defence technology**, aligning with the **broader goal of enhancing indigenous development**.

This project is a significant step **in advancing India's capabilities in helicopter engine technology** and **strengthening the strategic relationship between India and France**.

## 23. PROJECT NAMAN


**Context:**

The **Indian Army launched Project NAMAN to support Defence Pensioners, Veterans, and their families, centred around the SPARSH digital pension system**.

- The project aims to **streamline pension processes and provide essential services through Common Service Centres (CSCs) across India**.
- These centres, supported by HDFC Bank and managed by veterans or their families, **offer SPARSH-enabled pension services, e-Governance, and banking solutions**, reflecting the Army's commitment to **veteran welfare and community empowerment**.

**MAPPING**

INTERNATIONAL

Place	Why in News?
<p><b>1. SUDAN</b></p>	<p><b>Context:</b> The <u>war in Sudan, now over 500 days old</u>, continues to <u>wreak havoc as the Sudanese Armed Forces (SAF) and the Rapid Support Forces (RSF)</u> remain engaged in a brutal power struggle.</p> <ul style="list-style-type: none"> <li>The war <u>has devastated cities, displaced entire communities, and plunged over half of Sudan's population—25.6 million people</u>—into acute hunger, with more than 755,000 on the brink of famine.</li> </ul> <p><b>About Sudan:</b> Sudan is located in <u>Northeast Africa and shares borders with several countries: Central African Republic to the southwest, Chad to the west, Egypt to the north, Eritrea to the northeast, Ethiopia to the southeast, Libya to the northwest, and South Sudan to the south.</u></p> <p>It also <u>has a coastline along the Red Sea</u>. Before South Sudan's secession in 2011, <u>Sudan was the largest country by area in both Africa and the Arab League.</u></p>  <p style="text-align: right; font-size: small;">© Encyclopædia Britannica, Inc.</p>

## 2. BRUNEI DARUSSALAM

**Context:** Prime Minister Narendra Modi's official visit to Brunei Darussalam marks a significant milestone as the first Indian PM to visit the nation, celebrating 40 years of diplomatic ties.

- Brunei plays a **crucial role in India's 'Act East' Policy and Indo-Pacific Vision.** As a major **oil and gas producer and an ASEAN member,** Brunei is vital for India's economic and strategic interests, especially in counterbalancing China's influence in the region.
- **Location:** A Southeast Asian country with two non-contiguous regions on the northern coast of Borneo Island.
- **Borders:** Surrounded entirely by Malaysia's Sarawak state, except for its northern coastline on the South China Sea.
- **Membership:** Part of the Commonwealth and ASEAN.

