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SURROGACY

FINANCIAL ACTION TASK FORCE

SUPERMOON

TEJAS MK1A FIGHTER

THUMRI



**TOPPER'S
RECOMMENDED**

BEST CHOICE

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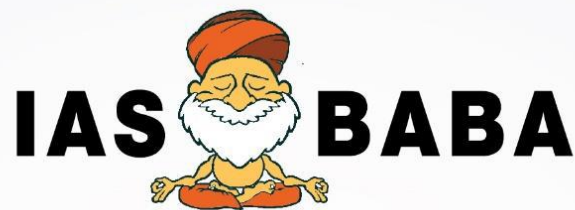
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PRELIMS



POLITY & GOVERNANCE



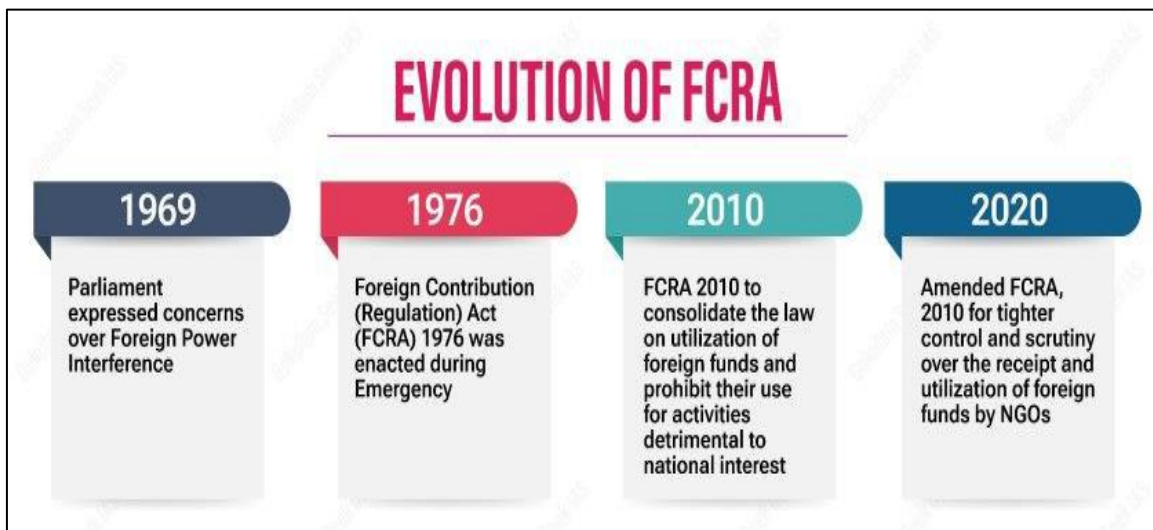
FOREIGN CONTRIBUTION REGULATION ACT (FCRA)

Context:

- The Union Ministry of Home Affairs directed NGOs to submit applications for renewal of their Foreign Contribution (Regulation) Act (FCRA) registration at least four months before expiry.

About Foreign Contribution (Regulation) Act (FCRA), 2010:

- Nature:** The Foreign Contribution (Regulation) Act (FCRA), 2010, regulates foreign contributions to protect national sovereignty and security. It governs the receipt and use of foreign contributions by individuals, associations, and companies operating in India.
- Objective:** The FCRA 2010 aims to ensure that foreign donations do not compromise the nation's sovereignty or internal security.
- Amendments:** Amendments were made in 2020 which brought certain changes.

**About Foreign Contribution (Regulation) Amendment Act, 2020:**

- Validity & Renewal:** FCRA registration is valid for five years, and NGOs are required to apply for renewal within six months of the registration's expiry.
- Mandates Aadhaar:** Office bearers must provide an Aadhaar or passport/OCI card for registration.
- Need for SBI account:** Contributions must be received in a designated SBI branch in New Delhi.
- Puts a cap on administrative Use:** Administrative expense limits were reduced from 50% to 20%.
- Suspension Extension:** Initially, registration suspension can be enforced for a period of 180 days. This suspension can be further extended by an additional 180 days.
- Prohibits certain activities**
 - The applicant must not represent fictitious entities.
 - The applicant should not have been involved in religious conversion activities, either directly or indirectly.
 - The applicant must not be engaged in activities related to sedition.
 - The FCRA prohibits candidates, journalists, media companies, judges, government servants, politicians, and political organizations from receiving foreign funds.
- FCRA Rules 2022**

- In July 2022, the MHA introduced changes to FCRA rules. These changes included increasing the number of compoundable offences from 7 to 12.
- The rules also raised the limit for contributions from relatives abroad that do not require government intimation from Rs 1 lakh to Rs 10 lakh and extended the time limit for intimation of the opening of bank accounts.

PASSIVE EUTHANASIA

Context:

- Recently, the U.K.'s House of Commons passed the Terminally Ill Adults (End of Life) Bill, reigniting a global conversation about euthanasia.

About Passive Euthanasia:

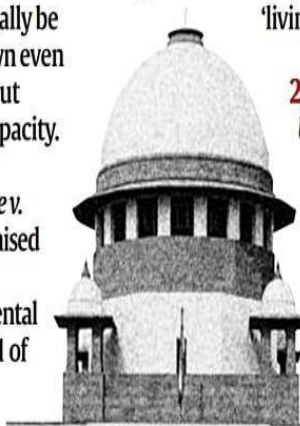
- Definition: Passive euthanasia refers to the intentional withholding or withdrawal of medical treatments or life-sustaining interventions, allowing a person to die naturally from their underlying condition.
- Mechanisms: This can include stopping treatments like ventilators, feeding tubes, or medications that keep the patient alive.
- Implementation: Decisions for passive euthanasia are typically made based on the patient's wishes, advance directives, or through family members and healthcare proxies when the patient cannot make decisions themselves.
- Legality in India: A five-judge bench of the Supreme Court in *Common Cause vs Union of India* (2018) recognised a person's right to die with dignity under Art. 21. It said that a terminally ill person can opt for passive euthanasia and execute a living will to refuse medical treatment.
- Draft guidelines on passive euthanasia: The guidelines for withdrawing or withholding medical treatment in terminally ill patients are based on four key conditions:
 - The individual has been declared brainstem dead.
 - There is a medical assessment that the patient's condition is advanced and unlikely to improve with aggressive treatment.
 - The patient or their surrogate has provided informed refusal to continue life support after understanding the prognosis.
 - The procedure follows the directives set by the Supreme Court.
- Legality in other parts of the world: Euthanasia is legal in several countries such as Netherlands, Belgium, Luxembourg, and Spain.
- Difference with Active euthanasia: Active euthanasia refers to the physician deliberate act, usually the administration of lethal drugs, to end an incurably or terminally ill patient's life. In India, active euthanasia is a crime.

IN THE SUPREME COURT

2011: *Aruna Shanbaug v. Union of India* recognised that life-sustaining treatment could legally be withheld/withdrawn even from persons without decision-making capacity.

of India, and legalised the use of advance medical directives or 'living wills'.

2018: *Common Cause v. Union of India* recognised the right to die with dignity as a fundamental right under Article 21 of the Constitution



2023: *Common Cause v. Union of India* simplified the process for making living wills and withholding/withdrawing life-sustaining treatment by removing bureaucratic hurdles.

CIVIL LIABILITY FOR NUCLEAR DAMAGE ACT (CLNDA), 2010

Context:

- Finance Minister said that government intends to amend Civil Liability for Nuclear Damage Act as deliberations within the government continue on bringing in new legislation to allow the private sector to operate nuclear plants in India.

About Civil Liability for Nuclear Damage Act (CLNDA), 2010:

- Nature:** It is India's nuclear liability law ensuring compensation for victims and defining responsibility for nuclear accidents.
- In sync with CSC:** It aligns with the Convention on Supplementary Compensation (CSC, 1997), adopted post-Chernobyl to set global minimum compensation standards. India ratified CSC in 2016.
- Follows global conventions:** It follows the nuclear liability principles of the Vienna Convention 1963, Paris Convention 1960, and Brussels Supplementary Convention 1963.
- Puts a cap on operator liability:** The Act imposes strict, no-fault liability on operators, caps operator liability at Rs 1,500 crore.
- Provision for intervention of government:** If damage claims exceed Rs 1,500 crore, the CLNDA expects the government to intervene. The government's liability is capped at the rupee equivalent of 300 million Special Drawing Rights (SDRs), roughly Rs 2,100 to Rs 2,300 crore.
- Nuclear Damage Claims Commission:** The Act also establishes a Nuclear Damage Claims Commission to ensure fair compensation and resolve conflicts.
- Supplier Liability:** India's CLNDA is unique as it introduces supplier liability under Section 17(b), enabling operators to seek recourse against suppliers; unlike global frameworks like the CSC, which place liability solely on the operator.
- Broadens supplier responsibility:** Unlike CSC, which allows recourse only for contractual breaches or intentional acts, CLNDA broadens supplier accountability to cases where a nuclear incident results from a supplier's or their employee's act, including the supply of defective equipment, materials, or sub-standard services.



CONTEMPT OF COURT

Context :

- A Supreme Court lawyer has written to Attorney-General seeking consent to initiate criminal contempt proceedings against advocate who allegedly flung papers at Chief Justice of India (CJI) B.R. Gavai during court proceedings.

About Contempt of Court:

- Objective:** Contempt of court seeks to protect judicial institutions from motivated attacks and unwarranted criticism, and as a legal mechanism to punish those who lower its authority.

- Legal backing:
 - When the Constitution was adopted, contempt of court was made one of the restrictions on freedom of speech and expression under Article 19 (2) of the Constitution of India.
 - Separately, Article 129 of the Constitution conferred on the Supreme Court the power to punish contempt of itself. Article 215 conferred a corresponding power on the High Courts.
 - The Contempt of Courts Act, 1971, gives statutory backing to the idea.
- Punishment:
 - A person found guilty of contempt of court can be sentenced to simple imprisonment for up to six months or fined up to Rs. 2,000 or both.
 - In the case of criminal contempt, the Supreme Court or the High Court may take action on its motion or a motion made by the Advocate-General or any other person, with the consent in writing of the Advocate-General.

Types of Contempt of Court:

- Civil Contempt: Section 2(b) of Contempt of Court Act 1971 defines civil contempt as wilful disobedience to any judgment, decree, direction, order, writ or other process of a court or wilful breach of an undertaking given to a court.
- Criminal Contempt: Section 2(c) of the Contempt of Court Act 1971 defines criminal contempt as the publication (whether by words, spoken or written, or by signs, or by visible representations, or otherwise) of any matter or the doing of any other act whatsoever which:
 - scandalises or tends to scandalise, or lowers or tends to lower the authority of, any court; or
 - prejudices, or interferes or tends to interfere with the due course of any judicial proceeding; or
 - interferes or tends to interfere with, or obstructs or tends to obstruct, the administration of justice in any other manner.

SURROGACY

Context :

- Supreme Court said that retrospective age limits under surrogacy law violate reproductive autonomy.

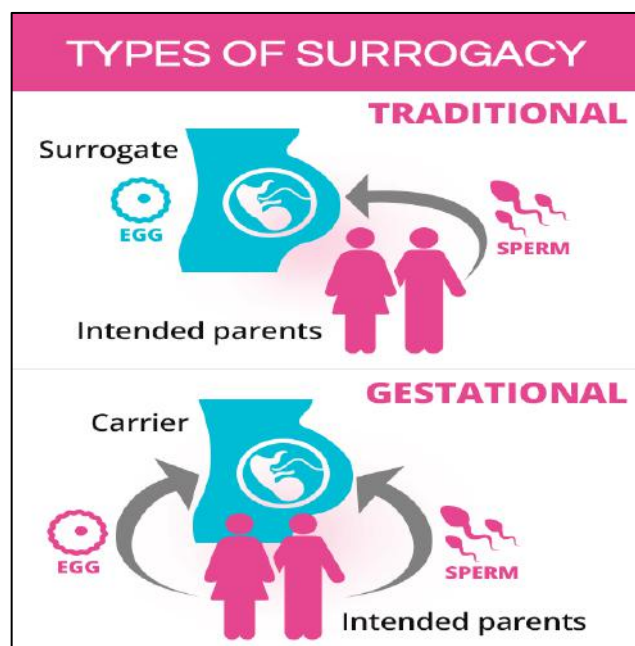
About Surrogacy in India:

- Definition: Surrogacy is an arrangement where a woman (known as the surrogate mother), agrees to carry and deliver a baby for another individual or couple, known as the intended parents.
- Permissibility: Under the Surrogacy (Regulation) Act 2021, Surrogacy is permissible only for altruistic purposes or for couples with proven infertility or disease.
- Prohibition of Commercial surrogacy: Commercial surrogacy, including for sale or exploitation purposes, is strictly prohibited.
- Eligibility for Couples:
 - Couples must be married for at least 5 years.
 - The wife must be aged between 25-50 years, and the husband between 26-55 years.
 - The couple must not have any living child, whether biological, adopted, or through surrogacy, except in cases of children with disabilities or life-threatening disorders.
- Criteria for Surrogate mother:
 - The surrogate mother must be a close relative of the couple.
 - She must be a married woman with at least one child of her own.

- Her age must be between 25-35 years, and she must have only been a surrogate once in her life.
- Parental Status upon Birth: Upon birth, the child is legally recognized as the biological child of the intended couple.
- Rule for abortion: Abortion of the foetus requires consent from both the surrogate mother and the relevant authorities, following the provisions of the Medical Termination of Pregnancy Act.

Types and Forms of Surrogacy:

- Different types of Surrogacy:
 - Traditional Surrogacy: Traditional surrogacy involves using the intended father's sperm to fertilise the surrogate's egg. The surrogate carries the pregnancy to term, and the resulting baby is biologically related to the surrogate mother and the intended father.
 - Gestational Surrogacy: In gestational surrogacy, the baby is not biologically related to the surrogate. An embryo, created using the intended father's sperm (or donor sperm) and the biological mother's egg (or donor egg), is implanted into the surrogate's uterus for her to carry to term.
- Various forms of Surrogacy:
 - Altruistic Surrogacy: It refers to a surrogacy arrangement where the surrogate does not receive financial compensation beyond reimbursement for medical expenses and other related costs. The primary motivation for the surrogate in altruistic surrogacy is typically to help another individual or couple achieve their dream of having a child.
 - Commercial Surrogacy: It involves a contractual agreement where the surrogate mother receives financial compensation beyond just reimbursement for medical expenses and other costs associated with the pregnancy. This compensation may vary depending on factors such as location, legal regulations, and the specific terms of the surrogacy agreement.



CENSUS 2027

Context:

- A four-day training to conduct the pre-test exercise for the first phase of the Population Census 2027 has started, the Registrar General and Census Commissioner (RG & CCI) said.

About Census:

- Feature: The Indian Census is the largest source of demographic and socio-economic data on the country's population.
- First census: India's first synchronised census occurred in 1881 under W.C. Plowden, the then Census Commissioner of India.

- Decennial in nature: It has consistently provided detailed statistical information every 10 years, starting in 1872, when the first non-synchronous census was conducted across different regions of India.
- Legal framework: The Census Act of 1948 was enacted to create a legal framework for census operations and to define the roles of census officers. While the Act provides the legal framework, it does not mandate a specific frequency, making the decennial pattern a convention, not a constitutional requirement.
- Ministry: In May 1949, the Government of India established a permanent Census organization under the Ministry of Home Affairs to systematize the collection of population and demographic data.
- Implementing authority: The Office of the Registrar General was later tasked with implementing the Registration of Births and Deaths Act, 1969, further expanding its role in maintaining vital statistics.
- About Census 2027:
 - The central government has officially notified the conduct of the next decennial census in 2027, exercising its authority under Section 3 of the Census Act, 1948.
 - The Census will have a reference date of 1st March, 2027, for most parts of the country.

UNIFORM CIVIL CODE (UCC)

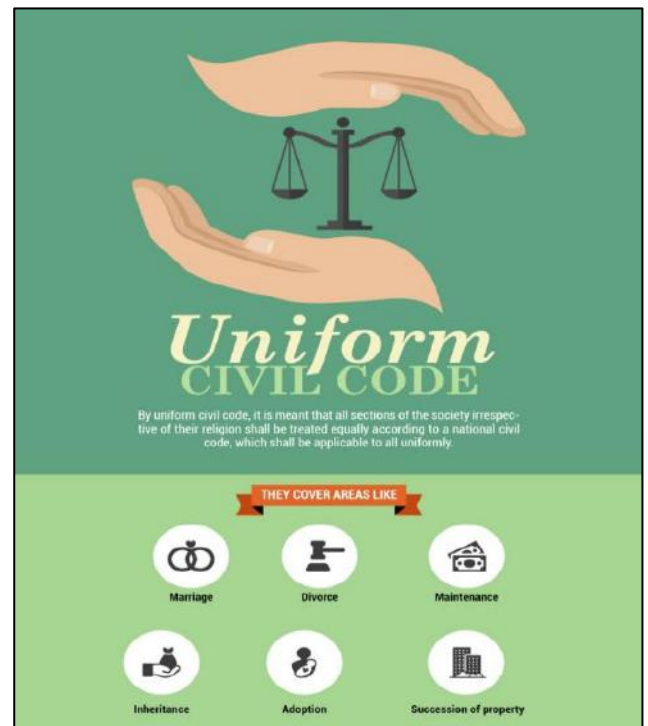
Context:

- The Uttarakhand government approved a crucial amendment in the Uniform Civil Code (UCC) bringing relief to citizens of Nepali and Bhutanese origin who are living in the State and do not have an Aadhaar card as identity proof to register their marriage.

About Uniform Civil Code (UCC):

- Definition: The Uniform Civil Code refers to a single set of laws governing personal matters such as marriage, divorce, adoption, inheritance, and succession for all citizens of India.
- Constitutional provisions:
 - Part of DPSP: The concept of UCC is mentioned in Article 44 of the Indian Constitution as a Directive Principle of State Policy, which states that the state shall endeavour to secure a uniform civil code for citizens throughout the territory of India.
 - Entry 5 of the Concurrent List in the Seventh Schedule: It specifically addresses various aspects including marriage, divorce, adoption, and succession, among others, allowing for legislation concerning personal laws.
- Important judgements:
 - 1985 - Shah Bano Case: The Court upheld a Muslim woman's right to maintenance, linking UCC to national integration.
 - 1995 - Sarla Mudgal Case: Strongly favoured UCC, especially for the majority Hindu population, questioning the delay in its implementation.
 - 2017 - Shayara Bano Case: Addressed triple talaq, reigniting the UCC debate but separating it from the issue of human rights.
- Arguments in favour:
 - A UCC would ensure equal rights and treatment for all citizens, regardless of their religious background. This aligns with Article 14 of the Indian Constitution, which guarantees equality before the law.
 - Many personal laws have been criticized for being discriminatory towards women. A UCC could address issues like triple talaq, unequal inheritance rights, and child marriage.

- India's current system of multiple personal laws based on religion creates a complex legal landscape. A UCC would simplify this system, making it easier for courts to administer justice and for citizens to understand their rights.
- Arguments against:
 - India's pluralistic society is characterized by a rich blend of cultural and religious practices, many of which are protected under personal laws. Critics argue that a UCC could erode this diversity, leading to cultural homogenization.
 - Opponents of UCC argue that it could infringe on the right to religious freedom guaranteed by Article 25 of the Constitution. They contend that personal laws are an integral part of religious practice for many communities.
 - There are concerns that a UCC could disproportionately affect minority communities, potentially leading to a sense of marginalization.



PROTECTION OF CHILDREN FROM SEXUAL OFFENCES (POCSO)

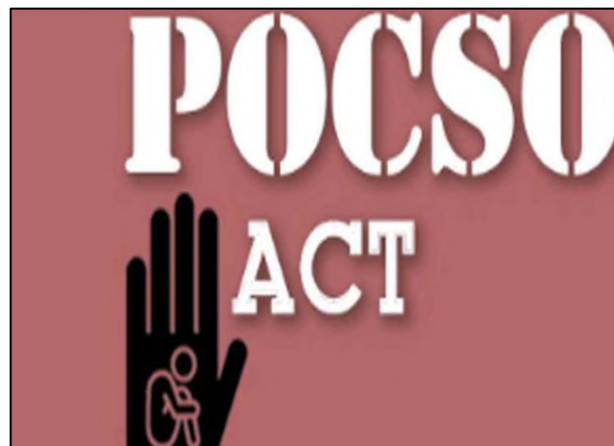
Context:

- The Madras High Court has held that involving the parents of victim, is essential for deciding on applications filed by individuals accused of offences under the Protection of Children from Sexual Offences (POCSO) Act.

About Protection of Children from Sexual Offences (POCSO):

- Enactment: The POCSO Act came into effect on 14th November 2012 which was enacted in consequence to India's ratification of the UN Convention on the Rights of the Child in 1992.
- Objective: The aim of this special law is to address offences of sexual exploitation and sexual abuse of children, which were either not specifically defined or in adequately penalised.
- Definition of a child: The Act defines a child as any person below the age of 18 years. The Act provides punishment as per the gravity of offence.
- Major features of the Act:
 - The Act recognizes that both girls and boys can be victims of sexual abuse and that such abuse is a crime regardless of the gender of the victim.
 - There is sufficient general awareness now to report cases of sexual exploitation of children not only by individuals but also by institutions as non-reporting has been made a specific offence under the POCSO Act.
 - The storage of child pornography material has been made a new offence.
 - Further, the offence of 'sexual assault' has been defined in explicit terms (with increased minimum punishment) unlike an abstract definition of 'outraging modesty of a woman' in the Indian Penal Code.
- Further amendments:

- The Act was further reviewed and amended in 2019 to introduce more stringent punishment including the death penalty for committing sexual crimes on children, with a view to deter the perpetrators & prevent such crimes against children.
- The Government of India has also notified the POCSO Rules, 2020.
- About POCSO Rules, 2020:
 - Rule-9 of the POCSO Rules allows the Special Court to order interim compensation for the child's needs related to relief or rehabilitation after the FIR's registration.
 - The Child Welfare Committee (CWC) may recommend immediate payment for essential needs like food, clothes, and transportation, using funds from the District Legal Services Authority (DLSA), the District Child Protection Unit (DCPU), or funds maintained under the Juvenile Justice Act 2015.
 - The POCSO Rules empower the CWC to provide a support person to assist the child throughout the investigation and trial process.



DIGITAL ARREST

Context:

- The Central Bureau of Investigation (CBI) said it arrested three persons in connection with the ongoing investigation into the digital arrest fraud, under the aegis of ongoing Operation Chakra V.

About Digital Arrest:

- Definition: Digital arrest scams involve cybercriminals impersonating law enforcement officials or government agencies such as the State police, CBI, ED, and Narcotics Bureau defrauding gullible victims of their hard-earned money.
- Nature of victims: The cybercriminals typically accuse victims of serious crimes such as money laundering, drug trafficking, or cybercrime. They may fabricate evidence to make their accusations seem credible.
- Modus Operandi:
 - Cybercriminals contact victims by phone or email, starting with audio calls and then video calls from places like airports, police stations, or courts.
 - They use photos of police officers, lawyers, and judges as display pictures on their social media accounts to appear legitimate.
 - They may also send fake arrest warrants, legal notices, or official-looking documents via email or messaging apps.
- Reasons behind rise in digital arrest:
 - Fear and Panic: Fear of arrest threats push victims to comply without rational thought.
 - Lack of Knowledge: Unfamiliarity with law enforcement procedures makes it difficult for victims to distinguish legitimate claims from fraud.



- Social Stigma: Fear of social stigma and impact on family motivates victims to comply to avoid embarrassment.
- Manipulative Techniques: Use of AI voices, professional logos, and simulated video calls to appear credible and increase victim compliance.

India's initiatives to fight against Cyber Crime and Digital Arrest:

- Indian Cyber Crime Coordination Centre (I4C): Established by the Ministry of Home Affairs, this center coordinates national efforts to combat cybercrime and provide cybercrime prevention resources.
- National Cyber Crime Reporting Portal: A dedicated portal allows the public to report cybercrimes, with a focus on cases involving women and children, enabling swift action by law enforcement.
- Financial Cyber Fraud Reporting System: Launched in 2021, this platform has successfully saved over ₹3431 Crore across 9.94 lakh complaints by allowing immediate reporting of financial frauds.
- Cyber Forensic Labs: The National Cyber Forensic Laboratory in Delhi and the Evidence Lab in Hyderabad have significantly improved the ability of police to manage and analyze digital evidence.
- Training through CyTrain: I4C's online platform trains law enforcement and judicial officers on investigating and prosecuting cybercrime, with over 98,000 police officers trained so far.
- Public Awareness Campaigns: The government has implemented awareness campaigns through SMS, social media, Cyber Dost, SancharSathi portal and app, and even digital displays in public spaces like metro stations and airports.

NATIONAL COMMISSION FOR MINORITIES (NCM)

Context:

- The Delhi High Court sought a response from the Union government on long-pending vacancies in the National Commission for Minorities (NCM).

About National Commission for Minorities (NCM):

- Genesis: The Minorities Commission (MC) was established in 1978 through a Ministry of Home Affairs Resolution and was moved to the newly created Ministry of Welfare in 1984.
- Nature: It is a statutory body established under the National Commission for Minorities Act, 1992. The first statutory Commission was constituted on 17th May 1993. In 1988, the Ministry of Welfare excluded linguistic minorities from the Commission's jurisdiction.
- Objective: It was formed with the vision to safeguard and protect the interests of minority communities.
- Composition: It consists of a Chairperson, a Vice-Chairperson, and five Members, all nominated by the Central Government but absence of a full body has led to concerns over inefficiency.
- Eligibility of members: Each member must belong to one of the six notified minority communities: Muslim, Christian, Sikh, Buddhist, Parsi, and Jain.
- Powers: It has quasi-judicial powers and each member serves a three-year term from the date they assume office.



- Removal: The Central Government may remove the Chairperson or any Member of the NCM if they:
 - Are adjudged insolvent,
 - Take up paid employment outside their duties,
 - Refuse or become incapable of acting,
 - Are declared of unsound mind by a court,
 - Abuse their office, or
 - Are convicted of an offence involving moral turpitude.

About Minorities in India:

- Not defined by Constitution: The Constitution of India does not provide a definition for the term 'Minority', but the Constitution recognises religious and linguistic minorities. The NCM Act, 1992 defines a minority as "a community notified as such by the Central government.
- List of Minority Communities: As per a 1993 notification by the Ministry of Welfare, the Government of India initially recognized five religious communities—Muslims, Christians, Sikhs, Buddhists, and Zoroastrians (Parsis) as minority communities. Later, in 2014, Jains were also notified as a minority community.

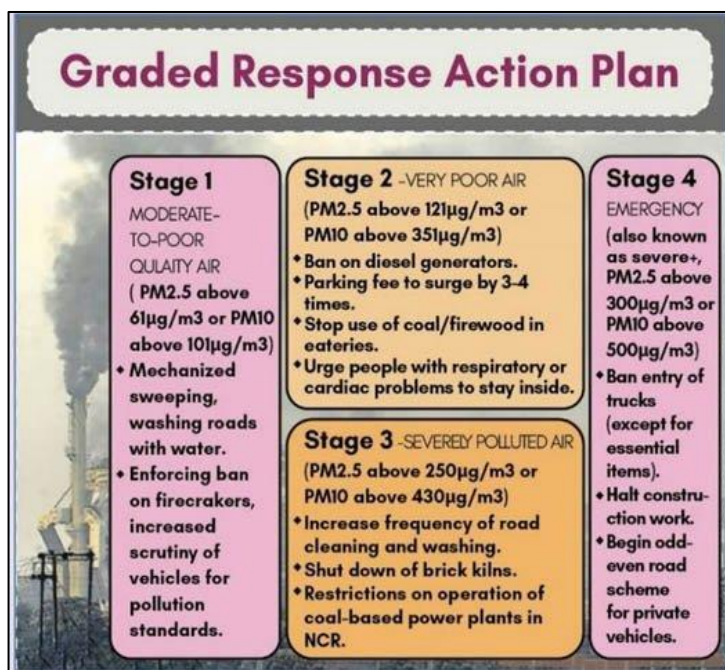
GRADED RESPONSE ACTION PLAN (GRAP)

Context:

- Chief Minister of Delhi appealed to residents to celebrate Deepavali by bursting only certified green crackers as the Capital's air quality index (AQI) crossed 300, prompting the enforcement of stage II of the Graded Response Action Plan (GRAP).

About Graded Response Action Plan (GRAP):

- Nature: GRAP is a set of emergency measures that kick in to prevent further deterioration of air quality once it reaches a certain threshold in the Delhi-NCR region.
- Judgement: It was approved by the Supreme Court in 2016 after the Supreme Court's order in the matter of M. C. Mehta vs. Union of India (2016) and notified in 2017.
- Implementation: The Commission for Air Quality Management (CAQM) in NCR and adjoining areas oversees the implementation of GRAP. It collaborates with the Ministry of Environment, Forest and Climate Change (MoEFCC).
- Evolution:
 - Till 2020, the Supreme Court-appointed Environment Pollution (Prevention & Control) Authority (EPCA) used to order States to implement GRAP measures.
 - The EPCA was dissolved and replaced by the Commission for Air Quality Management (CAQM) in 2020.
 - From 2021 onwards, the GRAP is being implemented by the CAQM.



- Role of IITM and IMD: CAQM relies on air quality and meteorological forecasts by the Indian Institute of Tropical Meteorology (IITM) and the India Meteorological Department (IMD).
- Various stages of GRAP:
 - Stage I (Poor Air Quality - AQI 201-300): Enforce NGT / Hon'ble SC's order on over aged diesel / petrol vehicles.
 - Stage II (Very Poor- AQI 301-400): Targeted actions to combat air pollution at identified hotspots in the region. Regulated operations of DG (Diesel Generators) have been set across all sectors in the NCR.
 - Stage III ('Severe'- AQI 401-450): Impose strict restrictions on BS III petrol and BS IV diesel four-wheelers in certain areas and may suspend physical classes in schools for primary grade children up to Class 5.
 - Stage IV (Severe Plus- AQI greater than 450): When the AQI exceeds 450, four-wheelers registered outside Delhi, except for electric vehicles, CNG vehicles, and BS-VI diesel vehicles and vehicle carrying essential commodity, will not be allowed to enter the city.

NATIONAL HUMAN RIGHTS COMMISSION (NHRC)

Context:

- The National Human Rights Commission (NHRC) issued notice to the Kerala, Tripura, and Manipur governments over the alleged attack on three journalists at different places in the States in the past three months.

About National Human Rights Commission (NHRC):

- Establishment: NHRC was established on 12th October 1993, under the Protection of Human Rights Act (PHRA), 1993.
- Amendments: It was amended by the Protection of Human Rights (Amendment) Act, 2006, and Human Rights (Amendment) Act, 2019.
- Objective: It ensures the protection of rights related to life, liberty, equality, and dignity of individuals. It also ensures the rights guaranteed by the Indian Constitution and international covenants enforceable by Indian courts.
- In sync with Paris principles: It was established in conformity with the Paris Principles, adopted for promoting and protecting human rights.
- Composition: The NHRC consists of a chairperson, five full-time Members and seven deemed Members. The chairman is a former Chief Justice of India or a Supreme Court judge.
- Appointment of members: The chairman and members appointed by the President on the recommendations of a six-member committee. The committee consists of the Prime Minister, the Speaker of the Lok Sabha, the Deputy Chairman of the Rajya Sabha, leaders of the Opposition in both Houses of Parliament, and the Union Home Minister.
- Tenure of members: The chairman and members hold office for a term of three years or until they reach the age of 70.
- Major functions:
 - It possesses powers of a civil court with judicial proceedings.
 - It is empowered to utilise the services of central or state government officers or investigation agencies for investigating human rights violations.
 - It can investigate matters within one year of their occurrence.



- Not binding: Its recommendations are primarily advisory in nature.

CENTRAL DRUGS STANDARD CONTROL ORGANIZATION (CDSCO)

Context:

- The Drugs Controller General of India (DCGI), which heads the Central Drugs Standard Control Organization (CDSCO) has directed digital monitoring for tracking the supply chain of high-risk solvents.

About Central Drugs Standard Control Organization (CDSCO):

- Nature: It is the National Regulatory Authority (NRA) of India for the medical devices industry under the provisions of the Drugs & Cosmetics Rules.
- Ministry: It works under the Ministry of Health & Family Welfare.
- Headed by: Drugs Controller General of India (DCGI) is the head of the CDSCO.
- Headquarters: Its headquarters is located in New Delhi.
- Major functions: Under the Drugs and Cosmetics Act, CDSCO is responsible for,
 - Regulatory control over the import of drugs
 - Approval of new drugs and clinical trials
 - Approval of certain licences as Central Licence Approving Authority
 - Coordination of the activities of State Drug Control Organizations.



About Drugs Controller General of India (DCGI):

- DCGI is the head of the department of the CDSCO of the Government of India.
- It is responsible for approval of licences of specified categories of drugs such as blood and blood products, IV fluids, vaccines and sera in India.
- DCGI also sets standards for the manufacturing, sales, import, and distribution of drugs in India.

8TH CENTRAL PAY COMMISSION (CPC)

Context:

- The Union Cabinet has approved the Terms of Reference of the 8th Central Pay Commission (CPC), the body in charge of deciding the pay structure and retirement benefits of central government employees.

About 8th Central Pay Commission (CPC):

- Nature: The 8th Central Pay Commission (CPC) is a temporary expert body set up by the Union Government to review and recommend revisions in the salary structure, allowances, and pension benefits of Central Government employees.
- Establishment: It was announced in January 2025 and formally constituted after Cabinet approval in October 2025 to ensure timely implementation from 2026.
- Composition: It has 3 members. It is headed by Justice Ranjana Prakash Desai (Retd.) and the other two members include Prof. Pulak Ghosh (IIM Bangalore) and Pankaj Jain, IAS (Petroleum Secretary).
- Tenure: The Commission will submit its final report within 18 months of constitution and may provide interim recommendations on specific issues.
- Coverage: The 8th CPC covers serving and retired employees of the Central Government, defence forces, All India Services, and Union Territories.

- **Functions:** It will examine and propose changes in pay scales, allowances, and pension structures. It will also consider the overall economic situation and maintain budgetary discipline while recommending pay revisions.
- **Equity Across Sectors:** It will ensure parity between Central services, PSUs, and private sector employees in terms of emoluments and working conditions.
- **Sustainability of Pensions:** It will address concerns related to non-contributory pension liabilities and their long-term fiscal implications.
- **Expected Implementation:** The recommendations are expected to come into effect from January 1, 2026, continuing the decade-long cycle of pay revisions followed since the First CPC (1946).

Pay Commission	Year	Chairman
First Pay Commission	1947-59	Srinivasa Varadachariar
Second Pay Commission	1959-73	Jaganath Das
Third Pay Commission	1973-87	Raghubir Dayal
Fourth Pay Commission	1987-96	P N Singhal
Fifth Pay Commission	1996-2006	Justice S Ratnavel Pandian
Sixth Pay Commission	2006-16	Justice BN Srikrishna
Seventh Pay Commission	2016-26	Justice Ashok Kumar Mathu

REHABILITATION COUNCIL OF INDIA (RCI)

Context:

- In a decisive move, the Rehabilitation Council of India (RCI) has announced a sweeping set of reforms designed to bring transparency, efficiency and inclusivity to the rehabilitation ecosystem across the country.

About Rehabilitation Council of India (RCI):

- **Nature:** It is a statutory body established by an Act of Parliament.
- **Establishment:** It was set up as a registered society in 1986. In 1992 the RCI Act was enacted by Parliament and it became a Statutory Body in 1993. The Act was amended by Parliament in 2000 to make it more broad-based.
- **Objective:** It aims to regulate and monitor services given to persons with disabilities, to standardise syllabi and to maintain a Central Rehabilitation Register of all qualified professionals and personnel working in the field of Rehabilitation and Special Education.
- **Nodal Ministry:** It comes under the Ministry of Social Justice & Empowerment.
- **Functions:** It regulates the training policies and programmes in the field of rehabilitation of persons with disabilities. It brings about standardization of training courses for professionals dealing with persons with disabilities.
- **Recognition to associated institutions:** It recognizes the national institutes and apex institutions on disability as manpower development centres. The Council also prescribes minimum standards of education and training for 16 categories of professionals and personnel allocated to RCI.
- **Important laws in India to deal with disabilities:**
 - Indian Lunacy Act, 1912
 - Mental Health Act, 1987
 - Rehabilitation Council of India Act, 1992
 - Persons With Disability Act, 1995
 - National Trust Act, 1999
 - Right To Education Act, 2010





INTERNATIONAL RELATIONS



SIR CREEK

Context :

Context:

- Defence Minister Rajnath Singh warned Pakistan that “any aggression by Pakistan in the Sir Creek area will be met with a resounding response that will change both history and geography.”

About Sir Creek:

- Disputed area: Sir Creek is a 96-km strip of water disputed between India and Pakistan in the Rann of Kutch marshlands.
- Nomenclature: Originally named Ban Ganga, Sir Creek is named after a British representative.
- Acts as a boundary: The Creek opens up in the Arabian Sea and roughly divides the Kutch region of Gujarat from the Sindh Province of Pakistan.
- Importance: Apart from strategic location, Sir Creek’s core importance is fishing resources. Sir Creek is considered to be among the largest fishing grounds in Asia.
- Possibility of oil and gas: The area has possible presence of great oil and gas concentration under the sea, which are currently unexploited thanks to the impending deadlock on the issue.
- Background of dispute:
 - The dispute lies in the interpretation of the maritime boundary line between Kutch and Sindh.
 - Pakistan claims the entire creek as per paragraphs 9 and 10 of the Bombay Government Resolution of 1914 signed between then the Government of Sindh and Rao Maharaj of Kutch, which set the boundary as the eastern flank of the creek popularly known as Green Line.
 - But India claims that the boundary lies mid-channel as depicted in another map drawn in 1925, and implemented by the installation of mid-channel pillars back in 1924. In its support, it cites the Thalweg Doctrine in International Maritime Law, which states that river boundaries between two states may be divided by the mid-channel if the water-body is navigable.
- UNCLOS favours India’s stand: Acceding to India’s stance would mean shifting of the land/sea terminus point several kilometres to the detriment of Pakistan, leading in turn to a loss of several thousand square kilometres of its Exclusive Economic Zone under the United Nations Convention on Law of the Sea (UNCLOS).



WORLD FOOD PROGRAMME

Context:

- Millions of people in Somalia face worsening hunger as major cuts to donor aid leave the World Food Programme with a critical funding shortfall, the UN agency warned.

About World Food Programme:

- Establishment:** It is the world's largest humanitarian agency and was established in 1961.
- Associated with UN:** It is a branch of the United Nations that deals with hunger eradication and promotes food security in the world.
- SDG 2:** The organization's work is guided by Sustainable Development Goal 2, which aims to end hunger, achieve food security and improved nutrition, and promote sustainable agriculture by 2030.
- Extent:** It operates in more than 120 countries, provides food assistance during emergencies and works with communities to enhance nutrition and generate resilience.
- Funding:** The WFP has no independent source of funds, it is funded entirely by voluntary donations. Its principal donors are governments, but the organization also receives donations from the private sector and individuals.
- Nobel prize:** The WFP has been awarded with the Nobel Prize for Peace 2020 for its efforts to combat hunger, bettering conditions for peace in conflict-affected areas and preventing the use of hunger as a weapon of war and conflict.
- Reports by WFP:** The report released by the WFP is the Global Report on Food Crisis which describes the scale of acute hunger in the world.
- Headquarters:** Its headquarter is located in Rome, Italy.



INTERNATIONAL ATOMIC ENERGY AGENCY (IAEA)

Context :

- Iran's top diplomat said that cooperation with the IAEA, the UN nuclear watchdog was no longer relevant following the reimposition of international sanctions on it.

About International Atomic Energy Agency (IAEA):

- Nature:** IAEA is an intergovernmental organisation that seeks to promote the peaceful use of nuclear energy and to inhibit its use for any military purpose, including nuclear weapons.
- Establishment:** It was established in 1957 as the world's "Atoms for Peace" organisation within the UN, and governed by its own founding treaty, viz. the Statute of the IAEA.
- Main functions:** The IAEA works to ensure that nuclear technology is used solely for peaceful purposes. It applies comprehensive nuclear safeguards, including: Monitoring, On-site inspections, Information analysis, and Other techniques to verify peaceful use.
- Relations with UN:** It reports to both the UNGA and the UNSC and is headquartered at the UN Office at Vienna, Austria



- Distinction: In 2005, it was awarded the Nobel Peace Prize for its work for a safe and peaceful world.
- Membership: The IAEA has 180 member states, India being one of the founding members of it.
- Institutional structure: The General Conference, composed of all member states, meets annually to approve budgets and set general policy directions.
- Headquarters: Its headquarters is located in Vienna, Austria.

UN PEACEKEEPING FORCE

Context:

- The United Nations will begin slashing its peacekeeping force, as a result of the latest U.S. funding cuts to the world body.

About UN Peacekeeping Force:

- Nature: UN Peacekeeping refers to the activities carried out by the United Nations (UN) to help maintain or restore international peace and security in conflict-affected areas. UN Peacekeepers are also known as 'Blue Helmets.'
- Origin: It began in 1948 with the establishment of the United Nations Truce Supervision Organization (UNTSO) in the Middle East to monitor ceasefires.
- Objective: It was established to respond to the complex nature of conflicts and to support countries in transition from conflict to peace.
- Working principles: UN Peacekeeping operates under the principles of consent, impartiality, and non-use of force, except in self-defence and defence of the mandate.
- Use of civilians: Although the majority of peacekeepers are military or police, approximately 14% are civilians.
- Mandate: UN Security Council provides mandates to Missions by adopting a resolution.
- Award: It was awarded with Nobel Peace Prize in 1988.
- First Mission: The first UN peacekeeping mission was established in May 1948 when the UN Security Council authorized the deployment of a small number of military observers to the Middle East.
- Major Achievements:
 - UN peacekeepers have successfully resolved conflicts in countries such as Cambodia, El Salvador, Mozambique, and Sierra Leone. Overall, interstate conflicts have decreased by 40% since 1945.
 - Peacekeepers have protected over 125 million civilians in conflict zones and facilitated the delivery of humanitarian assistance, supporting refugee returns and resettlement.
 - They have supported democratic elections in over 75 countries and helped establish functioning government institutions, alongside assisting in security sector reforms and training.
- India's contributions to Peacekeeping Missions:
 - India has been one of the largest cumulative contributors of UN peacekeepers.
 - Indian peacekeepers have established themselves as technical experts across missions, particularly in medical support.
 - India has provided specialized units like attack helicopters, transport aircraft, and engineering companies.
 - India has been instrumental in shaping UN peacekeeping policies, particularly through its presence in the C-34 (Special Committee on Peacekeeping Operations).

WORLD HEALTH ORGANIZATION (WHO)

Context:

- The World Health Organization (WHO) has issued a medical product alert on three liquid medicines identified in India as contaminated and reported to it on October 8.

About World Health Organization (WHO):

- Specialised agency of UN:** The World Health Organization (WHO) is the UN's specialized agency for health, coordinating international public health efforts and working to ensure the highest possible level of health for all people.
- Establishment:** World Health Organization (WHO), the United Nations' specialized agency for Health was founded in 1948. It began functioning on April 7, 1948 – a date now being celebrated every year as World Health Day.
- Headquarters:** Its headquarters is situated in Geneva, Switzerland, and it also has six regional offices.
- Nature:** It is an inter-governmental organization and works in collaboration with its member states usually through the Ministries of Health.
- Objective:** The WHO provides leadership on global health matters, shaping the health research agenda, setting norms and standards, articulating evidence-based policy options, providing technical support to countries and monitoring and assessing health trends.
- Governing body:** World Health Assembly (WHA) is WHO's decision-making body attended by delegations from all of WHO's member states. Specific health agenda prepared by the Executive Board remains the focus of this assembly.
- Membership:** Members of the United Nations may become Members of the Organization. Territories or groups of territories which are not responsible for the conduct of their international relations may be admitted as Associate Members by the Health Assembly.



WORLD TRADE ORGANIZATION (WTO)

Context:

- China has filed a complaint against India in the World Trade Organization (WTO) over New Delhi's subsidies for electric vehicles (EVs) and batteries.

About World Trade Organization (WTO):

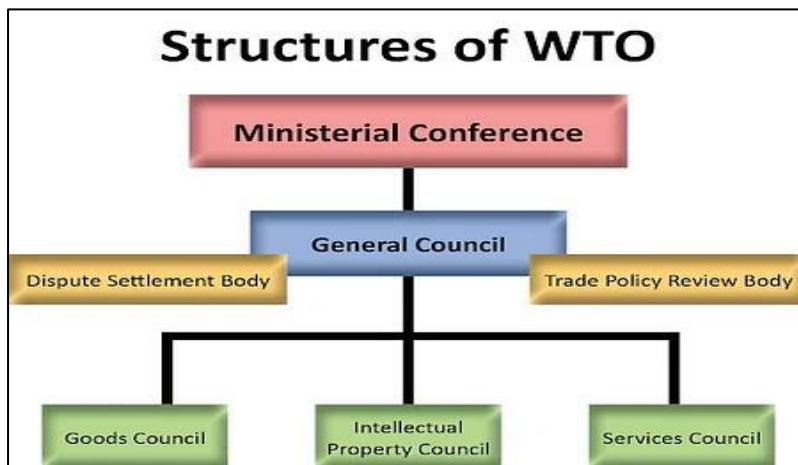
- Formation:** WTO was formed under the Marrakesh Agreement signed on 15th April 1994 by 123 countries after the Uruguay Round negotiations (1986-94) of the General Agreement on Tariffs and Trade (GATT), leading to the birth of WTO in 1995.
- Objective:** It is an international institution formed to regulate the rules for global trade among nations.
- Successor:** WTO succeeded the GATT which had regulated world trade since 1948. GATT focused on trade in goods, while WTO covers trade in goods, services, and intellectual property, including creations, designs, and inventions.

- Headquarters: Its headquarters is located in Geneva, Switzerland.
- Members: It has 166 countries, representing 98% of global trade.
- Governing bodies:

- Ministerial Conference (MC): It is the highest decision-making authority.
- Dispute Settlement Body (DSB): It resolves trade disputes.

- Major WTO Agreements:

- TRIMS (Trade-Related Investment Measures): It prohibits measures that discriminate against foreign products, e.g., local content requirements.
- TRIPS (Trade-Related Aspects of Intellectual Property Rights): It resolves disputes over intellectual property rights.
- AoA (Agreement on Agriculture): It promotes agricultural trade liberalization, focusing on market access and domestic support.



NON-ALIGNED MOVEMENT (NAM)

Context:

- Members of the Non-Aligned Movement (NAM) should harness the initiative to advance the aspirations of the Global South, said Minister of State for External Affairs.

About Non-Aligned Movement (NAM):

- Background: The Non-Aligned Movement was formed during the Cold War as an organization of States that did not seek to formally align themselves with either the United States or the Soviet Union, but sought to remain independent or neutral.
- Origin: The basic concept for the group originated in 1955 during discussions that took place at the Asia-Africa Bandung Conference held in Indonesia.
- Foundation: The Non-Aligned Movement was founded and held its first conference in Belgrade, Yugoslavia, in 1961 under the leadership of Josip Broz Tito of Yugoslavia, Gamal Abdel Nasser of Egypt, Jawaharlal Nehru of India, Kwame Nkrumah of Ghana, and Sukarno of Indonesia.
- Objective: The purpose of the organization was enumerated in Havana Declaration of 1979 to ensure "the national independence, sovereignty, territorial integrity and security of non-aligned countries" in their struggle against imperialism, colonialism, neo-colonialism, racism, and all forms of foreign subjugation.
- Members: It has 120 members comprising 53 countries from Africa, 39 from Asia, 26 from Latin America and the Caribbean and 2 from Europe (Belarus, Azerbaijan). There are 17 countries and 10 international organizations that are Observers at NAM.



- Significance: During the cold war era, the NAM played a vital role in stabilizing the world order and preserving peace and security. Non alignment of NAM doesn't mean the neutrality of state on global issues, it was always a peaceful intervention in world politics.
- Panchsheel: The principles of NAM was largely guided by Panchsheel principles, some of them are:
 - Respecting each other's territorial integrity and sovereignty.
 - Not to take aggressive action against each other.
 - Not to interfere in each other's internal matters.
 - To follow the policy of equality and mutual benefit.
 - Believe in the policy of peaceful co-existence.

CARBON BORDER ADJUSTMENT MECHANISM (CBAM)

Context:

- Indian exporters of iron and steel to EU may have to pay about ₹3,000 crore in Carbon Border Adjustment Mechanism (CBAM) fees, the highest among all countries exporting similar products to the EU.

About Carbon Border Adjustment Mechanism (CBAM):

- Nature: It is a European Union (EU) tariff on carbon-intensive products. It is an instrument of EU for preventing carbon leakage, that is, the shifting of the production of goods to non-EU countries where there is a lower or no carbon cost associated with their production.
- Objective: It aims to put a fair price on the carbon emitted during the production of carbon-intensive goods that are entering the EU and to encourage cleaner industrial production in non-EU countries.
- Accounts for embedded carbon emissions: By confirming that a price has been paid for the embedded carbon emissions generated in the production of certain goods imported into the EU, the CBAM will ensure the carbon price of imports is equivalent to the carbon price of domestic production, and that the EU's climate objectives are not undermined.
- Timeline: CBAM will apply in its definitive regime from 2026, while the current transitional phase lasts between 2023 and 2025.
- Coverage: CBAM will initially cover several specific products in some of the most carbon-intensive sectors at risk of "carbon leakage": iron and steel (including some downstream products such as nuts and bolts), cement, fertilizers, aluminium, electricity, and hydrogen.
- Definition of imports: It means any imports to the EU from outside the EU, including e.g., imports of goods ordered online and imports of gifts.
- Compliant with WTO norms: The CBAM is designed to be compatible with WTO rules.
- Provision of carbon certificates:
 - If implemented as planned, EU importers will have to buy carbon certificates corresponding to the carbon price that would have been paid in the EU if the goods had been produced locally.



- The price of the certificates would be calculated according to the auction prices in the EU carbon credit market.

KAFALA SYSTEM

Context:

- In a welcome relief for millions of migrant workers, Saudi Arabia has officially ended the Kafala System, giving them more rights and freedom to work in the kingdom.

About Kafala System:

- Nature: The Kafala system is a sponsorship system used in several Gulf Cooperation Council (GCC) countries, including Saudi Arabia, Qatar, Kuwait, Bahrain, Oman, and the United Arab Emirates.
- Objective: It governs the legal status of migrant workers, particularly those from other countries in Asia and Africa, who come to work in these countries. It binds migrant workers to a specific employer, known as the “kafeel,” who is responsible for the worker’s visa and legal status.
- Drawback: Under the Kafala System, the employer, who is also the sponsor of the migrant workers, had an undue legal advantage over them as they were not allowed to switch jobs without the Kafala’s consent.
- Compared to slavery: Due to its exploitative nature, especially on migrant workers who come to the Middle East for jobs, including domestic work, construction, etc, critics have often called it modern-day slavery.
- Spotlight: The Kafala system had come under international spotlight ahead of the 2022 FIFA World Cup in Qatar, where thousands of migrant workers, mostly from South Asian countries including India died, during construction while working under excruciating circumstances.
- Features of the new contract system: It facilitates job mobility, allowing workers to transfer to new employment upon contract completion without requiring prior employer approval. It also grants workers the right to exit, return, and travel permanently by electronically notifying the employer, eliminating the need for employer consent.
- Kafala system in other countries: In 2009, Bahrain became the first country in the Middle East to abolish the Kafala system, while the UAE diluted its Kafala system in 2015, allowing migrant workers whose contracts have expired to obtain a new permit and remain in the country on a 6-month job seeker visa. GCC countries that still have the strict Kafala system in place are Kuwait, Qatar, and Oman.



ECONOMY



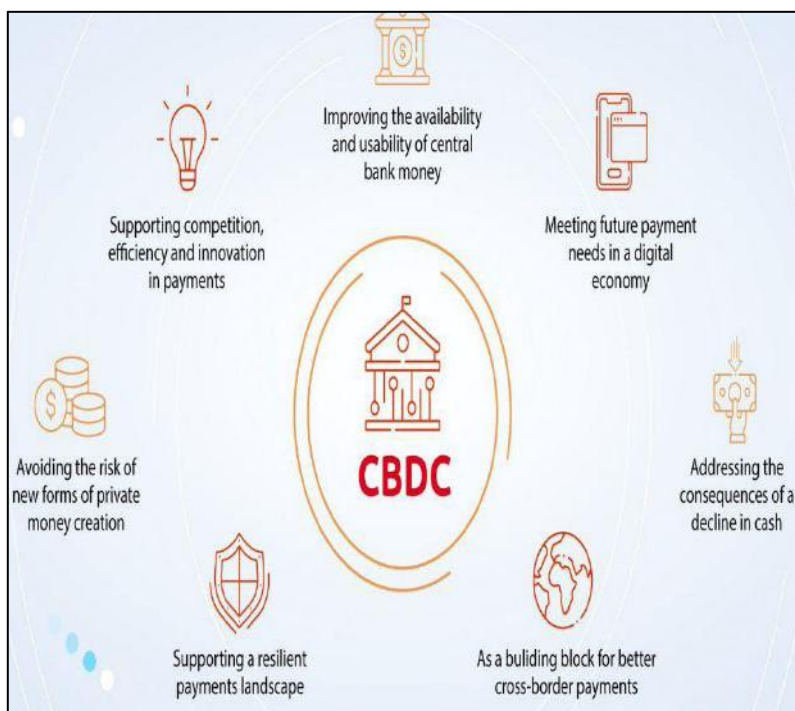
CENTRAL BANK DIGITAL CURRENCY (CBDC)

Context:

- RBI is waiting for other countries to launch digital currency and is in no hurry to roll out Central Bank Digital Currency (CBDC) nationwide for retail, said Deputy Governor of RBI.

About Central Bank Digital Currency (CBDC):

- Nature:** A CBDC is a legal tender issued by a central bank in digital form.
- Authorised by Central Bank:** Unlike private cryptocurrencies, CBDCs are backed by the central bank, ensuring stability and trust.
- Objective:** The main objective is to mitigate the risks and trim costs in handling physical currency, costs of phasing out soiled notes, transportation, insurance and logistics.
- Use of wallets:** The digital fiat currency or CBDC can be transacted using wallets backed by blockchain.
- Difference with virtual currencies:** Though the concept of CBDCs was directly inspired by Bitcoin, it is different from decentralised virtual currencies and crypto assets, which are not issued by the state and lack the 'legal tender' status.
- First country to launch:** Bahamas was the first economy to launch its nationwide CBDC namely Sand Dollar in 2020.
- Major advantages:**
 - CBDCs leverage digital security measures, potentially reducing the risk of counterfeiting and theft compared to physical cash.
 - Digital transactions can be settled instantly and efficiently, facilitating faster and more cost-effective payments.
 - Programmable features could be introduced to enable targeted disbursement of government benefits or promote financial inclusion.
- Challenges associated:**
 - Robust security measures are crucial to protect the e-rupee system from cyberattacks.
 - Balancing user privacy with the need for anti-money laundering and countering financing of terrorism measures is a critical aspect.
 - The RBI made CBDC non-remunerative and non-interest-bearing to mitigate potential risks of bank disintermediation.



SECURITIES TRANSACTION TAX (STT)

Context :

- The Supreme Court of India decided to examine a plea challenging the constitutional validity of the Securities Transaction Tax (STT), a direct tax levied on securities transactions through a listed stock exchange, as imposed under the Finance Act, 2004.

About Securities Transaction Tax (STT):

- Nature: It is a direct tax charged on the purchase and sale of securities listed on the recognized stock exchanges in India.
- Introduction: Finance Act 2004 introduced Securities Transaction Tax (STT), as a clean and efficient way of collecting taxes from financial market transactions. It is levied and collected by the central government of India.
- Regulation: STT is governed by Securities Transaction Tax Act (STT Act), and STT Act has specifically listed various taxable securities transactions, i.e., transactions on which STT is leviable.
- Taxable securities: These include equities, derivatives, or equity-oriented mutual funds investment units (excluding commodities and currency).
- Contract notes: The charges and rate of STT are reflected on the contract notes which a broker provides to its clients for every execution of trades.
- Excluded for certain transactions: The rate of taxation is different for different types of securities. STT is not applicable to off-market transactions or to commodity or currency transactions.
- Liability: The liability of applying the STT is on the broker when the client undertakes transactions in the stock market. The collected amount is then paid to the government.

RARE EARTH ELEMENTS

Context :

- US President said that China had sent letters to countries detailing export controls on “each and every element of production having to do with Rare Earths, and virtually anything else they can think of, even if it’s not manufactured in China.”

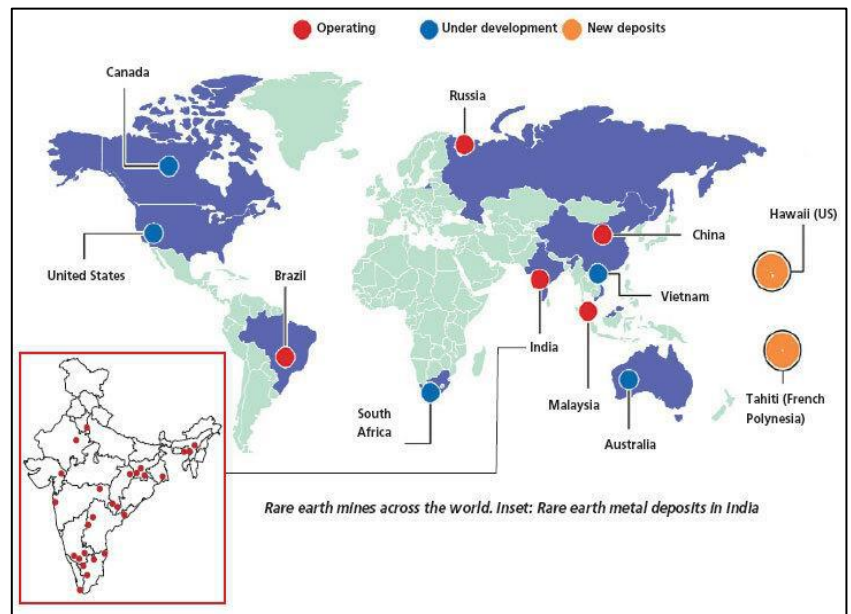
About Rare Earth Elements:

- Nature: Rare Earth Elements (REEs) are important components in over 200 products, spanning applications in consumer electronics, electric vehicles, defence systems, and many more.
- Types of Rare Earth Elements: Based on the atomic weight, Rare Earth Elements are divided into two groups - light REEs, those with atomic numbers from 57 to 63 (La, Ce, Pr, Nd, Pm, Sm and Eu) and heavy REEs, those with atomic numbers from 64 to 71 (Gd, Tb, Dy, Ho, Er, Tm, Yb and Lu).
- Characteristics: REEs are characterised by high density, high melting point, high conductivity and high thermal conductance. Rare Earth Elements share a trivalent charge (+3) and similar ionic radii, hence similar properties.
- Sources: The principal sources of REE are bastnaesite (a fluorocarbonate which occurs in carbonatites and related igneous rocks), xenotime (yttrium phosphate) commonly found in mineral sand deposits, loparite which occurs in alkaline igneous rocks and monazite (a phosphate).
- Most abundant REE: Cerium is the most abundant rare earth, approximately the same as that of Copper.
- Applications: Rare Earth Elements are very important for futuristic technology. Demand for REEs is expected to rise with a focus on renewable energy, Electric Vehicles, and niche sectors like

communications and nuclear energy. They also have wide applications in clean energy, high-end electronics, defence, etc with no equal substitutes.

- Initiatives taken by India:

- Setting up of a Rare Earth Theme Park and joint ventures aim to enhance India's position in this critical industry.
- RE and Titanium Theme Park was developed by IREL to cater for the technologies developed by BARC.
- India is actively exploring collaborations, and initiatives such as



Toyotsu Rare Earths India Limited in Visakhapatnam to enhance efforts to refine rare earths through foreign collaboration.

- IREL processing plants have been established in Ganjam, Odisha and Aluva, Kerala.

PRESUMPTIVE TAXATION

Context :

- The government think tank Niti Aayog suggested the introduction of a presumptive taxation scheme for foreign companies to provide certainty and simplicity.

About Presumptive Taxation:

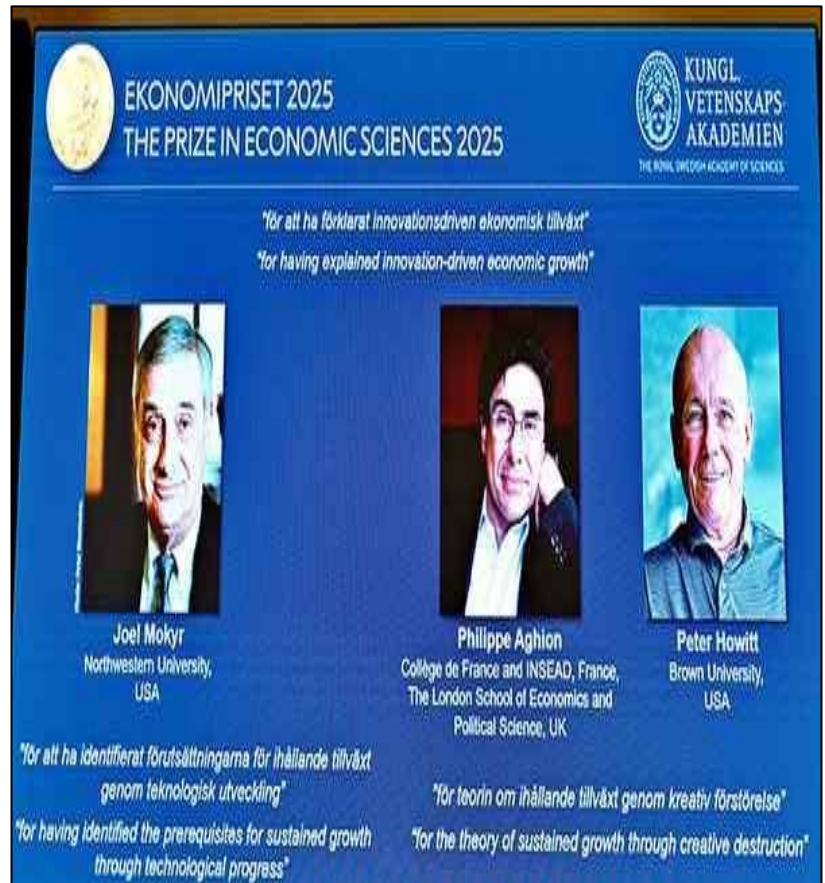
- Nature:** It is a simplified tax scheme where income is calculated based on a presumed rate of profit rather than actual income.
- Need:** Despite India's inherent appeal and remarkable FDI growth, structural impediments such as ambiguous PE (permanent establishment), regulations introduce tax uncertainty and dampen investments.
- Objectives:**
 - To provide relief to taxpayers from the tedious work of maintaining regular books of account under certain circumstances.
 - To provide tax certainty and reduce compliance burdens.
 - To align with India's goal of becoming a global manufacturing hub under initiatives like Make in India.
- Importance:**
 - The optional presumptive taxation scheme would help resolve disputes concerning PE (permanent establishment), simplifying compliance and protecting revenue.
 - By adopting a presumptive taxation scheme, India can transform its tax regime from a 'minefield' into a 'well-lit path.'
- Impact on businesses:** A company opting for this scheme can declare income at a prescribed rate; in lieu of that, it is relieved from maintaining books of accounts for audit by tax authorities.

NOBEL PRIZE IN ECONOMICS 2025**Context:**

- The Nobel prize in Economics was declared for year 2025 by Royal Swedish Academy of Sciences.

About Nobel Prize in Economics 2025:

- Awardees: Joel Mokyr, Philippe Aghion and Peter Howitt won the 2025 Nobel economics prize. Mr. Mokyr was awarded half the prize with the other half being shared between Aghion and Howitt.
- Awarded for: They were awarded the Nobel economics prize for “having explained innovation-driven economic growth.”
- Significance: The laureates have taught us that sustained growth cannot be taken for granted. Economic stagnation, not growth, has been the norm for most of human history. Their work shows that we must be aware of, and counteract, threats to continued growth.
- About the winners:
 - Mr. Mokyr is a professor at Northwestern University, in Evanston in the United States, while Mr. Aghion is professor at the College de France and INSEAD, in Paris, and at the London School of Economics and Political Science, in Britain.
 - Mr. Howitt is a professor at Brown University, in Providence in the United States.

**About Nobel Economics Prize:**

- Feature: The prestigious award, formally known as the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel, is the final prize, given out every year and is worth 11 million Swedish Kronor (\$1.2 million).
- First Nobel Economics Prize: The economics prize was established much later (compared to other Nobel prizes), being given out first in 1969 when it was won by Norway's Ragnar Frisch and Jan Tinbergen from the Netherlands for work in dynamic economic modelling.
- Famous Recipients: While few economists are household names, relatively well-known winners include former U.S. Federal Reserve chairman Ben Bernanke, and Paul Krugman and Milton Friedman.
- Last year's economics award: It went to U.S.-based academics Simon Johnson, James Robinson and Daron Acemoglu for research that explored the relationship between colonisation and the establishment of public institutions to explain why some countries have been mired in poverty for decades.

CONSUMER PRICE INDEX (CPI)

Context :

- Retail inflation, as measured by the Consumer Price Index fell to a more than eight-year-low of 1.54% in September on falling food and fuel prices. This is once again below the RBI's lower comfort bound of 2%.

About Consumer Price Index (CPI):

- Nature:** CPI measures the overall change in consumer prices based on a representative basket of goods and services over time, with 2012 as the base year.
- Objective:** CPI is used for targeting price stability, adjusting dearness allowance, and understanding cost of living, purchasing power, and the expensiveness of goods and services.
- Composition:** The basket of goods includes food, clothing, transportation, medical care, electricity, education, and more. The following are the primary components of CPI (along with their weightage).
 - Food and Beverage (45.86%)
 - Housing (10.07%)
 - Fuel and Light (6.84%)
 - Clothing and Footwear (6.53%)
 - Pan, tobacco, and intoxicants (2.38%)
 - Miscellaneous (28.32%)
- Released by:** The CPI is published monthly by the National Statistical Office (NSO) under the Ministry of Statistics and Program Implementation (MoSPI).
- 4 types of CPI:**
 - CPI for Industrial Workers (CPI-IW):** It tracks price changes in a fixed basket of goods and services used by industrial workers over time. The Labour Bureau, under the Ministry of Labour and Employment, compiles CPI-IW.
 - CPI for Agricultural Laborers (CPI-AL):** The Labour Bureau compiles CPI-AL to assist in revising minimum wages for agricultural workers across different states.
 - CPI for Rural Labourer (CPI-RL):** It measures changes in the retail prices of goods and services consumed by agricultural and rural laborers. The Labour Bureau compiles CPI-RL.
 - CPI for Urban Non-Manual Employees (CPI-UNME):** CPI-UNME is compiled by NSO. An urban non-manual employee earns 50% or more of their income from non-manual work in the urban non-agricultural sector.

	WPI	CPI
Released By	Office of Economic Advisor (Ministry of Commerce & Industry)	National Statistics Office (Ministry of Statistics and Programme Implementation)
Measures	Goods only	Both Goods & Services
Items covered	697	448(Rural Basket) 460 (Urban Basket)
Base year	2011-12	2012

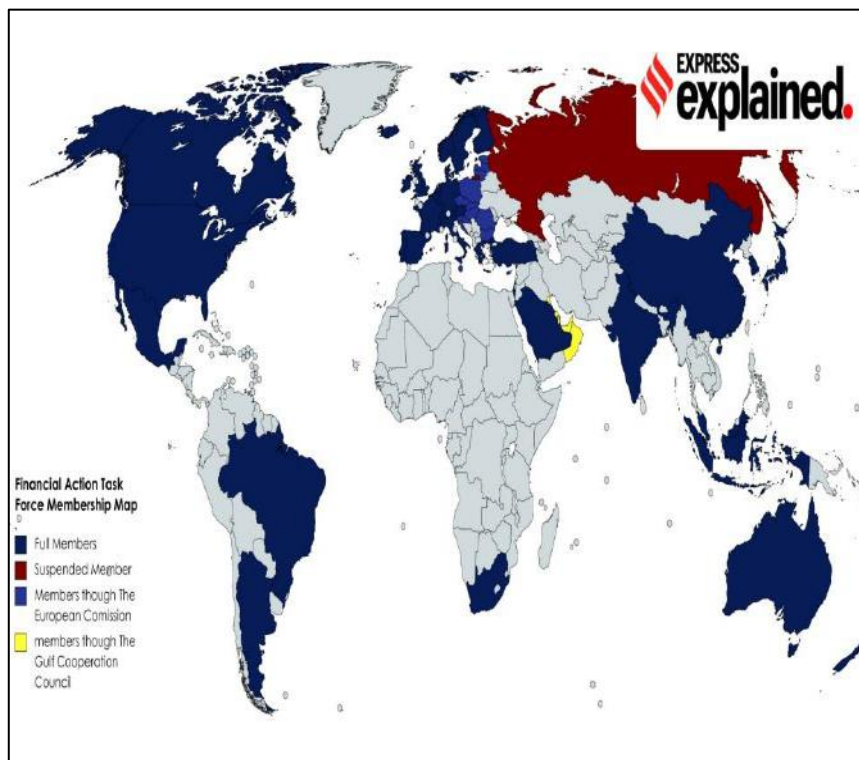
FINANCIAL ACTION TASK FORCE (FATF)

Context :

- The ongoing Financial Action Task Force (FATF) meetings in Paris are expected to deliberate on state sponsorship as a means to fund and support terrorism, including the financing of banned outfits and their proxies operating in Pakistan.

About Financial Action Task Force (FATF):

- **Establishment:** FATF is the global money laundering and terrorist financing watchdog set up in 1989 out of a G-7 meeting of developed nations in Paris.
- **Objective:** Initially, its objective was to examine and develop measures to combat money laundering. After the 9/11 attacks on the US, the FATF in 2001 expanded its mandate to incorporate efforts to combat terrorist financing.
- **Members:** It is a 39-member body representing most major financial centres in all parts of the globe. Out of 39 members, there are two regional organisations: the European Commission, and the Gulf Cooperation Council.
- **India and FATF:** India joined with 'observer' status in 2006 and became a full member of FATF in 2010. India is also a member of its regional partners, the Asia Pacific Group (APG) and the Eurasian Group (EAG).
- **Special Recommendations:** In April 1990, the FATF issued a report containing a set of Forty Recommendations intended to provide a comprehensive plan of action needed to fight against money laundering. In 2004, the FATF published a Ninth Special Recommendations, further strengthening the agreed international standards for combating money laundering and terrorist financing - the 40+9 Recommendations.
- **Structure:** The FATF Plenary is the decision-making body of the FATF. It meets three times per year.
- **Secretariat:** The FATF Secretariat is located at the OECD headquarters in Paris. The Secretariat supports the substantive work of the FATF membership and global network.
- **Funding:** The funding for the FATF Secretariat and other services is provided by the FATF annual budget to which members contribute.
- **Grey and Black Lists of the FATF:**
 - **Grey List:** The Grey List includes countries that are considered safe haven for supporting terror funding and money laundering. It serves as a warning that the country may enter the blacklist.
 - **Black List:** The Black List includes Non-Cooperative Countries or Territories (NCCTs) that support terror funding and money laundering activities.
- **Implications of inclusion in FATF Lists:**
 - Economic sanctions from financial institutions affiliated with FATF (IMF, World Bank, ADB etc.)
 - Problem in getting loans from such financial institutions and countries
 - Reductions in international trade
 - International boycott



INDEX OF INDUSTRIAL PRODUCTION (IIP)

Context:

- Growth in the Index of Industrial Production (IIP), released by the Ministry of Statistics and Programme Implementation, stood at 3.2% in September last year. However, growth had since accelerated to 4.3% by July 2025, following which it slowed again.

About Index of Industrial Production (IIP):

- Nature:** The Index of Industrial Production (IIP) is a key statistical tool used to measure the short-term changes in the volume of production in Indian industries.
- Objective:** It provides insight into the growth or contraction of industrial activity over a given period, making it a crucial economic performance indicator.
- Nodal ministry:** The IIP is published by the Central Statistics Office (CSO), which is part of the Ministry of Statistics and Programme Implementation (MoSPI).
- Base year:** The current base year for the index is 2011–12. This base year was adopted to reflect modern industrial structure and production patterns, following periodic revisions from earlier base years such as 1937, 1946, 1951, 1956, and so on.
- Sectoral Composition of IIP (Weight-wise):**
 - Manufacturing: 77.63% of total weight (809 items)
 - Mining: 14.37% (29 items)
 - Electricity: 7.99% (1 item)
- Composite indicator:** It is a composite indicator that measures the growth rate of industry groups classified under:
 - Broad sectors, namely, Mining, Manufacturing, and Electricity.
 - Use-based sectors, namely Basic Goods, Capital Goods, and Intermediate Goods.
- Eight Core Sectors:**
 - These comprise 40.27% of the weight of items included in the Index of Industrial Production (IIP).
 - The eight core sector industries in decreasing order of their weightage: Refinery Products, Electricity, Steel, Coal, Crude Oil, Natural Gas, Cement, Fertilizers.





GEOGRAPHY



SUPERMOON

Context :

- A supermoon was visible on the night of October 7 and will appear twice more in November and December.

About Supermoon:

- Feature: A supermoon occurs when a full moon or new moon coincides with the moon's closest approach to the earth in its elliptical orbit, a point known as the perigee.
- Reason: Because the moon's orbit is not a perfect circle, its distance from the earth varies throughout the month by around 50,000 km. When the moon is near its perigee and also directly opposite the sun, the full moon appears about 14% larger and 30% brighter than when it is at its farthest point. This is the supermoon.
- Nomenclature: The term "Supermoon" was coined by astrologer Richard Nolle in 1979, defining it as a special event when a full moon is within 90 percent of its closest point to Earth.
- Frequency: In a typical year, there may be two to four full supermoons and two to four new supermoons in a row.
- Impact: Supermoons influence the tides, creating perigean spring tides. These tides are slightly higher and lower than usual because the moon's stronger gravitational pull acts in concert with that of the sun. While the changes are typically modest, they can exacerbate coastal flooding when combined with storm surges.
- Significance: Culturally, supermoons have long captured human imagination, inspiring folklore and spiritual observances across civilisations. They also offer opportunities for astronomers and photographers to observe lunar surface details and study tidal effects more clearly.

What is a supermoon?

When the moon is at "perigee", its shortest distance from the Earth, it is around 226,000 miles away and appears 14% larger and 30% brighter than when it is at apogee, its furthestmost point.



SAWALKOTE HYDROELECTRIC PROJECT

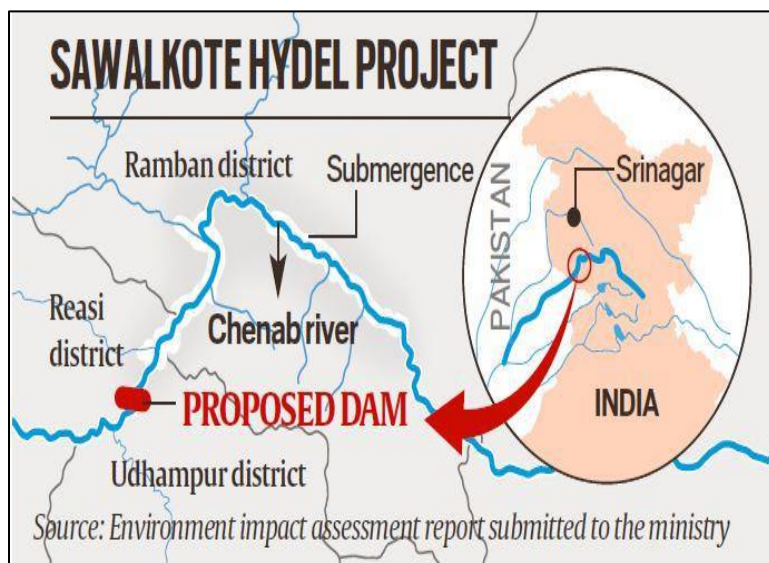
Context:

- An apex committee of the Environment Ministry has accorded a fresh environmental clearance to the Sawalkote hydroelectric project.

About Sawalkote Hydroelectric Project:

- Location: It is a 1,856 MW run-of-the-river (uses the natural flow of a river with little or no water storage) hydroelectric project located on the Chenab River (a western river under Indus Water Treaty) in Ramban, J&K.

- Gravity dam: The project was initiated in 1984 and has faced multiple delays over the years. Declared as a project of national importance, it involves the construction of a concrete gravity dam with a reservoir.
- Electricity production: Once operational, Sawalkote is expected to generate over 7,000 million units of electricity annually, making it one of the largest hydroelectric projects in India.
- Significance: With the Indus Water Treaty (IWT) in abeyance, the project is considered crucial for harnessing Chenab River's hydropower potential and enhancing India's control over western rivers of IWT.



About Chenab River:

- Origin: It is formed by the confluence of two streams, Chandra and Bhaga, in the Lahaul and Spiti Districts of Himachal Pradesh. It is a tributary of the Indus River. In its upper reaches, it is also known as the Chandrabhaga.
- Course: It flows through Jammu and Kashmir union territory, Himachal Pradesh and after receiving the Jhelum River near Trimmu, the Chenab empties into the Sutlej River.
- Major Tributaries:
 - Left Bank: Niru, Tawi, Neeru, and Liddrari
 - Right Bank: Ans, Bhut Nalla, Bichleri, Kalnai Marusudar and Miyar Nalla.
- Major projects on Chenab river: The Chenab River hosts the 390-MW Dulhasti project at Kishtwar, the 890-MW Baglihar project at Ramban, and the 690-MW Salal project at Reasi. These projects significantly contribute to the region's energy supply.

CYCLONES

Context:

- The well-marked low pressure area over the Bay of Bengal, which is expected to become a cyclonic storm is likely to cause heavy rain, especially in north Tamil Nadu.

About Cyclones:

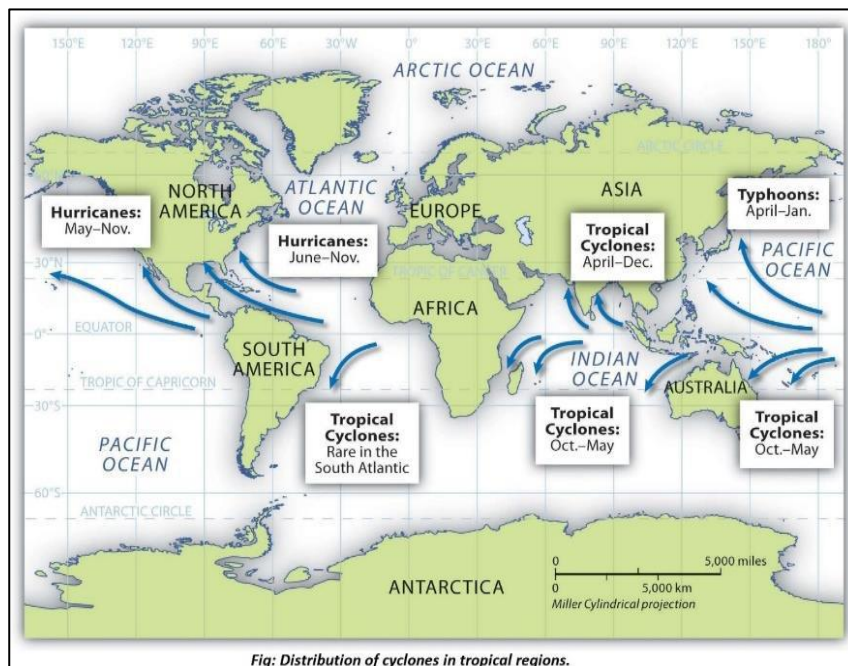
- Definition: Cyclones are rapid inward air circulation around a low-pressure area. Cyclones are usually accompanied by violent storms and bad weather.
- Nomenclature: The word Cyclone is derived from the Greek word Cyclos meaning the coils of a snake. It was coined by Henry Peddington because the tropical storms in the Bay of Bengal and the Arabian Sea appear like coiled serpents of the sea.
- Direction of air: The air circulates in an anticlockwise direction in the Northern hemisphere and clockwise in the Southern hemisphere.
- Types: There are 2 types of cyclones, viz. Tropical cyclones and Extra-Tropical cyclones.

About Tropical Cyclones:

- Definition: Tropical cyclones are violent storms that originate over oceans in tropical areas and move over to the coastal areas bringing about large scale destruction caused by violent winds, very heavy rainfall and storm surges.

- **Uniqueness:** Tropical Cyclones are one of the most devastating natural calamities in the world. Tropical cyclones originate and intensify over warm tropical oceans.
- **Conditions required:** The conditions favourable for the formation and intensification of tropical storms are:

- Large sea surface with temperature higher than 27° C.
- Presence of the Coriolis force.
- Small variations in the vertical wind speed.
- A pre-existing weak low-pressure area or low-level-cyclonic circulation.
- Upper divergence above the sea level system.



- **Different names in different regions:** They are known as Typhoons in the China Sea and Pacific Ocean; Hurricanes in the West Indian islands in the Caribbean Sea and Atlantic Ocean; Tornados in the Guinea lands of West Africa and southern USA.; Willy-willies in north-western Australia and Tropical Cyclones in the Indian Ocean.
- **Naming of tropical cyclones:** The naming of tropical cyclones is a recent phenomenon. The process of naming cyclones involves several countries in the region and is done under the aegis of the World Meteorological Organization (WMO).

About Extratropical Cyclones:

- **Different names:** Extratropical cyclones are referred to as mid-latitude depressions, temperate cyclones, frontal depressions and wave cyclones.
- **Location:** These are active above the mid-latitudinal region between 35° and 65° latitude in both the hemispheres.
- **Uniqueness:** The direction of movement is from west to east and more pronounced in the winter seasons. It is in these latitude zones the polar and tropical air masses meet and form fronts.
- **Formation:** The origin and development of temperate cyclones is best explained by the Polar Front theory.



ENVIRONMENT AND ECOLOGY



DUGONGS

Context :

- Once widespread across the Gulf of Mannar, Palk Bay, the Gulf of Kutch and the Andaman and Nicobar Islands, India's dugongs dwindled to a few hundred individuals.

About Dugong:

- Nature:** Dugongs (*Dugong dugon*), also called "sea cows," are marine mammals that graze on seagrass beds, earning them the nickname "farmers of the sea."
- Behaviour:** The dugong is a long-lived species, capable of living up to 70 years. Typically solitary or found in small mother-calf pairs, large herds common in Australian waters are rare in India.
- Uniqueness:** Dugongs (*Dugong dugon*) are the only herbivorous mammals found in India's marine ecosystems.
- Appearance:** It is known as the sea cow, but resembles a cross between a seal and a whale, and is distributed through the Indo-Pacific region.
- Distribution:** They are found along the Indian coastline, primarily inhabiting warm waters around the Andaman and Nicobar Islands, the Gulf of Mannar, Palk Bay, and the Gulf of Kutch. The dugong is a long-lived species, able to live up to 70 years.
- Habitat:** Due to their dependence on seagrass beds for habitat and food, dugongs are restricted to shallow waters, where they spend the day feeding on seagrasses of the genera *Cymodocea*, *Halophila*, *Thalassia*, and *Halodule*.
- Reproduction cycle:** Individuals reach reproductive maturity after only nine or ten years and can give birth at intervals of around three to five years.
- Conservation status:**
 - IUCN: Vulnerable
 - CITES: Appendix I
 - Wildlife Protection Act 1972: Schedule I
- Threats:** The threats they face worldwide include rapidly declining populations and the ongoing degradation of their seagrass habitats.

HILSA FISH

Context:

- Bangladesh's defence force said it has deployed warships and patrol aircraft to protect Hilsa fish from illegal fishing during its spawning season.

About Hilsa Fish:

- State fish:** It is the state fish of West Bengal and the national fish of Bangladesh.
- Clupeidae family:** It is a species of fish belonging to the Clupeidae family, which includes herring fish.
- Uniqueness:** It is also called Ilish and holds an exceptional position in the culinary customs and social practices of Bengal. It is a fish that is highly prized because of its delicate flavour, distinct taste, and silky texture.



- Location: It is found in rivers and estuaries in Bangladesh, India, Pakistan, Myanmar, and the Persian Gulf area. They travel to rivers like the Ganges River and Godavari River in India.
- Lifespan: Hilsa fish live in both saltwater and freshwater. They spend most of their lives in the ocean. However, when it's time to lay their eggs, they swim up into rivers. This journey is called a migration.
- Appearance: Hilsa fish have a silvery body. They are quite flat and have a pointed head.
- Weight: Hilsa can grow up to about 50 cm, weighing more than 3 kg. They are known for their many small bones.
- Conservation Status: It is classified as 'Least Concern' under the IUCN Red List.

PERIYAR TIGER RESERVE

Context :

- A 32-year-old forest watcher in the Periyar Tiger Reserve was found dead in the Ponnambalamedu forest area in Pathanamthitta district of Kerala.

About Periyar Tiger Reserve:

- Nomenclature: It is named after the Periyar River, which originates within the reserve.
- Location: It is situated in the Idukki and Pathanamthitta districts of Kerala. It is set high at Cardamom Hills and Pandalam Hills of the Western Ghats, adjacent to the border with Tamil Nadu.
- Formation: It was established as a wildlife sanctuary in 1950 and later declared a Tiger Reserve in 1978.
- Terrain: The terrain is hilly and undulating with a maximum altitude of 2016 m. The highest peak is Kottamala (2016 m).
- Vegetation: It comprises tropical evergreen forests, semi-evergreen forests, moist deciduous forests, transitional fringe evergreen forests, grasslands, and eucalyptus plantations.
- Drainage: Major rivers flowing through the reserve are the Periyar and Mullayar.
- Dams: Mullaperiyar Dam is located within the PTR.
- Flora and fauna: Important flora includes teak, mangoes, rosewood, jamun, jacarandas, terminalias, tamarind, royal ponciana, bamboo, etc. Fauna includes Elephants, Wild Pigs, Sambar, Gaur, Mouse Deer, Dhole or Barking Deer, Indian Wild Dog, and Tiger.
- Unique species: It hosts medicinal plants like *Syzygium periyarensis*, *Habenaria periyarensis* (an orchid), and *Mucuna pruriense thekkadiensis*.
- Tribes: It is home to six tribal communities including the Mannans, Paliyans, Malayarayans, Mala Pandarams, Uralis, and Ulladans, who live within the reserve.



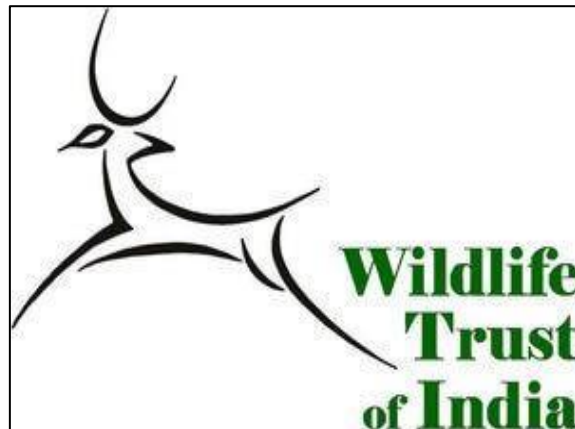
WILDLIFE TRUST OF INDIA (WTI)

Context:

- A report on 25 years of support for wildlife warriors by the Wildlife Trust of India (WTI) has highlighted the role of India's forest protectors.

About Wildlife Trust of India (WTI):

- **Nature:** The Wildlife Trust of India (WTI) is a non-profit conservation organisation dedicated to safeguarding India's natural heritage. It is a registered charity in India (under Section 12A of the Income Tax Act, 1961).
- **Establishment:** It was established in 1998 in response to the numerous crises confronting India's wildlife and wild habitats.
- **Objective:** Its mission is to conserve nature, especially endangered species and threatened habitats, in partnership with communities and governments.
- **Ministry:** It works closely with the Ministry of Environment, Forest and Climate Change under the Government of India, as well as with the respective state government forest and wildlife departments.
- **Headquarters:** It is headquartered in New Delhi.
- **About Van Rakshak Project (VRP):**
 - The WTI launched the Van Rakshak Project (VRP) in 2000 with the International Fund for Animal Welfare's (IFAW) support.
 - It aimed at building a well-equipped, and motivated force of frontline forest staff across India. The project has supported more than 21,000 personnel nationwide through a diverse range of capacity-strengthening initiatives.
 - A key component of the VRP is the Supplementary Accident Assurance Scheme, which offers immediate financial assistance to frontline forest staff in the event of injury or death in the line of duty.

**SNOW LEOPARDS****Context:**

- Snow leopard that inhabits the rugged ranges of 12 Asian countries, including India, has the lowest genetic diversity of any big cat species in the world, even lower than that of the dwindling cheetah.

About Snow Leopards:

- **Physical features**
 - **Extra paws:** Its extra large paws act like a pair of natural snow shoes preventing the cat from sinking into the snow.
 - **Short ears:** Its round, short ears reduce heat loss, and the wide, short nasal cavity warms the air before it reaches the cat's lungs.
 - **Longer hind limbs:** The cat has strong, short front limbs and longer hind limbs helping launch the cat up to 30 feet (10 meters) in one leap.
- **Difference with other cats:**
 - Unlike other big cats, snow leopards can't roar.
 - Despite being called the snow 'leopard', this big cat is more closely related to the tiger than the leopard.



- **Habitat:** Snow leopards (*Panthera uncia*) are considered medium-sized cats that are known for their elusive nature and ability to thrive in harsh, high-altitude environments.
- **Native areas:** They are native to the mountains of Central and South Asia and typically found at elevations between 9,800 and 17,000 feet in mountain ranges, including the Himalayas.
- **Adaptations:** They are known as "ghosts of the mountains" due to their elusive nature and ability to blend into their surroundings.
- **Reproduction:** They usually mate between January and March, a time when both sexes mark their territories intensively leaving signs such as scrapes, faeces, urine and scent-spray in prominent locations along their travel routes.
- **Ecological Importance:** They serve as top predators and Indicator species, as their presence reflects the health of their high-altitude ecosystems. Their kills provide food for scavengers like vultures and wolves, supporting other species.
- **Conservation status:**
 - IUCN: Vulnerable
 - CITES: Appendix 1
 - Wildlife (Protection) Act, 1972 :- Schedule 1

MICROPLASTICS

Context:

- According to a study, microplastics pollution threatens Goa's estuarine fisheries as well as human consumers.

About Microplastics:

- **Definition:** They are defined as plastics less than five millimetres in diameter. It can be harmful to our ocean and aquatic life.
- **Formation:** Under the influence of solar UV radiation, wind, currents, and other natural factors, plastic fragments into small particles, termed microplastics (particles smaller than 5 mm) or nanoplastics (particles smaller than 100 nm).
- **Classification of microplastics:**
 - **Primary Microplastics:** They are tiny particles designed for commercial use and microfibers shed from clothing and other textiles. E.g., microbeads found in personal care products, plastic pellets, and plastic fibres.
 - **Secondary Microplastics:** They are formed from the breakdown of larger plastics, such as water bottles. Exposure to environmental factors, primarily solar radiation and ocean waves, is the cause of this breakdown.
- **Applications of Microplastics:**
 - **Medical and Pharmaceutical Uses:** Used in targeted drug delivery due to the capacity to absorb and release chemicals effectively.
 - **Industrial Applications:** Used in air-blasting technology for cleaning machinery and in the production of synthetic textiles.
 - **Cosmetics and Personal Care Products:** Used as exfoliating agents in facial scrubs, toothpaste, and other personal care products.
- **Steps taken to address microplastics:**



- United Nations Environment Assembly (UNEA) Resolutions: The UNEA resolution mandated the development of an international legally binding instrument on plastic pollution, including in the marine environment.
- United Nations Environment Programme (UNEP) Plastics Treaty: The UNEP is working on an international legally binding instrument to address plastic pollution, including microplastics.

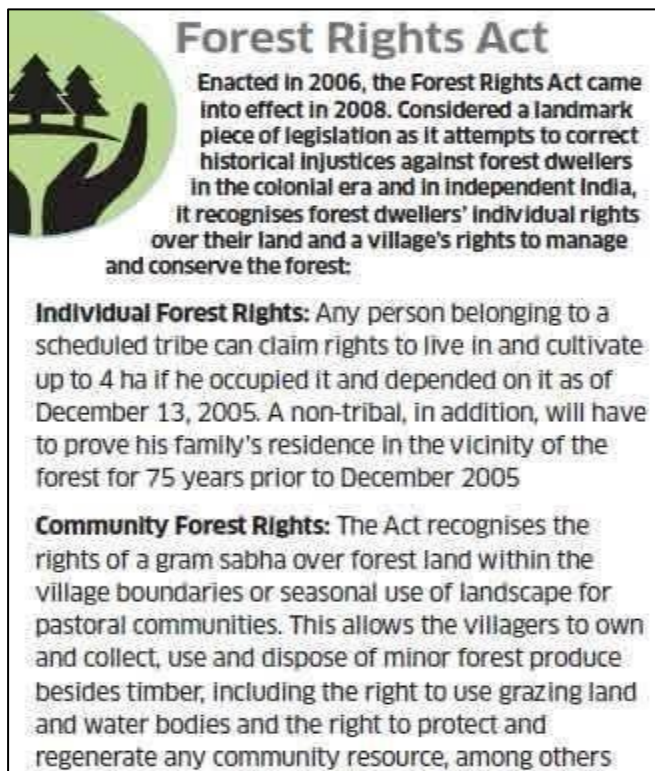
FOREST RIGHTS ACT (FRA), 2006

Context:

- The Chhattisgarh High Court for the first time, addressed the question of whether forest rights granted under the 2006 Forest Rights Act (FRA) can be revoked or cancelled, given that the law does not explicitly provide for any such measure.

About Forest Rights Act (FRA), 2006:

- Landmark legislation: The Forest Rights Act, 2006 (officially known as the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act) is a landmark legislation aimed at recognizing and securing the rights of forest-dwelling communities in India.
- Reasons behind bringing the Act:
 - The FRA, 2006 was implemented to recognize and vest the forest rights and occupation in forest land in forest dwelling Scheduled Tribes and other traditional forest dwellers who have been residing in such forests for generations but whose rights could not be recorded.
 - The Act also aimed to undo the historical injustice occurred to the forest dwelling communities due to the forest management policies of colonial and post-colonial India, which did not acknowledge their symbiotic relationship with the forests.
 - The Act further intended to empower the forest dwellers to access and use the forest resources in a sustainable manner, to conserve the biodiversity and ecological balance, and to protect them from unlawful evictions and displacement.
- Major provisions of the Act:
 - The Act recognizes and vests the forest rights and occupation in Forest land in Forest Dwelling Scheduled Tribes (FDST) and Other Traditional Forest Dwellers (OTFD) who have been residing in such forests for generations.
 - Forest rights can also be claimed by any member or community who has for at least three generations (75 years) prior to the 13th day of December, 2005 primarily resided in forest land for bona fide livelihood needs.



Forest Rights Act

Enacted in 2006, the Forest Rights Act came into effect in 2008. Considered a landmark piece of legislation as it attempts to correct historical injustices against forest dwellers in the colonial era and in independent India, it recognises forest dwellers' individual rights over their land and a village's rights to manage and conserve the forest:

Individual Forest Rights: Any person belonging to a scheduled tribe can claim rights to live in and cultivate up to 4 ha if he occupied it and depended on it as of December 13, 2005. A non-tribal, in addition, will have to prove his family's residence in the vicinity of the forest for 75 years prior to December 2005

Community Forest Rights: The Act recognises the rights of a gram sabha over forest land within the village boundaries or seasonal use of landscape for pastoral communities. This allows the villagers to own and collect, use and dispose of minor forest produce besides timber, including the right to use grazing land and water bodies and the right to protect and regenerate any community resource, among others

- The Gram Sabha is the authority to initiate the process for determining the nature and extent of Individual Forest Rights (IFR) or Community Forest Rights (CFR) or both that may be given to FDST and OTFD.
- Four types of rights, identified by the Act:
 - Title rights: It gives FDST and OTFD the right to ownership to land farmed by tribals or forest dwellers subject to a maximum of 4 hectares. Ownership is only for land that is actually being cultivated by the concerned family and no new lands will be granted.
 - Use rights: The rights of the dwellers extend to extracting Minor Forest Produce, grazing areas etc.
 - Relief and development rights: To rehabilitate in case of illegal eviction or forced displacement and to basic amenities, subject to restrictions for forest protection.
 - Forest management rights: It includes the right to protect, regenerate or conserve or manage any community forest resource which they have been traditionally protecting and conserving for sustainable use.
- Importance: It strengthens the conservation regime of the forests while ensuring livelihood and food security of the FDST and OTFD.

INDIAN WOLF

Context:

- A discreet, charismatic denizen of scrubland and grasslands, the Indian wolf (*Canis lupus pallipes*) is likely to be classified as a new species by the IUCN.

About Indian wolf:

- Nature: The Indian wolf is one of the most ancient and genetically unique wolf lineages in the world, endemic to the Indian subcontinent.
- Scientific Name: *Canis lupus pallipes*, commonly referred to as the Peninsular wolf or Indian grey wolf.
- Uniqueness: Fossil and genetic studies show that it diverged from other wolf species thousands of years ago, making it one of the oldest wolf lineages in the world.
- Conservation status:
 - It is classified as 'Vulnerable' by the International Union for Conservation of Nature (IUCN).
 - It is placed under 'Schedule 1' of the Wildlife Protection Act.
- Distribution: The Indian wolf was historically found across northern and western India, from Punjab and Haryana to Rajasthan and Maharashtra, thriving in open plains and semi-arid regions.



- **Drastic reduction in population:** Due to habitat loss, persecution, and expanding agriculture, the species has now vanished from many areas, including parts of Punjab, Haryana, and Himachal Pradesh. Its population has dwindled to just around 3,000 individuals in India and Pakistan.
- **Best models for co-existence:** The wolf, like the bustards and other denizens of the open natural ecosystems, do not need strict protected areas. Rather they serve as the best models for co-existence, and this is what needs to be incentivised.

ASIAN PALM CIVET

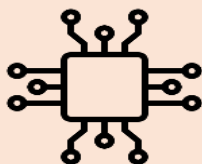
Context:

- A recent scientific study has revealed that civet coffee (popularly known as Kopi Luwak), which is primarily produced from the excreta of the Asian palm civet, shows distinct when compared to naturally harvested robusta beans.

About Asian Palm Civet:

- **Common names:** The Asian Palm Civet, is also known as the Toddy Cat or Common Palm Civet.
- **Distribution:** It is a small, nocturnal mammal that is found throughout South and Southeast Asia, including India, Sri Lanka, Indonesia, and the Philippines.
- **Scientific Name:** It is a member of the Viverridae family, which also includes other civet and mongoose species. Its scientific name is *Paradoxurus hermaphroditus*.
- **Physical features:** It has a long, slender body, short legs, and a pointed snout. It weighs between 2 to 5 kg (4.4 to 11 lbs) and measures around 53 to 71 cm (21 to 28 inches) in length, including the tail.
- **Behaviour:** It is thought to lead a solitary lifestyle, except for brief periods during mating.
- **Uniqueness:** Its fur is brownish-grey with black spots, and it has a white mask-like marking around its eyes. Its anal scent glands emit a nauseating secretion as a chemical defence when threatened or upset.
- **Nocturnal:** It is a nocturnal animal and feeds on a variety of prey, including insects, small mammals, and fruits.
- **Relevance in coffee industry:** One of the most distinctive features of Asian palm civets is their ability to digest coffee beans, which makes them an important part of the coffee production process in some countries.
- **Conservation Status:** It is classified as 'Least Concern' under the IUCN Red List.





SCIENCE & TECHNOLOGY



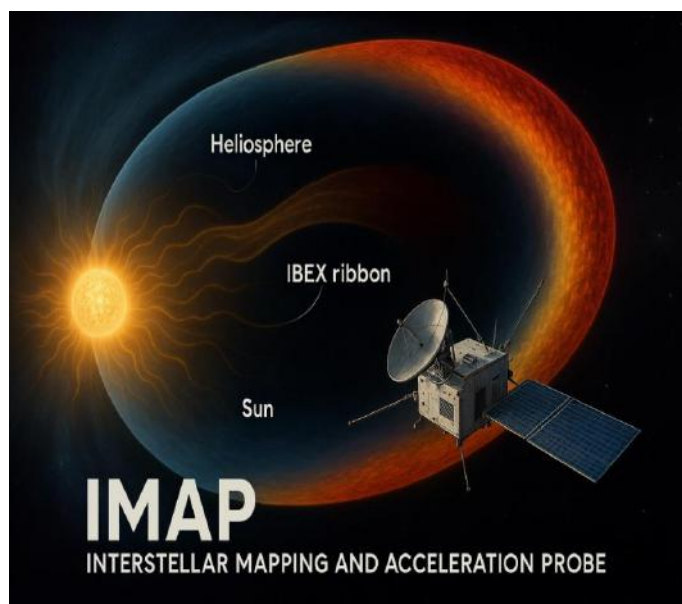
INTERSTELLAR MAPPING AND ACCELERATION PROBE (IMAP)

Context :

- Recently, NASA launched the Interstellar Mapping and Acceleration Probe (IMAP) to map the heliosphere's boundary, trace energetic particles, and improve space weather forecasting.

About IMAP:

- Nature:** The Interstellar Mapping and Acceleration Probe, or IMAP, will explore and map the very boundaries of our heliosphere, a huge bubble created by the Sun's wind that encapsulates our entire solar system.
- Functioning:** The IMAP mission will use 10 scientific instruments to chart a comprehensive picture of what's roiling in space, from high-energy particles originating at the Sun, to magnetic fields in interplanetary space, to remnants of exploded stars in interstellar space.
- Mass of the spacecraft:** It weighs around 900 kilograms (1,984 pounds).
- Launch vehicle:** It is launched using Falcon 9, which is a partially reusable, two-stage-to-orbit, medium-lift launch vehicle designed and manufactured by SpaceX.
- Location:** The IMAP spacecraft is situated at the first Earth-Sun Lagrange point (L1), at around one million miles from Earth toward the Sun. There, it can provide about a half hour's warning to voyaging astronauts and spacecraft near Earth of harmful radiation coming their way.
- Investigating heliophysics:** The mission will primarily investigate two of the most important overarching issues in heliophysics, viz. how charged particles from the Sun are energized to form what's known as the solar wind and how that wind interacts with interstellar space at the heliosphere's boundary.
- Help astronauts:** The IMAP mission will additionally support real-time observations of the solar wind, which can flood the near-Earth space environment with dangerous particles and radiation that could harm technology and astronauts in space and disrupt global communications and electrical grids on Earth.
- Expected outcomes of the mission:**
 - Uncover fundamental physics at scales both tiny and immense.
 - Improve forecasting of solar wind disturbances and particle radiation hazards from space.
 - Draw a picture of our nearby galactic neighborhood.
 - Help determine some of the basic cosmic building materials of the universe.
 - Increase understanding of how the heliosphere shields life in the solar system from cosmic rays.



NOBEL PRIZE IN MEDICINE 2025

Context :

- The annual Nobel Week kicked off with three scientists, sharing the Nobel Prize in Medicine for unravelling tantalising aspects of the human immune system.

About Nobel Prize in Medicine 2025:

- **Awardees:** The 2025 Nobel Prize in Physiology or Medicine has been awarded to Mary E. Bruncko, Fred Ramsdell, and Shimon Sakaguchi.
- **Awarded for:** They were awarded for discovering the mechanism and key constituents of the so-called 'peripheral immune tolerance', a fundamental mechanism that prevents our immune system from attacking the body's own tissues.
- **Identification of T-cells:** Their collaborative research identified Regulatory T cells (Tregs), specialized immune cells that act as "guardians" to prevent the immune system from mistakenly attacking the body's own cells. The discovery of the Foxp3 gene revealed its crucial role in the development of Treg cells and in controlling immune tolerance.
- **Significance:** Their discovery has helped blaze new paths into treating cancer as well as auto-immune disease, a condition by which the immune system ends up harming healthy cells they are meant to protect. This may also lead to more successful transplantations. Several of these treatments are now undergoing clinical trials.
- **Contribution of Shimon Sakaguchi:**
 - He made the first key discovery in 1995. At the time, many researchers were convinced that immune tolerance only developed due to potentially harmful immune cells being eliminated through a process called central tolerance.
 - Mr. Sakaguchi showed that the immune system is more complex and discovered a previously unknown class of immune cells, which protects the body from autoimmune diseases.
- **Contributions of Mary Bruncko and Fred Ramsdell:**
 - They made the other key discovery in 2001, when they presented the explanation for why a specific mouse strain was particularly vulnerable to autoimmune diseases.
 - They had discovered that mice have a mutation in a gene that they named Foxp3. They also showed that mutations in the human equivalent of this gene triggered a serious autoimmune disease, IPEX.
 - Two years after this, Mr. Sakaguchi was able to link these discoveries. He proved that the Foxp3 gene governs the development of the cells he identified in 1995. These cells, now known as 'regulatory T cells', monitor other immune cells and ensure that our immune system tolerates our own tissues.

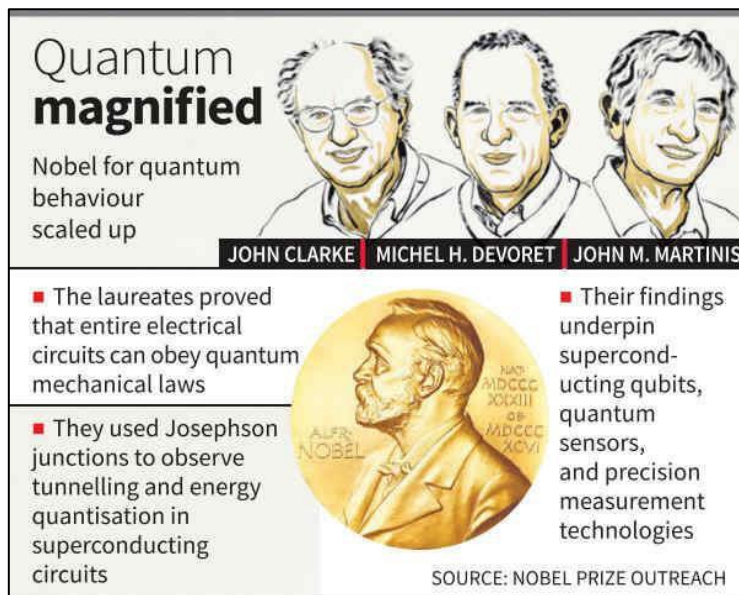


NOBEL PRIZE IN PHYSICS 2025**Context:**

- The Nobel Prize for Physics this year will be awarded to three scientists to tease greater insight into the workings of the quantum world.

About Nobel Prize in Physics 2025:

- Awardees: The Nobel Prize 2025 in Physics has been awarded to John Clarke from the University of California, Berkeley, Michel H. Devoret of Yale University and the University of California, Santa Barbara, and John M. Martinis of the University of California, Santa Barbara.
- Awarded for: They have been recognized for their pioneering work on the macroscopic quantum phenomena in electrical circuits, specifically the demonstration of quantum tunneling and energy quantization on a macroscopic scale.
- Significance: This groundbreaking research has significantly advanced our understanding of quantum mechanics in engineered systems and opened new avenues for quantum technology applications.
- About the experiment:
 - Much like early insight into quantum mechanics paved the way for transistors and silicon chips in the 1950s, the three scientists devised an electrical circuit with two superconductors, components that can conduct a current without any electrical resistance.
 - They separated these with a thin layer of material — called a Josephson junction — that did not conduct any current at all.
 - In this experiment, they showed that they could control and investigate a phenomenon in which all the charged particles in the superconductor behave in unison, as if they are a single 'particle' that fills the entire circuit.
 - Following this, they were able to demonstrate that such a particle could be made to behave simulating the flow of electricity even without voltage, a prerequisite for the flow of current.

**NOBEL PRIZE IN CHEMISTRY 2025****Context:**

- An Australian, a Japanese and a Jordanian-American scientists were announced winners of the Nobel Prize in Chemistry for discovering and creating a class of materials, called metal-organic frameworks (MOF).

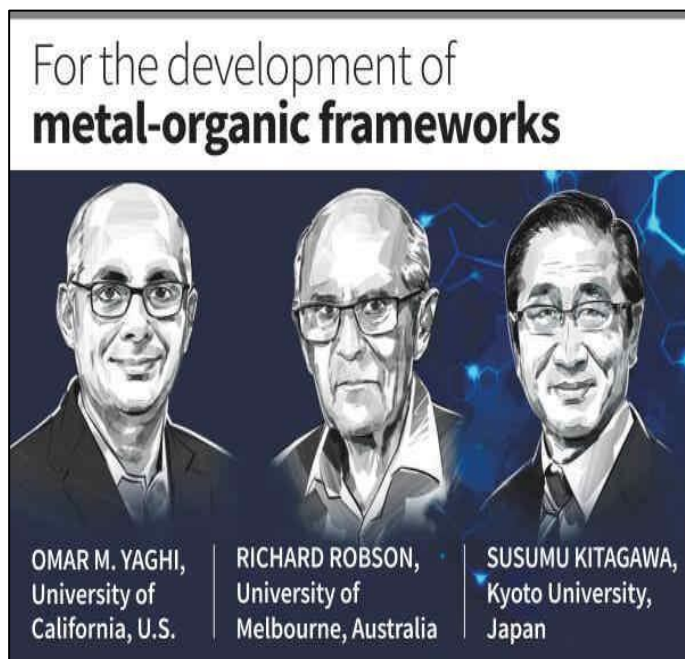
About Nobel Prize in Chemistry 2025:

- Awardees: The Nobel Prize in Chemistry 2025 has been awarded to Scientists Susumu Kitagawa, Richard Robson, and Omar Yaghi for the development of metal-organic frameworks (MOFs).

- **Significance:** Their pioneering work on MOFs porous materials with vast surface areas has revolutionized applications in gas storage, catalysis, and environmental sustainability. The discovery represents a transformative advancement in chemical sciences, with potential benefits for medicine, clean energy, and climate solutions.

- **Applications:**

- Following the laureates' groundbreaking discoveries, chemists have since built tens of thousands of different MOFs.
- Some of these may contribute to solving some of humankind's greatest challenges, with applications that include separating PFAS (a family of chemicals that are believed to be toxic) from water, breaking down traces of pharmaceuticals in the environment, capturing carbon dioxide or harvesting water from desert air



- **About the experiment:**

- It all started in 1989, when Richard Robson tested utilising the inherent properties of atoms in a new way. He combined positively charged copper ions with a four-armed molecule; this had a chemical group that was attracted to copper ions at the end of each arm.
- When they were combined, they bonded to form a well-ordered, spacious crystal. It was like a diamond filled with innumerable cavities. Robson immediately recognised the potential of his molecular construction, but it was unstable and collapsed easily.
- However, Susumu Kitagawa and Omar Yaghi provided this building method with a firm foundation; between 1992 and 2003 they made, separately, a series of revolutionary discoveries.
- Kitagawa showed that gases can flow in and out of the constructions and predicted that MOFs could be made flexible. Yaghi created a very stable MOF and showed that it can be modified using rational design, giving it new and desirable properties.

ANTIMICROBIAL RESISTANCE (AMR)

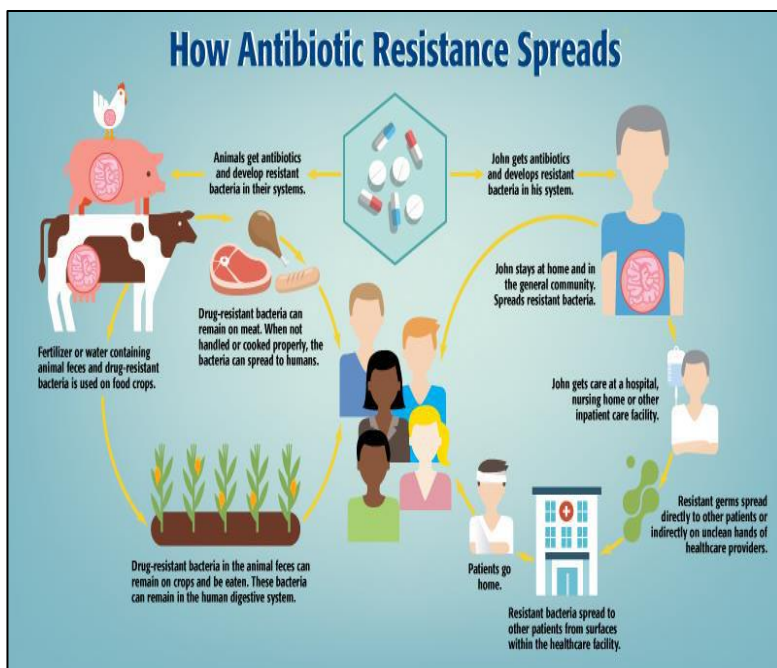
Context:

- Antimicrobial resistance has become, a communication crisis; instead of talking only about the future collapse of healthcare systems, the focus must be on the present impact on individual bodies.

About Antimicrobial Resistance (AMR):

- **Definition:** Antimicrobial resistance is the resistance acquired by any microorganism (bacteria, viruses, fungi, parasites, etc.) against antimicrobial drugs (such as antibiotics, antifungals, antivirals, antimalarials, and anthelmintics) that are used to treat infections.
- **Natural process:** It is a natural phenomenon as bacteria evolve, making drugs used to treat infections less effective.

- Formation of superbugs: Microorganisms that develop antimicrobial resistance are sometimes referred to as “superbugs”.
- Global threat: The World Health Organization (WHO) has identified AMR as one of the top ten threats to global health.
- Reasons for the Spread of AMR:
 - High burden of communicable diseases, such as tuberculosis, diarrhoea, respiratory infections, etc. that require antimicrobial treatment.
 - Hygiene lapses in hospitals and clinics facilitate the spread of resistant bacteria.
 - Overprescribing by doctors under pressure from patients (often self-medication), incomplete antibiotic courses, and broad-spectrum antibiotics used unnecessarily create selective pressure for resistant bacteria.
 - Unregulated over-the-counter availability and affordability of antibiotics fuel self-medication and inappropriate use.
 - Low public understanding of AMR and proper antibiotic use encourages misuse.
- Measures Taken by India to Address AMR:
 - National Programme on AMR containment was launched in 2012 to strengthen AMR Surveillance Network by establishing labs in State Medical College.
 - National Action Plan on AMR was launched in April 2017 with the aim of involving various stakeholder ministries/departments.
 - Indian Council of Medical Research (ICMR) has taken initiatives to develop new drugs /medicines through international collaborations in order to strengthen medical research in AMR.



GREEN CRACKERS

Context:

- Ahead of Deepavali, the Supreme Court relaxed the blanket ban on fireworks in Delhi and the National Capital Region (NCR) and allowed the sale of green fireworks approved by Petroleum and Explosives Safety Organisation (PESO).

About Green Crackers:

- Nature: Green crackers are dubbed as ‘eco-friendly’ crackers and are known to cause less air and noise pollution as compared to traditional firecrackers.
- Designed by: These crackers were first designed by the National Environmental and Engineering Research Institute (NEERI), under the aegis of the Council for Scientific and Industrial Research (CSIR) in 2018.

- Objective: These crackers replace certain hazardous agents in traditional crackers with less polluting substances with the aim to reduce the noise intensity and emissions.
- Range of sound: Regular crackers also produce 160-200 decibels of sound, while that from green crackers are limited to about 100-130 decibels.
- Features:
 - Most green crackers do not contain barium nitrate, which is the most dangerous ingredient in conventional crackers.
 - Green crackers use alternative chemicals such as potassium nitrate and aluminium instead of magnesium and barium as well as carbon instead of arsenic and other harmful pollutants.
- Types of green crackers:
 - SWAS - Safe Water Releaser: These crackers do not use sulphur or potassium nitrate, and thus release water vapour instead of certain key pollutants. It also deploys the use of diluents, and thus is able to control particulate matter (PM) emissions by upto 30%.
 - STAR – Safe Thermite Cracker: Just like SWAS, STAR also does not contain sulphur and potassium nitrate, and besides controlling particulate dust emissions, it also has lower sound intensity.
 - SAFAL – Safe Minimal Aluminium: It replaces aluminium content with magnesium and thus produces reduced levels of pollutants.
- Production: All three types of green crackers can currently only be produced by licensed manufacturers, approved by the CSIR.
- Certification: The Petroleum and Explosives Safety Organisation (PESO) is tasked with certifying that the crackers are made without arsenic, mercury, and barium, and are not loud beyond a certain threshold.

Toxic nature

Conventional firecrackers contain chemicals which produce effects like bright lighting and colours. However, these chemicals can have adverse effects on human health and the environment



Initial ingredient	Use in crackers	Health hazards
Charcoal, potassium nitrate and sulphur	Black powder which is the primary fuel in the cracker	The dust released is hazardous when inhaled; different compounds formed can be carcinogenic
Strontium and lithium	Colouring agent (Red)	Strontium can replace calcium in the body which can be toxic; Lithium releases harmful fumes
Barium	Colouring agent (Orange)	Fumes can cause respiratory and other health issues
Nitrates, chlorates/perchlorates	Oxidising agents	The compounds can hamper the growth of small children; they remain airborne for days and can be poisonous

About Petroleum and Explosives Safety Organisation (PESO):

- Ministry: PESO is an office under the Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industries.
- Establishment: It was established in 1898 as a nodal agency for regulating safety of substances such as explosives, compressed gases and petroleum.
- Head office: Its head office is located in Nagpur, Maharashtra.

CELL2SENTENCE-SCALE 27B (C2S-SCALE)

Context :

- Google's new AI, Cell2Sentence-Scale 27B (C2S-Scale) finds promising approach for cancer treatment.

About C2S-Scale:

- **Nature:** The Cell2Sentence-Scale 27B (C2S-Scale) is a 27-billion-parameter foundation model designed to understand the language of individual cells within the body. This enables it to simulate and predict cellular behaviour under various conditions, such as in diseases like cancer.
- **Significance:** C2S-Scale can generate insights that were previously unrecognized by understanding how individual cells react and interact. This allows researchers to explore new pathways in drug discovery and disease treatment.
- **Development:** The C2S-Scale is an advanced artificial intelligence (AI) model developed by Google DeepMind and Google Research in collaboration with Yale University and based on the Gemma framework.
- **Changes course of medical research:** This development marks a significant milestone in medical research by generating new scientific hypotheses, bridging computational predictions with experimental validation.
- **Working mechanism:**
 - The model was trained using large data sets to identify patterns in cell behavior, especially under conditions where immune system responses are low (low levels of interferons), such as in early-stage cancer.
 - By analyzing this data, C2S-Scale can generate hypotheses about cellular behavior and suggest potential drug combinations that could trigger immune responses in tumors that are typically hidden from the immune system.

**ROTAVIRUS****Context :**

- A recent study on the impact of the indigenous rotavirus vaccine in India found marked reductions in rotavirus-based gastroenteritis in sites across the country.

About Rotavirus:

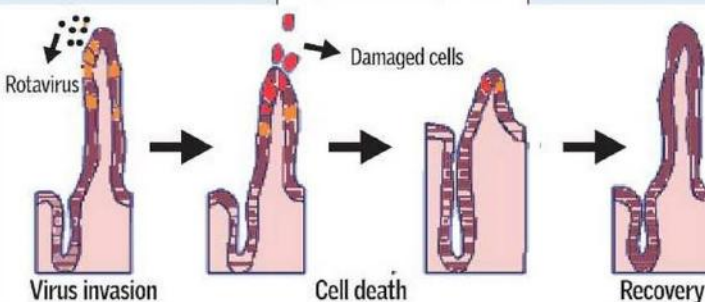
- **Family:** Rotavirus is a double-stranded RNA virus genus in the Reoviridae family.
- **Contagious:** Rotavirus is a contagious disease that spreads easily from child to child.
- **Mortality:** Rotavirus is a leading cause of severe diarrhoea and death among children less than five years of age. It is responsible for around 10% of total child mortality every year.
- **Mode of spread:** Rotavirus spreads easily through the fecal-oral route (when a person comes in contact with the feces of someone who has rotavirus and then touches their own mouth). For example, rotavirus can spread when a child with rotavirus doesn't wash their hands properly after going to the bathroom and then touches food or other objects.
- **Symptoms**
 - Severe diarrhea
 - Throwing up
 - Dehydration
 - Fever
 - Stomach pain

- Dosage: World Health Organisation (WHO) recommends that the first dose of rotavirus vaccine be administered as soon as possible after 6 weeks of age, along with DTP vaccination (diphtheria, tetanus and pertussis).
- Inclusion in National Schedules: WHO has recommended the inclusion of rotavirus vaccine in the National Schedules of the countries where under five mortality due to diarrhoeal diseases is more than 10%.
- Vaccines available: Currently, two vaccines are available against rotavirus:
 - Rotarix (GlaxoSmithKline): is a monovalent vaccine recommended to be orally administered in two doses at 6-12 weeks.
 - Rota Teq (Merck) is a pentavalent vaccine recommended to be orally administered in three doses starting at 6-12 weeks of age.

HOW ROTAVIRUS ATTACKS

The rotavirus attacks the villus tip cells of the small intestine, and obstructs digestion and absorption

- 1 Once rotavirus enters the small intestine, it sticks to glycolipids on villus cells (see figure) lining small intestine
- 2 It invades the villus tip cells, causing atrophy, loss of digestive enzymes, and a dip in absorption
- 3 Once the villi become blunted, the resulting malabsorption of carbohydrates results in diarrhoea



Source: Principles and Practices of Clinical Virology, 5th ed. 2004

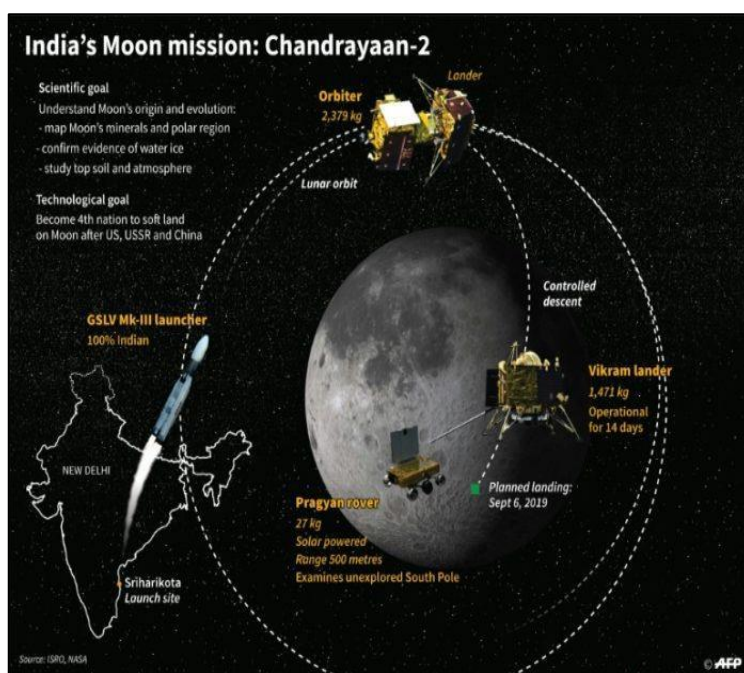
CHANDRAYAAN-2

Context:

- The lunar orbiter of India's second moon mission, Chandrayaan-2, has made the first-ever observation of the effects of the sun's coronal mass ejection (CME) on the moon.

About Chandrayaan-2:

- Nature: It is the second lunar exploration mission developed by ISRO after Chandrayaan-1. It is the 1st Indian expedition to attempt a soft landing on moon with indigenous technology.
- Objectives:
 - to study lunar topography, mineralogy, elemental abundance, the lunar exosphere, and signatures of hydroxyl and water ice;
 - to study the water ice in the south polar region and thickness of the lunar regolith on the surface; and
 - to map the lunar surface and help to prepare 3D maps of it.



- Launch vehicle: It was launched using India's most powerful launcher GSLV MK-III from Satish Dhawan Space Centre in Andhra Pradesh.
- Components:
 - There are three components of the mission, a lunar orbiter, the Vikram lunar lander, and the Pragyan rover. The mission's lander is named Vikram after Dr Vikram A Sarabhai, the Father of the Indian Space Programme.
 - The lander, rover and orbiter will perform mineralogical and elemental studies of the lunar surface. The orbiter is deployed at an altitude of 100 kilometers above the surface of the Moon.
- Major payloads:
 - Chandrayaan-2 Large Area Soft X-ray Spectrometer (CLASS)
 - Solar X-ray Monitor (XSM)
 - CHandra's Atmospheric Compositional Explorer 2 (CHACE 2)
 - Dual Frequency Synthetic Aperture Radar (DFSAR)
 - Imaging Infra-Red Spectrometer (IIRS)
 - Terrain Mapping Camera (TMC 2)
 - Orbiter High Resolution Camera (OHRC)
 - Dual Frequency Radio Science (DFRS) Experiment
- Step towards PLANEX: The mission is an important step in India's plans for planetary exploration, a program known as Planetary Science and Exploration (PLANEX).

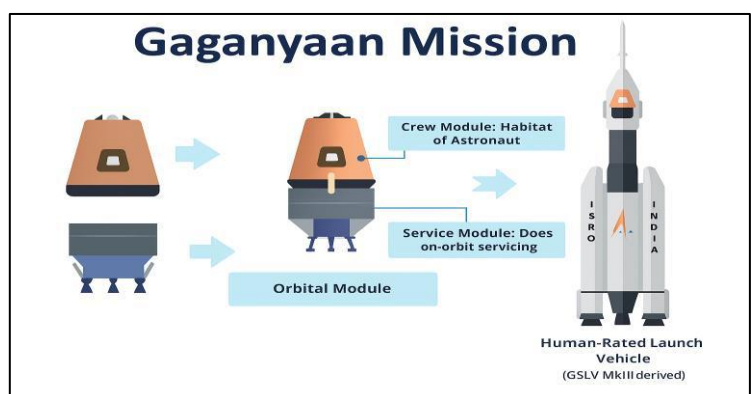
GAGANYAAN MISSION

Context:

- ISRO Chairman V. Narayanan on Thursday said that about 90% of the development work on the Gaganyaan mission had been completed.

About Gaganyaan Mission:

- Nature: It is India's first human spaceflight program.
- Objective: It aims to send a crew of 3 astronauts to Low Earth Orbit (LEO) at 400 km for 3 days and return them safely to Earth.
- Importance: Gaganyaan success will place India among the elite group of nations (US, Russia, China) with human spaceflight capability.
- Phased mission: It includes unmanned test missions followed by the first manned mission expected to happen in early 2027.
- Astronauts selected: Group Captain Prasanth Balakrishnan Nair, Group Captain Ajit Krishnan, Group Captain Angad Pratap, and Wing Commander Shubhanshu Shukla are India's astronauts-designated for Gaganyaan.
- Training: Astronaut Training Facility established in Bengaluru caters to Classroom training, Physical Fitness training, Simulator training and Flight suit training. Training modules cover Micro-gravity familiarization through Parabolic Flights, Aero-medical training, Recovery & Survival training, Crew Training Simulators, etc.
- Key Technologies for Crew Safety:

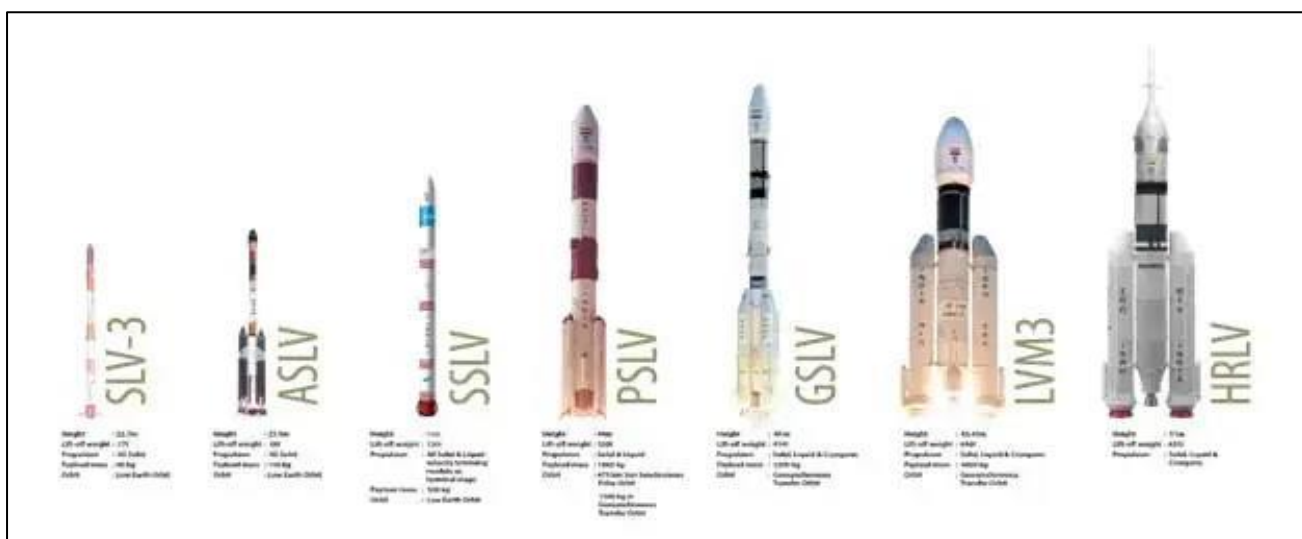


- Human-Rated Launch Vehicle (HLVM3): It is a modified version of ISRO's LVM3 rocket. It includes solid, liquid, and cryogenic stages, re-configured to meet human rating requirements. It is capable of launching the Orbital Module to a Low Earth Orbit (400 km) and features a Crew Escape System (CES) with high burn rate solid motors to ensure crew safety during emergencies.
- Orbital Module (OM): It houses the Crew Module (CM) and Service Module (SM) with life support, avionics, and propulsion systems. The CM is a habitable space with an Earth-like environment, with a pressurized inner structure and unpressurized external structure. The SM supports the CM in orbit, providing thermal, propulsion, power systems, avionics, etc. but remains unpressurized.
- Preparatory tests for the mission:
 - Integrated Air Drop Test (IADT): Validate parachute and deceleration systems.
 - Test Vehicle Missions (TV): Test abort and launch systems.
 - Pad Abort Test (PAT): Check crew module safety from various altitudes.
 - Water Survival Test Facility (WSTF): Recovery trials with Navy support.

GSAT-7R

Context:

- ISRO will launch military communications satellite CMS-03 on November 2 from the Satish Dhawan Space Centre in Sriharikota. The CMS-03 communication satellite, also known as GSAT-7R, will be launched by the Launch Vehicle Mark 3 (LVM3).



About GSAT-7R:

- Nature: It is an upcoming Indian military communication satellite for the Indian Navy, designed to replace the GSAT-7 (Rukmini) satellite.
- Launch: Originally slated for a 2024 launch, the launch is now scheduled for November 2, 2025, using the LVM-3 rocket.
- Objective: It will provide secure, multi-band communication services for naval assets like ships, submarines, and aircraft, enhancing secure, multi-band communication for the Navy's blue-water operations
- Multi-band satellite: It is a multi-band communication satellite that will provide services over a wide oceanic region including the Indian landmass.

- Heaviest communication satellite: It weighs about 4400 kg and it will be the heaviest communication satellite to be launched to Geosynchronous Transfer Orbit (GTO) from Indian soil.

About LVM-3 Rocket:

- Nature: It is India's most powerful launcher built entirely with domestic technology.
- Stages:
 - The first (or bottom most stage) is in the form of 2 S200 boosters straps to the sides of the rocket body. They combust a solid fuel called hydroxyl-terminated polybutadiene,
 - The second stage is powered by Vikas Engines, which combust a liquid fuel, either nitrogen tetroxide or unsymmetrical dimethylhydrazine.
 - The Uppermost final stage is Powered by a cryogenic engine. It combusts liquified hydrogen with liquified oxygen.
- Payload capacity: It can lift up to 8 tonnes in low earth orbit.
- Evolution: Since its first flight in 2014, it has enabled India to pursue heavy-lift geosynchronous missions with complete strategic autonomy. Future variants of LVM3 now under development are aimed at reducing costs and improving performance through new technologies like electric propulsion and recoverable first stages.
- Major missions launched:
 - Chandrayaan-2 Mission
 - GSAT-29 Mission
 - GSAT-19 Mission
 - CARE Mission

CRYODIL**Context :**

- In a breakthrough, scientists have developed a ready-to-use, egg yolk-free solution, CRYODIL with shelf life of 18 months, at refrigeration temperature, for cryopreserving buffalo semen.

About CRYODIL:

- Nature: CRYODIL is a ready-to-use, egg yolk-free semen extender designed to preserve buffalo semen for long durations while maintaining fertility and motility.
- Development: It is developed by scientists at the National Institute of Animal Nutrition and Physiology (NIANP) under the Indian Council of Agricultural Research (ICAR), Bengaluru.
- Objective: It aims to provide a safe, efficient, and affordable alternative to traditional egg-yolk-based semen extenders and enhance buffalo breeding efficiency in India.
- Long Shelf Life: It has the ability to preserve semen for up to 18 months without contamination or loss of motility.
- No risk of microbial defilement: It eliminates risk of microbial contamination associated with egg yolks and uses purified whey proteins instead of egg yolk, ensuring consistent semen quality.
- Cost-Effective: It is cheaper and easier to produce compared to imported commercial extenders.





HISTORY AND ART & CULTURE



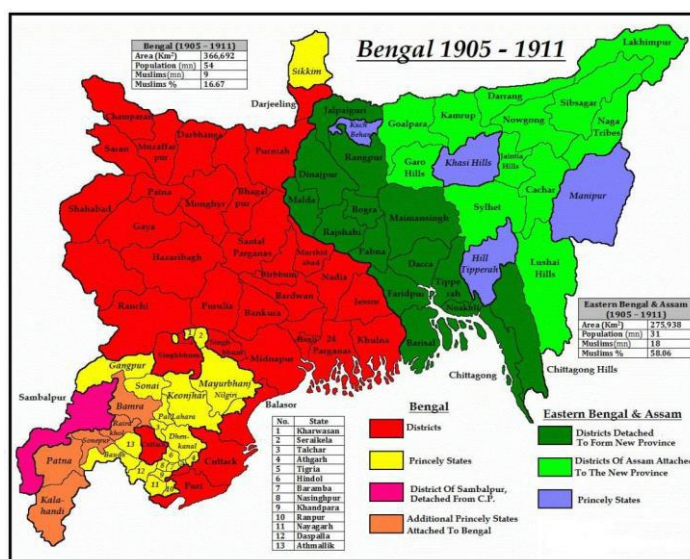
PARTITION OF BENGAL

Context:

- Recently, Undivided Bengal' emerged as the popular theme of Durga Puja in West Bengal.

About Partition of Bengal:

- Background:
 - The Partition of Bengal in 1905 was initiated by Lord Curzon, the then Viceroy of India, citing administrative efficiency due to the vast size and population of Bengal.
 - However, the underlying motive was to weaken the growing nationalist movement by dividing Hindus and Muslims. Bengal was split into two provinces: Eastern Bengal and Assam (Muslim-majority) and Western Bengal (Hindu-majority).
 - The move was widely opposed by Indian nationalists, who saw it as a strategy of "divide and rule." The partition sparked widespread protests and gave rise to the Swadeshi Movement, eventually leading to its annulment in 1911.
- Course of the Movement:
 - Protests were organised all over Bengal, and the idea of boycotting foreign goods was put into practice.
 - A huge gathering was held in Calcutta town hall on August 7, 1905, and a Boycott Resolution was passed. This marked the formal beginning of the Swadeshi movement.
 - Krishna Kumar Mitra was the first to suggest the boycott of British goods in Bengal.
 - Syed Haidar Raja led the Swadeshi movement in Delhi.
- Role of Moderates:
 - Surendranath Banerjee led the Moderate group, which comprised Krishna Kumar Mitra, Jogeshchandra Chaudhuri, Bhupendranath Bose, Prithwishchandra Ray, etc.
 - They worked ceaselessly from 1903 to intensify the agitation through press campaigns, meetings, petitions, conferences, etc.
 - In their usual style, they forwarded anti-partition arguments in their pamphlets, and a few newspapers, like Sanjibani, Indian Mirror, and Ananda Bazar Patrika, carried their ideas widely.
- Impact of the Movement:
 - Public meetings, protests, and the spread of nationalist literature galvanized the masses, especially the youth and middle class.
 - The partition also deepened communal divisions, laying early seeds of communal politics.
 - However, it unified different sections of Indian society against colonial rule and energized the freedom struggle.



- The British eventually annulled the partition in 1911 due to strong resistance, making it a landmark victory and reinforcing the power of mass mobilization in India's fight for independence.

KATHAKALI

Context:

- Kerala Kalamandalam, Cheruthuruthy, witnessed history when 16-year-old Sabri, became the first Muslim girl to perform Kathakali at the prestigious institution since its founding in 1930.

About Kathakali:

- Origin: Kathakali emerged in the 17th century in the kingdom of Travancore (present-day Kerala). The art form was initially performed in temple precincts and later gained popularity in the royal courts.
- Based on ancient texts: Kathakali is based on Natya Shastra, the ancient treatise on dance, written by Sage Bharata. However, It relies on Hasthalakshana Deepika, another classical text for its hand gestures.
- Precursors: Dance-drama art form called 'Krishnanattam' and Ramanattam based on Mahabharata and Ramayana are precursor of 'Kathakali'.
- Composition: Kathakali combines elements of dance, music, mime, and drama.
- Features of dance: The four aspects of abhinaya – Angika, Aharya, Vachika, Satvika and the Nritta, Nritya and Natya are combined perfectly in this dance form.
- Features of music: Kathakali music follows the traditional sopana sangeet of Kerala. It is said to be the ritual singing of the Ashtapadis on the flight of steps leading to the sanctum sanctorum.
- Use of Mudras: The movements are highly stylized and include intricate footwork, rhythmic swaying, and various hand gestures called mudras.
- Emphasis on facial expressions: The dancers use their facial expressions, known as rasas, to convey emotions and tell stories.
- Downfall in 20th century: Kathakali was in peril and on the verge of extinction in the beginning of 20th century.
- Revival: Renowned Poet Vallathol Narayana Menon and Manakkulam Mukunda Raja took the initiative to set up Kerala Kalamandalam, a centre of excellence for classical art forms for the revival of kathakali.
- Major exponents: Kavungal Chathunni Panicker and Kalamandalam Gopi are its most eminent representatives.



THUMRI

Context:

- Thumri (one of the ten main styles of singing in Hindustani music) lost its voice as Pandit Chhannulal Mishra passed away leaving a musical legacy.

About Thumri:

- Origin: Originated in Eastern Uttar Pradesh, mainly in Lucknow & Benares, around 18th century. A romantic & erotic style of singing; also called “the lyric of Indian classical music.”
- Themes: Compositions are mostly on love, separation and devotion.
- Distinct feature: Erotic subject matter portrayed picturesquely from the various episodes of the lives of Lord Krishna & Radha.
- Language: Lyrics are typically in Brij Bhasha and are usually romantic & religious.
- Linkage with Khayal: A Thumri is usually performed as the last item of a Khayal concert.
- Gharanas: Three main gharanas of thumri are Benaras, Lucknow and Patiala.
- Exponent: Begum Akhtar is one of the most popular singers of thumri style.

About Hindustani Music:

- Origin: While the historical roots of both the music types belong to the Bharata's Natyasastra, they diverged in the 14th century.
- Focus: The Hindustani branch of music focuses more on the musical structure and the possibilities of improvisation in it. The Hindustani branch adopted a scale of Shudha Swara Saptaka or the 'Octave of Natural notes'.
- Composition: The Hindustani music has elements of ancient Hindu tradition, Vedic philosophy and Persian tradition as well.
- Based on teacher-disciple tradition: Since ancient times, it has been passed from one to another through the Guru-Shishya Parampara.
- Musical instruments: The musical instruments used in Hindustani are Tabla, Sarangi, Sitar, Santoor, Flute and violin.
- Raga system: It is based on the Raga system. The Raga is a melodic scale comprising of basic seven notes.
- Major styles: There are ten main styles of singing in Hindustani music like the Dhrupad, Khayal, Tappa, Chaturanga, Tarana, Sargam, Thumri and Ragasagar, Hori and Dhamar.

Hindustani Vs Carnatic Music	
Hindustani Music	Carnatic Music
	
• Have influence of Arab, Persian and Afghan • Scope provided to artists for variation and improvisation • several sub-styles which lead to emergence of 'Gharanas' • 6 major ragas • Instruments are equally important as vocals • Main emphasis on Ragas • Mainly associated with north India • Major instrument used: Tabla, Sarangi, Sitar and Santoor	• Indigenous system of music • Less scope of improvisation • Only one particular prescribed style of singing • 72 melakartas, ragas and janya ragas • More emphasis given on vocal music • Mainly based on Tala or Taal • Mainly prevalent in south India • Instruments used: Veena, Mridangam and Mandolin

BANNI FESTIVAL**Context:**

- Two people were killed and more than a hundred were injured at the annual Banni festival at Devaragattu in Kurnool district of Andhra Pradesh.

About Banni Festival:

- Nature: It is a tradition in Andhra Pradesh where villagers fight with sticks to claim a deity's idol on Vijayadashami. The objective of this event is to snatch the idols from the God's team, leading to a fierce battle known as the Banni Fight.
- Occasion: It is celebrated on the night of Dussehra celebration (Vijaya Dasami) every year.
- Location: It is held on the premises of Mala Malleswara Swamy Temple (situated at the border of Andhra Pradesh and Karnataka).
- Linkage with Vijayanagara Empire: This festival was celebrated by people under the Vijayanagara Empire.

- Significance: It is celebrated on the account of the victory of Lord Mala Malleswara Swamy and Goddess Parvati over demonish Mani and Mallasura, who troubled the people at Devaragattu region.
- Rituals:
 - The ritual takes place at midnight when the procession of idols of the ruling deities Malamma (Parvati) and Malleshwara Swamy (Shiva) are brought down the hill temple at Neraneki.
 - Devotees carry long sticks or lathis with them for hitting each other with these sticks on the head. The basic idea of this fight is to capture the procession idol.

LINGAYATS

Context:

- Karnataka Minister countered the demand for a separate religious status for Lingayats, and said that “no force can separate Veerashaivas and Lingayats” in the State.

About Lingayats:

- Nature: Lingayats are followers of 12th-century social reformer Basavanna and his vachana (verses) philosophy, which emphasized equality, social justice, and devotion, rejecting Brahmanical authority, temple worship, and caste distinctions.
- Shaivite: They are a Shaivite sect in Hinduism that emerged in Karnataka during the reign of the Kalachuri dynasty. Basavanna, a minister in the court of Kalachuri King Bijjala (1157-67 CE), was the key proponent of Lingayatism.
- Worship of Ishtalinga: They promoted work as worship and offered spiritual enlightenment for all, including householders and artisans. Lingayats worship ishtalinga, a formless God, and reject rituals, focusing on honest labour and social redistribution.
- Rejected Brahmanical Authority: They prioritized direct worship of Shiva and rejected the Vedic authority, the caste system, and Brahmin ceremonies.
- Fostered social reforms: They encouraged post-puberty marriage, re-marriage of widows, and the promotion of inter-caste relationships.
- Anubhava Mantapa: Basavanna established the Anubhava Mantapa, a “Hall of Experience,” where people from all social backgrounds could gather, discuss religious and social issues, and share their experiences.
- Questioned theory of re-births: They bury their dead instead of cremating them (as they believe that devotees will be united with Shiva and will not return to this world).
- Gave importance to compassion: They stressed the importance of being a compassionate and socially productive human being in this world and in this life.



- Kayaka as means of worship: They considered all forms of labour and means of livelihood (kayaka) a form of worship. They provided the honest earnings from labour (kayaka), which are primarily used for social redistribution, called 'dasoha'.
- Distribution: Lingayats are found primarily in Karnataka, where Lingayats comprise a major population. They are also found in significant numbers in Maharashtra and Andhra Pradesh.
- Difference with Veershaivas: Veerashaivism, a sect deeply rooted in the Vedas and Agamas, centres solely around the worship of Lord Shiva as mentioned in Hindu mythology. Its followers are devoted to five religious centres known as Pancha Peethas, which are established similarly to the four peethas set up by Adi Shankara.

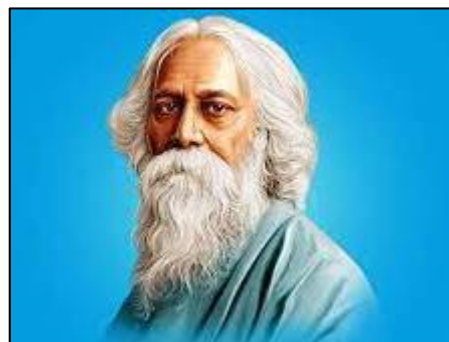
RABINDRANATH TAGORE

Context:

- The Odisha government has announced plans to restore 'Pather Puri', the residence of Nobel laureate Rabindranath Tagore in Puri, and transform it into a museum.

About Rabindranath Tagore:

- Background: He was the youngest of 13 children born to Debendranath Tagore, a leading figure in the Brahmo Samaj, and Sarada Devi. Tagore received early education at home, with his family emphasizing literary and cultural learning.
- Schooling and higher education: He attended several schools, including a stint at the University College London, though he did not complete formal schooling.
- Multi-faceted personality: Rabindranath Tagore was a Bengali poet, novelist, and painter, who was highly influential in introducing Indian culture to the west. He was an exceptional literary figure and a renowned polymath who singlehandedly reshaped the region's literature and music.
- Sobriquets: He was also referred to as 'Gurudev', 'Kabiguru', and 'Biswakabi'.
- Association with Mahatma Gandhi: He was a good friend of Mahatma Gandhi and is said to have given him the title of Mahatma.
- Votary of national integration: He had always stressed that unity in diversity is the only possible way for India's national integration.
- World Parliament for Religions: He had spoken at the World Parliament for Religions in the years 1929 and 1937.
- Contribution to education system: Besides all his literary achievements he was also a philosopher and educationist who in 1921 established the Vishwa-Bharati University, a university that challenged conventional education.
- Contributions as a poet:
 - He is said to have composed over 2000 songs and his songs and music are called 'Rabindra Sangeet' with its own distinct lyrical and fluid style.
 - He is responsible for modernising Bengali prose and poetry. His notable works include Gitanjali, Ghare-Baire, Gora, Manasi, Balaka, Sonar Tori, He is also remembered for his song 'Ekla Chalo Re'.
 - He published his first poems aged 16 under the pen-name 'Bhanusimha'.
 - He not only gave the national anthems for two countries, India and Bangladesh, but also inspired a Ceylonese student of his, to pen and compose the national anthem of Sri Lanka.



- Awards:
 - In 1913 he was awarded the Nobel Prize in Literature for his work on Gitanjali.
 - He was the first non-European to receive the Nobel Prize.
 - In 1915 he was awarded knighthood by the British King George V. In 1919, following the Jallianwalla Bagh massacre, he renounced his Knighthood.

IRON AGE CULTURE

Context:

- The first season of excavations carried out by the Tamil Nadu State Department of Archaeology (TNSDA) at Thirumalapuram in Tenkasi district has brought to light the presence of Iron Age culture close to the Western Ghats in Tamil Nadu.

More about the findings:

- According to 'Archaeological Excavations in Tamil Nadu: A Preliminary Report', the burial site at Thirumalapuram covers nearly 35 acres and lies about 10 km northwest of the present-day village, between two seasonal streams that rise from the Western Ghats near the Kulasegarapereri tank.
- The excavations also yielded a rich collection of ceramics found in graves and among grave goods. These included white-painted black-and-red ware, red ware, red-slipped ware, black-polished ware, and coarse red ware.
- The black-and-red ware, black ware, and black-slipped ware types had white-painted designs, a unique feature first reported from T. Kallupatti and later from Adichanallur, Sivagalai, Thulukkarpatti, and Korkai.
- According to the report, symbols on the urns were among the most striking discoveries at Thirumalapuram. One red-slipped pot featured dotted designs showing a human figure, a mountain, a deer, and a tortoise.
- A total of 78 antiquities made of bone, gold, bronze, and iron were also found. They include a tweezer, sword, spearhead, gold ring, axe, dagger, chisel, bonehead, and arrowhead.



About Iron Age:

- Nature: The Iron Age is a prehistoric period that followed the Bronze Age, characterized by the widespread use of iron for tools, weapons, and other implements.
- Various cultures associated with it:
 - Black-and-Red Ware (BRW): It is characterized by distinctive pottery with black interiors and red exteriors due to inverted firing techniques. It is found in Harappan context (Gujarat), Pre-PGW context (northern India), and Megalithic context (southern India).

- Painted Grey Ware (PGW) Culture: It is characterized by grey pottery with black geometric patterns. Iron reported at multiple sites in the Ganga valley and South Indian Megaliths (1st millennium BCE).
- Northern Black Polished Ware (NBPW) Culture: It is characterized by wheel-made pottery which is fine, black, and highly polished. It is significant in north India.
- Megalithic Culture: Megaliths (large stones used to construct a prehistoric structure), linked to iron, are found in the Vindhya (southern Uttar Pradesh), Vidisha region, and much of South India.

KAMBALA

Context:

- The Karnataka High Court dismissed most aspects of a petition filed by People for the Ethical Treatment of Animals (PETA) against holding the Kambala race outside Udupi and Dakshina Kannada districts.

About Kambala:

- Nature: Kambala is a traditional buffalo race in paddy fields filled with slush and mud which generally takes place in coastal Karnataka (Udupi and Dakshina Kannada) from November to March.
- Native to: Traditionally, it is sponsored by local Tuluva landlords and households in the coastal districts. Tuluva people are an ethnic group native to Southern India. They are native speakers of the Tulu language.
- Objective: During the race, the racers try to bring the buffaloes under control by holding their reins tight and whipping them.
- Tradition: In its traditional form, Kambala was non-competitive and buffalo pairs raced one after another in paddy fields. It was also observed as thanksgiving to gods for protecting the animals from diseases.
- Concerns: Animal activists criticize the sport and argue that the Kambala involves acts of cruelty on animals which are not physiologically suited for racing. According to them, it violates the Prevention of Cruelty to Animals (PCA) Act, 1960, which prevents practices involving unnecessary pain to the animal amounting to cruelty.



About People for the Ethical Treatment of Animals (PETA):

- Nature: It is a nongovernmental organization (NGO) committed to ending abusive treatment of animals in business and society and promoting consideration of animal interests in everyday decision-making and general policies and practices.
- Foundation: PETA was founded in 1980 by Ingrid Newkirk and Alex Pacheco, who were influenced by Australian ethicist Peter Singer's book Animal Liberation (1975).
- Headquarters: It is the largest animal rights organization in the world and is based in Norfolk, Virginia, United States, with entities worldwide.
- Objective: PETA opposes speciesism, a human-supremacist worldview, and focuses on the four areas in which the largest numbers of animals suffer the most intensely for the longest periods of time: in laboratories, in the food industry, in the clothing trade, and in the entertainment business.

- Working mechanism: PETA works through public education, investigations, research, legislation, protests, and negotiations with companies and regulatory agencies.

ARCHAEOLOGICAL SURVEY OF INDIA (ASI)

Context:

- In a recent interview, the Director General of the Archaeological Survey of India discussed reforms for the complete revival of the organisation's excavation policies.

About Archaeological Survey of India (ASI):

- Nature: ASI is the premier organization for the archaeological research and protection of the cultural heritage of the nation.
- Foundation: ASI was founded in 1861 by Alexander Cunningham (the first Director-General of ASI). He is also known as the "Father of Indian Archaeology."
- Statutory body: After independence, it was established as a statutory body under the Ancient Monuments and Archaeological Sites and Remains Act, 1958 (AMASR Act).
- Ministry: It works under the Ministry of Culture.
- Coverage: It administers more than 3650 ancient monuments, archaeological sites and remains of national importance.
- Works: Its activities include carrying out surveys of antiquarian remains, exploration and excavation of archaeological sites, conservation and maintenance of protected monuments etc.
- ASI Circles:
 - For the maintenance of ancient monuments and archaeological sites and remains of national importance the entire country is divided into 36 Circles.
 - These carry out archaeological fieldwork, research activities and implement the various provisions of the Ancient Monuments and Archaeological Sites and Remains (AMASR) Act, 1958 and Antiquities and Art Treasures Act 1972.



NINGOL CHAKOUBA FESTIVAL

Context:

- Manipur government holds fish fair ahead of the Ningol Chakouba festival and targets to sell 1.5 lakh kg of various fish varieties.

About Ningol Chakouba Festival:

- Annual festival of Manipur: The festival is held every year in Manipur on the second day of the lunar month of Hiyangei of the Meitei calendar.
- Primarily celebrated by Meiteis: The festival is mainly celebrated by the Meiteis but nowadays many other communities also have started to celebrate it.
- Objective: It emphasises the importance of happiness and reunion of a family in bringing peace and harmony in a society.
- Nomenclature: Ningol means 'married woman' and Chakouba means 'invitation for feast'; so the festival is the one where the married women are invited to their parents' home for a feast.



- Uniqueness: The main component of the festival is the visit of married sisters to their maternal homes for grand feast and joyous reunion followed by giving away the gifts.

About the Meitei Community:

- Separate ethnic group: They are the predominant ethnic group of Manipur State.
- Language: They speak the Meitei language (officially called Manipuri), one of the 22 official languages of India and the sole official language of Manipur State.
- Distribution: The Meiteis primarily settled in the Imphal Valley region in modern-day Manipur, though a sizable population has settled in the other Indian states of Assam, Tripura, Nagaland, Meghalaya, and Mizoram. There is also a notable presence of Meitei in the neighbouring countries of Myanmar and Bangladesh.
- Clans: They are divided into clans, the members of which do not intermarry.
- Economy: Rice cultivation on irrigated fields is the basis of their economy.

SARDAR VALLABHBHAI PATEL

Context:

- Prime Minister Narendra Modi will lead the Rashtriya Ekta Diwas parade near Kevadia in Gujarat on October 31 to commemorate the 150th birth anniversary of Sardar Vallabhbhai Patel.

About Sardar Vallabhbhai Patel:

- Birth: He was born on 31st October 1875, in Nadiad, Gujarat.
- Career: He completed law studies in England, earning a prize in Roman Law, and returned to India as a barrister in 1913.
- Legacy: He is popularly known as the "Iron Man of India" for his determination and firm approach. He is revered as a symbol of national unity and resilience.
- Statue of Unity: In 2018, the Statue of Unity, the world's tallest statue at 182 meters (600 feet), was inaugurated at Kevadia, Gujarat, honouring Sardar Vallabhbhai Patel. His birth anniversary is observed as National Unity Day (31st October).
- Contributions in the Indian National Movement:
 - He played a pivotal role in Kheda Satyagraha (1918) demanding tax exemptions for farmers affected by crop failure due to drought.
 - He led the resistance during the Bardoli Satyagraha (1928) against an unjust tax increase, earning him the title "Sardar" for his leadership.
 - He played crucial role during Non-Cooperation and Civil Disobedience. He embraced Gandhi's vision, leading actions like the Salt Satyagraha in 1930 and facing multiple imprisonments for his involvement.
 - He chaired the 46th session of the Congress in 1931, navigating through the Gandhi-Irwin Pact discussions.
 - He was arrested and imprisoned during Quit India Movement (1942).
- Role after independence of India:
 - He was India's first Deputy Prime Minister and Home Minister.



- He spearheaded the integration of 562 princely states into the Indian Union, securing stability and democracy for millions. The Indian Independence Act of 1947 allowed princely states to declare independence.
- He was instrumental in establishing the modern All India Services, strengthening the administrative framework of the country.
- He is remembered as the "patron saint of India's civil servants" for his contribution to reinforcing the bureaucratic system.
- National Civil Services Day (21st April) honours Sardar Patel's 1947 speech, calling civil servants "the steel frame of India" and reinforcing their dedication to public service.
- He led the Advisory Committee on Fundamental Rights, Minorities, and Tribal and Excluded Areas in the Constituent Assembly.

VANDE MATARAM

Context:

- PM Modi acknowledged 150 years of 'Vande Mataram' in Mann ki Baat episode.

About Vande Mataram:

- Meaning: Vande Mataram (meaning "I bow to thee, Mother") is India's national song, symbolizing reverence to the motherland and evoking patriotism and unity among citizens.
- Composition: It was composed in Sanskritised Bengali by Bankim Chandra Chattopadhyay in the 1870s and it was first published in his novel Anandamath (1882).
- First public rendition: The song's first public rendition was by Rabindranath Tagore at the 1896 Congress Session. It became the anthem of India's freedom struggle, sung in protests and revolutionary gatherings despite being banned by the British.
- Adoption as national song: The Indian National Congress in 1937 adopted its first two stanzas as the National Song, balancing inclusivity and secular appeal.
- Comparison to national anthem: On January 24, 1950, the Constituent Assembly accorded Vande Mataram equal honour to the National Anthem "Jana Gana Mana."
- Current Status: It is recognized by the Government of India as equal in stature to the National Anthem and its instrumental version is played at the closing of every Parliament session.



DEFENCE & SECURITY

TOMAHAWK MISSILES

Context :

- Russian President Vladimir Putin said that a decision by the United States to supply Tomahawk missiles to Ukraine would trigger a major new escalation with Washington.

About Tomahawk Missiles:

- **Development:** It is a long-range, subsonic cruise missile developed by the United States Navy.
- **Launch:** It is launched from ships or submarines through a Vertical Launch System and used for precision strikes on land-based targets.
- **Range:** These missiles have a range between 1,000 and 1,500 miles (1,550 to 2,500 km).
- **Structure:** Tomahawks measure 18.3 feet in length and weigh about 3,200 pounds. They carry a 1,000-pound conventional warhead or cluster munitions.
- **Uniqueness:** Tomahawks can fly at low altitudes, avoiding radar detection, and are guided by advanced GPS, inertial navigation, and terrain contour mapping. : This makes them highly accurate with a margin of error of just 10 meters.
- **Deceptive:** It is built to follow a non-linear path, reducing the chance of interception. It is further powered by a solid propellant during its launch phase. Thereafter, it is powered by a turbofan engine that does not emit much heat, which makes infrared detection difficult.
- **Past uses:** Tomahawks were first deployed in combat during Operation Desert Storm in 1991. Since then, they have been used in several major conflicts, including strikes in Syria in 2017.

INS ANDROTH

Context:

- The Indian Navy is set to commission INS Androth, the second Anti-Submarine Warfare Shallow Water Craft (ASW-SWC), at the Naval Dockyard in Visakhapatnam.

About INS Androth:

- **Nomenclature:** Named after Androth Island in Lakshadweep, the ship symbolises India's commitment to securing its maritime boundaries. The name also honours the legacy of the previous INS Androth (P69), which served for over 27 years before decommissioning.
- **Construction:** It was built by Garden Reach Shipbuilders and Engineers (GRSE), Kolkata, features over 80% indigenous components, aligning with the government's Aatmanirbharta (self-reliance) vision.
- **Uniqueness:** These ships are propelled by a diesel engine-waterjet combination and are equipped with state-of-the-art lightweight torpedoes and indigenous anti-submarine warfare rockets.
- **Anti-Submarine Warfare Water Craft:** It is the second of eight indigenously built Anti-Submarine Warfare Shallow Water Crafts (ASW-SWC). These vessels



are designed for anti-submarine operations in coastal waters, low-intensity maritime operations (LIMO), and mine-laying missions.

- **Structure:** It is approximately 77 meters in length and it is the largest Indian Naval warship.
- **Propulsion:** The ship is propelled by a diesel engine-waterjet combination, which allows for high speed and efficient maneuverability in shallow waters.
- **Armament:** It is equipped with state-of-the-art lightweight torpedoes, indigenous ASW rockets, and advanced shallow water SONAR,
- **Significance:** It strengthens the Indian Navy's Anti-submarine, coastal surveillance and mine laying capabilities. It enables effective submarine detection and engagement in littoral zones.

INDIAN AIR FORCE (IAF)

Context:

- The Indian Air Force (IAF) celebrated its 93rd anniversary on 8th October with a ceremonial parade at the Air Force Station, Hindon.

About Indian Air Force (IAF):

- **Establishment:** The Indian Air Force was officially established on 8 October 1932 as an auxiliary unit of the Royal Air Force. The first squadron became operational on 1 April 1933 with six officers and four Westland Wapiti biplanes.
- **Full-fledged aerial force:** After independence in 1947, the IAF became a crucial arm of India's defence, evolving from a small air wing into a modern and powerful aerial force.
- **Motto:** The motto of the Indian Air Force is "Nabhah Spriśam Deeptam" which translates to "Touch the Sky with Glory." It is derived from the Bhagavad Gita (Chapter 11, Verse 24) and reflects the IAF's spirit of valor, excellence, and limitless ambition.
- **Emblem:** The emblem of the Indian Air Force features the Ashoka Chakra at its center, symbolizing righteousness and unity, with wings on either side representing speed, power, and freedom.
- **Structure:** The Indian Air Force (IAF) is organized into seven commands: Five operational commands (Western, Eastern, Central, Southern, South Western) and two functional commands (Training and Maintenance) to ensure effective command and control of air assets and personnel.
- **Ranking:** The Indian Air Force (IAF) maintains a well-defined rank structure that ensures discipline, leadership, and a clear chain of command. It is divided into three main categories:
 - Commissioned Officers (Leadership and Command roles)
 - Junior Commissioned Officers (JCOs) / Warrant Ranks
 - Non-Commissioned Officers (NCOs) / Airmen.
- **Key Historical Milestones:**
 - 1947 – IAF participates in Jammu & Kashmir operations post-independence.
 - 1965 & 1971 – Major contributions during Indo-Pak wars; decisive in the 1971 victory.
 - 1999 – Role in Kargil War, showcasing precision air strikes at high altitudes.
 - 2025 – 93rd anniversary marking technological modernization and global outreach.



TEJAS MK1A FIGHTER JET

Context:

- The Indian Air Force (IAF) is set to receive its first light combat aircraft (LCA) Tejas Mk1A in Nashik, marking a significant milestone in India's indigenous fighter jet programme.

About Tejas Mk1A Fighter Jet:

- Manufactured by: The Tejas Mk1A is an upgraded variant of India's Light Combat Aircraft (LCA) Tejas, developed by Hindustan Aeronautics Limited (HAL).
- Objective: This version is aimed to enhance operational and combat capabilities, survivability and maintainability over the baseline Mk1.
- Upgraded version of Tejas: Tejas LCA Mk1A is an upgraded variant of India's indigenous Light Combat Aircraft (LCA) Tejas, developed by HAL.
- Improvements over Tejas: It features over 40 improvements over the Mk1 variant, enhancing its combat capabilities, survivability, and operational efficiency.
 - It is equipped with Active Electronically Scanned Array (AESA) radars.
 - It features a Unified Electronic Warfare Suite (UEWS) and also includes an Advanced Self-Protection Jammer Pod for improved survivability.
 - It also has Upgraded Flight Control Computer (DFCC Mk1A) for better maneuverability and stability.
 - It also has reduced weight and improved maintainability, allowing for faster turnaround times during missions.



SAKSHAM SYSTEM

Context :

- The Indian Army has initiated procurement of the indigenously developed 'Saksham' Counter-Unmanned Aerial System Grid System.

About Saksham System:

- Nature: The Situational Awareness for Kinetic Soft and Hard Kill Assets Management (SAKSHAM) is an indigenously developed Counter-Unmanned Aerial System (UAS) Grid System.
- Working: It is a modular, high-end Command and Control (C2) system operating on the secure Army Data Network (ADN).
- Uniqueness: It ensures comprehensive airspace security across the newly defined Tactical Battlefield Space (TBS), which now includes the Air Littoral (airspace up to 3,000 metres, or 10,000 feet, above ground level).



- Objective: The system is designed to detect, track, identify, and neutralise hostile drones and unmanned aerial systems.
- Development: It is developed in collaboration with the Bharat Electronics Limited, Ghaziabad.
- Major features:
 - It is designed to detect, track, identify, and neutralise hostile drones and unmanned aerial systems in real time.
 - It creates a real-time, integrated Recognised UAS Picture (RUASP) for commanders, merging sensor data, counter-drone systems, and AI-driven analytics.
 - It consists of real-time threat detection and AI-enabled predictive analysis, integration of CUAS sensors and weapons for synchronised response, automated decision support and 3D battlefield visualization.
 - It can integrate its own as well as hostile UAS data, C-UAS sensors, and soft- and hard-kill systems on a common GIS-based platform.

NATIONAL SECURITY GUARD (NSG)

Context :

- A new hub of the National Security Guard (NSG), the elite counter-terror and counter-hijack force, will be established at Ayodhya in Uttar Pradesh.

About National Security Guard (NSG):

- Establishment: The NSG is a counter-terrorism unit that formally came into existence in 1986 by an act of Parliament- 'National Security Guard Act, 1986'.
- Incidents that led to its formation: The idea behind raising such force came in the aftermath of Operation Blue Star in 1984, Akshardham Temple attack and the assassination of former PM Indira Gandhi.
- Objective: It aims for 'combating terrorist activities with a view to protect states against internal disturbances.'
- Specialisations: The NSG is trained to conduct counter-terrorist task including counter hijacking tasks on land, sea, and air; Bomb disposal (search, detection, and neutralization of IEDs), Post Blast Investigation (PBI), and Hostage Rescue missions.
- Distinctive uniform: The NSG personnel are often referred to in the media as Black Cat Commandos because of the black outfit and black cat insignia worn on their uniform.
- Motto: The motto of 'Sarvatra, Sarvottam, Suraksha' has always been upheld by it with a focus on its basic philosophy of swift and speedy strike and immediate withdrawal from the theatre of action.
- Nodal ministry: It operates under the Ministry of Home Affairs and is a task-oriented force that has two complementary elements in the form of:
 - Special Action Group (SAG) comprising of the Army personnel- is the main offensive or the strike wing of the NSG, and
 - Special Ranger Groups (SRG) comprising of personnel drawn from the Central Armed Police Forces/State Police Forces. They generally handle VIP securities.



BRAHMOS MISSILE

Context :

- Defence Minister Rajnath Singh said that the BrahMos missiles were a symbol of India's growing indigenous strength in defence manufacturing and every inch of Pakistan was within their reach.

About BrahMos Missile:

- Nomenclature:** It is named after the Brahmaputra River of India and the Moskva River of Russia.
- Range:** An Indo-Russian joint venture, the standard BrahMos missile has a range of 290 km and but extended-range versions can reach up to 500 km. Future variants like the BrahMos-II are planned to have a much longer range of up to 1,500 km.
- Fastest cruise missile:** It is the world's fastest cruise missile with a top speed of Mach 2.8 (about three times the speed of sound).
- Two-stage missile:** It is a two-stage (solid propellant engine in the first stage and liquid ramjet in the second) missile. The solid propellant booster engine propels it to supersonic speed before separating, and during the cruise phase, the liquid ramjet or second stage, propels the missile closer to 3 Mach.
- Launch platforms:** It is a multiplatform missile which can be launched with great accuracy from land, air and sea having multi-capability capabilities and can operate during day and night despite bad weather.
- Uniqueness:** It operates on the "fire and forget" principle i.e. it does not require guidance after launch. It also carries a conventional warhead weighing 200 to 300 kg.
- Propulsion and Flight:** Jet engines are the primary mode of propulsion for cruise missiles. Most cruise missiles are subsonic and use Turbofan and Turbojet engines. While less common, supersonic and hypersonic cruise missiles utilize Ramjet and Scramjet engines.

Special Features of BRAHMOS cruise missile

- Universal Missile for multiple platforms

- "Fire and Forget" principle of operation

- High supersonic speed all through the flight

- Long flight with varieties of trajectories

- Low radar signature

- Pin point accuracy & high lethal power



Guidance System

Advanced guidance system incorporating high manoeuvres & steep dive capabilities

Propulsion System

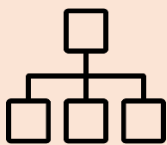
Air-breathing ramjet propulsion for fuel-efficiency & supersonic speed

Wings & Fins

For better stability & accurate direction of missile during the flight

Solid State Propellant

Solid-propellant rocket for initial acceleration of the missile



RODTEP SCHEME

Context:

- The Government has extended the Remission of Duties and Taxes on Exported Products (RoDTEP) incentive scheme for exporters until March 31, 2026.

About RoDTEP Scheme:

- Launch:** It was launched in 2021 by the Ministry of Commerce and Industry.
- Objective:** The RoDTEP scheme is designed to reimburse exporters for embedded duties, taxes, and levies that are not otherwise refunded under any other existing scheme.
- Eligibility:** Manufacturer exporters and merchant exporters (traders) are both eligible for the benefits of this scheme. There is no particular turnover threshold to claim the RoDTEP.
- India as country of origin:** The exported products need to have the country of origin as India.
- SEZs:** The Special Economic Zone Units and Export Oriented Units are also eligible to claim the benefits under this scheme.
- Compliant with WTO norms:** The RoDTEP scheme, which replaced the Merchandise Export from India Scheme (MEIS), is fully aligned with World Trade Organization norms.
- Role of CBIC:** Rebates under RoDTEP Scheme will be issued as transferable duty credits or electronic scrips (e-scrips), maintained in an electronic ledger by the Central Board of Indirect Taxes and Customs (CBIC).
- Multi-sector scheme:** Under RoDTEP, all sectors, including the textiles sector, are covered, so as to ensure uniformity across all areas.

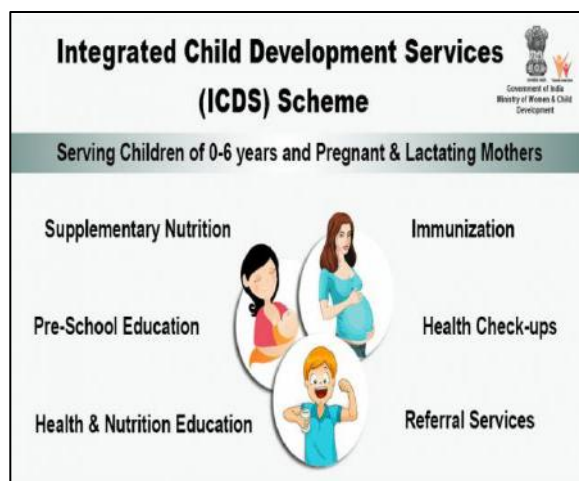
ICDS SCHEME

Context:

- Recently, Integrated Child Development Services (ICDS) scheme completed 50 years of its launch.

About ICDS:

- Launch:** Launched in 1975, it is one of the world's largest programmes providing for an integrated package of services for the holistic development of the child.
- Ministry:** The Umbrella ICDS is a centrally sponsored scheme implemented by the Ministry of Women and Child Development.
- Flagship programme:** The ICDS Scheme providing for supplementary nutrition, immunization and pre-school education to the children is a popular flagship programme of the government.
- Major objectives:**
 - To improve the nutritional and health status of children in the age-group 0-6 years.
 - To lay the foundation for proper psychological, physical and social development of the child.
 - To reduce the incidence of mortality, morbidity, malnutrition and school dropout.



- To achieve effective coordination of policy and implementation amongst the various departments to promote child development.
- To enhance the capability of the mother to look after the normal health and nutritional needs of the child.
- To facilitate, educate and empower Adolescent Girls (AGs) so as to enable them to become self-reliant and aware citizens.
- Various schemes subsumed: Presently, various government schemes have been subsumed under the Umbrella ICDS.

Various schemes under ICDS:

- Anganwadi Services Scheme:
 - It is a unique programme for early childhood care and development.
 - The beneficiaries under the Scheme are children in the age group of 0-6 years, pregnant women and lactating mothers.
 - It provides a package of six services namely supplementary nutrition, pre-school non-formal education, nutrition & health education, immunisation, health check-up and referral services.
- Pradhan Mantri Matru Vandana Yojana:
 - It provides cash incentive amounting to Rs.5,000/- in three instalments directly to the Bank/Post Office Account of Pregnant Women and Lactating Mother (PW&LM) in DBT (Direct Benefit Transfer) Mode during pregnancy and lactation in response to individual fulfilling specific conditions.
- National Creche Scheme:
 - It provides day care facilities to children of age group of 6 months to 6 years of working women.
 - The facilities are provided for seven and half hours a day for 26 days in a month.
- POSHAN Abhiyaan:
 - It targets to reduce the level of stunting, under-nutrition, anaemia and low birth weight babies by reducing mal-nutrition/undernutrition, anaemia among young children as also, focus on adolescent girls, pregnant women and lactating mothers.

PM-KUSUM SCHEME

Context:

- The Union government is looking to showcase the PM-KUSUM (Pradhan Mantri Kisan Urja Suraksha evam Utthan Mahabhiyan) programme to several African countries and island nations, Union Minister for Renewable Energy (MNRE) said.

About PM-KUSUM Scheme:

- Launch: The PM-KUSUM was launched by the MNRE in 2019, in order to endow installation of off-grid solar pumps in rural areas and reduce dependence on grid, in grid-connected areas.
- Objective: It aims to enable farmers to set up solar power generation capacity on their arid lands and to sell it to the grid. It also seeks to increase the income of farmers by allowing them to sell surplus solar power to the grid.
- Components of the scheme:
 - 10,000 MW of decentralized ground-mounted grid-connected renewable power plants.
 - Installation of 20 lakh solar-powered agriculture pumps.
 - Converting 15 lakh agriculture pumps, already connected to the grid, into solar.
- Significance:

- It incentivises the farmers to sell surplus solar energy to the states, which in turn will augment their income.
- If farmers are able to sell surplus power, they will be incentivised to save power and, in turn, it will mean the reasonable and efficient use of groundwater.
- The scheme is expected to create job opportunities in the installation, maintenance, and operation of solar power projects.
- Challenges:
 - The cost of setting up solar power projects can be high, and some farmers may not have access to the necessary financing.
 - Due to power subsidies, the recurring cost of electricity is so low that farmers keep on pumping water and the water table is going down.
 - Integrating decentralized solar power projects into the grid may pose technical challenges and stability issues, which need to be addressed.



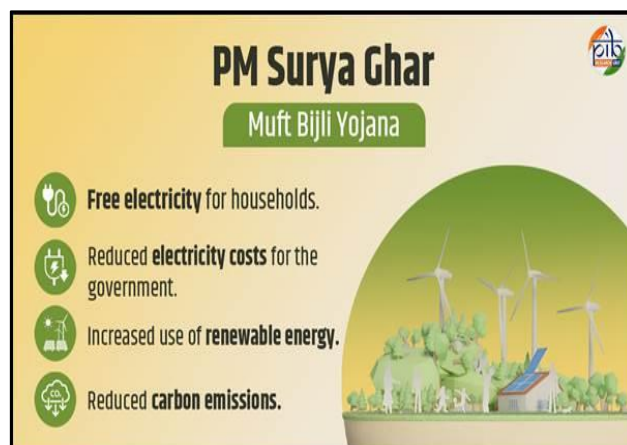
PM SURYA GHAR: MUFT BIJLI YOJANA

Context:

- Despite a near four-fold increase in applications between March 2024 and July 2025, only 13.1% of the targeted 1 crore solar rooftop installations, under the PM Surya Ghar: Muft Bijli Yojana, has been achieved.

About PM Surya Ghar: Muft Bijli Yojana:

- Feature: It is a central scheme to promote the adoption of solar rooftop systems by providing substantial financial subsidies and ensuring ease of installation.
- Objective: It aims to provide free electricity to one crore households in India, who opt to install rooftop solar electricity units. The households will be able to get 300 units of electricity free every month.
- Implementation Agencies: The scheme will be executed at two levels.
 - National Level: Managed by the National Programme Implementation Agency (NPIA).
 - State Level: Managed by State Implementation Agencies (SIAs), which are the Distribution Utilities (DISCOMs) or Power/Energy Departments of the respective states or UTs.
- Supervision: As SIAs, DISCOMs are responsible for facilitating various measures to promote rooftop solar adoption, including ensuring the availability of net metres, and conducting timely inspections and commissioning of installations.
- Capping of subsidy: The scheme provides subsidies to reduce the cost of installing solar rooftop systems. The subsidy is capped at a maximum of 3kW capacity.
- Eligibility: Grid-connected rooftop solar systems on residential properties, including roofs, terraces, balconies, and elevated structures are eligible for Central Financial Assistance (CFA).



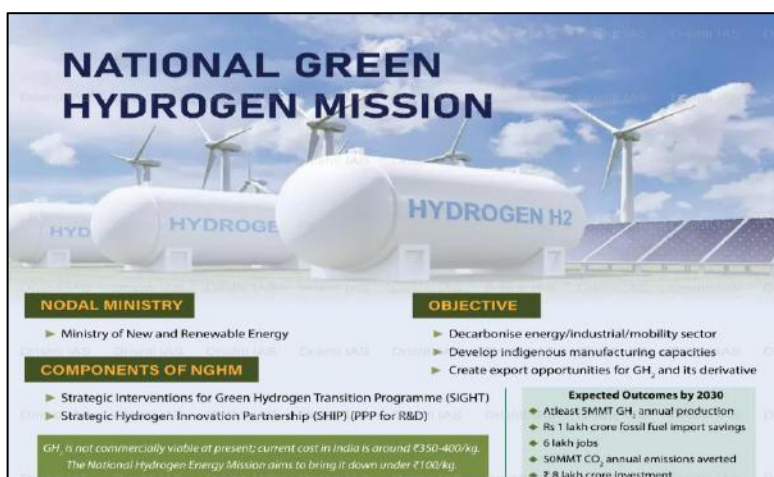
NATIONAL GREEN HYDROGEN MISSION (NGHM)

Context:

- In a move towards greener public transport, Pune has begun trials of a hydrogen fuel-powered bus under the Centre's National Green Hydrogen Mission.

About National Green Hydrogen Mission (NGHM):

- Launch:** India launched the National Green Hydrogen Mission (NGHM) in January 2023 with the budget outlay of Rs. 19,744 crore.
- Ministry:** The Ministry of New & Renewable Energy (MNRE) is tasked with implementing the scheme.
- Objective:** The mission's primary aim is to establish India as a global hub for the production, utilisation, and export of green hydrogen and its derivatives. The main target of the scheme to achieve a production capacity of 5 million tonnes per annum of Green Hydrogen in the country by the year 2030.
- Major components of the scheme:**
 - Strategic Interventions for the Green Hydrogen Transition Programme (SIGHT): SIGHT will incentivise the domestic manufacturing of electrolyzers and the production of green hydrogen.
 - Green Hydrogen Hubs: The mission will identify and develop states and regions into Green Hydrogen Hubs, fostering large-scale production and utilization.
- Hydrogen Valley Innovation Cluster (HVIC):** The Department of Science and Technology has initiated Hydrogen Valley Innovation Clusters to foster innovation and promote the green hydrogen ecosystem in India.
- Dedicated portal:** Under NGHM a dedicated portal was launched to provide information on the mission and steps for developing the green hydrogen ecosystem in India.
- Guidelines:** India has also released scheme guidelines for the use of Green Hydrogen in steel, transport, and shipping sectors.
- Expected Outcomes by 2030:**
 - A green hydrogen production capacity of at least 5 MMT per year.
 - An addition of approximately 125 GW of renewable energy capacity.
 - Over Rs. 8 lakh crore in total investments.
 - Creation of over six lakh jobs.
 - A reduction in fossil fuel imports exceeding Rs. 1 lakh crore.
 - Averting nearly 50 MMT of annual greenhouse gas emissions.



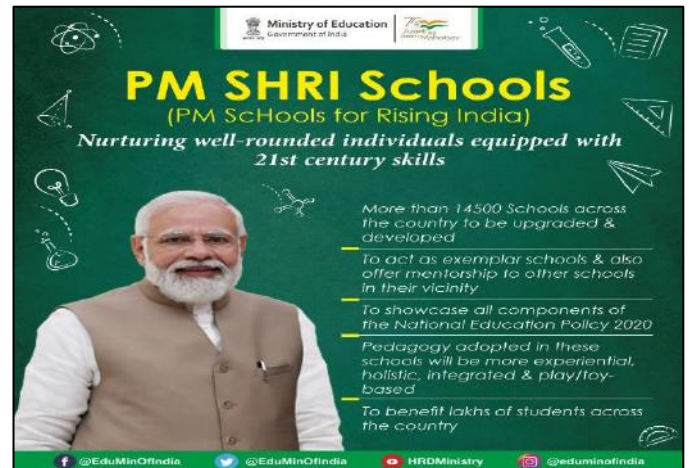
PM-SHRI SCHEME

Context:

- The ruling Left Democratic Front (LDF) appears divided over the Kerala government's move to sign a MoU with the Union government to access the Prime Minister's Schools for Raising India (PM SHRI) government school modernisation funds.

About Pradhan Mantri Schools for Rising India (PM-SHRI) Scheme:

- **Launch:** It is a centrally sponsored initiative, launched in 2022, by the Government of India aimed at establishing over 14,500 PM SHRI Schools by enhancing existing schools to showcase the implementation of the National Education Policy (NEP) 2020.
- **Objective:** The primary objective is to create an inclusive and nurturing environment that promotes the well-being and safety of every student, offering diverse learning experiences and access to quality infrastructure and resources.
- **Funding:** The funding pattern is 60:40 between Centre and State Governments and UTs with legislature (except J&K). The sharing pattern is 90:10 for North Eastern and Himalayan States and UT of J&K and 100% central funding for the Union Territories without legislature.
- **Need of MoU:** States must confirm their participation by signing a Memorandum of Understanding (MoU) with the Education Ministry.
- **Duration:** The duration of the scheme is from 2022-23 to 2026-27, after which it shall be the responsibility of the states/UTs to continue to maintain the benchmarks achieved by these schools.
- **Eligibility:**
 - Schools managed by Central/State/UT Governments and local bodies.
 - All Kendriya Vidyalayas and Navodaya Vidyalayas which are non-project and run from permanent buildings.
- **Main features of these schools:**
 - These schools will focus on holistic student development of students including the skills of communication, collaboration and critical thinking.
 - Schools will have modern labs, libraries, art rooms, and promote "green" initiatives like water conservation and waste recycling.
 - Learning outcomes will be prioritized, with competency-based assessments that apply knowledge to real-life situations.

**BHARAT TAXI****Context:**

- India is set to launch its first-ever cooperative cab service "Bharat Taxi" in November 2025 in Delhi and it aims to address challenges faced by both commuters and drivers using private cab services.

About Bharat Taxi:

- **Launched by:** It is launched by Union Ministry of Cooperation and the National e-Governance Division (NeGD).
- **Objective:** It aims to build a robust, fairer system settling growing urban cab facility needs in the country.
- **Based on cooperative model:** This cooperative cab service offers a transparent, driver-owned alternative to private aggregators where drivers become members and shareholders instead only as 'employees'.

- One stop solution for passengers and drivers: Bharat Taxi is expected to be as a materialistic solution for the long-standing challenges faced by both commuters and drivers using private cab services. The model ensures all the stakeholders including the driver, the passenger behind the wheels have a voice in the system.
- Integration with other government services: The platform integrates with government digital services like DigiLocker and UMANG, ensuring seamless verification and service access.
- Management: Sahakar Taxi Cooperative Limited manages Bharat Taxi comprising cooperative leaders and driver representatives. It is backed by eight major institutions, renowned for its strong governance, transparency, and long-term sustainability for the initiative.



SKILLING FOR AI READINESS (SOAR) PROGRAMME

Context:

- The Skilling for AI Readiness (SOAR) program has been launched by government of India, and it coincides with the 10-year milestone of the Skill India Mission, which has empowered people through various skilling schemes since 2015.

About Skilling for AI Readiness (SOAR) Programme:

- Launch: It was launched by the Ministry of Skill Development and Entrepreneurship (MSDE) in July 2025.
- Objective: It aims to integrate artificial intelligence learning into India's school education and training ecosystem, preparing both students and teachers for a rapidly evolving digital world.
- Long-term vision: SOAR's long-term vision is to position India as a global leader in AI by preparing its youth for AI-driven careers and entrepreneurial ventures.
- In sync with NEP 2020: The National Education Policy (NEP) 2020 emphasises the inclusion of contemporary subjects like Artificial Intelligence (AI) in school curricula, at appropriate stages, to foster innovation and digital literacy among students.
- Focus: It focuses on school students from classes six to twelve and educators across India. It is offering three targeted 15-hour modules for students and a 45-hour module for teachers. These courses introduce foundational AI and machine learning concepts, along with data literacy and the ethical use of technology.
- Centre of Excellence in AI: In support of this vision, the Union Budget 2025–26 has earmarked ₹500 crore to establish a Centre of Excellence in Artificial Intelligence for Education. The centre will focus on developing AI-based learning tools, promoting multilingual AI resources for Indian languages, and fostering innovative classroom practices.
- Linkage with IITs: It will also strengthen AI curriculum development across technical institutions and complement existing efforts by IITs and AICTE-approved colleges that already offer advanced courses in machine learning, deep learning, and data analytics.



MISCELLANEOUS

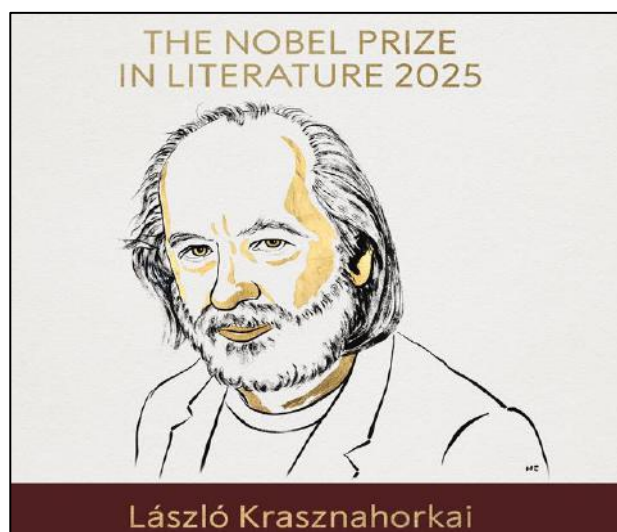
NOBEL PRIZE IN LITERATURE 2025

Context :

- László Krasznahorkai wins Nobel Prize in literature.

About Nobel Prize in Literature 2025:

- Awardee: Hungarian writer László Krasznahorkai won the Nobel Prize in Literature 2025.
- Reason for award: His philosophical, bleakly funny novels often unfold in single sentences, and his “compelling and visionary oeuvre, in the midst of apocalyptic terror, reaffirms the power of art.”
- Significance:
 - The Nobel judges praised his “artistic gaze which is entirely free of illusion, and which sees through the fragility of the social order combined with his unwavering belief in the power of art.
 - The judges applauded his “extraordinary sentences, sentences of incredible length that go to incredible lengths, their tone switching from solemn to madcap to quizzical to desolate as they go their wayward way.”
- About the Writer:
 - László Krasznahorkai is a great epic writer in the Central European tradition that extends through [Franz] Kafka to Thomas Bernhard, and is characterised by absurdism and grotesque excess.”
 - Several works, including his debut, *Satantango*, and *The Melancholy of Resistance* were turned into films.
 - He also won the National Book Award for Translated Literature in the U.S. in 2019 for *Baron Wenckheim’s Homecoming*.



NOBEL PEACE PRIZE 2025

Context:

- Venezuela’s Opposition leader María Machado won the Nobel Peace Prize for ‘promoting democracy.’

About Nobel Peace Prize 2025:

- Awardee: Venezuelan Opposition leader María Corina Machado won the Nobel Peace Prize 2025.
- Reason for the award: The Nobel Peace Prize 2025 has been awarded to María Corina Machado “for her tireless work promoting democratic rights for the people of Venezuela and for her struggle to achieve a just and peaceful transition from dictatorship to democracy.”

- Significance: She won the Nobel Peace Prize for her struggle to achieve a democratic transition in the South American nation, winning recognition as a woman “who keeps the flame of democracy burning amid a growing darkness.”

About Nobel Peace Prize:

- Nature: It is one of the five Nobel Prizes established by the will of Swedish industrialist, inventor, and armaments manufacturer Alfred Nobel, along with the prizes in Chemistry, Physics, Physiology or Medicine, and Literature.
- Background: In 1895, Alfred Nobel’s will specified a prize for those promoting fraternity between nations, reducing standing armies, or supporting peace congresses.
- Establishment of the award: The Nobel Peace Prize was established in 1901 by Alfred Nobel, and it recognizes individuals or organisations promoting peace, disarmament, and global harmony.
- Inspiration: Alfred Nobel was inspired by Bertha von Suttner, a peace activist, to include the peace category.
- Awarding Body: The prize is administered by the Norwegian Nobel Committee, elected by Norway’s Parliament (Stortinget).
- First recipient: The first Nobel Peace Prize was awarded in 1901 and was shared by two recipients: Swiss humanitarian Jean Henry Dunant and French pacifist Frédéric Passy.



HENLEY PASSPORT INDEX

Context :

- In a changing global mobility landscape, both India and the United States have seen notable drops in their passport power, according to the 2025 Henley Passport Index, which ranks the world’s most travel-friendly passports.

About Henley Passport Index:

- Nature: The Henley Passport Index ranks global passports based on the number of destinations their holders can travel to without a visa, with data sourced from the International Air Transport Association (IATA).
- Definition of a powerful passport: It is defined by travel openness, the freedom to enter more countries without having to deal with visa applications, long processing times, or bureaucratic hurdles.
- Published by: It is compiled and published by Henley & Partners, a global citizenship and residence advisory firm.
- Findings from Henley Passport Index 2025:



- Leading the rankings in 2025 are three Asian countries: Singapore holds the top spot with access to 193 destinations visa-free, followed by South Korea with 190 destinations and Japan with 189 destinations.
- India's passport has fallen to 85th place, offering visa-free access to 57 countries, down from 59 in 2024. This marks a further decline from the 77th position earlier this year, underscoring a steady reduction as per the index.
- For the first time in the Index's 20-year history, the United States has dropped out of the global top 10. The US passport now ranks 12th, tied with South East Asian Malaysia, offering visa-free access to 180 destinations out of 227.

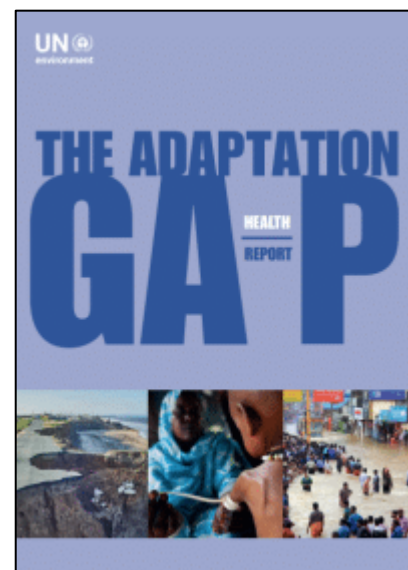
ADAPTATION GAP REPORT 2025

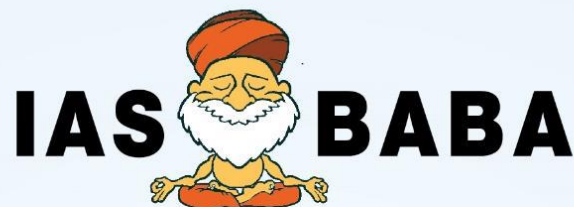
Context:

- Amid rising global temperatures, UNEP's 2025 Adaptation Gap Report: Running on Empty finds that a yawning gap in adaptation finance for developing countries is putting lives, livelihoods and entire economies at risk.

About Adaptation Gap Report:

- Published By: It is an annual flagship publication of the United Nations Environment Programme (UNEP) –Copenhagen Climate Centre with contributions from multiple global institutions and experts.
- Objective: The Adaptation Gap Report tracks global progress on climate adaptation planning, implementation, and finance, assessing how far the world is from achieving climate resilience goals.
- Focus on developing countries: To evaluate whether nations—especially developing ones—are adapting fast enough to climate impacts, and to quantify the adaptation finance gap to support global negotiations under the UNFCCC and COP30.
- Important highlights from Adaptation Gap Report 2025:
 - The report updates the cost of adaptation finance needed in developing countries, putting it at US\$310 billion per year in 2035, when based on modelled costs.
 - When based on extrapolated needs expressed in Nationally Determined Contributions and National Adaptation Plans, this figure rises to US\$365 billion a year.
 - Meanwhile, international public adaptation finance flows to developing countries were US\$26 billion in 2023: down from US\$28 billion the previous year. This makes adaptation financing needs in developing countries 12-14 times as much as current flows.
 - If current finance trends continue, the Glasgow Climate Pact goal of doubling international public adaptation finance from 2019 levels by 2025 will not be achieved, while the New Collective Quantified Goal for climate finance is not ambitious enough to close the finance gap.
 - The private sector could do more – with potential to provide around US\$50 billion per year if backed by targeted policy action and blended finance solutions.





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MAINS

PAPER 1

'GEN Z' PROTESTERS AND THE GLOBAL WAVE OF GENERATIONAL DISCONTENT

Context (Introduction):

- From Madagascar to Nepal and Kenya to Peru, digitally networked “Gen Z” movements are emerging as powerful forces of dissent. These leaderless, youth-driven protests reflect frustration with inequality, corruption, and political unresponsiveness in the post-pandemic world.

Understanding the ‘Gen Z’ Protest Wave

- Who Are ‘Gen Z’ Protesters: Born between 1996–2010, *Generation Z* is the first cohort raised entirely in the digital era. They are globally connected, value transparency, and mobilize rapidly through social media platforms like TikTok, Instagram, and Discord to challenge entrenched political elites.
- Global Spread of Discontent: Recent youth-led uprisings have occurred across *Nepal, Madagascar, Indonesia, Kenya, Morocco, and Peru*, with movements often inspired by each other. Many drew parallels with earlier youth protests such as *Arab Spring (2010–12)* and *Sri Lanka’s Aragalaya (2022)*, showing how digital tools accelerate cross-border solidarity.
- Common Triggers Across Regions: While immediate grievances differ — water shortages in Madagascar, pension reforms in Peru, social media bans in Nepal — the underlying causes are *corruption, inequality, unemployment, nepotism, and failure of welfare delivery*.
- Pop Culture and Protest Symbolism: A unique global unifier has been the “One Piece” skull flag — a pirate symbol representing resistance against corrupt authority. It symbolizes youth defiance and cultural interconnectivity in a digitalized, globalized protest culture.
- Role of the Digital Sphere: Unlike past movements, *Gen Z* activists rely less on formal organizations and more on decentralized online networks. These movements have used memes, influencers, and gaming platforms to mobilize, coordinate, and sustain transnational visibility.

Issues and Challenges

- Leaderless Movements and Sustainability: While decentralization allows rapid mobilization, it often limits negotiation capacity, coherent policy articulation, and long-term reform outcomes.
- State Repression and Digital Censorship: Many regimes respond with *internet shutdowns, surveillance, and social media bans* (as in Nepal), curbing expression and amplifying distrust among youth.
- Rising Inequality and Economic Frustration: Post-pandemic inflation, job scarcity, and youth unemployment (above 20% globally, ILO 2024) have widened the gap between elites and young citizens, breeding alienation.
- Global South Vulnerability: Developing nations with *weak institutions and patronage-based governance* face amplified unrest as climate stress, inflation, and debt further constrain opportunities.
- Polarisation and Misinformation Risks: Social media, though empowering, also facilitates misinformation, cyber radicalisation, and performative activism without tangible political outcomes.

Reforms and Policy Responses Needed

- Youth-Centric Governance: Governments must institutionalize *youth participation councils*, transparent budgeting, and consultation mechanisms to channel grievances constructively.
- Digital Freedom and Accountability: Safeguarding online expression through clear *data privacy and social media rights charters* can prevent digital authoritarianism.

- **Employment and Skill Generation:** Address *youth unemployment and underemployment* via policies such as India's PM Kaushal Vikas Yojana, Start-up India, and Digital India, ensuring global replicability of youth empowerment models.
- **Education for Civic Consciousness:** Integrating *civic education, ethics, and digital literacy* into school curricula can promote responsible activism and democratic engagement.
- **Global Platforms for Youth Dialogue:** International institutions like the UN Youth Strategy (2030) and Commonwealth Youth Council should coordinate transnational responses to youth concerns like climate justice and inequality.

Conclusion

- The "Gen Z" protests represent not anarchy but a *crisis of trust* in institutions. This generation demands inclusion, accountability, and ethical governance — not mere reform rhetoric. For democracies, especially in the Global South, the challenge is to transform *digital dissent into participatory democracy*. Governments that ignore these signals risk alienating their most connected and consequential generation.

THE CHAI STORY: WHY INDIAN TEA IS YET TO BECOME A GLOBAL BRAND

Context (Introduction):

- India is the world's second-largest producer of tea and the largest producer of black tea, yet its global brand presence remains weak. Despite its cultural centrality and export potential, Indian tea faces policy, structural, and marketing challenges.

Background: India's Tea Legacy

- **Origin and Spread:** India and China are the original homes of tea cultivation. Tea was first commercialised under British colonial rule after Robert Bruce discovered wild tea in Assam in 1823.
- **Institutional Framework:** The Tea Board of India (est. 1953) regulates the sector, while auction systems like J. Thomas & Co. in Kolkata (since 1861) continue to determine pricing.
- **Production Statistics:** India produced around 1,285 million kg in 2024, second to China's 3,700 million kg. However, only 20% is exported, with most consumed domestically.
- **Global Image:** While Sri Lanka and Kenya have marketed distinctive national brands ("Ceylon Tea" with the Lion logo), Indian tea is mostly exported as unbranded blends, losing identity and value.
- **Major Tea Regions:** Assam, West Bengal (Darjeeling, Dooars, Terai), Tamil Nadu (Nilgiris), and Kerala form India's tea heartlands, employing over 1 million workers.

Main Arguments: Why Indian Tea Lacks Global Brand Value?

- **Overreliance on Bulk Exports:** Nearly 90% of Indian tea is sold in bulk for blending (e.g., "English Breakfast" or "Earl Grey"), erasing India's distinct regional identity.
- **Auction Dependency and Policy Rigidities:** The Tea Board mandates that 50% of produce be sold via public auctions, discouraging innovation and direct marketing. In contrast, coffee growers gained flexibility after the Coffee Board's auction system ended in 1996.
- **Weak Branding and Marketing:** Few Indian brands (Tata's Tetley, Makaibari, Cha Bar) operate globally. There's little coordinated brand promotion unlike Sri Lanka's state-backed campaigns since the 1980s.
- **Structural Problems in Production:** Over 50% of production now comes from small growers (<25 acres) who fall outside the Plantation Labour Act. This leads to uneven quality, low wages, and weak compliance with sustainability standards.

- **Domestic Consumption Patterns:** Tea is viewed as a household necessity rather than a lifestyle product. Coffee, in contrast, became aspirational through cafés and urban branding (Café Coffee Day, Starbucks).
- **Labour and Environmental Challenges:** Poor working conditions, labour unrest, and climate change-induced yield variations have led to estate closures in Darjeeling, Nilgiris, and Assam.
- **Market Competition:** Kenya and Vietnam have captured significant export shares due to mechanised production and low costs. Nearly half of tea consumed in the UK is now Kenyan.

Challenges and Constraints

- **Institutional Inertia:** The Tea Board's dual role as regulator and marketer creates bureaucratic inefficiency.
- **Fragmented Industry:** Over 2,000 small growers operate informally, limiting economies of scale.
- **Lack of Innovation:** Traditional processing and packaging limit value addition.
- **Price Volatility:** Auction-determined prices fluctuate, making planning difficult for small estates.
- **Climate Vulnerability:** Erratic rainfall and rising temperatures affect yields in Assam and Darjeeling.
- **Decline of Traditional Markets:** The collapse of the Soviet Union, once India's largest buyer, disrupted long-standing trade patterns.

Reforms and Way Forward

- **Branding and Geographical Indications (GI):** Promote Darjeeling, Assam, and Nilgiri teas under protected GI tags with strict quality standards, similar to Sri Lanka's Lion logo system.
- **Auction Reforms:** Allow direct marketing and e-commerce sales for producers; create a transparent digital auction model with quality certification.
- **Labour and Sustainability Standards:** Integrate small growers into formal systems; link wages and certification (Fairtrade, Rainforest Alliance) to export incentives.
- **Marketing and Value Addition:** Launch a "Brand India Tea" campaign showcasing tea as both heritage and health drink. Encourage boutique stores, tourism-linked cafés, and wellness branding.
- **Diversification and Innovation:** Promote tea-based wellness products, flavoured teas, and ready-to-drink (RTD) beverages targeting youth markets globally.
- **Institutional Support:** Restructure the Tea Board as a Tea Development and Export Promotion Authority, focusing on R&D, marketing, and global partnerships.
- **International Collaboration:** Collaborate with global tea research institutes to improve varieties resistant to climate stress and pests.

Conclusion

- Tea is not merely an agricultural crop in India—it is a cultural and economic symbol. For India's "chai" to achieve its global potential, the sector must move beyond colonial-era systems toward a brand-led, innovation-driven, and sustainable model. Like coffee, Indian tea needs a new story — one rooted in authenticity, modernity, and pride in its origins.

PAPER 2

RECLAIMING THE DISTRICT AS A DEMOCRATIC COMMONS

Context (Introduction):

- India's future hinges on its 65% young population. With 85% living in districts of birth, yet 60% of GDP concentrated in cities, reclaiming districts as democratic commons is vital to unlock inclusive growth and deepen democratic engagement.

Main Arguments

- Demographic Dividend:** In a world with aging populations, India's 65% youth under 35 is an opportunity, but limited mobility and district neglect risk wasting it.
- Urban Bias:** Cities occupy 3% land yet generate 60% GDP, while districts remain under-utilised despite housing the majority. This creates stark geographic and social concentration of growth.
- Centralised Governance:** Policy paradigms prioritise efficiency, technocratic schemes, and digital delivery, but weaken local political agency and reduce elected leaders to entitlement mediators.
- Welfare Politics & Fatigue:** Rising dependence on cash transfers, without structural transformation or jobs, leads to political fatigue among citizens, especially youth.
- District-First Framework:** A shift from "district-first bureaucracy" to "district-first democracy" can disaggregate opaque schemes, localise accountability, track outcomes, and tailor solutions.



Criticisms/Drawbacks

- Bureaucratic Dominance:** Citizens interact with the state mainly as recipients, not participants, limiting ownership of development.
- Capacity Deficit:** District administrations and panchayats lack funds, skilled manpower, and autonomy to plan holistically.
- Risk of Elite Capture:** Local bodies may replicate inequalities without checks on capture by dominant groups.
- Weak Policy Linkages:** MPs and local representatives are rarely held accountable for developmental outcomes within constituencies.
- Fragmented Efforts:** Civil society, government, and private initiatives often work in silos, reducing district-level synergy.

Reforms/Proposals

- District-First Democratic Commons:** Reimagine districts as civic spaces to strengthen participation in production, consumption, and innovation beyond elite and export-driven growth.
- Accountability & Transparency:** Disaggregate schemes at district level, track outcomes locally, and bridge disparities in investment and opportunity.
- Strengthening Local Leadership:** Empower elected representatives as conveners of developmental priorities rather than mediators of welfare entitlements.

- Shared Responsibility of Elites: Political leaders, corporates, and intellectuals (top 10%) must translate intent into targeted district interventions.
- Collaborative Ecosystem: Link MPs, civil society, private actors to co-create locally tailored reforms and innovations.

Conclusion

- India already has a district-first bureaucracy. What it needs now is a district-first democracy. By redistributing power to communities, fostering accountability, and bridging policy–reality gaps, districts can become engines of inclusive growth. Without this shift, India risks hollowing democracy and squandering its demographic dividend.

IN A MULTIPOLAR WEST, INDIA'S OPPORTUNITY

Context (Introduction):

- The changing dynamics of Western unity, shaped by US nationalism, European strategic autonomy, and global power shifts, present India with new diplomatic openings. A “multipolar West” now enables India to engage multiple partners on its own strategic terms.

Nature of the Emerging Multipolar West

- Decline of Western Homogeneity: Post–World War II Western unity under US dominance is fragmenting due to diverging political and security priorities.
- America First and Strategic Autonomy: The rise of Donald Trump’s nationalism has led Europe to pursue independent defence, trade, and technology strategies, reducing reliance on Washington.
- Europe’s Assertiveness: Initiatives like Macron’s ‘Europe Puissante’, Scholz’s Zeitenwende, and Ursula von der Leyen’s call for sovereignty mark Europe’s bid for self-reliance in economic, military, and technological spheres.
- Rearrangement, Not Decline: The West’s fragmentation is internal recalibration — the US remains powerful, but engagement terms have shifted, giving allies more autonomy.
- Asia-Europe Parallels: Asian allies like Japan, Australia, and South Korea are similarly diversifying ties, reflecting a broader trend of strategic pluralism.

Risks for India

- Weakening of Collective Action: Fragmentation of the West may weaken unified responses to authoritarian assertiveness from China or Russia.
- Uncertain US Policy: Shifting American domestic politics create volatility in long-term commitments.
- European Divisions: Internal splits — East vs West over Russia, North vs South over economics — may delay coherent policymaking.
- Balancing Challenges: India must manage contradictions among its Western partners without compromising autonomy.
- Institutional Lag: India’s internal economic and administrative reforms may not keep pace with rapid external transformations.

India’s Diplomatic Engagement and Opportunities

- Europe’s Renewed Role: Engagements such as Keir Starmer’s India visit, EFTA trade pact, and ongoing EU negotiations signal growing India–Europe convergence.
- Strategic Diversification: A fragmented West allows multiple cooperation channels — trade with the EU, technology with the UK, defence with France, and investment with Nordic states.
- Global Connectivity: Collaboration under the EU’s Global Gateway and India’s Indo-Pacific outreach enhances resilient supply chains and digital infrastructure.

- Shared Democratic Values: Europe views India as a key Indo-Pacific partner in maintaining an open, rules-based global order.
- Balanced Realism: India's steady diplomacy during US–Europe–China frictions reflects strategic maturity and multipolar adaptation.

Future Needs and Way Forward

- Institutional Modernisation: India must reform trade, technology, and governance systems to leverage Western diversification effectively.
- Economic Competitiveness: Deepen domestic manufacturing and innovation under 'Make in India' and Digital India to attract Western investment.
- Strategic Autonomy: Maintain equidistance between competing Western factions while expanding influence in multilateral forums like G20, BRICS, and IPEF.
- Cultural and Academic Diplomacy: Strengthen people-to-people and educational ties to deepen long-term India–Europe relations.
- Global Governance Role: Collaborate with plural Western powers to promote inclusive multilateralism, climate finance, and digital equity.

Conclusion

- A multipolar West offers India both challenge and choice. By combining strategic agility with domestic reform, India can position itself as a pivotal bridge between Western pluralism and the emerging multipolar world order.

INDIA–UK FTA: BUILDING BRIDGES BEYOND TRADE

Context (Introduction):

- The India–UK Free Trade Agreement (FTA) signifies a new era of bilateral cooperation, blending trade liberalisation with talent and innovation exchange. Its true potential lies in turning economic ties into sustainable people-centric partnerships.

Recent Developments

- Broadening Economic Partnership: The FTA signed by Prime Ministers Modi and Starmer covers most goods and services. The UK expects £4.8 billion annual gains, while India foresees greater export access for textiles, leather, and specialty goods, boosting employment and MSMEs.
- Shifts in Global Skilled Migration: The US's increase in H-1B visa fees to \$100,000 has pushed Indian firms to diversify talent routes. The UK, through reduced visa fees and expanded "Global Talent" pathways, is positioning itself as a preferred destination for skilled Indian professionals.
- Trade and Innovation Linkages: The FTA promotes cooperation in advanced manufacturing, green technology, and services, aligning with India's *Make in India* and *Skill India* missions. This synergy advances innovation-led growth and strengthens India's global value chain presence.
- Whisky as a Cross-border Asset Class: Halving of Scotch import duties from 150% to 75% redefines whisky as a financial asset. The Caledonian Malt Fund's creation signals how tariff reforms can spur cross-border investment and capital market innovation.
- Carbon and Regulatory Challenges: The UK's proposed Carbon Border Adjustment Mechanism (CBAM) and pending Bilateral Investment Treaty create uncertainty for Indian exporters. Addressing these through green investments and institutional clarity is vital for long-term trust.

Criticisms and Challenges

- Implementation Uncertainty: Parliamentary delays in the UK and domestic lobbying over sensitive sectors could postpone FTA benefits and reduce investor confidence.

- **Limited Mobility Gains:** The agreement lacks binding provisions on labour mobility, limiting access for India's IT professionals and skilled workers despite its people-to-people rhetoric.
- **Regulatory Barriers:** India's sanitary and phytosanitary restrictions on UK agricultural imports (mangoes, spices, marine products) and differing standards create non-tariff barriers that need harmonisation.
- **Uneven Distribution of Gains:** The benefits may accrue disproportionately to UK's high-tech sectors, while India's MSMEs and small exporters require capacity-building and logistics support to compete effectively.
- **Climate and Compliance Pressure:** The CBAM could impose additional costs on India's carbon-intensive sectors like steel and cement unless coupled with domestic carbon credit markets and clean-tech investments.

Reforms and Way Forward

- **Institutional Reforms:** Finalising the Bilateral Investment Treaty (BIT) with provisions for transparent dispute resolution and tax predictability will strengthen investor confidence and cross-border security.
- **Mobility Facilitation:** Expanding the Young Professionals Scheme and integrating the FTA with Skill India International Centres can create structured, ethical migration pathways for skilled talent.
- **Green and Digital Synergies:** Strengthening the India–UK Green Growth Partnership can link trade with sustainability goals, promoting collaboration in renewable energy, green hydrogen, and carbon capture technologies.
- **Financial Innovation:** Encouraging cross-border fintech platforms, joint investment funds, and mutual recognition of financial products can enhance capital flow and diversify portfolios between the two economies.
- **Public Diplomacy and Academia:** Promoting educational and research collaborations through initiatives like UKIERI (UK-India Education and Research Initiative), student exchanges, and dual-degree programmes will deepen people-to-people connectivity, the true foundation of bilateral trust and long-term cooperation.

Conclusion

- The India–UK FTA is not merely a trade pact but a blueprint for holistic engagement in a fragmented world. Its durability will rest on sustained delivery, mutual openness, and trust across mobility, investment, and education. By linking trade with talent, climate, and culture, India and the UK can craft a partnership that embodies equitable globalisation and shared prosperity.

THE NEW ARC OF INDIA–AUSTRALIA COLLABORATION

Context (Introduction):

- India's Defence Minister's 2025 visit to Australia marked a new milestone in bilateral defence ties, with operational and industrial agreements that transformed the partnership from strategic convergence to practical interoperability across the Indo-Pacific maritime domain.

Main Arguments

1. From Strategic Convergence to Operational Cooperation

- The inaugural India–Australia Defence Ministers' Dialogue produced agreements such as the *Joint Maritime Security Collaboration Roadmap* and renewal of the *Defence and Security Cooperation Declaration*.

- Establishment of Joint Staff Talks, submarine-rescue cooperation, and air-to-air refuelling arrangements strengthened interoperability and tactical coordination.
- The partnership now enables contingency planning, joint exercises, and information-sharing across air and maritime domains.

2. Evolving Phases of Defence Partnership

- Phase I – Strategic Convergence: Shared Indo-Pacific vision through the Quad and concerns over China's assertiveness.
- Phase II – Operational Deepening: Joint exercises (e.g., *Talisman Sabre*), logistics talks, and intelligence sharing.
- Phase III – Industrial Convergence: Emerging cooperation in maintenance, repair, and supply-chain security, signalling a shift from dialogue to sustained collaboration.

3. Structural and Pragmatic Drivers

- Structural: Shifting maritime balance and Beijing's coercive behaviour push middle powers to enhance redundancy and reduce vulnerability.
- Pragmatic: Uncertainties over traditional security providers have motivated both countries to develop bilateral crisis-response mechanisms and industrial resilience.
- AUKUS dynamics and Australia's access to advanced systems offer India opportunities for technological and operational synergy.

4. Complementary Strengths and Industrial Synergy

- India: Large-scale defence manufacturing (₹1.5 lakh crore output in FY 2024–25), cost efficiency, and maritime geography near key sea lanes.
- Australia: Advanced undersea systems (P-8A, Triton drones, "Ghost Shark"), robust R&D, and innovation networks.
- The collaboration merges India's scale and affordability with Australia's high-tech edge, enabling co-development and joint sustainment of regional security capabilities.

5. Political and Institutional Significance

- Elevated from Strategic Partnership (2009) to Comprehensive Strategic Partnership (2020), the relationship is underpinned by shared democratic values and economic interdependence.
- Regularised dialogues and annual ministerial meetings ensure institutional continuity beyond political cycles.
- Strengthened defence cooperation aligns with Quad objectives and reinforces India's leadership in the southern Indo-Pacific.

Criticisms and Challenges

- Limited binding commitments: The cooperation remains incremental and reversible, lacking formal defence guarantees.
- Information-sharing sensitivities: Classified data exchange frameworks are still developing.
- Dependence on external alliances: Australia's strong AUKUS commitments may complicate independent Indo-Indian cooperation.

- Implementation lag: Bureaucratic and logistical hurdles could delay operationalisation of ship-repair and logistics support agreements.
- Geopolitical balancing: Both nations must avoid being drawn into great-power blocs while safeguarding regional autonomy.

Future Path

- Institutionalisation: Deepen joint staff mechanisms and standard operating procedures for humanitarian assistance and maritime surveillance.
- Defence Industry Integration: Promote co-production and joint R&D under iDEX and Defence Production Corridors.
- Quad Synergy: Align bilateral outcomes with Quad's Maritime Domain Awareness Initiative.
- People-to-People & Education Linkages: Foster defence education exchanges, naval academies' cooperation, and private-sector participation.
- Sustainable Security Architecture: Develop a shared logistics and repair ecosystem across Indian and Australian shipyards to reduce dependence on extra-regional powers.

Conclusion

- India–Australia defence cooperation is evolving from symbolic partnership to functional interoperability. Anchored in trust, shared maritime interests, and industrial complementarity, it promises to shape a stable, resilient, and inclusive Indo-Pacific security order.

RE-IMAGINING HIGHER EDUCATION BEYOND STEM NATIONALISM

Context (Introduction):

- While reversing brain-drain in STEM is a valid goal, India's ambition for higher education must be broader than simply producing industrial pipelines. True academic strength lies in inquiry, autonomy, interdisciplinarity and openness—not just strategic STEM nationalism.

Main Arguments

- Repatriation of talent has limits. The proposed scheme to attract Indian-origin “star faculty” targets 12-14 priority STEM areas, offering grants and labs to returnees. Yet the article emphasises that this is only a beginning: what matters more is the environment that enables sustained contribution at home.
- India already has strong institutions but needs reinforcement. Institutions like Indian Institute of Technology's (IITs), Indian Institute of Science (IISc), Tata Institute of Fundamental Research (TIFR) and others have produced notable work despite constraints. The article argues these must be bolstered by sustained investment, transparent governance and genuine academic autonomy.
- Higher education should not be reduced to industrial supply-chain logic. The piece cautions against treating universities merely as feeders for industry and emphasises that innovation “flourishes in interdisciplinary, and often inconvenient spaces” — for instance where social scientists question the ethics of AI, or historians challenge majoritarian narratives.
- Academic freedom and openness are essential. Returnees and ongoing faculty must have the freedom to ask difficult questions. The article invokes the example of deportation of scholars (e.g., Francesca Orsini) as sending “a dispiriting message about how India treats academic inquiry that doesn't align with official narratives”.

- Global benchmarks show India's lag. China's Thousand Talents Plan (launched 2008) was accompanied by systemic overhaul of its universities — resulting now in five Chinese institutions in the QS Top 100, 72 overall. In contrast, India with 54 institutions is yet to break into the Top 100; the highest-ranked Indian institution, IIT Delhi, stands at 123.

Criticisms / Drawbacks

- Over-emphasis on STEM and strategic priorities. While targeting STEM is understandable, reducing higher education to strategic national capacities (AI, quantum computing, biotech) risks marginalising humanities and social sciences, which are essential for ethical, reflective, societal dimensions of innovation.
- Institutional autonomy remains weak. Political interference, curricular controls and faculty appointments driven by patronage hamper universities.
- Retention and attractiveness issues. Even if returning faculty can be recruited, without robust institutional ecosystems, many may view India as a stop-gap rather than a long-term base — undermining the ambition to build a home for them.
- Neglect of critical social sciences. In pursuing technological self-reliance and national competitiveness, ignoring the role of ethics, philosophy, social inquiry and interdisciplinary scholarship diminishes holistic education.
- Global perception and ranking gap. Despite quantity in enrolments and STEM graduates, Indian higher-ed institutions struggle to achieve global research impact, innovation culture and institutional prestige.

Reforms and Way Forward

- Strengthen academic autonomy and governance. Universities must have freedom in curriculum design, faculty appointment, research priorities and institutional direction — insulated from excessive political or regulatory control.
- Balance STEM with humanities and interdisciplinary research. Foster environments where technology is informed by ethics, society, culture and history. Encourage programmes that integrate engineering-science with social science/humanities.
- Build institutional ecosystems, not just recruit stars. Ensure returning scholars find high-quality labs, stable funding, peer communities, long-term contracts, and an environment that values inquiry.
- Raise research investment and culture. Increase R&D spend (currently low relative to global peers), promote high-quality PhDs, encourage risk-taking, support basic research not purely applied/industrial outcomes.
- Global engagement and openness. Protect academic freedom, welcome diverse ideas (including dissenting ones), avoid deportations or political pressures on scholars. Offer competitive remuneration, world-class infrastructure, and reputational incentives to retain domestic talent.
- Monitor and reform metrics of success. Shift from narrow metrics (graduates-for-industry, placements) to broader ones: research quality, citation impact, interdisciplinary output, global collaborations, societal relevance.

Conclusion

- India stands at a crossroads in higher education. The effort to reverse brain-drain and build global research capacity is commendable, but it must be accompanied by a deeper transformation: from a narrowly instrumental model — “university as industry feeder” — to a vibrant ecosystem of inquiry,

autonomy, interdisciplinarity and openness. Only then can India not just stock its strategic STEM needs, but truly nurture minds that question, innovate, reflect and lead, building institutions that command global respect and serve society in full.

INDIA'S STRATEGIC ENGAGEMENT WITH ASEAN

Context (Introduction):

- India's engagement with ASEAN, initiated in 1992, has evolved from dialogue partnership to a Comprehensive Strategic Partnership by 2022. Amidst a multipolar and unstable geopolitical scenario, ASEAN is central to India's Act East Policy and vision for a free, open, and inclusive Indo-Pacific (FOIIP).

Historical Evolution of India-ASEAN Ties

- Early Engagement:** India became an ASEAN dialogue partner in 1995 and joined the ASEAN Regional Forum in 1996. The first ASEAN-India Summit in 2002 elevated relations.
- Strategic Upgrades:** 2012 marked the 10th anniversary of summit-level partnership and India's strategic partnership; 2014 saw the transformation of Look East Policy into Act East Policy under PM Modi.
- Commemorative Milestones:** Celebrations included the ASEAN-India car rally, INS Sudarshini naval expedition, and leaders' attendance at the 2018 Republic Day parade in Delhi.

PM Modi's Role and Geopolitical Significance

- Consistent Leadership:** Modi attended nine of 19 East Asia Summits, emphasizing ASEAN's central role in regional stability.
- FOIIP Vision:** India seeks a Free, Open, and Inclusive Indo-Pacific to counterbalance rising tensions between the US and China.
- ASEAN as a Linchpin:** ASEAN mediates regional stability amid maritime disputes involving China and ensures cooperative approaches over rivalry.

Current Geopolitical Context

- Summit 2025:** Leaders including US President Trump, Australia's PM Albanese, and Japan's PM Takaichi will attend; China and Russia will be represented by deputies. Modi will address virtually due to domestic commitments.
- ASEAN Expectations:** ASEAN seeks deeper engagement from India in trade, development, and security; Malaysia's PM Anwar Ibrahim maintains strong bilateral ties with India.
- Multipolar Challenges:** US-ASEAN ties are strained; China's regional assertiveness and maritime disputes underline ASEAN's strategic importance to India.

Economic and Strategic Dimensions

- Trade and Development:** Enhanced bilateral trade, capacity-building initiatives, and regional connectivity projects strengthen India-ASEAN cooperation.
- Security Cooperation:** India's role as a major Indian Ocean power complements ASEAN's regional security framework; emphasis on collaborative multilateralism.
- Soft Power and Cultural Ties:** Shared history, people-to-people linkages, and cultural diplomacy remain integral to the partnership.

Reforms / Recommendations

- Deepen Multilateral Engagement: Active participation in regional forums like EAS and IORA to shape Indo-Pacific governance.
- Enhance Economic Integration: Strengthen trade, investment, and technology collaboration with ASEAN nations.
- Focus on Security Cooperation: Joint maritime exercises, intelligence sharing, and capacity-building for regional stability.
- Cultural Diplomacy: Expand people-to-people, academic, and cultural exchanges to reinforce strategic ties.

Conclusion:

- ASEAN is central to India's regional strategy in a multipolar Indo-Pacific. Strengthening trade, security, and cultural engagement will enable India to act as a stabilizing force while countering geopolitical uncertainty, fulfilling Modi's vision of a cooperative and inclusive Asia.

UNITED NATIONS AT 80: REFORMING MULTILATERALISM FOR A FRAGMENTED WORLD

Context (Introduction):

- The United Nations, born from the ashes of World War II, was envisioned as a mechanism to secure peace, uphold human dignity, and promote collective progress. Eight decades later, the UN remains indispensable yet deeply constrained by outdated structures, political rivalries, and the waning spirit of multilateralism.

Main Arguments

- The UN emerged not as a symbol of power but as an institution of peace, tasked with preventing conflict and fostering cooperation. Its achievements — from decolonisation support to humanitarian relief and peacekeeping — illustrate its continuing relevance.
- Over the decades, it evolved from a Cold War battleground to a laboratory for post-Cold War cooperation. Yet, bureaucracy, political interference, and funding shortfalls have limited its capacity.
- The post-1945 global order has transformed into a multipolar and fragmented landscape, marked by nationalism, technological disruptions, and climate insecurity — all demanding agile multilateral responses.
- The erosion of liberal internationalism threatens the UN's foundational values — sovereign equality, collective security, and peaceful dispute resolution.
- The Security Council's structure, frozen in 1945 realities, fails to reflect the present balance of power. Emerging powers like India, Brazil, South Africa, Germany, and Japan demand fair representation to ensure legitimacy and efficacy.
- India's claim for permanent membership rests on its democratic credentials, contributions to UN peacekeeping, economic growth, and leadership in the Global South. Excluding it undermines the UNSC's credibility and global governance reform.
- Despite institutional weaknesses, UN agencies like UNHCR, WFP, and UNICEF remain vital for humanitarian aid, while the *Sustainable Development Goals (SDGs)* have institutionalised a global vision for inclusive and sustainable growth.
- The UN's *normative power* — in shaping discourses on human rights, gender equality, and environmental protection — remains a subtle but lasting achievement.

Criticisms and Drawbacks

- The UN's effectiveness is hampered by veto politics, where major powers prioritize strategic interests over global welfare.
- Budgetary shortfalls, especially due to delayed payments by major contributors like the U.S., have weakened operations.
- Bureaucratic inertia, fragmented mandates, and politicisation of decisions often dilute the organisation's impact.
- Its peacekeeping missions, though well-intentioned, have struggled with limited mandates and lack of coordination, as seen in Rwanda and Srebrenica.
- The credibility crisis of the UN mirrors the decline in global moral consensus, where nationalism increasingly trumps cooperation.

Reforms and the Way Forward

- UNSC Reform: Expand permanent and non-permanent membership to reflect 21st-century power realities. The inclusion of India and other emerging nations would enhance legitimacy.
- Operational Agility: Streamline decision-making, reduce bureaucratic delays, and empower field agencies with digital tools for real-time crisis management.
- Moral Leadership: Reclaim the UN's normative role as the global conscience — speaking truth to power and defending human rights without fear or bias.
- Financial Sustainability: Ensure predictable, depoliticised funding through assessed contributions and diversified partnerships.
- Reinforce Multilateralism: Strengthen regional partnerships (such as G20, African Union, ASEAN) as complementary pillars supporting UN-led governance.
- Member-State Responsibility: The UN can only be as strong as the political will of its members. States must act as partners in reform rather than critics of inertia.

Conclusion

- At 80, the UN stands not as a relic of the past but as a *symbol of possibility* — an imperfect yet indispensable forum for dialogue and collective action. As Shashi Tharoor reminds, it was never meant “to take mankind to heaven but to save humanity from hell.” Its renewal depends on our collective commitment to make multilateralism more inclusive, responsive, and humane in a world yearning for principled global cooperation.

HONEST WELFARE VS. FREEBIE POLITICS IN INDIA

Context (Introduction):

- The 2025 Bihar Assembly election reflects India's growing crisis of competitive populism, where pre-election freebies worth over ₹8 lakh crore overshadow welfare intent, distort fiscal priorities, and blur the line between social justice and political bribery.

Main Arguments

- Elections as Auctions: Indian elections increasingly resemble auctions, where state treasuries are used to buy votes. In Bihar, poll promises exceed three times the annual state budget, undermining fiscal discipline.
- Weaponisation of Welfare: Welfare, originally a constitutional duty to secure basic needs, is being misused as an electoral currency. Populism has transformed welfare into vote-buying rather than nation-building.

- Distinction Between Welfare and Freebies: – *Welfare* strengthens human capability — e.g., education, food, health, pensions. —
Freebies generate dependency and short-term satisfaction — e.g., cash transfers weeks before elections. Mid-day meals or MGNREGA create empowerment, unlike unproductive handouts.
- Double Standards in Economic Policy: Benefits to corporates are often termed “reforms,” while aid to the poor is labelled “freebies.” The 2019 corporate tax cut cost ₹1.45 lakh crore yearly, yet was celebrated as bold economics.
- Legal and Ethical Loopholes: The Supreme Court’s 2013 judgment (S. Subramaniam Balaji vs State of Tamil Nadu) ruled that manifesto promises do not constitute “corrupt practices” under the RPA, leaving space for misuse.
- Moral Paradox: Offering a cup of tea to a voter is bribery under Section 123(1) of the RPA, but promising ₹2,500 monthly to millions is legally acceptable. This inconsistency erodes electoral integrity.
- Fiscal and Economic Risks: The RBI’s Report on State Finances 2022–23 warned that populist subsidies threaten fiscal collapse. Punjab’s debt-to-GSDP ratio reached 47.2%; Rajasthan’s pre-poll spending crossed ₹56,000 crore.
- Socioeconomic Inequities Persist: Despite welfare rhetoric, inequality deepens — the richest 1% own 51.5% of India’s wealth (Oxfam 2022). India ranks 130th in HDI; one-third of children remain malnourished, and 81 crore depend on free rations.



Criticisms / Drawbacks

- Erosion of Democratic Ethos: Freebies convert elections into fiscal auctions, reducing citizens to beneficiaries rather than empowered voters.
- Distortion of Fiscal Priorities: State budgets are diverted from long-term investments (education, health, infrastructure) to short-term populism.
- Weak Legal Oversight: Absence of clear guidelines allows manifestos to remain outside electoral accountability, encouraging reckless promises.
- Ethical Governance Deficit: Politicians misuse the Model Code of Conduct window to announce schemes, exploiting administrative gaps before EC intervention.
- Dependency Syndrome: Freebies weaken productivity and discourage self-reliance, especially among youth seeking sustainable livelihoods.

Reforms and Way Forward

- Define and Regulate Freebies: Establish a constitutional or statutory body under the Election Commission to distinguish legitimate welfare from electoral bribes.

- Mandatory Costed Manifestos: Political parties must publish audited, costing manifestos explaining funding sources — whether through taxes, loans, or budget cuts.
- Amend Representation of People Act (RPA): Classify direct cash transfers to voter groups before elections as “corrupt practices” under Section 123.
- Pre-election Fiscal Code: Prohibit the announcement of new subsidies or direct benefit schemes within six months of election notification.
- Performance-linked Welfare: Prioritise welfare linked to outcomes — education, job creation, irrigation, and healthcare — over consumption-based subsidies.
- Transparency and Accountability: Mandate annual disclosure by state finance departments on fiscal impact of welfare schemes and their developmental returns.
- Public Awareness and Voter Education: Promote informed voting through EC and civil society initiatives highlighting fiscal literacy and ethical governance.

Conclusion

- India needs honest welfare, not hollow populism. Welfare must empower citizens through health, skills, and education — not lure them through cash doles. A democracy that survives on freebies risks both fiscal bankruptcy and moral decay. True welfare is nation-building; reckless populism is nation-draining.

PAPER 3

INDIA'S ANSWER LIES IN SCALE, SKILL, AND SELF-RELIANCE

Context (Introduction):

- As the developed world retreats behind tariff and visa walls, India's growth strategy — anchored in scale, skill, and self-reliance — presents an outward-looking alternative rooted in domestic capacity-building, global integration, and demographic strength.

India's Growth Model in a Fragmented World

- Turning Global Protectionism into Opportunity:** With rising trade barriers and visa curbs by the US and others, India's response has been to build internal resilience. The focus on *Atmanirbhar Bharat* seeks not isolation, but capability — making India a producer and exporter of solutions, not a victim of global walls.
- Demographic Dividend as Strategic Advantage:** With a median age under 29, India remains the youngest large economy, in contrast to ageing China and the West. This youthful energy, when matched with *Skill India* and *Startup India*, is becoming the foundation of global labour competitiveness.
- Macroeconomic Strength and Consumption Boom:** BI forecasts 6.8% GDP growth for FY26, GST revenues consistently cross ₹1.8 lakh crore, and foreign-exchange reserves exceed \$700 billion. Festive consumption reached ₹3.7 lakh crore this Dussehra, indicating strong domestic demand and formal credit expansion.
- Investment and Infrastructure Push:** Over the past decade, India's GDP has nearly doubled, exports reached \$825 billion, and renewable capacity crossed 220 GW. Record public capital expenditure, stable inflation, and fiscal prudence underline macro stability.
- Digital Public Infrastructure as Competitive Edge:** India's UPI now handles over 650 million daily transactions, surpassing Visa. The JAM trinity — *Jan Dhan, Aadhaar, Mobile* — alongside *ONDC* and *DigiLocker*, showcases how inclusive technology can empower citizens and create globally exportable governance models.

Criticisms and Challenges

- Uneven Employment Generation:** Despite strong growth, labour participation and formal job creation lag behind investment trends, necessitating targeted job-rich growth sectors.
- Dependence on Global Markets:** Export growth faces headwinds from geopolitical tensions and protectionism, demanding continued diversification of markets.
- Skill Mismatch:** The quality and alignment of skilling programmes with global needs remain uneven; India must shift from quantity-based to quality-based skilling.
- Regional and Sectoral Inequalities:** Urban–rural and gender divides in access to credit, technology, and employment still hinder inclusive growth.
- Environmental Pressures:** Rapid industrial expansion must balance India's net-zero 2070 commitments through cleaner technologies and circular-economy models.

Reforms and the Road Ahead

- Global Skilling Mission:** A unified framework integrating *Skill India*, *Make in India*, and *Startup India* with international certifications and pre-departure training to make Indian workers globally competitive.

- Atmanirbhar Bharat as Global Integration: Promote *Make in India for the World* — using PLIs, R&D investments, and export-linked manufacturing clusters to build global supply-chain resilience.
- Innovation through Anusandhan Foundation: The ₹50,000 crore Anusandhan National Research Foundation will revitalise India's R&D ecosystem, linking academia and industry.
- Diaspora as Development Diplomats: With \$135 billion remittances in 2024 and 11 Fortune 500 CEOs of Indian origin, India's diaspora is both a soft-power and economic multiplier.
- Digital and Green Synergy: Expansion of digital infrastructure and renewable capacity will define India's leadership in sustainable industrialisation and inclusive growth.

Conclusion

- When developed nations build walls of protectionism, India builds bridges of capability. Guided by the triad of scale, skill, and self-reliance, India's model redefines globalization from dependency to confidence. As the 2016 Economic Survey noted, domestic strength is not the opposite of global integration — it is its precondition. India's next leap, like Hanuman's in the Ramayana, lies in rediscovering its own power — the belief that national growth and global goodwill are not opposing forces but parallel paths to resilience and renewal.

THE 'CRITICAL FACTOR' IN INDIA'S CLEAN ENERGY AMBITIONS

Context (Introduction):

- India's path to 500 GW renewable energy by 2030 and net-zero emissions by 2070 hinges on securing *critical minerals* such as lithium, cobalt, and rare earth elements (REEs) — essential for clean technology, battery storage, and green industrial growth.

Importance of Critical Minerals

- Green Technology Backbone: Critical minerals power the core of clean-tech systems — lithium and cobalt for *EV batteries*, REEs such as *neodymium and dysprosium* for *wind turbines and motors*, and graphite for *battery anodes*.
- Economic Driver: India's EV market is projected to reach ₹1.8 lakh crore by 2030, growing at 49% CAGR (NITI Aayog, 2023). The *battery storage market*, valued at \$2.8 billion in 2023, is expected to grow fivefold by 2030.
- Strategic Necessity: As fossil fuels lose relevance, *critical minerals* will define *energy security*. India's dependence on imports for lithium (100%), cobalt (100%), and REEs (90%) poses risks similar to the 20th-century oil dependence.
- Climate Commitments: These minerals are indispensable for India's *Energy Transition Roadmap* and *National Hydrogen Mission* — both critical to meeting *Paris Agreement* goals.

Main Arguments

(a) Import Dependence and Global Concentration

- India's critical mineral imports may cross \$20 billion by 2030 (NITI Aayog).
- China controls 60% of REE mining and 85% of processing, while Indonesia refines 40% of nickel, posing major supply risks.
- China's 2023 export curbs on gallium and germanium exposed the fragility of global dependence.

(b) Domestic Exploration and Emerging Potential

- GSI discovered 5.9 million tonnes of lithium in Reasi, J&K — India's first major deposit.
- Auctions in Odisha, Chhattisgarh, and Andhra Pradesh cover lithium, graphite, and REEs.
- The MMDR Act 2023 opened 20 critical minerals for private exploration, boosting FDI potential.

(c) Institutional and Strategic Efforts

- National Critical Mineral Mission (₹34,300 crore) targets exploration, mining, and recycling.
- KABIL acquiring lithium assets in Argentina and Australia; IREL and NMDC expanding REE extraction.
- India–Australia and India–U.S. partnerships foster technology sharing and diversified sourcing.

(d) Recycling and Urban Mining

- India produces 3.9 million tonnes of e-waste yearly; only 10% recycled (CPCB 2022).
- Battery Waste Rules 2022 aim for 70% recycling by 2030.
- Attero Recycling and Lohum Cleantech lead e-waste recovery, potentially meeting 15–20% of mineral demand (TERI 2023).

(e) Global Partnerships and Mineral Diplomacy

- Under the Quad and IPEF, India collaborates with Australia, Japan, and the U.S. for resilient supply chains.
- The India–Australia Critical Minerals Partnership (2023) committed \$150 million for joint projects.
- India joined the Minerals Security Partnership (MSP) to secure lithium, cobalt, and REEs through multilateral cooperation.

Key Issues and Challenges

- Low Value-Addition: India contributes *less than 1%* of global REE output and lacks refining technology, forcing export of raw ores.
- Institutional Overlaps: Multiple ministries (Mines, MNRE, MEITY, Commerce) lead to fragmented execution.
- Private Sector Reluctance: Long gestation, high exploration costs, and regulatory delays deter private investment.
- Environmental Sensitivity: Mining lithium and REEs consumes significant water and impacts biodiversity; *ESG compliance* remains weak.
- Technology Gaps: Dependence on imported processing and separation technologies limits domestic innovation capacity.

Reforms and Measures Needed

- Operationalise NCMM Effectively: Define *time-bound exploration targets*, use AI-based geological surveys, and link outcomes to production incentives.
- Build Processing and Refining Hubs: Establish *National REE and Battery Metal Refineries* under PPPs in mineral-rich states.
- Strategic Stockpiling: Create a *National Critical Mineral Reserve* similar to the Strategic Petroleum Reserve.
- Promote Recycling Ecosystem: Incentivise *urban mining start-ups* via tax rebates and integrate e-waste collection under *Swachh Bharat 2.0*.
- Global Joint Ventures: Expand KABIL's footprint in Latin America and Africa through concessional credit lines and EXIM Bank support.
- Invest in R&D: Strengthen collaboration among *IITs, CSIR-NML, and ARCI* for mineral substitution, eco-friendly extraction, and advanced battery chemistries.

Conclusion

- Critical minerals are the new strategic resource frontier. India must transition from being a *raw importer* to a *value-chain participant* through robust domestic mining, technology partnerships, and circular-economy innovation. A coherent, fact-driven mineral policy backed by science, sustainability, and diplomacy will transform India into a critical-mineral power and a leader in green growth.

THE PRIVATE SECTOR PROBLEM IN INDIA'S GROWTH STORY

Context (Introduction):

- Despite robust GDP growth and major policy incentives — from corporate tax cuts to infrastructure push — private sector investment in India remains sluggish, forcing the government to continue as the main driver of capital formation and growth.

Main Arguments

1. Nature of the Problem – Weak Private Investment

- India's Gross Fixed Capital Formation (GFCF), representing all investments in fixed assets, has been declining since 2011–12, staying below 30% of GDP for most years after 2014.
- Within GFCF, the private corporate sector's share has steadily fallen, especially post-2019, despite major corporate tax cuts.
- In FY24, while nominal GDP grew by 12%, private and household investment shares dropped, with only government spending rising — indicating an imbalanced investment recovery.

2. Policy Efforts to Revive Investment

- The government aimed to trigger a self-sustaining growth cycle by boosting consumption demand (through income-tax reliefs, GST rate cuts, and direct transfers).
- Large-scale public infrastructure investment — roads, ports, logistics, and railways — was meant to “crowd in” private investment.
- Structural reforms like the corporate tax cut (2019), PLI schemes, and ease of doing business initiatives sought to enhance private sector confidence and profitability.

3. Why Private Investment Matters

- Sustained private capital formation is vital for long-term growth, job creation, and innovation.
- When private firms expand capacity and production, it creates a virtuous cycle of employment, income, and demand, reducing reliance on state expenditure.
- Without it, growth becomes fiscally driven, straining public finances and limiting the scope for social and welfare spending.

4. Structural Reasons for Weak Investment Response

- Demand uncertainty: Despite recovery in consumption, uneven income distribution and inflation have restrained durable goods demand.
- Excess capacity: Many sectors, especially manufacturing, still operate below full capacity post-pandemic.
- Corporate deleveraging: Firms are using profits to reduce debt rather than expand operations.
- Global headwinds: Slowing export demand and geopolitical uncertainties affect investment confidence.
- Implementation gaps: Delays in PLI disbursements and complex compliance environments reduce private participation in industrial schemes.

5. Implications for India's Growth Strategy

- The state-led investment model is increasingly driving growth, contrary to the “Minimum Government, Maximum Governance” vision.
- Private sector reticence undermines employment generation, worsens inequality, and limits innovation-led growth.

- The imbalance could make India's high growth unsustainable, as government capital expenditure cannot indefinitely substitute for private enterprise dynamism.

Criticisms and Drawbacks

- Policy fatigue: Repeated fiscal stimuli and tax incentives have not translated into higher private capex.
- Inequality trap: Consumption growth driven by upper-income segments limits broad-based demand recovery.
- Dependence on government spending: Raises fiscal deficit and debt concerns.
- Limited credit uptake: Despite high liquidity, credit flow to private industry remains sluggish.
- Weak business sentiment: Regulatory unpredictability and slow contract enforcement deter risk-taking.

Reforms and the Way Forward

- Boosting Demand Confidence: Broaden income growth through rural consumption support, MSME revival, and job-intensive sectors.
- Predictable Policy Framework: Ensure regulatory stability and faster dispute resolution to improve investment climate.
- Strengthening PLI and Industrial Corridors: Streamline procedures, decentralise approvals, and focus on value-chain linkages.
- Credit and Financing Ecosystem: Expand development finance institutions (DFIs) and bond market depth to fund private projects.
- Public-Private Partnerships: Revitalise PPP models with risk-sharing mechanisms to catalyse infrastructure and green investments.

Conclusion

- India's growth cannot rely indefinitely on state-led investments. Reviving private sector confidence through stable demand, transparent policies, and innovation incentives is essential for a sustainable, employment-rich, and self-propelling economic trajectory.

SYNTHETIC MEDIA AND AI-GENERATED CONTENT

Context (Introduction):

- The proliferation of AI-generated deepfakes and synthetic media has raised significant concerns regarding misinformation, electoral integrity, and personal rights. In response, the Indian government has proposed amendments to the IT Rules, 2021, mandating the labelling of AI-generated content to enhance transparency and accountability in the digital ecosystem.

Key Arguments:

- Widespread Proliferation: Advancements in generative AI have made it easier to create photorealistic images and videos, leading to the widespread dissemination of AI-generated content across social media platforms. For instance, Meta has initiated the labelling of AI-generated content on Facebook, Instagram, and Threads to inform users about the nature of the content they encounter.
- Democratic Risks: The rapid spread of AI-generated misinformation poses a threat to democratic processes. During India's general election, over 75% of voters were exposed to political deepfakes, with nearly one in four believing the AI-generated content was real.
- Personal Rights Violations: Public figures have reported instances of their likenesses being misused in AI-generated media. For example, a deepfake video of Punjab Chief Minister Bhagwant Mann was created and circulated with the intent to defame him.

- **Industry Initiatives:** The Coalition for Content Provenance and Authenticity (C2PA) has developed an open technical standard, known as Content Credentials, to enable the verification of digital content's origin and edits. This initiative aims to establish trust in media content by providing transparent information about its creation and modifications
- **Regulatory Challenges:** The current IT Rules, 2021, may not adequately address the complexities associated with AI-generated content. The proposed amendments seek to fill this regulatory gap by introducing clear guidelines for labelling AI-generated content, thereby enhancing user awareness and trust.

Criticisms / Drawbacks:

- **Enforcement Complexity:** Ensuring consistent identification and labelling of AI-generated content across diverse platforms and formats presents significant enforcement challenges.
- **Legal Ambiguities:** The introduction of subordinate legislation without thorough parliamentary scrutiny may raise concerns regarding democratic legitimacy and accountability.
- **Limited Impact Evidence:** Mandatory labelling, as observed in previous interventions, may have limited effectiveness in reducing misinformation without complementary measures such as user education and platform accountability.
- **Global Coordination:** Divergent approaches to AI content regulation across countries complicate efforts to establish standardized practices and may hinder international cooperation.

Reforms / Recommendations:

- **Dynamic Regulation:** Regularly update regulations to keep pace with advancements in AI technology and address emerging challenges effectively.
- **Public Awareness Campaigns:** Implement educational initiatives to enhance users' ability to critically assess AI-generated content and identify potential misinformation.
- **Industry Collaboration:** Encourage collaboration among tech companies, policymakers, and civil society to develop and adopt standardized labelling practices and verification tools.
- **Parliamentary Oversight:** Ensure that amendments to regulations undergo thorough scrutiny and debate in Parliament to uphold democratic principles.
- **Integration with Digital Literacy:** Incorporate AI content labelling into broader digital literacy programs to empower users to navigate the digital landscape responsibly.

Conclusion

- The proposed mandatory labelling of AI-generated content represents a proactive step towards enhancing transparency and accountability in the digital realm. By implementing dynamic regulations, fostering public awareness, and promoting industry collaboration, India can mitigate the risks associated with AI-generated misinformation and uphold democratic values.

DELHI'S AIR POLLUTION CRISIS: CAUSES AND CHALLENGES**Context (Introduction):**

- Delhi, the capital of India, faces a severe air pollution crisis, particularly during the post-monsoon and winter months. Despite various measures, the city continues to experience hazardous air quality, impacting public health and quality of life.

Key Causes of Air Pollution in Delhi:

- **Vehicular Emissions:** The growing number of vehicles in Delhi contributes significantly to air pollution. Emissions from diesel and petrol vehicles release pollutants such as nitrogen oxides and particulate matter into the atmosphere.
- **Construction Dust:** Ongoing construction activities in the city generate large amounts of dust, which, when mixed with other pollutants, deteriorate air quality.
- **Industrial Emissions:** Industries in and around Delhi emit pollutants from burning fossil fuels and other processes, adding to the city's pollution burden.
- **Waste Burning:** Open burning of solid waste, including plastic and organic matter, releases toxic fumes into the air.
- **Agricultural Stubble Burning:** Farmers in neighboring states burn crop residues to clear fields, releasing large quantities of smoke and particulate matter that travel to Delhi, exacerbating pollution levels.
- **Meteorological Conditions:** During winter, Delhi experiences stagnant air conditions and low wind speeds, which trap pollutants close to the ground, leading to smog formation.

Data and Reports:

- In 2024, Delhi's average PM_{2.5} concentration was 108.3 µg/m³, over 21 times the World Health Organization's annual guideline of 5 µg/m³.
- The Central Pollution Control Board (CPCB) reported that in October 2025, Delhi's Air Quality Index (AQI) improved to the 'poor' category, registering a reading of 293, indicating a temporary improvement.

Cloud Seeding: A Proposed Solution**What is Cloud Seeding?**

Cloud seeding is a weather modification technique that involves dispersing substances like silver iodide or sodium chloride into clouds to encourage precipitation. The goal is to induce rainfall, which can temporarily clear pollutants from the air.

Effectiveness and Limitations:

- **Dependence on Cloud Presence:** Cloud seeding requires the presence of natural clouds. Without sufficient cloud cover, seeding cannot generate rainfall.
- **Temporary Relief:** Even when successful, the reduction in pollution is short-lived, with levels often returning to hazardous conditions within a few days.
- **Environmental Concerns:** The chemicals used in cloud seeding, such as silver iodide, can accumulate in the environment, potentially impacting soil and water quality.
- **High Costs:** Implementing cloud seeding on a large scale is expensive and may divert resources from more effective, long-term pollution control measures.

Current Status in Delhi:

The Delhi government has initiated cloud seeding trials to address air pollution during the post-Diwali smog season. While initial tests have shown some success, experts caution that cloud seeding should be considered a supplementary measure, not a primary solution.

Recommended Long-Term Solutions

- **Strengthening Emission Standards:** Implement stricter emission norms for vehicles and industries to reduce the release of pollutants.
- **Promoting Clean Energy:** Encourage the use of renewable energy sources and phase out coal-based power plants to decrease industrial emissions.

- Improved Waste Management: Enhance waste segregation and processing to prevent open burning and reduce air pollution.
- Adoption of Sustainable Agricultural Practices: Promote alternatives to stubble burning, such as the use of the 'Happy Seeder' machine, to manage crop residues without releasing harmful emissions.
- Public Awareness Campaigns: Educate citizens about the sources and impacts of air pollution and encourage practices that contribute to cleaner air.
- Enhanced Monitoring and Enforcement: Strengthen air quality monitoring networks and enforce regulations to ensure compliance with pollution control measures.

Conclusion

- While cloud seeding may offer temporary relief from Delhi's air pollution, it is not a sustainable solution. Addressing the root causes of pollution through comprehensive and long-term strategies is essential for improving air quality and public health in the city.

URBAN PLANNING IN INDIA MUST MOVE BEYOND LAND-USE TOWARDS SUSTAINABLE GROWTH

Context (Introduction):

- India's Viksit Bharat @2047 vision of a \$30-trillion economy hinges on cities that are productive, resilient, and sustainable. However, urban planning in India largely remains limited to *land-use zoning*, neglecting economic potential, environmental sustainability, and inclusive urban governance.

Main Arguments

- Economic Vision as the Foundation of Planning: Urban planning must begin with an *economic growth strategy*, identifying future employment sectors, industrial corridors, and skill clusters.
 - The UN-Habitat's New Urban Agenda advocates aligning spatial plans with economic priorities to transform cities into growth engines. For instance, Ahmedabad's Town Planning Schemes link land readjustment to infrastructure-driven industrial expansion, demonstrating this integration in practice.
- Integrated Systems Planning: Cities function as interlinked systems — housing, mobility, energy, waste, and water.
 - Planning must, therefore, move beyond static zoning to *systems-based urban design*, aligning with SDG 11: Sustainable Cities and Communities. Integrated land, water, and energy plans can prevent resource stress and improve resilience to shocks such as floods or droughts.
- Natural Resource and Climate Budgeting: Urban growth must be guided by *resource budgeting*—evaluating available water, green cover, and waste-handling capacity.
 - The Second Administrative Reforms Commission (2nd ARC) and the National Mission on Sustainable Habitat recommend integrating *disaster resilience* and *climate adaptation* into every urban plan, ensuring no city expands beyond its ecological carrying capacity.
- Environmental and Mobility Integration: Cities contribute about 70% of India's carbon emissions and face severe air quality crises. Each city plan must include an Air Pollution Management and Mobility Plan, promoting mass transport, non-motorised modes, and electrification.
 - The Delhi Metro is an effective model—integrating land-use, transport, and emission reduction, helping avoid nearly 4.8 million tonnes of CO₂ annually (CSE, 2024).

- Regional and Polycentric Urbanisation: Urbanisation now extends to peri-urban belts and smaller towns. *UN-Habitat* and India's National Urban Policy Framework (NUPF) emphasise *polycentric growth*—developing multiple city clusters instead of one mega-city focus.
 - The Delhi–Meerut–Ghaziabad corridor under the Regional Rapid Transit System (RRTS) exemplifies such a *regional planning model* connecting jobs, transport, and housing across jurisdictions.

Criticisms and Drawbacks

- Outdated legal framework: Urban planning acts still rely on 20th-century zoning logic, unsuited to fast urbanisation.
- Weak coordination: Multiplicity of agencies leads to fragmented planning, violating the “one city—one plan” principle.
- Neglect of informality: Over 80% of India's urban workers are informal, yet livelihood zones remain unplanned.
- Limited environmental integration: Air, water, and waste management are peripheral rather than integral planning goals.
- Boundary constraints: Planning stops at municipal limits, excluding fast-growing peri-urban regions.

Reforms and Policy Directions

- Legislative Modernisation: Revise the Town and Country Planning Acts to include economic, environmental, and social parameters, adopting *performance-based planning* instead of rigid zoning.
- Economic and Resource-linked Planning: Make *City Economic Strategies* mandatory precursors to Master Plans—linking job forecasts, GDP potential, and carrying-capacity assessments.
- Integrated Metropolitan Governance: Create unified Metropolitan Planning Authorities with fiscal autonomy and accountability, as suggested by the 2nd ARC, to ensure cohesive planning across agencies.
- Climate and Environmental Accountability: Institutionalise City Climate Action Plans, Carbon Budgets, and Air Quality Cells to operationalise India's net-zero 2070 roadmap and meet *Paris Agreement* commitments.
- Data, Education, and Local Capacity: Modernise urban education through GIS-enabled, sustainability-focused curricula. Planners must be trained in digital mapping, environmental auditing, and participatory planning, as encouraged by *UN-Habitat's Capacity Development Framework*.

Model Example: Surat City Resilience Model

Surat, once prone to floods and epidemics, is now cited globally (by UN-Habitat) as a *Resilient City Model*. Through *Surat Urban Development Authority (SUDA)* and the *100 Resilient Cities initiative*, the city integrated flood forecasting, solid waste management, and early warning systems into its planning. This demonstrates how multi-sectoral, adaptive planning can convert vulnerability into resilience — a template for other Indian cities.

Conclusion

- India's urban future must transcend land-use rigidity and embrace strategic, data-driven, and climate-conscious urbanism. By linking planning to economic growth, sustainability metrics, and resilient

governance, India can build cities that power inclusive development while meeting its climate and social justice obligations — truly realising the vision of Viksit Bharat 2047.

INDIA'S MILITARY TRANSFORMATION: TOWARDS INTEGRATED THEATRE COMMANDS

Context (Introduction):

- Artificial intelligence, drones, and hybrid warfare are lowering the cost of conflict but increasing operational risks. In a two-front threat scenario from China and Pakistan, India must shift from coordination to command through integrated theatre commands backed by structural reforms.

From Coordination to Command

- New Rules of 2025:** The Inter-Services Organisations (Command, Control and Discipline) Rules empower joint commanders with authority across services, moving beyond silos.
- Prime Minister's Push:** At the 2025 Combined Commanders' Conference, the theme of "Year of Reforms" stressed integrated theatre commands as the future of Indian defence.
- Tri-Service Agencies:** Cyber, Space, and Special Operations divisions have been raised under HQ IDS, enhancing India's preparedness for new-age domains.
- Combat Formations:** Rudra and Bhairav units integrate artillery, armour, engineers, and surveillance for modular, mission-specific deployment.
- Amphibious Doctrine:** A declassified joint doctrine now provides an integrated framework for land, sea, and air operations.

Doctrinal and Technological Evolution

- Earlier Doctrines:** The Joint Doctrine (2017) and Land Warfare Doctrine (2018) laid the groundwork for synergy among the three services.
- Ran Samvad Seminar (2025):** Emphasised hybrid warriors—capable of coding, information warfare, and tactical command—reflecting the demands of multi-domain conflict.
- Technology Induction:**
 - MQ-9B drones* (2023 deal) enhance persistent ISR and precision strike.
 - Rafale-M* strengthens naval aviation and maritime strike power.
 - Akashteer AI system* integrates Army air defence with IAF's IACCS.
 - Pralay missile* adds credible theatre-level firepower.

Creating a Modern Force

- Integrated Battle Groups (IBGs):** Rudra-type brigades designed for 12–48 hour deployment with combined arms, drones, and loitering munitions.
- Maritime Posture:** A carrier-centred strategy is being developed; Rafale-M supports near-term aviation while a 15-year naval roadmap expands subsurface and unmanned capacity.
- Standardisation:** Future force requires common data and interface systems across all services.
- Professional Military Education:** PME must embed technologist-commanders into exercises, ensuring adaptability and joint leadership.

Challenges and Drawbacks

- Slow Reform Pace:** Despite a decade of emphasis, joint PME began only in 2024; China achieved theatre commands in 2016.
- Untested Jointness:** Exercises like Operation Sindoor were largely aerial, never testing full mobilisation.
- Inter-Service Rivalries:** Persistent disagreements over jurisdiction delay full implementation of theatre commands.
- Import Dependence:** Key systems such as Rafale-M and MQ-9B highlight reliance despite *Atmanirbhar Bharat*.

- Weak Defence–Industry Links: The CAG (2022) flagged delays in DRDO projects, slowing indigenous modernisation.

Reforms and Way Forward

- Phased Theatrisation: Begin with functional commands (cyber, space), then expand geographically, similar to the US *Goldwater-Nichols Act (1986)*.
- Strengthen PME: Train hybrid technologist-commanders skilled in AI, coding, and information warfare.
- Civil–Military Fusion: Deepen collaboration between DRDO, DPSUs, private startups, and universities via *IDEX* and *Defence Acquisition Procedure 2020*.
- Expand IBGs: Convert trial brigades into permanent formations with joint logistics and firepower.
- Industrial Ecosystem: Build DARPA-style rapid testing and prototyping cycles to accelerate indigenous defence innovation.

Conclusion

India must move beyond incremental coordination to genuine joint command. By activating theatre commands, reforming PME, and strengthening civil–military fusion, India can build a flexible and adaptive force capable of winning 21st-century hybrid and multi-domain wars.

INDIA'S FIGHT AGAINST CYBER FRAUDS IN THE DIGITAL ECONOMY

Context (Introduction):

- India's digital revolution—driven by affordable internet, UPI payments, and e-commerce—has increased financial inclusion but also opened avenues for cybercrime. Rising phishing scams, identity theft, UPI/OTP frauds, and “digital arrests” expose systemic gaps in banks and cyber policing.

Security Challenges in India's Digital Transformation

- Social engineering at the core: Fraudsters manipulate fear, urgency, or trust rather than relying only on hacking. Elderly, rural populations, and job/loan seekers are most vulnerable.
- Rise of digital arrests: Criminals impersonate officials, threaten fake charges, and coerce large payments (e.g., ₹23 crore fraud of a retired banker).
- Systemic gaps: Banks miss red flags such as unusually large transactions and mule accounts with weak KYC, while cyber police lack tools and manpower.
- Underreporting of frauds: Many victims avoid complaints due to stigma or lack of trust, allowing fraudsters to thrive unchecked.
- Organised patterns: Layering of money through multiple accounts makes recovery nearly impossible, especially when the crucial 24-hour window is missed.

Criticisms and Institutional Weaknesses

- Banks' limited role: Restrict themselves to issuing generic advisories instead of proactive prevention.
- Weak KYC enforcement: Mule accounts with fake or incomplete details facilitate laundering.
- Cyber police constraints: Severely short of technology, trained workforce, and real-time coordination.
- Delayed responses: By the time fraud is reported and acted upon, funds are already dispersed.
- Data insecurity: Leaked customer data often circulates, exposing citizens to repeated fraud attempts.

Reforms and Way Forward

- AI-driven monitoring: Create personalised transaction profiles and anomaly detection to flag unusual size, frequency, or timing of transfers.
- Cross-institutional collaboration: An AI-enabled fraud intelligence network across banks, payment systems, and telecom providers for real-time alerts.
- Empowering cyber police: 24/7 rapid-response units with automated AI alerts to act within the 24-hour window.

- Strengthening banks' accountability: Audit mule accounts, plug KYC gaps, use Blockchain for tamper-proof data, and ensure timely customer compensation (RBI guidelines).
- Global cooperation: Cybercrime is transnational; India must strengthen cross-border intelligence-sharing and legal frameworks for effective action.

Conclusion

- India's digital economy cannot thrive without trust. By shifting from reactive firefighting to AI-enabled proactive protection, strengthening bank accountability, and empowering cyber police, India can secure its digital transformation and safeguard citizens from escalating cyber fraud.

INDIAN FARMERS NEED INCOME, NOT PRICE SUPPORT

Context (Introduction):

- The recent hike in wheat's Minimum Support Price (MSP) to ₹2,585 per quintal—109% above its cost of cultivation—has reignited debate on whether MSP-driven price support truly enhances farmer welfare or distorts agricultural priorities.

The Policy Paradox

- Unjustified MSP Hike: Despite record public wheat stocks (33.3 million tonnes) and lower wholesale prices, MSP was increased by ₹160/quintal for 2025–26.
- Cost–Price Mismatch: The A2+FL cost (₹1,239/quintal) shows MSP is more than double production cost, far exceeding the mandated 50% profit margin.
- Crop Bias: Wheat and paddy receive procurement and import protection, while pulses and oilseeds get minimal support, distorting cropping patterns.
- Market Disconnection: India's MSP-based price (\$290/tonne) is much higher than global prices (\$225–230/tonne), making exports uncompetitive.
- Fiscal Burden: High procurement, storage, and subsidy costs strain the exchequer and crowd out spending on rural infrastructure and innovation.

Challenges in the MSP-Based Approach

- Regional Concentration: Procurement benefits farmers mainly in Punjab, Haryana, and parts of MP, excluding the majority of smallholders.
- Crop Imbalance: Overemphasis on rice and wheat encourages unsustainable water and fertilizer use.
- Inefficiency in Distribution: FCI's mounting stocks and wastage indicate poor alignment with real consumption needs.
- Global Price Distortion: High MSPs hinder agro-export competitiveness and may invite WTO disputes.
- Low Diversification: Farmers remain risk-averse to shift towards horticulture, pulses, or oilseeds, which the market actually demands.

Reforms and Way Forward – Income, Not Price Support

- Direct Income Transfers: Implement per-hectare cash support similar to PM-KISAN, ensuring predictable, equitable assistance.
- Decoupled Support: Shift from product-based MSPs to area-based income schemes, encouraging market-driven cropping choices.
- Strengthen Rural Infrastructure: Invest in warehouses, cold chains, irrigation, and digital markets (e-NAM) to reduce middlemen exploitation.
- Crop Diversification Incentives: Encourage nutri-cereals, pulses, and oilseeds through targeted subsidies and assured procurement.

- **Price Stabilisation Funds:** Use market intervention schemes and risk insurance rather than blanket MSPs to cushion farmers.

Criticisms and Considerations

- **MSP Withdrawal Risks:** Sudden removal without alternatives may hurt small farmers in food-surplus regions.
- **Implementation Challenges:** Land record inconsistencies complicate per-hectare transfers.
- **Political Resistance:** MSP enjoys symbolic and electoral significance, making reforms politically sensitive.
- **Need for Coordination:** Reforms require Centre–State collaboration under a clear agricultural transition roadmap.

Conclusion

- True farmer empowerment lies not in inflated price supports but in assured income and resilient markets. Guided by NITI Aayog’s vision of Doubling Farmers’ Income and market reforms, India must transition from price-based protection to income-led, sustainable, and technology-driven agriculture.

TREAT EMPLOYMENT AS A NATIONAL PRIORITY

Context (Introduction):

- India is set to add over 133 million people to its working-age population by 2043. To harness this demographic dividend, job creation must become a national mission integrating growth, skilling, mobility, and inclusivity under a unified employment framework.

Why Employment Must Be a National Priority?

- **Demographic Dividend Window:** With the working population expected to peak around 2043, India has a limited window to leverage its youth advantage; failure could turn the dividend into a demographic burden.
- **Equity and Inclusion:** Quality jobs uplift millions from poverty, reduce inequality, and broaden consumption in a demand-driven economy, creating a self-sustaining cycle of growth.
- **Need for a Unified Framework:** Despite multiple schemes, the absence of an integrated National Employment Policy (NEP) weakens coordination between ministries, States, and industry.
- **Demand–Supply Gap:** Employment generation must address both job creation (demand side) and employability (supply side), with special emphasis on aligning education and skilling to industry needs.
- **Institutional Mechanism:** An Empowered Group of Secretaries and District Planning Committees could ensure coordinated governance and localised implementation.

Criticisms and Challenges

- **Low Employability:** Over 40% of graduates lack market-ready skills (India Skills Report 2024). Outdated curricula and poor skilling alignment hinder job readiness.
- **Regional and Gender Disparities:** Labour participation in northern States and female workforce participation (around 25%) remain low due to societal and infrastructural barriers.
- **Labour Market Rigidities:** Slow rollout of the four Labour Codes (2019–20) has created uncertainty among employers and workers alike.
- **Informality:** Over 80% of India’s workforce remains informal, lacking social security, data visibility, and access to credit.

- Weak Employment Data: Current surveys (PLFS, EPFO) fail to capture the gig and rural informal sectors, leading to policy blind spots.

Reforms and Way Forward

- Integrated National Employment Policy: Consolidate all employment-linked initiatives; align trade, industrial, education, and labour policies for coherent job creation.
- Sectoral Focus: Promote labour-intensive sectors—textiles, tourism, real estate, agro-processing, and health care—through targeted fiscal incentives and public-private partnerships.
- Support to MSMEs: Strengthen access to finance, technology, and markets; as the sector employs 25 crore workers, its growth is critical for inclusive employment.
- Urban Employment Guarantee: Pilot urban employment programmes in select cities to address job distress and provide a safety net akin to MGNREGA.
- Gig and Platform Economy: Develop a National Gig Policy to formalise and protect the growing gig workforce (projected to reach 9 crore by 2030), including skilling, finance access, and social security coverage.
- Gender and Inclusion Measures: Incentivise women's participation through childcare facilities, formalisation of Anganwadi and ASHA roles, and ELI-linked benefits.
- Data and Monitoring: Establish a real-time Employment Data Task Force to capture informal sector dynamics and reduce data lag.
- Migration and Mobility: Promote a "One India for Employment" framework to facilitate inter-State mobility with social protection portability.
- Institutional Coordination: Regular review by NITI Aayog and CII to monitor implementation of employment-linked reforms and integration with Viksit Bharat 2047 goals.

Conclusion

- India's demographic dividend is a fleeting opportunity. By making employment generation the fulcrum of economic policy—anchored in inclusivity, innovation, and institutional synergy—India can achieve not just growth, but equitable and resilient national development.

IT'S TIME FOR MAOISTS TO LAY DOWN ARMS

Context (Introduction):

- Naxalism, once India's most serious internal security threat, has steadily declined in strength and influence. With improved governance, modernised policing, and developmental integration, the movement now stands at its weakest, signalling a decisive shift in India's internal security landscape.

Nature and Evolution of the Problem

- Ideological Roots: Originating from the 1967 Naxalbari uprising, the movement was inspired by Marxist–Leninist–Maoist ideology and aimed at overthrowing the state through armed struggle.
- Expansion and Consolidation: The 2004 merger of the People's War Group and Maoist Communist Centre formed the CPI (Maoist), spreading influence across 200 districts in the "Red Corridor."
- Socio-economic Grievances: Exploitation, displacement, and alienation of tribal and marginalised communities provided fertile ground for recruitment and ideological appeal.
- Shift to Militarisation: From the 1990s, the movement became more violent, running parallel governance structures (Janatana Sarkars) in parts of Chhattisgarh and Andhra Pradesh.
- Peak and Decline: Post-2010, coordinated security operations, improved governance, and erosion of ideological legitimacy led to a sharp fall in cadre and territorial control.

Issues and Criticisms

- **Leadership Crisis:** The CPI (Maoist) Central Committee has shrunk from 42 to 13 members, with ageing leaders disconnected from local realities.
- **Tribal Disillusionment:** Atrocities by both Maoists and state-backed groups like Salwa Judum alienated tribal communities.
- **Ideological Erosion:** Lack of urban intellectual support and focus on violence over social mobilisation eroded the movement's moral legitimacy.
- **Development Deficits:** Continued poverty, displacement, and weak governance still sustain pockets of sympathy.
- **Fragmented Strategy:** Inconsistent approaches across states and occasional rights violations have hindered full rehabilitation.

Government Efforts

- **Security Strengthening:** Formation of elite units like CoBRA (Commando Battalion for Resolute Action) and District Reserve Guard (DRG) improved counterinsurgency capacity.
- **Targeted Operations:** Missions like Operation Black Forest decimated leadership and disrupted strongholds in Bastar.
- **Surrender and Rehabilitation:** Lucrative schemes provide incentives, education, and livelihood support to surrendered cadres.
- **Developmental Approach:** Programmes like Integrated Action Plan (IAP) and Aspirational Districts Programme focus on infrastructure, education, and healthcare in Maoist-hit regions.
- **Tribal Empowerment:** Implementation of PESA and Forest Rights Act has enhanced local governance and reduced alienation.

Future Needs and Reforms

- **Inclusive Governance:** Strengthen administrative presence and accountability in remote tribal areas.
- **Livelihood Generation:** Promote forest-based industries, rural entrepreneurship, and skill training to prevent re-recruitment.
- **Community Engagement:** Build trust through dialogue, grievance redressal, and participatory development.
- **Ideological Counter:** Use education and media to promote democratic participation and constitutional protest.
- **Inter-state Coordination:** A unified national framework under MHA can ensure consistency in operations and rehabilitation efforts.

Conclusion

- India's fight against Maoism is nearing closure. True victory, however, lies not only in defeating insurgents but in empowering people through justice, inclusion, and sustained development — ensuring peace with dignity in every tribal heartland.

PAPER 4

GANDHI'S QUIET COURAGE: LESSONS FOR ETHICS AND LEADERSHIP**Context (Introduction)**

- For Gandhi, courage was not dramatic defiance but discipline, self-mastery, and loyalty to principles higher than fear or comfort. His life episodes — from plague service to Noakhali peace marches — illustrate quiet moral courage in action.

Courage in Public Service

- Plague Relief in Johannesburg (1904): Gandhi nursed abandoned plague victims despite infection risks. His choice reflects selflessness and the ethical value of putting community welfare above personal safety.
- Noakhali Riots (1946): Gandhi walked barefoot through riot-torn villages without police protection. His reliance on truth and non-violence restored peace, showing the role of moral authority in conflict resolution.
- Facing Assassination Attempts: Even after bomb and knife attacks, Gandhi refused police protection, showing fearlessness and adherence to ahimsa (non-violence).

Moral Integrity in Personal Life

- Kasturba's Health Crisis: Gandhi respected his wife's conviction as a vegetarian, refusing to override her conscience even at the risk of her life. This highlights respect for individual autonomy and moral integrity.
- Ashram and Untouchability: He admitted an "untouchable" family into his Ahmedabad ashram despite financial backlash. His stand for equality demonstrates courage in resisting societal prejudice.
- Family Discipline: Gandhi punished his son Manilal for disobeying ashram rules, proving impartiality in enforcing discipline, even against personal relationships.

Ethical Values Demonstrated

- Integrity: Principles were non-negotiable even under personal loss.
- Empathy: Care for plague victims and riot survivors reflected compassion in action.
- Moral Courage: Choosing right action despite risks to life, family, and reputation.
- Justice and Equality: Opposition to untouchability exemplified fairness and inclusivity.
- Self-Discipline: Practised simplicity, restraint, and personal accountability as foundations of ethical leadership.

Relevance for Ethics in Governance

- Administrators today must show courage of conviction, upholding fairness even against popular or political pressure.
- Respecting diverse beliefs and individual conscience builds trust in public institutions.
- Like Gandhi, civil servants must practise discipline and impartiality, ensuring rules apply equally to all.
- Non-violence and dialogue as tools of conflict resolution remain relevant in communal harmony and public order management.

- Gandhi's courage shows that ethical authority can be more powerful than positional authority in leadership.

Conclusion

- Gandhi's quiet courage lay in standing by truth, justice, and compassion regardless of consequence. For public administrators, his example underlines that ethical leadership requires inner strength, impartiality, and integrity — qualities essential for governance in a diverse democracy.

JOURNALISM ETHICS IN DISASTER REPORTING

Context (Introduction):

- The devastating North Bengal floods (2025), which claimed over 30 lives and caused 110 major landslides, highlight not only the tragedy of natural disasters but also the ethical dilemmas and moral responsibilities faced by journalists covering human suffering in crisis situations.

Core Ethical Principles in Disaster Journalism

- **Empathy Over Exploitation:** Reporting on trauma demands sensitivity. Journalists must avoid intrusive questioning or emotional exploitation of survivors for "scoops." The dignity of victims should remain central, ensuring that storytelling does not become voyeuristic.
- **Humanity and Compassion:** Despite losing everything, many survivors displayed kindness and solidarity. Ethical journalism reciprocates that humanity — acknowledging resilience rather than only amplifying grief.
- **Informed Consent:** Victims are not obligated to share their pain. Ethical conduct requires seeking informed consent before interviews or photographs, especially when individuals are in psychological distress.
- **Sensitivity to Visual Representation:** Ethical journalists must be cautious with graphic imagery — ensuring that visuals evoke empathy and awareness, not sensationalism. Visuals should preserve privacy, cultural values, and emotional limits of affected communities.
- **Objectivity with Compassion:** Balancing truth-telling with emotional restraint is vital. Facts must be accurate, but the tone should remain compassionate, avoiding blame narratives or politicization during humanitarian crises.
- **Cultural and Contextual Respect:** Disaster zones often overlap with tribal, border, or minority communities. Ethical reporting means understanding local sensitivities, avoiding stereotypes, and ensuring representation of marginalized voices.
- **Avoiding Harm and Re-traumatization:** Journalists must recognize psychological limits — identifying visual cues and body language to know when to stop questioning. Ethical restraint protects both **reporter and survivor** from further trauma.

Ethical Challenges in the Field

- **Access and Safety vs. Duty to Inform:** Reporters often risk personal safety in unstable terrain to bring stories from remote, high-risk zones. Balancing public interest with personal responsibility is a recurring ethical dilemma.
- **Media Absence in Marginal Areas:** Many border or high-altitude communities go unreported due to bureaucratic hurdles or fear of reprisal. This reflects a failure in media justice, where certain lives remain invisible in national narratives.

- **Economic and Institutional Pressures:** The demand for “impactful stories” may tempt sensationalism. Ethical journalism must resist commercial pressure and focus on truthful, human-centered reporting.
- **Reporter’s Emotional Trauma:** Covering destruction and death leads to vicarious trauma. Ethical frameworks should extend to journalist well-being, promoting mental health support and peer debriefing mechanisms post coverage.

Reforms and Best Practices

- **Adopt Ethical Codes:** Implement the Press Council of India’s Guidelines on Disaster Coverage, emphasizing accuracy, restraint, and empathy.
- **Capacity Building:** Train journalists in psychological first aid, trauma-informed reporting, and ethical interviewing techniques.
- **Community-Centric Reporting:** Shift focus from event-driven to people-centric journalism — highlighting resilience, recovery, and lessons learned.
- **Collaborative Reporting:** Encourage partnerships with local reporters, NGOs, and disaster authorities to ensure authentic, safe, and holistic coverage.
- **Institutional Support Systems:** Establish media ethics cells within news organizations for ethical review of sensitive reports and visuals.
- **Ethical Tech Use:** Use AI verification tools to combat misinformation, but ensure data privacy and contextual accuracy in disaster-related visuals or stories.

Conclusion

- Ethical disaster journalism is not just about telling stories of pain, but about restoring dignity to those who suffer. By upholding empathy, truth, and responsibility, journalists transform from mere observers to agents of human solidarity and accountability. Amid ruins, it is not just infrastructure that needs rebuilding — it is trust and humanity.

CASE STUDY 1

You are the Regional Commissioner of a tribal-dominated state in Eastern India, overseeing several district collectors. An RTI activist alleges corruption by one District Collector, claiming that the officer waived fees worth several crores for a corporate company after receiving a kickback. The District Collector denies any wrongdoing and provides supporting documents. The issue gains nationwide attention, sparking condemnation. You receive an urgent call from the Chief Minister's office demanding an explanation. What are the ethical dilemmas faced by you in this situation? What possible courses of action are available to you? Which course of action would you choose and why? Support your answer with ethical principles and values.

CASE STUDY 2

You are the District Medical Officer of a major metropolitan city in Northern India. Recently, there has been a rise in dog bite incidents causing public unrest, including demonstrations demanding immediate capture of all stray dogs. Following the tragic mauling of a senior citizen, you issue an order for the capture of stray dogs. This leads to protests by animal welfare organizations opposing the action. What are the ethical dimensions involved in this situation? What options are available to you as a public servant to address this issue? What would be your chosen course of action, and how would you justify it ethically?



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