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CURRENT
AFFAIRS
MARCH 2024

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Monthly Current Affairs – March 2024

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Polity

Grant permanent commission to women: SC to Coast Guard

Context: The Supreme Court has stressed the importance of granting Permanent Commission to women officers in the Indian Coast Guard, with the Chief Justice of India directing the consideration of this matter, indicating the court's readiness to intervene if necessary.

Key Highlights
- The Attorney-General pointed out operational challenges in implementing Permanent Commission for Short Service Commission Officers.
- It was suggested to limit Permanent Commission for women to 10%, emphasizing the importance of treating women equally and not considering them inferior.

About the Indian Coast Guard
- Established on August 1, 1978, the Indian Coast Guard serves as an armed force of the Union.
- Its mission includes safeguarding India's maritime and national interests within its maritime zones, enforcing laws related to customs, immigration, poaching, and pollution at sea.
- Despite its relatively small size, the Indian Coast Guard conducts round-the-year real-life operations at sea.
- While the Indian Navy operates globally, the Indian Coast Guard is confined to territorial waters extending out to 30 nautical miles from the coast, focusing on enforcing maritime laws, ensuring safety, and preserving the marine environment.

Significance of Permanent Commission for Women
- Promotes gender equality by eliminating discrimination in the Armed Forces.
- Provides women officers with increased job security, extended tenure, and equal entitlements, including pension benefits after 20 years of service.
- Enhances economic opportunities, improves social conditions, and fosters dignity for women.
- Encourages more women to join the Armed Forces, thereby expanding the talent pool and addressing officer shortages.
- Challenges Faced by Women Officers in the Indian Armed Forces:
- Gender bias and discrimination from male officers regarding commitment due to marriage or family responsibilities.
- Historically limited career opportunities and challenges in obtaining commanding positions.
- Issues related to work environment, such as lack of gender-sensitive facilities and unequal treatment.
- Societal and cultural barriers hindering acceptance of women in combat roles and leadership positions.
- Recruitment and retention challenges due to the lack of a strong mixed-gender force and restrictions on women in commanding roles.

Way Forward

Acknowledge And Incorporate Gender-specific Rights	Gender-based Role	Merit-based Promotions	Adopt Pragmatic Policies	Codify Terms Of Service	Establish Military Laws

- Acknowledge and incorporate gender-specific rights like maternity and child care leave into armed forces policies.
- Establish role-based, rather than gender-based, physical fitness standards to ensure equal opportunities.
- Implement merit-based promotions without preferential treatment or discrimination.
- Adopt pragmatic policies for the gradual inclusion of women in all ranks and disciplines, shedding patriarchal attitudes and creating necessary infrastructure.
- Codify terms of service for women officers, establish military laws to address gender crimes, and ensure that only volunteer women meeting psychological and physical fitness standards join combat roles.

SC's interim order on the Forest Act

Context: The Supreme Court has instructed the government to uphold the broad interpretation of "forest" as per the 1996 T.N. Godavarman Thirumulpad case until a final decision is made on a petition challenging the amended Forest Conservation Act of 2023.

What is the Forest Conservation Act, 1980?
- Enacted to streamline forest-related laws, regulate deforestation, oversee transportation of forest products, and levy duties on timber and forest produce.
- Requires prior approval of the Central Government for diversion of forest land for non-forest purposes.
- Primarily applies to forest lands recognized by the Indian Forest Act, 1927 or State records since 1980.
- The 1996 Godavarman judgement mandated protection of forests regardless of classification or ownership, introducing the concept of deemed forests.

Concern Regarding Varying Definitions of Forests
- States interpret 'forests' differently, resulting in diverse definitions.
- For example, Chhattisgarh and Madhya Pradesh base their definitions on size and tree density, while Goa relies on forest species coverage.
- Estimates of deemed forest range from 1% to 28% of India's official forest area.
- Recent Amendment to Forest Conservation Act:
- The Forest (Conservation) Amendment Act, 2023 aimed to clarify and address concerns surrounding deemed forests.

Forest (Conservation) Act, 1980

- enacted by Parliament in the Thirty-first Year of the Republic of India
- The **Forest (Conservation) Act, 1980** an Act of the Parliament of India to provide for the conservation of forests and for matters connected therewith or ancillary or incidental thereto. It was further **amended in 1988**. This law extends to the whole of India except the State of Jammu and Kashmir. It was enacted by Parliament of India to control further deforestation of Forest Areas in India. The act came into force on 25 October 1980. It has five section.

▪**History:**
➤Indian forest act 1927(reserved, protected & village forests)
➤Indian forest policy in 1951(focused on revenue)
➤In 1992, 73rd, 74th amendments gives state the ability to provide power to local panchayats

▪ **Forestry:**
- India is one of the ten most forest rich countries
- Contributed 22% in country's area and 1.7% to GDP In 2002. In 2010, the contribution to GDP dropped to 0.9%

WHY FOREST COVER DATA MATTERS
DENSE FOREST LOST & PLANTATION GAINED

9,470 2015-2021	8,968 2003-2015	4,569 2003-2015	5,737 2015-2021

MDF to NF Total: 18,438

545 2003-2015

NF to MDF Total: 10,306

725 2015-2021

200 2003-2015

270 2015-2021

VDF to NF Total: 1,270

NF to VDF Total: 470

LOST

GAINED IN PLANTATION

Graphic: IE Design

VDF: Very dense forest; MDF: Mid-dense forest; NF: Non-forest, In SqKm

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- It defined the scope of forest land and exempted certain categories of land from its provisions.
- However, the Supreme Court's interim directive maintains the traditional approach to forest governance.

Major Provisions of the Forest (Conservation) Amendment Act, 2023

- Defines two categories of land under its purview.
- Exempts certain activities and projects from the Act, including those related to security and public utility.
- Permits activities like conservation, management, and development efforts, with some exemptions.
- Extends the prerequisite for obtaining prior approval from the central government for assignment of forest land.

Current Status of Forest Cover in India

- Total forest and tree cover accounts for 24.62% of the country's geographical area.
- Madhya Pradesh has the largest forest cover, while Mizoram has the highest percentage of forest cover.
- Positive and negative changes in forest cover have been observed in various states.
- India ranks 3rd in the world for net gain in average annual forest area between 2010 and 2020.

Immunity won't protect legislators taking bribes to vote in Parliament from criminal prosecution Supreme Court

Context: The Supreme Court of India, led by a seven-judge Bench, unanimously ruled that parliamentary privilege does not shield legislators from criminal prosecution for bribery related to their actions in Parliament or State Legislative Assemblies.

Historical Overruling

This ruling overturn a 1998 Supreme Court decision (the JMM bribery case judgment), which previously granted lawmakers immunity from corruption prosecution for actions undertaken as part of their legislative functions.

Chief Justice of India's Observations

- The Chief Justice emphasized that privileges and immunities should not be used to evade general law, stating that corruption undermines the essence of Indian parliamentary democracy.
- He clarified that accepting bribery is a complete act regardless of subsequent legislative actions, highlighting the gravity of bribery within the legislative process.

Background of the Appeal

The ruling stemmed from an appeal by

Implications for Parliamentary Immunity

- The Court rejected the argument that reducing parliamentary immunity unfairly exposes opposition members to criminal investigation, asserting that bribed lawmakers undermine democratic principles.

Criteria for Immunity

- The judgment specified that parliamentary immunity could only be invoked to uphold the dignity and authority of the legislative body or to protect legislators' rights to free speech and protest.
- Immunity claims failing to meet these criteria would not be accepted, with the Court recognizing concurrent jurisdiction of criminal courts and legislative bodies over bribery allegations.

JMM leader Sita Soren, accused of accepting a bribe during the 2012 Rajya Sabha elections, revisiting the controversial JMM bribery scandal of 1993.

Reaffirmation of Rule of Law

Chief Justice Chandrachud concluded that granting MPs immunity from bribery prosecution would undermine parliamentary democracy and violate the rule of law, positioning the judiciary against corruption in legislative bodies.
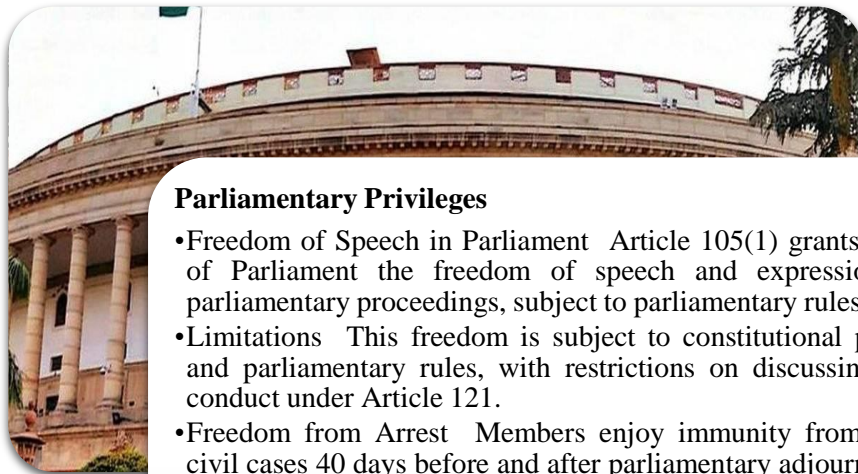
Parliamentary Privileges

- Freedom of Speech in Parliament Article 105(1) grants members of Parliament the freedom of speech and expression within parliamentary proceedings, subject to parliamentary rules.
- Limitations This freedom is subject to constitutional provisions and parliamentary rules, with restrictions on discussing judicial conduct under Article 121.
- Freedom from Arrest Members enjoy immunity from arrest in civil cases 40 days before and after parliamentary adjournment and during sessions, with arrest outside the parliamentary limits requiring house permission.
- Right to Prohibit Publication Article 105(2) protects individuals publishing parliamentary proceedings under a member's authority.
- Right to Exclude Strangers Members have the right to exclude non-members from proceedings to ensure fair discussion.

Chakshu, an online platform to report suspected fraud or spam callers

Context: The Department of Telecommunications (DoT) has rolled out Chakshu, an online platform accessible via sancharsaathi.gov.in/sfc, enabling telecom users to report suspected fraud or spam callers.

Key Highlights

- This initiative aims to empower citizens in reporting fraudulent communications related to various services such as bank accounts, payment wallets, SIM and utility connections, KYC updates, impersonation, and sextortion.
- Concurrently, the DoT launched the Digital Intelligence Platform, a secure data-sharing tool for stakeholders including Telecom Service Providers, law enforcement, financial institutions, and social media platforms to combat fraud.
- Additionally, Communications Minister Ashwini Vaishnaw endorsed the Caller Name Presentation (CNAP) feature, allowing users to see the registered name of incoming callers,

How to Use Chakshu Portal? → **Log in to the 'Sanchar Saathi' portal at sancharsaathi.gov.in.** → **Select the 'Chakshu' option under 'Citizen Centric Services.'**

↓

Provide personal details, verify with OTP, and submit the complaint. ← **Fill out the form detailing suspected fraud communication medium, category, and timing.** ← **Review the disclaimer and usage guidelines, then proceed with reporting.**

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while ensuring thorough review of Telecom Regulatory Authority of India recommendations for implementation, considering privacy concerns.

What's Chakshu Portal?

The Chakshu portal, under the Sanchar Saathi initiative, empowers citizens to report suspected fraud communications targeting telecom service users, encompassing bank accounts, payment wallets, SIM cards, and impersonation as government officials or relatives.

Moreover, the Department of Telecom introduced the DIP to facilitate information sharing with law enforcement agencies, banks, and financial institutions to combat fraud, enhancing detection and prevention efforts in collaboration with Chakshu and the Digital Intelligence Platform.

What you can report on Sanchar Saathi Portal?

- Check and report mobile connections issued in their name.
- Report stolen/lost mobile handsets for blocking and tracing.
- Verify authenticity of mobile handsets when purchasing new or used devices.
- Report incoming international calls displaying Indian telephone numbers as caller ID.
- Check details of licensed wireline Internet Service Providers.

Mask names of those acquitted in criminal cases from digital records, HC tells media

Context: Justice M. Nagaprasanna of the Karnataka High Court advised the media to take proactive steps to remove or anonymize the names of acquitted individuals from their digital archives, aiming to prevent these individuals from resorting to legal remedies for name removal.

'Right of Erasure'

- The Karnataka High Court referenced the recently enacted Personal Data Protection Act, effective from August 11, 2023, highlighting its recognition of the "right of erasure" of personal data.
- This action aligns with global legal trends supporting rights to be forgotten, correction, and erasure of personal data.
- The court cited a 2018 UK judgment (NT1 Vs Google LLC) emphasizing the right of individuals, including those acquitted or discharged by competent courts, to live with dignity, challenging Google's resistance to delist such individuals.
- Additionally, the High Court cited a Supreme Court directive to anonymize names in cases involving sexual offenses and a 2023 Delhi High Court order directing media platforms to remove the name of an accused whose criminal case was quashed following a settlement.
- These references illustrate a growing legal consensus on the significance of protecting individuals' dignity and privacy post-acquittal.

Key Highlights

- This advice accompanied a directive to the High Court's registry to anonymize the personal details of a 27-year-old acquitted in a criminal case, emphasizing the individual's right to dignity.
- The court emphasized that continuing to associate acquitted individuals with crimes online after their exoneration contradicts the essence of life protected under Article 21 of the Indian Constitution.
- The court's stance seeks to enable a form of digital forgetting, aligning with the right to privacy principles established in the K.S. Puttaswamy case by the Supreme Court.

K S Puttaswamy case and Right to Privacy

- In August 2017, the Supreme Court, in Justice K. S. Puttaswamy (Retd) Vs Union of India, unanimously affirmed that Indians have a constitutionally protected fundamental right to privacy, inherent in life and liberty under Article 21.

- The court held that privacy is a natural right inherent in all individuals, subject to restriction only by state action meeting legislative mandate, pursuing legitimate state purposes, and proportionate to achieving those ends.

Supreme Court asks whether Maharashtra Speaker contradicted verdict

Context: The Supreme Court of India has raised questions regarding Maharashtra Speaker Rahul Narwekar's decision to recognize Chief Minister Eknath Shinde's faction as the authentic Shiv Sena based on 'legislative majority.'

Key Highlights
- Chief Justice of India D.Y. Chandrachud, leading a three-judge Bench, expressed concerns that this criterion seemed to contradict a previous ruling by the Constitution Bench.

2018 Constitution of Shiv Sena
- In the ongoing legal dispute over the Shiv Sena party's leadership, Senior advocates Kapil Sibal, A.M. Singhvi, and Devadutt Kamat argued that Maharashtra Speaker Rahul Narwekar erred by not recognizing the 2018 Constitution of Shiv Sena, which designated Mr. Thackeray as president.
- They pointed out that this constitution had been acknowledged by both the High Court and the Supreme Court previously, but the Speaker disregarded it because it wasn't filed with the Election Commission of India, opting instead for a 1999 version of the constitution that had not been previously contested.
- In opposition, Mr. Salve, representing the opposing faction, alleged that the documents presented by the Thackeray camp were fabricated and mentioned an ongoing similar case in the Bombay High Court, arguing against simultaneous petitions in multiple courts over the same matter.
- Despite this, the Supreme Court has decided to continue hearing the case, scheduling further arguments for the week of April 8 and requesting the records of the disqualification proceedings from the Maharashtra Speaker's office.

- The Bench had previously emphasized that the Speaker's decision on party disputes should not solely rely on legislative majority but should also consider the structure of leadership outside the Legislative Assembly, indicating support from the party's political wing, not just its legislative members.
- A majority faction of the legislature party cannot be considered a political party for the purposes of the Tenth Schedule.
- This inquiry arose in the context of resolving disqualification petitions against Mr. Shinde by the rival Uddhav Thackeray faction under the anti-defection law.

India's Undertrial Bail System

Context: The Supreme Court of India's acknowledgment in the case of Satender Kumar Antil vs Central Bureau Of Investigation, 2022, highlights issues with India's bail system and its impact on undertrial incarceration.

Concerns Regarding India's Bail System High Undertrial Population
- Over 75% of India's prison population comprises undertrials, indicating a significant problem.
- An undertrial prisoner is someone accused but not convicted, kept in judicial custody during trial.

What the top court said

The Supreme Court has called upon the government to consider framing a new law to facilitate the grant of bail

On rate of conviction: "The rate of conviction in criminal cases in India is abysmally low. It appears to us that this factor weighs on the mind of the court while deciding the bail applications in a negative sense"

On the need for bails act: "We... call on government to consider an Act meant for granting of bail. Our belief is for the reason that the code as it exists today is a continuation of the pre-independence one"

On preservation of right to liberty: "Liberty, as embedded in the Code, has to be preserved, protected, and enforced by the criminal courts. Any conscious failure by them would constitute an affront to liberty"

- Indian prisons' overcrowding rate is at 118%, reflecting systemic issues.

Bail Adjudication

- Bail decisions heavily rely on court discretion, guided by Supreme Court guidelines.
- Factors like the gravity of the offense and likelihood of absconding are considered.
- Courts often deny bail or impose strict conditions without clear reasons, disproportionately affecting marginalized individuals.

Challenges in Bail Compliance

- Many undertrials struggle to meet bail conditions due to financial and logistical barriers.
- Lack of resources, local sureties, residence/identity proof, and family support hinder compliance.
- Existing bail laws inadequately address these challenges, leading to continued imprisonment in some cases.

Lack of Safeguards

- Safeguards against arbitrary arrest often exclude disadvantaged individuals, contributing to high undertrial numbers.
- Data shows a significant portion of undertrials unjustly excluded from arrest protections.

Flawed Assumptions

- The current bail system assumes financial capacity and influential connections for all accused.
- Contradicts the principle of "bail not jail," requiring empirical evidence-based reforms.

Way Forward

- Revise bail laws for fairness and equity, regardless of socio-economic status.
- Consider amendments to address systemic issues contributing to the high undertrial population.
- Enact special bail legislation like the UK's Bail Act for clear criteria and reduced reliance on monetary bonds.
- Provide legal aid and support for bail compliance and court appearances.
- Ensure inclusive safeguards against arbitrary arrest and establish support programs for undertrials.
- Foster collaboration among government agencies, legal institutions, and civil society for holistic bail reform.
- Implement monitoring and evaluation mechanisms to assess reform effectiveness and identify areas for improvement.

Subsidy Extension for PMUY

Context: The Pradhan Mantri Ujjwala Yojana (PMUY), aimed at providing LPG gas cylinders to rural and deprived households, is facing challenges in ensuring consistent usage among beneficiaries.

Concerns Regarding the PMUY

- **Limited Refill Consumption**
  - Out of 9.58 crore PMUY households, 1.18 crore bought no refills in 2022-23, and 1.51 crore bought one refill.
  - Average refill consumption per PMUY beneficiary was fewer than four LPG cylinders in 2022-23.
  - One in four PMUY beneficiaries did not use any LPG cylinders or took just one refill during the same period.

o In contrast, non-PMUY households consumed an average of 6.67 LPG cylinder refills per household, highlighting consumption pattern disparities.

- **Rising LPG Cylinder Prices**
  o Steep price increases in LPG cylinders, despite subsidies, have made them less affordable for rural and deprived households.
  o High prices may discourage beneficiaries from using LPG for cooking, defeating the scheme's purpose.

Pradhan Mantri Ujjwala Yojana (PMUY)

- **About:** Introduced by the Ministry of Petroleum and Natural Gas (MOPNG) to provide clean cooking fuel like LPG to rural and deprived households.
- **Objectives**
- Empower women
- protect health
- reduce deaths due to unclean fuel
- prevent respiratory illnesses in children.
- **Features**
- Provides financial support
- Free LPG connection, subsidy on refills,
- EMI facility,
- Direct subsidy transfer through the PAHAL scheme.
- **Phases**: Phase I launched in May 2016 with a target of 8 crore LPG connections by March 2020. Ujjwala 2.0 aims to release additional LPG connections.

- **Subsidy Expenditure**
  o Subsidised LPG cylinder rates increased by 82% between January 2018 and March 2023, reaching ₹903 in March 2023 from ₹495.64 in January 2018.
  o Non-subsidised LPG cylinders saw a 49% price increase, reaching ₹1,103 in March 2023.
  o Subsidy amounts are determined by the difference between the Retail Selling Price (RSP) and the government-set subsidised cost.

- **International Factors Impacting LPG Prices**
  o Import charges, bottling charges, freight, delivery charges, GST, and distributor commission contribute to the final LPG price.

ASI Survey of Bhojshala Complex

Context: The Indore Bench of the Madhya Pradesh High Court has directed the Archaeological Survey of India (ASI) to conduct a scientific survey of the Bhojshala Temple-Kamal Maula Mosque complex in Dhar district to determine its original nature.
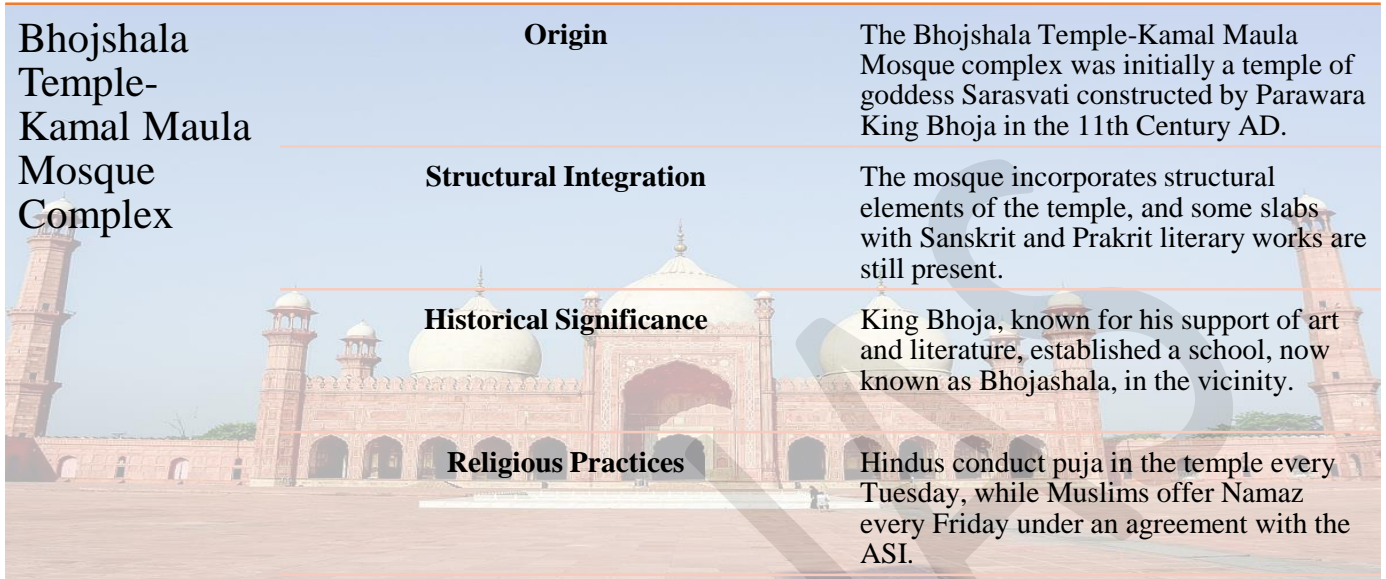
Dispute

- The controversy centers on the original status of the site as a temple, with a petitioner referring to an ASI report suggesting that the original temples were demolished to build the mosque. A survey is requested to ascertain the site's true history.
- A respondent challenges the suit's maintainability, citing a previous dismissal of a similar petition by the High Court in 2003 based on the principle of res judicata.

High Court's Order

- The court acknowledges the mystery surrounding the temple's character and assigns the ASI the task of clarifying the monument's nature under the Monument Act, 1958.

- The ASI is directed to conduct a comprehensive scientific survey, excavation, and investigation using advanced methods such as GPR-GPS and carbon dating within the site and its 50-meter peripheral area.

Bhojshala Temple- Kamal Maula Mosque Complex	Origin	The Bhojshala Temple-Kamal Maula Mosque complex was initially a temple of goddess Sarasvati constructed by Parawara King Bhoja in the 11th Century AD.
	Structural Integration	The mosque incorporates structural elements of the temple, and some slabs with Sanskrit and Prakrit literary works are still present.
	Historical Significance	King Bhoja, known for his support of art and literature, established a school, now known as Bhojashala, in the vicinity.
	Religious Practices	Hindus conduct puja in the temple every Tuesday, while Muslims offer Namaz every Friday under an agreement with the ASI.

Methods Adopted by the ASI for Excavation

| Invasive Methods | Non-Invasive Methods | Ground-Penetrating Radar (GPR) | Carbon Dating |

- **Invasive Methods**: Include excavation using stratigraphic principles to understand the past, albeit at the cost of destroying historical layers.
- **Non-Invasive Methods**: Used when excavation is not feasible and involve active (energy injection and measurement) and passive (measuring existing properties) techniques like seismic, electromagnetic, magnetometry, gravity surveying, and Ground-Penetrating Radar (GPR).
- **Ground-Penetrating Radar (GPR)**: Utilized by ASI to create a 3-D model of buried structures by sending radar impulses into the ground and recording return signals.
- **Carbon Dating**: Determines the age of organic material by measuring C-14 content.

> **Archaeological Survey of India (ASI)**
> - Premier organization under the Ministry of Culture responsible for archaeological research and cultural heritage protection.
> - Administers over 3650 ancient monuments, sites, and remains.
> - Activities include surveys, exploration, excavation, conservation, and maintenance of protected monuments.
> - Founded in 1861 by Alexander Cunningham, renowned as the "Father of Indian Archaeology."

Limitations of Various Methods in Archaeological Surveys

| Ambiguity | Data Constraints | Complex Structures | Geophysical Tools |

- **Ambiguity**: Similar materials can produce the same response, leading to uncertainties in target identification.
- **Data Constraints**: Limited data with measurement errors challenges accurate spatial estimation.
- **Complex Structures**: Heterogeneous materials and complex geometry in archaeological sites complicate data interpretation.
- **Geophysical Tools**: May not accurately reconstruct targets, especially in complex scenarios.

Revamped Pharmaceuticals Technology Upgradation Assistance Scheme and UCPMP 2024

Context: The Department of Pharmaceuticals (DoP), Ministry of Chemicals and Fertilizers, has introduced the Revamped Pharmaceuticals Technology Upgradation Assistance Scheme (RPTUAS) to upgrade the technological capabilities of the pharmaceutical industry. Additionally, the DoP has released the Uniform Code for Pharmaceutical Marketing Practices (UCPMP) 2024 to ensure responsible marketing practices in the industry.

Objective

- The Department of Pharmaceuticals aims to boost the growth of the pharmaceutical industry and ensure compliance with global manufacturing standards through RPTUAS.

Key Features

Broadened Eligibility Criteria

- Expanded eligibility to include any pharmaceutical manufacturing unit with a turnover of less than Rs 500 crores.
- Preference for Micro, Small, and Medium Enterprises (MSMEs) remains, supporting smaller players.

Flexible Financing Options

- Introduces subsidies on a reimbursement basis, offering more flexibility than traditional credit-linked approaches.

Comprehensive Support for Compliance

- Supports technological upgrades aligned with revised Schedule-M and World Health Organization (WHO) Good Manufacturing Practices (GMP) standards.

Dynamic Incentive Structure

- Offers incentives based on turnover, ranging from 20%, 15%, and 10% of investment for turnovers less than Rs. 50.00 crore, Rs. 50.00 to less than Rs. 250.00 crore, and Rs. 250.00 to less than Rs. 500.00 crore, respectively.

State Government Scheme Integration

- Allows integration with state government schemes for additional top-up assistance.

Enhanced Verification Mechanism

- Implements a robust verification mechanism through a Project Management Agency for transparency and accountability.

Pharmaceuticals Technology Upgradation Assistance (PTUAS) Scheme

- PTUAS helps drug companies upgrade their facilities to meet global standards and offers incentives such as interest subvention.

Revised Schedule M and WHO-GMP Standards

- The Union Health Ministry's January 2024 notification revised Schedule M to ensure adherence to GMP and WHO standards, emphasizing quality control measures for pharmaceutical products.

Recent Cases of Quality Issues in Indian Medicines

- Highlighted quality issues in Indian medicines, including concerns raised by international organizations over failed quality tests and drug-resistant bacteria strains allegedly linked to imported products.

Key Provisions of UCPMP 2024

Restrictions on Inducements and Payments	Prohibits inducements, cash payments, gifts, or benefits to healthcare professionals.
Evidence-Based Claims	Requires claims about a drug's usefulness to be supported by evidence.
Transparent CME Programs	Allows engagement with healthcare professionals only through transparent Continuing Medical Education (CME) programs.
Strict Compliance	Mandates strict compliance by all pharmaceutical companies and associations, requiring the constitution of an Ethics Committee for Pharmaceutical Marketing Practices.

Bare act

Context: India's legislative and regulatory framework, encompassing the Water (Prevention & Control of Pollution) Act of 1974 and the Environmental (Protection) Act of 1986, is designed to prevent the discharge of untreated industrial effluents into water bodies.

About

Despite these measures and the Central Pollution Control Board's (CPCB) guidelines, the effectiveness of these regulations remains unclear due to the lack of consolidated data on the generation and treatment of industrial effluents.

A 2021 report to the National Green Tribunal (NGT) reveals fragmented data, with significant gaps in information across various states and Union Territories, hindering the understanding of effluent management's actual state. Large states like Maharashtra, Tamil Nadu, and Uttar Pradesh have not provided comprehensive information.

Regular inspections mandated by State Pollution Control Boards (SPCBs) and Pollution Control Committees (PCCs) raise questions about the quality of inspections and the enforcement of regulations.

Instances such as Malbros International in Punjab illegally discharging untreated effluents highlight the challenges in monitoring and penalizing violations effectively.

Efforts by the NGT to upgrade laboratories and ensure compliance have noted serious deficiencies in regulatory actions against waste management system violations.

Continuous Effluent Quality Monitoring System (CEQMS)

- CEQMS is a real-time air and water pollution monitoring system introduced by CPCB in 2014 to enhance transparency and compliance through real-time pollution monitoring.
- It consists of sampling, conditioning, analytical components, and software designed for direct, real-time, continuous measurements of pollution by analyzing representative samples of air and water.
- CEQMS serves as a crucial tool for better compliance enforcement through credible pollution monitoring and reporting practices, providing accurate and real-time data with minimal manual intervention.

Challenges and Recommendations

- Data from many SPCBs/PCCs is either missing or inaccessible as of 2023, indicating issues with data availability.
- Staff shortages significantly impact the capability of pollution control boards to enforce environmental regulations effectively, with many sanctioned posts remaining vacant.
- The Water Pollution Act and related regulations require updating to enhance transparency and data availability, especially regarding public access to effluent data, which is currently not mandated by the legal framework.

High-Level Committee Report on Simultaneous Elections

Context: A significant step towards electoral reform has been taken by the High-level Committee on Simultaneous Elections, chaired by Shri Ram Nath Kovind, former President of India, proposing simultaneous elections for Lok Sabha, state Assemblies, and local bodies in India. The committee's report, submitted to President Droupadi Murmu, outlines comprehensive recommendations and amendments to the Constitution to facilitate this monumental change.

Recommendations of the High-level Committee on Simultaneous Elections

Transition to Simultaneous Elections	Term Synchronization	Synchronisation of Local Body Elections	Electoral Roll Preparation and Management	Logistical Arrangements and Expenditure Estimation

- **Transition to Simultaneous Elections**
    - The Committee proposes amending Article 82A of the Constitution to empower the President to designate an "Appointed Date" for simultaneous elections to the House of the People and Legislative Assemblies.
    - State assemblies going to poll after this date would synchronize their terms with the Parliament, enabling simultaneous elections.
- **Term Synchronization**
    - The first simultaneous elections could potentially be held in 2029 if implemented after the 2024 Lok Sabha polls, or after the 2029 polls if targeting the 2034 polls.
    - States with elections due between June 2024 and May 2029 would synchronize their election cycles.
- **Synchronisation of Local Body Elections**
    - Parliament is advised to enact legislation to ensure the synchronization of Municipalities and Panchayats elections with General Elections.
- **Electoral Roll Preparation and Management**
    - Amend Article 325 of the Constitution to enable the Election Commission of India (ECI) to prepare a single electoral roll applicable to all tiers of government.
- **Logistical Arrangements and Expenditure Estimation**
    - The Committee calls for detailed requirements and expenditure estimates for simultaneous elections to be submitted by the ECI.
    - Develop comprehensive plans and estimates for seamless logistical arrangements.

Impact on Governance and Development

- Certainty in governance aids effective decision-making and sustained development.
- Simultaneous elections can avert policy paralysis and foster progress.

Debates Regarding Simultaneous Elections

Arguments in Favour	Arguments Against
•Cost Efficiency: Reduces expenditure and optimizes resources. •Enhanced Governance Streamlines electoral process and governance. •Reduced Influence of Money: Lessens role of money in politics. •Mitigation of Divisive Politics: Aims to reduce divisive impacts. •Enhanced Voter Engagement: Alleviates voter fatigue and increases turnout.	•Federalism and Regional Representation: May centralize electoral process. •Cost Implications: Requires significant investment. •Impact on Accountability May reduce electoral accountability checks. •Required Constitutional: Amendments Necessitates amendments to various articles. •Security Implications: Deployment of large security forces diverts from national security.

Model Code of Conduct

Context: Recently, the Model Code of Conduct (MCC) has been enforced following the announcement of voting dates for the Lok Sabha elections 2024 by the Election Commission of India (ECI), marking a significant aspect of electoral governance.

What is MCC and its Evolution?

- The MCC is a consensus document where political parties have agreed to regulate their conduct during elections and abide by the Code.
- It aids the EC in fulfilling its mandate under Article 324 of the Constitution, empowering it to oversee and conduct free and fair elections to Parliament and State Legislatures.
- The MCC remains operational from the date of the election schedule announcement until the result announcement date.
- During this period, the government is restricted from announcing financial grants, promising infrastructure projects, or making ad hoc appointments in government or public undertakings.

ARTICLE 324

Article 324 of the Constitution provides that the power of superintendence, direction and control of elections to the Parliament, State Legislatures, the office of the President of India and the office of the Vice-President of India shall be vested in the Election Commission.

Enforceability of MCC

- Despite lacking statutory backing, the MCC has gained strength due to its strict enforcement by the EC over the past decade.
- Certain provisions of the MCC can be enforced by referring to corresponding provisions in other statutes like the Indian Penal Code (IPC) 1860, Code of Criminal Procedure (CrPC) 1973, and Representation of Peoples's Act (RPA) 1951.

DECODING THE CODE

➤ No party can indulge in any activity which may aggravate existing differences or **create mutual hatred or cause tension between different castes and communities, religious or linguistic**

➤ **Criticism of other political parties, when made, shall be confined to their policies** and programme, past record and work

➤ Criticism of other parties or their workers based on **unverified allegations** or distortion shall be avoided

➤ There shall be no appeal to **caste or communal feelings for securing votes**

➤ Parties and candidates shall refrain from criticism of all aspects of private life, **not connected with the public activities of the leaders or workers of other parties**

Evolution of MCC

- The concept of a code of conduct for elections was first adopted by Kerala in 1960 before the Assembly elections, covering aspects like processions, rallies, and speeches.
- In 1974, the ECI formally released the MCC and established bureaucratic bodies at district levels for its implementation, initially applicable to political parties and candidates
- In 1979, following instances of ruling parties misusing power, the MCC was revised to include guidelines for ruling parties' behavior post-election announcement, comprising seven parts.

Key Provisions of MCC	General Conduct	Parties and candidates are prohibited from engaging in activities that may escalate existing differences or create tensions between various social groups.
		Usage of religion, race, caste, community, or language to promote enmity or hatred is disallowed under Section 123(3) of the Representation of the People Act, 1951.
		Criticism towards other parties should focus on policies, historical performance, and initiatives, avoiding personal attacks.
	Meetings and Processions	Parties must inform local police authorities about meeting venues and times to facilitate adequate security arrangements.
		Coordination is required if multiple candidates plan processions on the same route to prevent clashes.
		Burning effigies of members from opposing parties is prohibited.
	Polling Day	Only authorized individuals are allowed in polling booths, and party workers must have appropriate identification.
		Identity slips provided to voters should not contain symbols, candidate names, or party names.
		Observers appointed by the EC address election-related problems reported by candidates.

Issues Associated with MCC

Enforcement Challenges	Ambiguity	Limited Scope	Timing Issues	Impact on Governance	Need for Reform
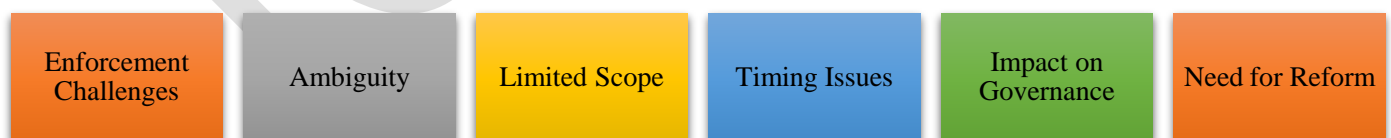
- **Enforcement Challenges**
  - Inconsistent or inadequate enforcement of the MCC can lead to violations going unpunished due to the absence of statutory backing.
  - The ECI opposes legalizing the MCC due to the need for swift elections within approximately 45 days, making legal enforcement cumbersome.

- **Ambiguity**: Certain MCC provisions may be vague or subject to interpretation, causing confusion among political entities.
- **Limited Scope**: Critics argue for expanding the MCC's scope to include electoral funding, social media usage, and hate speech regulation.
- **Timing Issues**: The MCC's applicability during election periods leaves room for misconduct outside of these periods.
- **Impact on Governance**: Some believe the MCC's restrictions on government activities during elections may hinder governance functions.
- **Need for Reform**: Calls exist for reforming the MCC to address shortcomings and enhance its effectiveness in ensuring fair elections.

Way Forward
- Strengthen enforcement mechanisms and clarify MCC provisions to ensure compliance.
- Consider expanding the MCC's coverage to address modern challenges like digital campaigning.
- Evaluate proposals to legalize the MCC for enhanced effectiveness and enforceability.
- Conduct public awareness campaigns on MCC compliance and its role in fair elections.
- Establish a framework for regular MCC evaluation and adaptation to evolving electoral dynamics.
- Conclusion
- The MCC plays a crucial role in democracy but faces challenges like declining commitment and violations. Legalizing it could empower the EC to ensure fair elections and uphold democratic integrity.

Supreme Court Warns Patanjali Ayurved on Misleading Claims

Context: The Supreme Court in India has cautioned Patanjali Ayurved, a well-known Ayurvedic products company, against making misleading claims in their advertisements regarding curing diseases.

Supreme Court slams Baba Ramdev's Patanjali Ayurved for misleading Ads against modern medicine; asks Union to find a viable solution

PATANJALI

About
- Regulations governing drug advertisements, specifically the Drugs and Magic Remedies (Objectionable Advertisements) Act, 1954, oversee and prohibit promotions of certain magic remedies.
- The Act specifically prohibits advertisements that misrepresent a drug's nature or effectiveness and those that promote drugs for specific diseases listed in the Act.
- Moreover, it bars advertisements for magic remedies claiming to treat the same diseases.
- The Act defines "magic remedy" to encompass talismans, mantras, kavachas (amulets), and any other similar items that assert supernatural or magical properties for healing ailments.
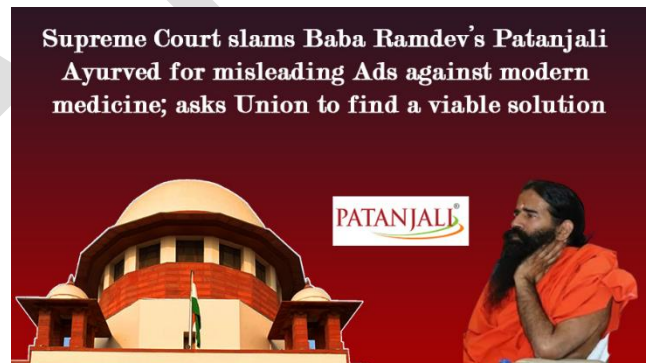
Governance & Social Justice

India to establish international alliance to protect big cats

Context: Cabinet approved the establishment of International Big Cat Alliance.

Key Initiatives
- Advocacy, collaboration, knowledge sharing through an e-portal, capacity building, eco-tourism promotion, expert group collaborations, and financial resource mobilization are among the key initiatives of the Alliance.
- **Conservation Efforts**: The Alliance also supports existing intergovernmental platforms dedicated to specific species to enhance conservation efforts.

Organizational Structure
- **Governance**: The International Big Cat Alliance is governed by a General Assembly consisting of all member nations, an elected Council representing member nations, and a Secretariat.
- **Appointment**: The Secretary General of the Alliance is appointed by the General Assembly based on the Council's recommendation.
- **Funding**: Initially, the Alliance will be supported by India's grant assistance of $100 million, and it is planned to become self-sustaining through membership fees, contributions from bilateral and multilateral institutions, and private sector support after the first five years.

International Big Cat Alliance	Recently approved by the Cabinet, the International Big Cat Alliance was launched by India on April 9, 2023, with the aim of protecting the seven large cats on Earth: tiger, lion, leopard, snow leopard, cheetah, jaguar, and puma.
Participation	The Alliance is open to 97 'range' countries where big cats are native, along with other interested states and international organizations.
Collaborative Forum	It serves as a platform for participating countries to exchange information, share experiences, and provide assistance for habitat restoration projects.

Significance of the Big Cats Alliance
- The alliance endeavors to unite nations, conservationists, and global experts to join forces in the conservation endeavors concerning the seven prominent big cat species.
- Through the International Big Cats Alliance (IBCA), India aspires to exchange knowledge, expertise, and best practices in the preservation of these species with other nations boasting substantial big cat populations, including Indonesia, Brazil, and South Africa.
- The primary objective of the alliance is to foster collaborations among governments, non-governmental organizations (NGOs), and the private sector, working collectively to establish sustainable conservation solutions.
- The initiation of the IBCA signifies a noteworthy stride in the conservation of these majestic animals, as their populations confront unparalleled threats arising from habitat loss, poaching, and human-animal conflicts.

Big cat count

According to the data released by the PM, the number of tigers in India increased by 200 in the past four years. A look at the tiger population

Year	Tiger population
2006	1,411
2010	1,706
2014	2,226
2018	2,967
2022	3,167
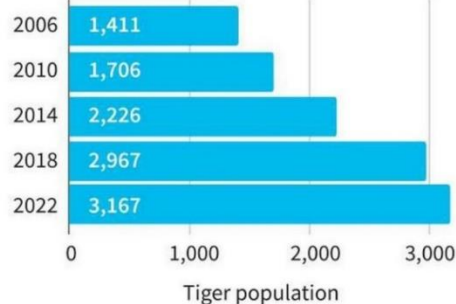
Steady rise: A tiger at Van Vihar National Park in Bhopal on Sunday. PTI

the big cats of the world (INDIA)

Bengal tiger
(*Panthera tigris tigris*)

Head-to-tail length of stuffed males varies from 2.7 to 3,1m. (max 3.20)
A shoulder height of 0.88–1.14 metres.
The weight of males - 150–230 kg, (max 325 kg),
the females are 85–164 kg. (?177 kg.)

Asiatic lion
(*Panthera leo persica*)

Head-to-tail length of stuffed males varies from 2.3–2.99 m. (max 3.10 m)
A shoulder height of 0.99–1.15 metres.
The weight of males 160–190 kg (max 306 kg),
the females are 90–120 kg.

Brakefield, T. (1993) "Lion physical characteristics"
Big Cats. St. Paul. Voyageur Press. p. 67

Indian leopard
(*Panthera pardus fusca*)

Head-to-tail length of stuffed males varies from 1.9–2.4 m.
A shoulder height of 0.6–0.7 metres.
The weight of males 50–75 kg (max 100 kg),
the females are 29–34 kg.

Snow leopard
(*Panthera uncia*)

Head-to-tail length from 1.9–2.3 m.
a shoulder height of 0.5–0.6 metres.
The weight - 20–55 kg (max 75 kg)

Clouded leopard
(*Neofelis nebulosa*)

Head-to-tail length from 1.5–1.7 m.
a shoulder height of 0.5–0.55 metres.
The weight - 11–23 kg

Skull length 330 - 353 mm

Skull length 340 mm

Skull length 190 - 270 mm

Skull length 180 mm

Skull length 150 mm

FANCAT

Centre's housing scheme for tribal groups facing hurdles due to lack of accurate data

Context: The implementation of the housing component of the PM-JANMAN Scheme has faced challenges due to the lack of reliable data on the total population of Particularly Vulnerable Tribal Groups (PVTG).

PM-JANMAN Scheme

- PM JANMAN is a government scheme aimed at mainstreaming tribal communities.
- It comprises Central Sector and Centrally Sponsored Schemes, to be implemented by the Ministry of Tribal Affairs in collaboration with State governments and PVTG communities.
- The scheme focuses on 11 critical interventions overseen by 9 line Ministries, ensuring the implementation of existing schemes in villages inhabited by PVTGs.
- It covers various sectors including safe housing under the PM-AWAS Scheme, access to clean drinking water, improved healthcare, education, nutrition, road and telecommunications connectivity, and opportunities for sustainable livelihoods.

Challenges in PM-JANMAN housing Scheme

- The Union government aimed to sanction 2.5 lakh out of nearly five lakh planned houses by February 15.
- However, only 1.59 lakh houses received sanction after the deadline passed.
- Absence of reliable population data for PVTG
- The Union government relied on the PM Gati Shakti portal to estimate the total population of PVTG across the country.
- State governments were instructed to conduct their surveys, but some States submitted incomplete survey data to the center.
- Discrepancies exist between the data held by the Tribal Affairs Ministry and that of the states.
- States mentioned that the PVTG population is not static as they regularly migrate in search of employment due to being among the most vulnerable groups.

- Additionally, it includes the establishment of Van Dhan Vikas Kendras for trading in forest produce, off-grid solar power systems for 1 lakh households, and solar street lights.
- The scheme aims to enhance the quality of life and well-being of PVTGs by addressing their multiple forms of discrimination and exclusion, and by recognizing and valuing their unique contribution to national and global development.

Cabinet Decisions
29th Nov 2023

my GOV

Pradhan Mantri Janjati Adivasi Nyaya Maha Abhiyan (JANMAN)

Elevating PVTG* socio-economically in 18 States & Andaman-Nicobar

Benefits to more than 28L+ people in 22.5K+ habitations across 220 districts

11 critical interventions for essential amenities - pucca house, road connectivity, piped water supply etc

Undersea cable disruptions expose India's crucial telecom vulnerability

Context: Three undersea cables connecting India to global telecom networks— Asia-Africa-Europe-1, Europe India Gateway, and Tata Global Network—have been damaged in the Red Sea Conflict, possibly due to targeted attacks.

What is Submarine Communications Cable?
- Submarine cables are laid on the seabed between land-based stations to transmit telecommunication signals across stretches of ocean and sea.
- These cables employ fiber-optic technology, with optical fiber elements coated with protective layers suitable for the marine environment.
- Submarine cables offer a reliable, cost-efficient, and high-capacity means of internet connectivity compared to satellites.

India's Submarine Cable Infrastructure

- India has 17 submarine cables landing in 14 cable landing stations, mainly in Mumbai and Chennai, and is actively expanding its undersea connectivity.
- The Telecom Regulatory Authority of India (TRAI) has introduced regulations categorizing Cable Landing Stations (CLS) into Main CLS and CLS Point of Presence to enhance data flow and reduce reliance on foreign providers.
- TRAI's recommendations include recognizing submarine cable operations as critical services, proposing legislative amendments, and suggesting exemptions from custom duty and GST for essential goods.

Current Challenges in Submarine Cable Infrastructure

- Rising demand from data centers, retail usage, and enterprise applications exacerbates capacity constraints in India's submarine cable networks.
- Lack of transparency in ownership of submarine cable systems raises national security concerns.

- Stringent regulations impede investment in submarine cable infrastructure, limiting redundancy and hindering security measures.

Implications of TRAI Proposals

- TRAI's recommendations facilitate the expansion of data centers and enhancing internet connectivity in line with India's digital ambitions.
- DoT's decision on TRAI's proposals will shape the future of India's submarine cable industry, balancing stakeholder interests and national security concerns.

Australia's Cable Protection Zone Regime

- Australia's Cable Protection Zones offer a legislative model for protecting international submarine cables within its Exclusive Economic Zone (EEZ).
- Regulatory measures within designated zones mitigate the risk of cable damage by restricting activities such as seabed trawling, vessel anchoring, and dredging.

Way Forward

- India can collaborate with Australia to enact similar laws within its territorial waters and establish Submarine Cable Protection Zones.
- Regional cooperation across the Indian Ocean Rim Association can foster multilateral cooperation in protecting subsea infrastructure.
- Collaboration among navies and coastguards of Quad nations and like-minded countries facilitates operational coordination in monitoring and protecting high-density cable zones.

Vulnerabilities in Telecom Infrastructure

- Damage to undersea cable systems in the Red Sea due to regional conflict exposes vulnerabilities in India's internet and overseas telecom connectivity.
- India's limited connections to such cables and regulatory restrictions on expanding the submarine cable industry pose significant concerns.
- Cable disruptions underscore a choke point in subsea connections between Europe and Asia, particularly concerning for India due to limited connections and regulatory constraints.

TRAI's sub-sea recommendations can

- **Reduce Reliance on Foreign Providers:** Indian vessels for cable maintenance and repair will reduce delays
- **Strengthen Data Flow** To unlock the full potential of cross-border data flow
- **Can enhance efficiency, security and self-reliance** Position India as a key submarine landing station

Cabinet okays ₹75,000-crore 'free electricity' solar scheme

Context: The Union Cabinet approved a ₹75,021-crore package for the 'PM-Surya Ghar: Muft Bijli Yojana' (PM Free Electricity scheme) to promote rooftop solar installations in India. The scheme aims to provide 300 units of "free electricity" every month to one crore households.

PM Surya Ghar Muft Bijli Yojana

- This scheme introduced by the central government aims to provide 300 units of free electricity per month to its beneficiaries, with an investment of ₹75,000 crores.
- Initially proposed in the interim budget speech by the Finance Minister, the scheme targets lighting up 1 crore households.
- Urban Local Bodies and Panchayats will be encouraged to promote rooftop solar systems within their jurisdictions.

- The Central Government ensures no financial burden on the people by providing significant subsidies directly to their bank accounts and offering highly concessional bank loans.

Objective and Scope PM Free Electricity Scheme

- The primary objective is to offer 300 units of "free electricity" every month to approximately one crore households.
- By encouraging rooftop solar systems, the government seeks to alleviate the burden of electricity expenses on households while promoting clean and sustainable energy alternatives.
- Subsidy and Financing Mechanism:
- The government will provide financial assistance by subsidizing a significant portion of the installation costs.
- Specifically, 60% of the cost for 2 kW systems and 40% for systems ranging from 2 to 3 kW will be covered by the central subsidy.
- Substantial subsidies include ₹30,000 for 1 kW systems, ₹60,000 for 2 kW systems, and ₹78,000 for 3 kW systems or higher.

Anticipated benefits

- Annual savings of fifteen to eighteen thousand rupees for households through free solar electricity and surplus sales to distribution companies.
- Facilitation of electric vehicle charging.
- Creation of entrepreneurship opportunities for vendors in supply and installation.
- Generation of employment opportunities for skilled youth in manufacturing, installation, and maintenance.

PM-Surya Ghar
Muft Bijli Yojana

Cabinet approves scheme for installing rooftop solar and providing free electricity up to 300 units every month for One Crore households

- Total outlay of ₹ 75,021 crore
- Scheme provides a central financial assistance of
  - ₹ 30,000 subsidy for 1 kW system
  - ₹ 60,000 for 2 kW systems
  - ₹ 78,000 for 3 kW systems or higher
- Households will apply for subsidy through national portal and can select suitable vendor for installing rooftop solar
- Households can access collateral-free low-interest loan products of around 7% at present for installation
- Model Solar Village to be developed in each district to act as role model for adoption of rooftop solar in rural areas

PM-Surya Ghar
Muft Bijli Yojana

Benefits

- Households will be able to save electricity bills
- Households can earn additional income through sale of surplus power to DISCOMs
- Will result in addition of 30 GW of solar capacity through rooftop solar in the residential sector
- Reduction of 720 million tonnes of CO_2 equivalent emissions over the 25-year lifetime of rooftop systems
- Scheme will create around 17 lakh direct jobs in manufacturing, logistics, supply chain, sales, installation, O&M and other services

Introduction of PM Free Electricity Scheme

- The Union Cabinet approved the 'PM-Surya Ghar: Muft Bijli Yojana' (PM Free Electricity scheme), aimed at advancing rooftop solar (RTS) installations across the country.
- With an investment of ₹75,021 crores, the scheme is poised to transform the landscape of solar energy adoption in India.

Application Process and Loan Facility

- Interested households can apply through a central portal and access relevant information and vendor options.
- Collateral-free, low-interest loans at around 7% are available to cover the remaining installation expenses.

Implementation Strategy

- Collaboration with public sector units (PSUs) affiliated with the Ministry of Power.
- PSUs will reach out to eligible households and oversee the installation of rooftop solar systems.
- Loans to finance the component not covered by the central subsidy will be repaid through surplus power sales back to the grid.

Poverty levels below 5%, claims NITI Aayog chief

Context: Less than 5% of Indians are now expected to be below the poverty line, and extreme destitution has almost gone away, a top government official asserted on February 25, citing the findings of the Household Consumption Expenditure Survey (HCES) for 2022-23. Retail inflation has also likely been overstated in recent years, he added.

Monthly Per Capita Expenditure (MPCE) Averages

- Average consumption level for the bottom 5% of rural households: ₹1,373; for the next 5%: ₹1,782, serving as a basis for poverty lines and estimates.
- Poverty line estimated around or less than 10%, considering ₹32 a day as poverty line in 2011-12.
- Average spending in the bottom 5 to 10% of rural households is ₹1,782.
- Addition of imputed value of food transfers and subsidies suggests poverty in India is likely below 5%.
- Benefits like healthcare under Ayushman Bharat and free education not factored into consumption expenditure survey.
- NITI Aayog's multi-dimensional poverty index indicates 11% of the population below the poverty line last year.

Findings of Household Consumption Expenditure Survey (HCES) for 2022-23

- Less than 5% expected to be below the poverty line.
- Retail inflation is believed to be overstated.
- Growth is broad-based, with rural Indian's income and spending increasing faster than urban peers.
- Inequality is decreasing, with the urban-rural consumption divide narrowing from 91% in 2004-05 to 71% in 2022-23.
- Rural households' spending on food has fallen below 50% of total expenditure.
- Less than 5% of per capita consumer expenditure is on pulses and cereals.
- Higher expenditure on conveyances and consumer durables.
- Indicates an increase in earnings and reduced spending on food, with a rise in consumption of products like TV sets, fridges, mobile phones, and cars, suggesting a change in lifestyle.

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Email: info@iqraias.com, support@iqraias.com

Global MPI

- The Global MPI, captures overlapping deprivations in health, education, and living standards. It complements income poverty measurements because it measures and compares deprivations directly.
- The global MPI Report is jointly published by the Oxford Poverty and Human Development Initiative (OPHI) and the United Nations Development Programme (UNDP).
- 2030 Agenda:
- Addresses Sustainable Development and the 17 SDGs related to the economic, environmental, and social aspects of societal well-being and are focused on the core principle of "leaving no one behind."

Poverty index
Bihar had the highest share of "multidimensionally poor" people while Kerala the least

Rajasthan **29.5**
Gujarat **18.6**
Bihar **51.9**
Manipur **17.8**
Andhra Pradesh **12.3**
Telangana **13.7**
Tamil Nadu **4.8**
Karnataka **13.2**
Kerala **0.7**

% of people who are multidimensionally poor
- <10
- 10-20
- 20-30
- 30-40
- >40
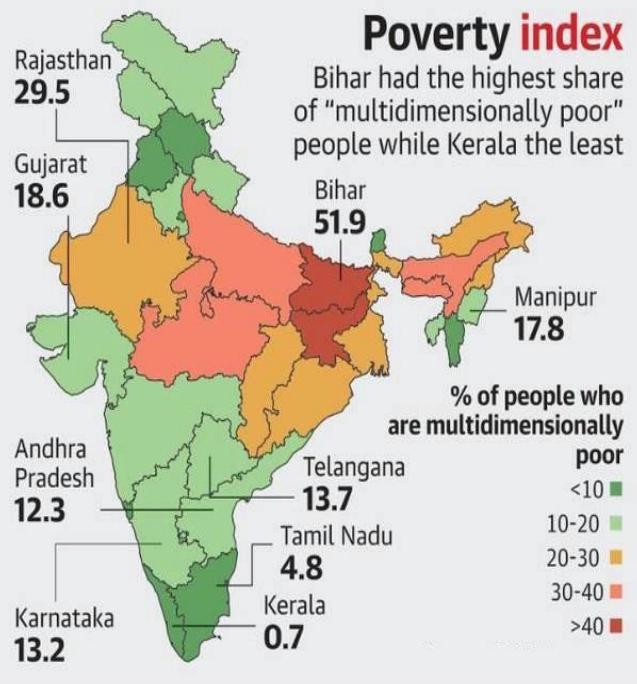
Findings of NITI Aayog's Discussion Paper 'Multidimensional Poverty in India since 2005-06'

- Alkire-Foster (AF) methodology used.
- Captures qualitative aspects across Health, Education, and Standard of Living dimensions.
- India's MPI retains 10 indicators from Global MPI and adds 2 new indicators: Maternal Health and Bank Account.
- Each household assigned a deprivation score based on 12 indicators.
- If deprivation score above 33%, considered multidimensionally poor.

Recent MPI-INDIA findings 2023

- 24.82 crore Indians escape multidimensional poverty in the last 9 years.
- Steep decline in Poverty Headcount Ratio from 29.17% in 2013-14 to 11.28% in 2022-23.
- All 12 MPI indicators show significant improvement.

CHANGING FORTUNES

Around 24.9% of Indians were assessed as multidimensionally poor in 2015-16, but that share came down to 15% in 2019-21.

Share of multidimensionally poor persons in population (in %)
- 2015-16
- 2019-21

Total: 24.9 / 15.0
Rural: 32.6 / 19.3
Urban: 8.7 / 5.3
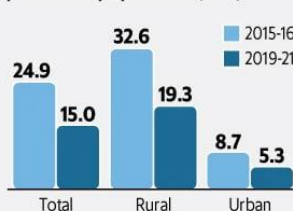
Biggest areas of 'deprivation' (figures denote % share of population 'deprived' in each indicator)
2019-21   2015-16
- Cooking fuel*
- Housing*
- Nutrition**
- Sanitation*
- Maternal health**
- Years of schooling#

Main indicator head: *Living standards **Health #Education.
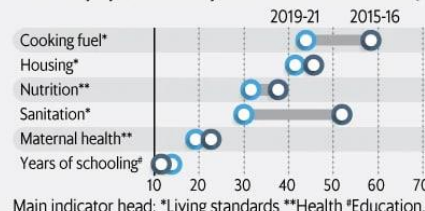
Multidimensional poverty index (scale: 0-1) (the lower, the better)
0.04 0.08 0.12

Rajasthan **0.065**
Uttar Pradesh **0.103**
Bihar **0.16**
Karnataka **0.031**
Kerala **0.002**
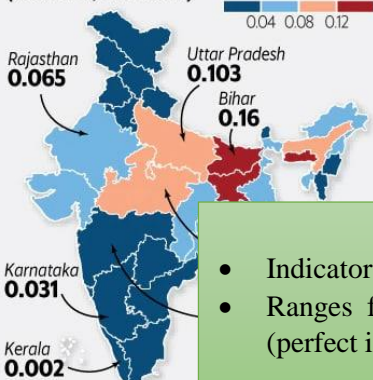
Biggest drops in share of multidimensionally poor population (percentage points)
- -18.1 Bihar
- -15.9 Madhya Pradesh
- -14.8 Uttar Pradesh
- -13.7 Odisha

Gini coefficient

- Indicator of income or wealth inequality.
- Ranges from 0 (perfect equality) to 1 (perfect inequality).

A multidimensionally poor person is one who is at least 33.3% deprived overall (this is based on 12 indicators, all of which has a different weightage). Headcount ratio is the share of multidimensionally poor persons in population. Intensity refers to the average extent of deprivation among such persons (hence always >33.3%). The MPI value is headcount multiplied by intensity.

Source: Niti Aayog

- Uttar Pradesh, Bihar, and Madhya Pradesh record largest decline in MPI poor.
- Poorer states record faster decline in poverty, indicating reduction in disparities.
- India likely to achieve SDG Target 1.2 ahead of 2030.

International Relations

Nepal-India official dialogue silent on landmark Pancheshwar project

Context: Despite the recent agreement between India and Nepal, discussions over the Pancheshwar Multipurpose Project (PMP) remain deadlocked.

Features

- The project entails building a 315-meter tall dam across the Mahakali River, known as Sharda in India.
- It aims to generate about 6,480 MW of energy, split equally between both sides.
- Additionally, it will provide water for irrigating 130,000 hectares of land in Nepal and 240,000 hectares in Indian Territory.

> **What is Pancheshwar Multipurpose Project (PMP)?**
> - The Pancheshwar Multipurpose Project (PMP) is a bi-national hydropower project between India and Nepal, planned for development along the Mahakali River, which forms the border between the two countries.
> - Its main goals are to produce energy and improve irrigation in both countries.

Concerns: Environmentalists have expressed concerns about its potential impact on regional ecology and local communities.

What is the Mahakali Treaty?

- The Mahakali Treaty is an agreement between the Governments of India and Nepal regarding the integrated development of the Mahakali River, recognized as a boundary river between the two countries.
- Signed in 1996.

About the Mahakali River (Sharda River)

Originating from Kalapani in the Himalayas, situated in the Pithoragarh district of Uttarakhand.

It flows along Nepal's western border with India and joins the Ghaghara (Karnali/Manchu) River, a tributary of the Ganga.

Its left tributaries include Chameliya and Ramgun in Nepal, while right tributaries include Kuthi, Dhauli, Gori, Sarju, and Ladhiya rivers in Uttarakhand, India

NHPC's Tanakpur Barrage
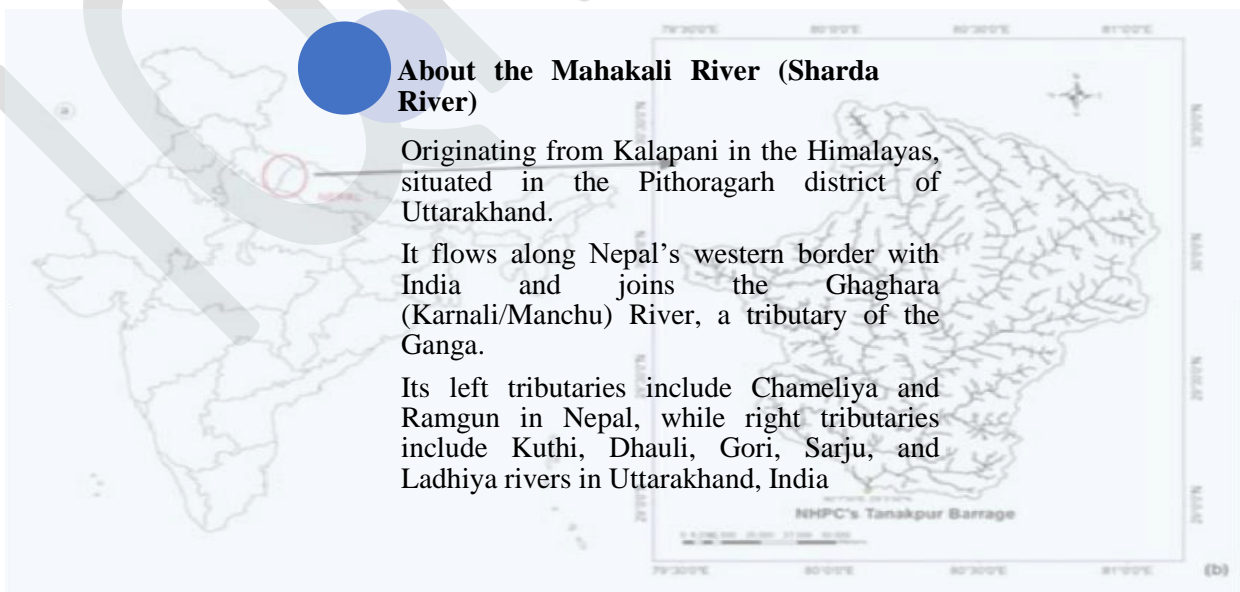
Can the IMEC address the Red Sea crisis?

Context: The Red Sea crisis has resulted in economic repercussions such as increased container ship costs, highlighting the importance of exploring alternative trade routes globally.

About Red Sea

- The Red Sea is a semi-enclosed inlet of the Indian Ocean located between Africa and Asia.
- It is connected to the Arabian Sea and the Indian Ocean via the Gulf of Aden and the Bab el Mandeb strait.
- Yemen and Saudi Arabia border the Red Sea to the east, while Egypt, Sudan, Eritrea, and Djibouti border it to the west.

About Crisis

- Houthi rebels in Yemen have intensified attacks on commercial ships in the lower Red Sea since mid-November 2023.
- The Bab el-Mandab Strait, between Yemen and Djibouti, is crucial for global trade.
- Nearly 12% of international merchandise trade passes through the Red Sea.

How has it Affected India?

India's trade with Europe and North Africa relies heavily on the Red Sea route, accounting for 24% of exports and 14% of imports.

Rising concerns have led to a decline in Indian shipments, with around 25% of cargo ships being held back

Impacts

- Major container and oil carriers have diverted shipments through the Cape of Good Hope, leading to increased ocean freight costs, insurance expenses, and delays.
- This has also raised transportation costs and consumer prices.
- China is promoting its China-Europe freight trains as an alternative route.

Significance of the IMEC in Present Scenario

- The India-Middle East-Europe Economic Corridor (IMEC) aims to integrate Asia, Europe, and the Middle East.
- It will reduce transit time and costs, providing a reliable cross-border transit network.
- IMEC can counter Chinese influence and promote economic activity in the Middle East.
- However, lack of attention, investments, and the Israel-Palestine conflict pose challenges.

India-Middle East-Europe Corridor (IMEC)

26
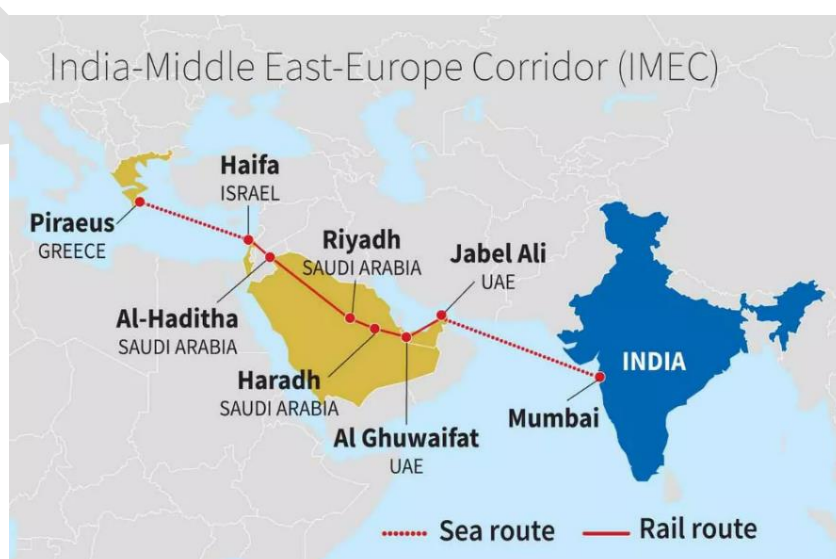
Concerns
- Insufficient infrastructure and the vulnerability of the Strait of Hormuz are key concerns.
- The entire trade route of IMEC passes through the Strait of Hormuz, controlled by Iran, raising the risk of disruptions.

Conclusion
- The Red Sea crisis requires a united global response.
- An empirical study on the economic benefits of IMEC is necessary to attract stakeholders.
- A robust financial framework and multi-national operational framework are essential.
- A forum for the corridor should be established to address these issues effectively.

Indigenous Greenland women sue Denmark over forced contraception

Context: In Greenland, 143 Indigenous Inuit women are suing Denmark, seeking compensation totaling nearly 43 million kroner ($6.3 million) for being forcibly implanted with intrauterine contraceptive devices (IUDs) during the 1960s and 70s.

Key Highlights
- These women, some of whom were adolescents at the time, allege that Danish health authorities infringed upon their human rights by inserting IUDs without their knowledge or consent, purportedly to control population growth in Greenland amidst improving living standards and healthcare.
- Despite Greenland's transition from a Danish colony to a province in 1953, the issue has prompted a joint investigation by the Danish and Greenlandic governments, with findings anticipated next year.

Uses, Advantages, and Disadvantages
- When correctly inserted, IUDs are over 99% effective in preventing pregnancy.
- It starts working immediately upon insertion and remains effective for 5 to 10 years, depending on the type.
- It can be inserted at any point in the menstrual cycle, provided the individual is not pregnant, and can be removed by a trained professional at any time, allowing immediate fertility restoration.

> **About Intrauterine Contraceptive Devices (ICD)**
> - An IUD is a small T-shaped plastic and copper device inserted into the uterus by a healthcare professional.
> - It releases copper to prevent pregnancy and offers contraceptive protection for 5 to 10 years, commonly referred to as a "coil" or "copper coil."

- Despite its efficacy, there's a slight risk of infection following insertion, and a possibility of expulsion or displacement within the body.
- Previous pelvic infections may make it unsuitable, and it does not safeguard against sexually transmitted infections (STIs).

About Greenland
- Greenland is an autonomous territory within the Kingdom of Denmark, located in North America.
- It's the larger of two autonomous territories, the other being the Faroe Islands, with citizens of both territories holding full Danish citizenship.
- Greenlandic citizens are also European Union citizens as Greenland is considered one of the Overseas Countries and Territories of the European Union.
- Nuuk serves as the capital and largest city, situated between the Arctic and Atlantic oceans, east of the Canadian Arctic Archipelago.
- As the world's largest island, Greenland is home to the northernmost point of land, with Kaffeklubben Island holding that distinction, while Cape Morris Jesup was once believed to be until the 1960s.

India inks free trade agreement with 4 European countries

Context: After 15 years of negotiations, India recently entered into a Trade and Economic Partnership Agreement (TEPA) with the European Free Trade Association (EFTA), which comprises four non-EU countries: Iceland, Liechtenstein, Norway, and Switzerland. Here are the key points about this development:

What is the European Free Trade Association (EFTA)?

About
- An intergovernmental organization promoting free trade and economic integration among its four Member States.

History
- Established through a Convention signed in Stockholm in January 1960.
- Created as an alternative trade bloc for European states not joining the then European Economic Community (EEC).

Main Tasks
- Maintaining the EFTA Convention regulating economic relations among member states.
- Managing the European Economic Area (EEA) Agreement, uniting EU and three EFTA States.
- Developing EFTA's network of free trade agreements globally

India and EFTA Bilateral trade statistics for 2022-23
- India's exports to EFTA countries: USD 1.92 billion.
- Imports from EFTA countries to India: USD 16.74 billion.
- Bilateral trade value: USD 18.65 billion.

Significant trade partners
- Switzerland
- Norway

Key trade item
- Gold, leading to India's trade deficit with Switzerland.

Trade and Economic Partnership Agreement (TEPA)
- **Objectives**
  o Eliminate/reduce tariffs and non-tariff barriers on various products.
  o Ensure fair market access for services and investors, enhance IP rights protection, and improve trade procedures.
- **Coverage**
  o 14 chapters covering goods, rules of origin, IPRs, services, investment, government procurement, and more.

Key Highlights
- **EFTA's commitment**: USD 100 billion FDI in India over 15 years, aiming for 1 million direct jobs.
- **Tariff concessions**: Both sides offering significant tariff reductions on various products.

- **Market access**: EFTA's offer covers 100% of non-agri products with tariff concessions on Processed Agricultural Products.

Why Does the India-EFTA Deal Hold Significance?

Economic Growth and Job Creation	Trade Expansion and Market Access	Strategic and Technological Benefits	Setting a Precedent

- **Economic Growth and Job Creation**
  - Investment boost: Anticipated FDI crucial for infrastructure, technology, and job creation.
  - Encouraging domestic manufacturing under "Make in India" and Atmanirbhar Bharat initiatives.
- **Trade Expansion and Market Access**
  - Stimulating services exports and offering access to high-quality Swiss products.
- **Strategic and Technological Benefits**
  - Strengthening economic ties, fostering knowledge sharing, and promoting innovation.
- **Setting a Precedent**
  - Serving as a template for future trade agreements, enhancing India's image as a free trade champion.

Key Issues in the India-EFTA Agreement

- Exclusions in sensitive sectors like agriculture and dairy.
- Concerns about the USD 100-million investment commitment.
- Proposal for data exclusivity in IP rights, potential income level gaps, and non-tariff barriers.

INDIA'S TRADE AGREEMENTS

Bilateral Agreements	
1. India-Sri Lanka FTA (2000)	6. India-Thailand EHS (2004)
2. India-Japan CEPA (2011)	7. India-Chile PTA (2007)
3. India-Korea CEPA (2010)	8. India-Afghanistan (2013)
4. India-Malaysia CECA (2011)	9. India-Singapore CECA (2005)
5. India-Nepal Trade Treaty (1950)	10. India-Bhutan Agreement on Trade & Transit (2016)

Regional Agreements

1. India-ASEAN (2010)	Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Thailand, Singapore, Vietnam
2. Asia Pacific Trade Agreement (APTA) (1975)	Thailand, Bangladesh, China, Republic of Korea, Sri Lanka
3. Agreement of South Asian Free Trade Area (SAFTA) (2006)	Bangladesh, Bhutan, Maldives, Nepal, Pakistan, Sir Lanka, Afghanistan
4. India-MERCOSUR (2009)	Argentina, Brazil, Paraguay, Uruguay
5. Global System of Trade Preference (1989)	47 Developing Countries

Unilateral DFTP Scheme (34 LDCs) (2008)

Afghanistan, Bangladesh, Benin, Burkina Faso, Burundi, Cambodia, Central African Republic, Chad, Comoros, Eritrea, Ethiopia, Gambia, Guinea, Guinea Bissau, Haiti, Lao PDR, Lesotho, Liberia, Madagascar, Malawi, Mali, Mozambique, Myanmar, Niger, Rwanda, Senegal, Somalia, Sudan, Timor Leste, Togo, Uganda, Tanzania, Yemen, Zambia

(As on Sept 2020)

INDIA'S TRADE WITH EFTA NATIONS IN FY23

	Exports	Imports
Switzerland	1,346.54	15,793.95
Iceland	10.41	4.95
Liechtenstein	0.30	1.97
Norway	569.19	938.06

*Amount in US$ Million
Source: Commerce Ministry

Way Forward for the India-EFTA Deal's Success
- Addressing asymmetries through common ground solutions like investment protection and phased tariff reductions.
- Streamlining regulations, reducing NTBs, and establishing dispute resolution mechanisms.
- Capacity building, infrastructure upgrades, stakeholder dialogues, and knowledge sharing for collaborative growth.

The Myanmar conflict is a regional problem

Context: ASEAN and other stakeholders should extend their support to Myanmar's independent media and its people as they strive for a truly democratic nation.

Background of Myanmar Conflict
- General election held in Myanmar in November 2020.
- Coup took place in February 2021 to overturn the election results.
- On March 9, 2021, army trucks arrived at Mizzima's headquarters in Yangon, leading to looting and ransacking by soldiers as part of a broader crackdown on independent media.
- Consequently, many journalists had to flee their homes.

Regional Impact of Myanmar Conflict

Exodus of Journalists	Migration Challenges	Security Concerns for Neighboring Nations	Rise in Criminal Activities	Disruption of Trade and Economic Corridors

- **Exodus of Journalists**
  - Journalists seeking safety have relocated to neighboring regions or countries beyond junta control.
- **Migration Challenges**
  - Over two million people within Myanmar and approximately 1.5 million refugees have been displaced since the coup.
  - Nearly 25 million individuals, about half of Myanmar's population, are living in poverty, exacerbating destabilizing conditions.
  - Nearly one-third of Myanmar's population lacks adequate access to food.
- **Security Concerns for Neighboring Nations**
  - The conflict has spilled over into neighboring countries such as Bangladesh, China, India, and Thailand, placing significant humanitarian burdens on these nations.
  - For instance, the influx of Rohingya refugees into Bangladesh is an example of this regional impact.
- **Rise in Criminal Activities**
  - The breakdown of law and order in Myanmar has led to an increase in criminal activities, affecting not only Myanmar but also creating challenges for neighboring countries.
  - For example, opium cultivation has increased in the region, posing a potential drug menace in India, particularly in the North East.
- **Disruption of Trade and Economic Corridors**
  - Hostilities in Myanmar have disrupted trade and economic projects like the China-Myanmar Economic Corridor and the Kaladan Multi-Modal Project.

ASEAN's Role in Promoting Regional Stability

- ASEAN reached a five-point consensus with the junta leader, focusing on ending violence, facilitating dialogue, appointing a special envoy, providing humanitarian aid, and arranging the special envoy's visit to Myanmar for discussions with all parties.

- However, the conflict has escalated, with active fighting reported in a majority of townships by the end of 2023, raising concerns about Myanmar's potential alignment with China.

- Currently, around 40% of townships are outside the junta's control, with numerous resistance groups challenging its authority.

ASEAN as a Pillar of Stability in Southeast Asia

1 - ASEAN promotes political stability in the region by maintaining a dialogue with different countries and organizations

2 - ASEAN's approach to conflict resolution is based on the principle of non-interference

3 - ASEAN is also a driving force in shaping regional norms and values

4 - ASEAN is also committed to promoting human rights and democracy in the region

- The State Administration Council (SAC) in Myanmar has disregarded calls for establishing representative democracy, resorting instead to intensified persecution, arbitrary arrests, and attacks on civilians and journalists.
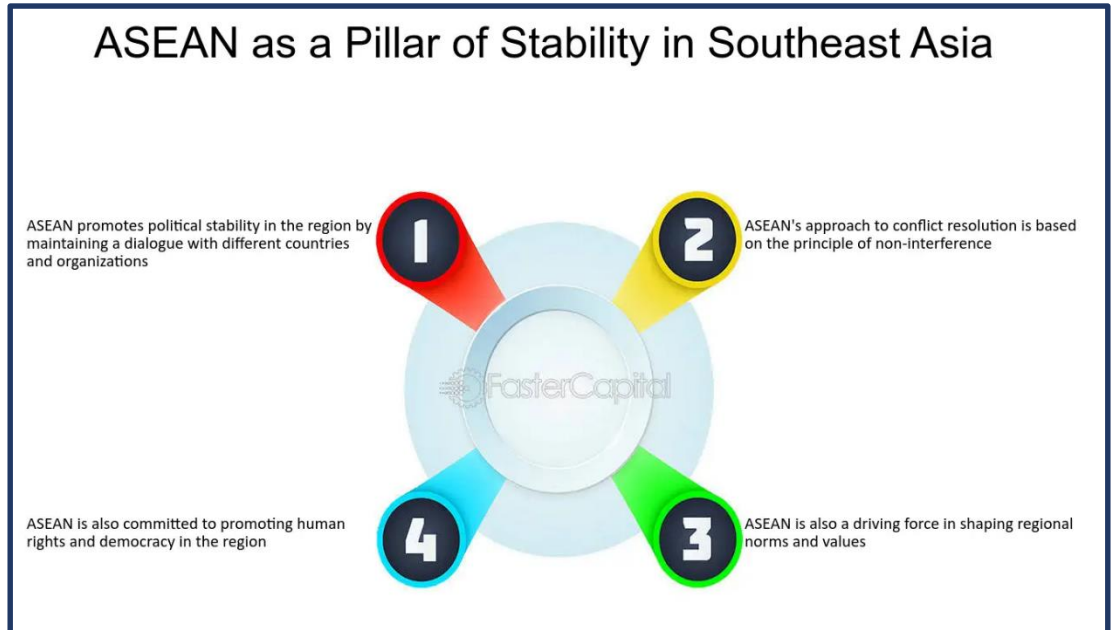
Role of Independent Media

- Despite challenges, independent media persists in reporting the truth from neighboring countries, upholding press freedom.

- An Independent Press Council is being established to counter the ineffective Myanmar Press Council, which has been promoting state propaganda.

Way Forward

- All stakeholders, including ASEAN, must support Burmese journalists and the people of Myanmar in their pursuit of peace, stability, prosperity, and democracy.

- Policymakers should reject junta-rigged elections, emphasizing the importance of a democratic post-junta Myanmar for regional strategic, security, and economic interests.

India's Push for Security Council Reform The G4 Model

Context: Participating in the Intergovernmental Negotiations on Security Council Reform, India presented a detailed model on behalf of the G4 nations for United Nations Security Council Reform.

G4 Proposed Model Features

Addressing Under-representation	Membership Expansion	Regional Representation	Flexibility on Veto	Democratic and Inclusive Election

- **Addressing Under-representation:** The model emphasizes the "glaring under-representation and un-representation" in the Council's current composition, hindering its legitimacy and effectiveness.
- **Membership Expansion:** Advocates for increasing the Security Council's membership from 15 to 25-26 members, including 6 permanent and 4 or 5 non-permanent members.
- **Regional Representation:** Proposes two new permanent members from African and Asia Pacific states each, one from Latin American and Caribbean states, and one from Western European and Other states.
- **Flexibility on Veto:** Offers flexibility on the veto issue, with new permanent members refraining from veto use until a decision during a review process, showing a willingness to engage in constructive negotiations.
- **Democratic and Inclusive Election:** Emphasizes democratic and inclusive elections by the UN General Assembly to decide which member states will occupy new permanent seats.

UN Security Council Reform Necessity

Representation and Legitimacy	Outdated Composition	Recognition of Contributions	Risk of Alternative Forums	Misuse of Veto Power

- **Representation and Legitimacy:** To ensure authority and legitimacy reflecting the current global landscape.
- **Outdated Composition:** The current setup does not accurately represent the world stage, with regions like Africa, Asia, Latin America, and the Caribbean lacking adequate representation.
- **Recognition of Contributions:** Nations like India, Germany, and Japan, making substantial contributions to the UN, deserve consideration for new permanent seats.
- **Risk of Alternative Forums:** Without reform, decision-making could shift to alternative forums, diluting the Council's effectiveness.
- **Misuse of Veto Power:** Criticism of veto power misuse calls for a more democratic and inclusive decision-making framework.

UN Security Council Reform Procedure

First Stage	• Requires endorsement by a two-thirds majority in the General Assembly.
Second Stage	• Involves Charter amendment ratification by two-thirds of member states, including all five permanent Security Council members.
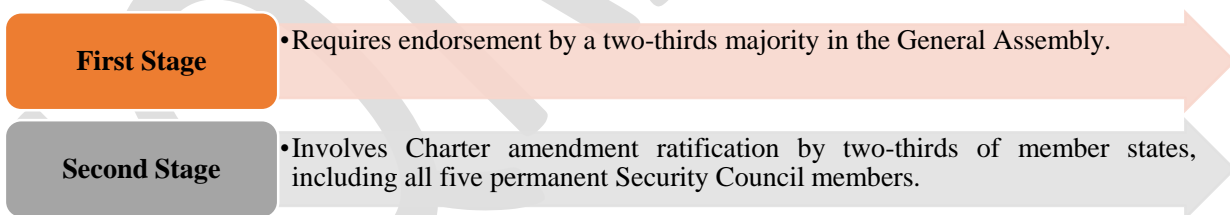
Way Forward

- **Engagement and Consensus Building:** Foster inclusive dialogues and consultations among member states, especially from underrepresented regions.
- **Amending the UN Charter:** Encourage cooperation among stakeholders for ratification reflecting contemporary realities.
- **Addressing Veto Power:** Explore reforms balancing decisive action with inclusivity and fairness.
- **Strengthening Council Effectiveness:** Enhance capacity to respond effectively to global challenges and promote cooperation with other UN bodies and stakeholders.

Military Exercises, Defence & Security

What will Gaganyaan change for India?

Context: Prime Minister Narendra Modi unveiled the final roster of candidates set to embark on India's inaugural human spaceflight mission, Gaganyaan, led by the Indian Space Research Organisation (ISRO).

About Gaganyaan

- Gaganyaan is an ISRO initiative aimed at launching Indian astronauts into low-Earth orbit utilizing indigenous launch vehicles.
- It serves as a testbed for technologies crucial to human spaceflight, showcasing India's prowess in developing and deploying such systems.
- ISRO's future endeavors include establishing a domestic space station by 2035 and landing an Indian on the moon by 2040.
- Plans entail integrating these ambitious projects with forthcoming lunar missions, including collaborative efforts with Japan for lunar rover deployment and sample return missions.

Expansion of Spaceflight Responsibilities

- The Indian government has extended spaceflight and service responsibilities beyond ISRO to entities like New Space India Ltd. (NSIL) for commercialization and the Indian National Space Promotion and Authorization Centre (IN-SPACe) for regulating space activities.
- Additionally, ISRO has established the Human Space Flight Centre (HSFC) to oversee the Gaganyaan mission.

Mission Preparation

- The Gaganyaan mission was initiated following the Union Cabinet's approval in 2018, utilizing existing technologies.
- ISRO subsequently human-rated these technologies to meet spaceflight standards.
- Preparatory experiments, including the Space Capsule Recovery Experiment (SRE) and the Crew-module Atmospheric Re-entry Experiment (CARE), were conducted to test crucial systems.
- Despite initial plans, certain components, such as the crew module, needed to be procured internationally due to manufacturing constraints.

Goals of Gaganyaan

- Gaganyaan aims to establish India's self-reliance in human spaceflight, reducing dependence on foreign launch services.

Components of Gaganyaan

- Gaganyaan comprises the Launch Vehicle Mark-3 (LVM-3), the orbital module, and the crew.
- The LVM-3, equipped with solid and liquid-fuel boosters and an indigenous cryogenic engine, serves as the rocket.
- The orbital module, weighing 8.2 tonnes, houses the crew and service modules, equipped with essential systems like parachutes and life-support.
- The crew, consisting of Indian Air Force personnel, underwent rigorous training in India and Russia.
- The mission also features 'Vyommitra,' a gynoid designed to monitor conditions within the capsule.

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- This aligns with broader space sector reforms in India, fostering investment in domestic space startups and positioning India within the global space arena.
- The Indian Space Policy outlines objectives for the country's space program, emphasizing participation in scientific, commercial, and exploratory missions beyond Earth.
- Gaganyaan's development signifies India's emergence as a key player in space exploration, highlighting the importance of international collaboration in space exploration endeavors.

The status of India's nuclear programme

Context: Prime Minister Narendra Modi inaugurated the core-loading process of the indigenous Prototype Fast Breeder Reactor (PFBR) at the Madras Atomic Power Station in Kalpakkam, Tamil Nadu, on March 4.

Why was the PFBR delayed?

> **What is PFBR?**
> - The Prototype Fast Breeder Reactor (PFBR) is a significant advancement in nuclear technology designed to generate more nuclear fuel than it consumes, marking a crucial phase in India's three-stage nuclear power program.
> - Initially, India employed Pressurised Heavy Water Reactors (PHWRs) and natural uranium-238 (U-238) in the first stage, producing plutonium-239 (Pu-239) and energy through nuclear fission processes involving U-235 and heavy water.
> - In the second stage, the PFBR will utilize Pu-239 along with U-238 to generate energy, U-233, and additional Pu-239, facilitated by Bharatiya Nabhikiya Vidyut Nigam Ltd. (BHAVINI).
> - The final stage involves combining Pu-239 with thorium-232 (Th-232) to produce energy and U-233, leveraging India's substantial thorium reserves for nuclear energy self-sufficiency.

- The development of the PFBR in India faced setbacks including international sanctions post the 'Smiling Buddha' nuclear test, necessitating a shift from enriched uranium to a mixed carbide fuel.
- Technical issues with the reactor coolant and the transition to mixed oxide fuel contributed to delays, pushing the commercial operation deadline to October 2022.

How does PFBR work?

- The PFBR operates on the principle of a breeder reactor mechanism, generating more fissile material (Pu-239) than it consumes.
- Unlike PHWRs, which produce Pu-239 as a byproduct, the PFBR combines produced Pu-239 with additional U-238 in a mixed oxide form, facilitated by fast neutrons.
- Liquid sodium serves as a coolant in two separate circuits, transferring heat from the reactor core to generate electricity.

> **Significance and challenges of Phase II**
> - Stage II of India's nuclear power program aims to enhance output with PFBR expansion, facing challenges including cost competitiveness against renewables, public perception post-Fukushima Daiichi, and technical complexities.
> - Recommendations include establishing an independent regulatory body, proposed through the Nuclear Safety Regulatory Authority (NSRA) Bill

Challenges in operationalizing the PFBR

Operational challenges include complex system behavior compared to theoretical expectations, such as extended preheating times for the reactor vessel.

What role can SMRs play?
- Small Modular Reactors (SMRs) offer a promising alternative to large-scale reactors, requiring less land and incorporating enhanced safety features.
- SMRs could utilize low-enriched uranium, potentially imported under the 123 Agreement, requiring legislative amendments to enable private sector involvement under regulatory oversight.

INS Jatayu

Context: The Indian Navy will commission the Naval Detachment Minicoy as INS Jatayu on March 6th, upgrading it to a strategic naval base in the Lakshadweep Islands.

Key Highlights
- This development is a significant move to strengthen India's security infrastructure in the region.
- The Minicoy detachment, operational since the 1980s, becomes India's second naval base in Lakshadweep after INS Dweeprakshak in Kavaratti, commissioned in 2012.
- The event follows the joint inauguration of an airstrip and a jetty on Agaléga island in Mauritius, highlighting India's strategic interests in the Indian Ocean.

> **About INS Jatayu**
> - INS Jatayu is the second Naval base in Lakshadweep after INS Dweeprakshak in Kavaratti, which was commissioned in 2012.
> - The existing Naval Detachment Minicoy, which is under the operational command of the Naval Officer-in-Charge (Lakshadweep), will be commissioned as INS Jatayu.

INS Jatayu Naval Base
- The Naval Detachment Minicoy, currently under the Naval Officer-in-Charge (Lakshadweep), will be commissioned as INS Jatayu, expanding into a comprehensive naval base.
- This upgrade involves augmenting existing administrative, logistics, and medical facilities with infrastructure like an airfield, housing, and personnel, subject to environmental and other clearances.
- Challenges may arise, particularly in constructing a jetty, due to the island's delicate ecology, but plans include developing an airfield supporting military and civil aircraft operations.
- Establishing INS Jatayu aims to enhance the Navy's operational capabilities, supporting anti-piracy and anti-narcotics efforts in the western Arabian Sea and serving as a first responder in the region.
- The base's commissioning and the proposed airfield will expand the Navy's presence on the western seaboard, facilitating the operation of various aircraft, including P8I maritime reconnaissance aircraft and fighter jets.

- This development is significant as India navigates regional dynamics, countering Chinese influence in the Indian Ocean amid strained relations with the Maldives due to recent political shifts.

About Lakshadweep Islands
- Lakshadweep, an archipelago of 36 islands, lies between 220 km and 440 km off the coast of Kochi, India, with strategic importance due to its location in the Indian Ocean.
- The islands, including Minicoy, play a crucial role in Sea Lines of Communications (SLOCs), though they are vulnerable to marine pollution risks.
- The archipelago consists of Amindivi Islands, Laccadive Islands, and Minicoy Island, collectively known as Lakshadweep, with Minicoy being the southernmost and largest island.
- Most islands have low elevation and are surrounded by fringing reefs, making them extremely vulnerable to sea level changes, with Minicoy being the largest and most developed.

Multiple Independently Targetable Re-entry Vehicle Technology

Context: India has recently achieved a significant milestone in missile technology by acquiring Multiple Independently Targetable Re-entry Vehicle (MIRV) capabilities, joining a select group of nations.

Key Facts About MIRV Technology

Agni-5 Missile
- Agni is an Inter-continental ballistic missile (ICBM) developed by DRDO.
- It carries nuclear warheads with a range exceeding 5,000 km and uses a three-stage solid-fuelled engine.
- Agni-5 has been tested successfully multiple times since 2012, with a recent night-time capability test in December 2022.
- The Agni family includes Agni I (short-range), Agni II (medium-range), Agni III (intermediate-range), Agni IV (intermediate-range), and Agni-P (Agni Prime, nuclear-capable).

Inception
- MIRV technology originated in the United States in 1970 with the deployment of a MIRVed Intercontinental Ballistic Missile (ICBM).
- It allows a single missile to carry multiple warheads (3-4), each capable of targeting different locations independently, thereby enhancing effectiveness.

Global Adoption and Proliferation
- Major nuclear powers like the United States, United Kingdom, France, Russia, China, and India possess MIRV technology.
- Pakistan also tested MIRV technology (Ababeel Missile) in 2017.
- Agni-5's successful flight test marked India's first use of MIRV technology, aiming to deploy multiple warheads in a single launch.

Strategic Significance
- MIRVs were initially designed to enhance offensive capabilities rather than to defeat ballistic missile defenses.
- Their ability to deploy multiple warheads independently poses challenges for defense systems.

Challenges
- Challenges in deploying MIRV technology include miniaturization of warheads, advanced guidance systems, and ensuring the reliability of re-entry vehicles

- Agni-6, the next upgrade, is expected to be an intercontinental ballistic missile with a range surpassing 7,000 km.

India's 5G Fighter Aircraft and LCA Tejas

Context: The Cabinet Committee on Security (CCS) has given the green light to a Rs 15,000 crore project for the development of India's fifth-generation fighter multirole jet, known as the Advanced Medium Combat Aircraft (AMCA). Additionally, a Court of Inquiry has been launched to investigate the cause of a crash involving an Indian Air Force Light Combat Aircraft (LCA) Tejas during an operational training sortie in Rajasthan.

Fifth-generation Fighter Jets
- Fifth-generation (5G) fighters are aircraft designed to operate effectively in heavily contested combat zones with advanced air and ground threats.
- They possess stealth capabilities and can cruise at supersonic speeds without using afterburners, distinguishing them from fourth-generation (4G) aircraft.
- Notable examples include Russia's Sukhoi Su-57, China's Chengdu J-20, and the US' F-35.

India's Need for 5G Fighters
- The Indian Air Force (IAF) currently operates around 30 fighter squadrons, below the sanctioned strength of 42.
- Aging aircraft like MiG-21s, MiG-29s, Jaguars, and Mirage 2000s are set to be phased out, necessitating the development of new fighter jets.
- India aims to bolster its air defenses given China's and Pakistan's aircraft strengths, focusing on self-sufficiency in defense.

Features of the Advanced Medium Combat Aircraft (AMCA)

Nodal Agency and Manufacturer	Key Features	Development Timeline

- **Nodal Agency and Manufacturer**
  - The Aeronautical Development Agency (ADA), under the Defence Research and Development Organisation (DRDO), leads the program.
  - State-owned Hindustan Aeronautics Limited (HAL) will manufacture the AMCA.
- **Key Features**
  - Stealth capabilities surpassing current IAF fighters.
  - Internal fuel tank with 6.5-tonne capacity and internal weapons bay.
  - AMCA Mk1 equipped with a GE414 engine; Mk2 to feature a more powerful engine developed by DRDO-Gas Turbine Research Establishment (GTRE).
- **Development Timeline**
  - Expected first flight in 4-5 years, full development in around 10 years, with five prototypes preceding HAL's manufacturing.

Features of Light Combat Aircraft (LCA) Tejas

Key Features

About

•Initiated in 1984 by the Indian government, managed by ADA, and manufactured by HAL.
•Designed to replace aging Mig 21 fighter planes.

•Lightest, smallest, and tailless multi-role supersonic fighter.
•Capable of carrying various air-to-air and air-to-surface weapons.
•Air-to-air refueling capability and maximum payload capacity of 4000 kg.
•Maximum speed of Mach 1.8 and a range of 3,000 km.

Variants

•Tejas Trainer, LCA Navy, LCA Tejas Navy MK2, and LCA Tejas Mk-1A, with improvements and variations in engine thrust and capabilities.

New Satellite-Based Toll Collection System

Context: The Ministry of Road Transport and Highways of India recently announced in Parliament the government's plan to introduce a new highway toll collection system based on the global navigation satellite system (GNSS) before the model code of conduct for the 2024 election comes into effect.

New Proposed Highway Tolling System: Salient Features

- The proposed highway tolling system utilizes GNSS technology, including India's satellite navigation system GAGAN (GPS Aided GEO Augmented Navigation), for precise location tracking.
- GNSS encompasses satellite-based navigation systems like the US' Global Positioning System (GPS), providing more accurate location and navigation data globally compared to GPS alone.
- It employs a vast network of satellites to deliver precise location information and navigation assistance to users worldwide.
- Implementation involves equipping vehicles with an On-Board Unit (OBU) or tracking device, which communicates with satellites to determine the vehicle's location.
- National highway coordinates are captured using digital image processing, allowing software to calculate toll rates based on the distance traveled.
- Toll fees are deducted from a digital wallet linked to the OBU, ensuring seamless and cashless transactions.

FASTag
- FASTag is a Radio Frequency Identification (RFID) device used for toll payments while the vehicle is in motion.
- It is affixed to the vehicle's windscreen and allows customers to make toll payments directly from their linked account.

- Enforcement measures include gantries equipped with CCTV cameras along highways to monitor compliance and deter evasion attempts.
- Initially, the new system is expected to operate alongside the existing FASTag-based toll collection, with a decision pending on mandating OBUs for all vehicles.

Benefits and Challenges

Benefits

- Smoother Traffic Flow: Eliminating toll plazas is anticipated to significantly reduce traffic congestion, especially during peak periods.
- Faster Commutes: Seamless toll collection should result in quicker travel times and a more efficient highway network.
- Fair Billing: Users are billed only for the actual distance traveled, promoting a pay-as-you-use model.

Challenges

- Payment Recovery: Ensuring toll collection from users with depleted digital wallets or those attempting system tampering remains a challenge.
- Enforcement Infrastructure: Establishing a nationwide network of Automatic Number-Plate Recognition (ANPR) cameras for enforcement purposes requires substantial infrastructure development.
- Privacy Concerns: Addressing data security and user privacy is essential.
- Operated by the National Highway Authority of India (NHAI) under the Ministry of Road Transport and Highways.

GAGAN

- GPS Aided GEO Augmented Navigation (GAGAN) is an Indian initiative for Satellite-based Navigation Services.
- It aims to improve the accuracy of GNSS receivers through reference signals.
- Developed collaboratively by the Airports Authority of India (AAI) and the Indian Space Research Organization (ISRO) as a regional Satellite Based Augmentation System (SBAS).
- GAGAN assists aircraft in accurate landings within Indian airspace and

neighboring areas for safety-to-life civil operations, and it is interoperable with other international SBAS systems.
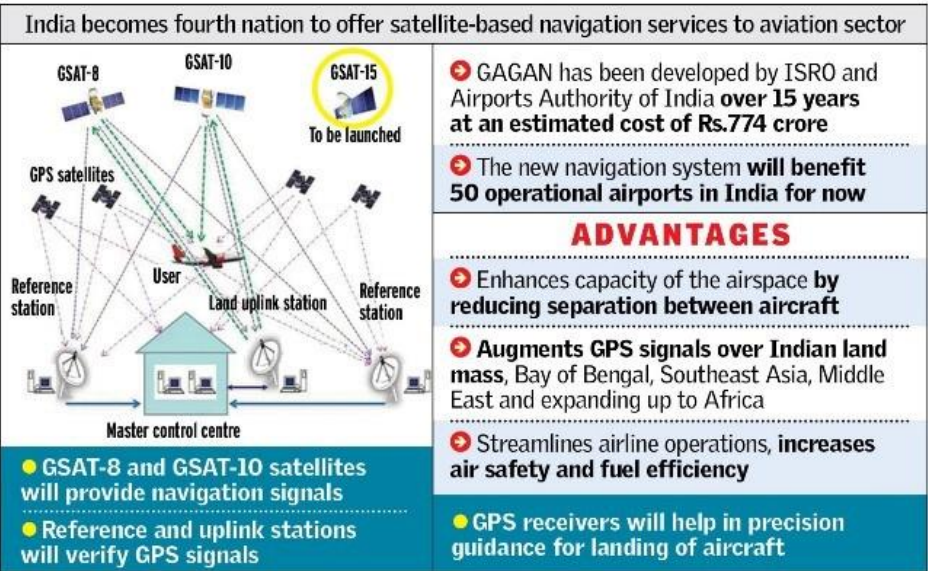
With Agni V test, India makes the MIRV leap

Context: The recent testing of the Agni-5 ballistic missile, conducted under "Mission Divyastra" by the Defence Research and Development Organisation (DRDO), carries significant strategic importance.

Mission Divyastra Significance

- The DRDO's successful launch of Mission Divyastra signifies a major accomplishment for India's nuclear capabilities.
- It marks the inaugural flight test of the domestically developed Agni-5 nuclear missile, boasting a 5,000-km range and featuring MIRV technology.
- The flight test, named Mission Divyastra, took place from Dr APJ Abdul Kalam Island off the Odisha coast.
- MIRV technology allows the missile to deliver multiple warheads to various or the same locations in a single launch, potentially including decoys to mislead enemy ballistic missile defenses.

MIRV Technology Overview

- MIRV technology, originating in the United States in 1970, enables a single missile to carry multiple warheads (4-6), each capable of targeting different locations independently.
- This technology enhances the missile's effectiveness by increasing the number of potential targets it can engage, and it can be launched from both land-based and sea-based platforms.
- Major nuclear powers possessing MIRV technology include the United States, the United Kingdom, France, Russia, China, and India, while Pakistan tested the technology (Ababeel Missile) in 2017.

AGNI-V MISSILE

OPERATIONAL RANGE
5,500-8,000* km

WEIGHT **50,000 kg**	SPEED **24 MACH**
LENGTH **17.5 m**	ENGINE **3 STAGE SOLID**
DIAMETER **2 m**	NUCLEAR WARHEAD **1,500 kg**

Test-fired from Abdul Kalam Island, Odisha

TESTS CONDUCTED	AGNI-I APR 19, 2012	AGNI-II SEP 15, 2013	AGNI-III JAN 31, 2015	AGNI-IV NOV 9, 2015
RANGE	700 km	2,000 km	3,500 km	4,000 km

*5,550 km with full payload of 1.5-tonne warhead, 8,000 km with a lighter warhead

ICBM ZONE Agni-V is classified as an inter-continental ballistic missile (ICBM), having a range of 5,500 km or more. The US, Russia, China, France and Israel already possess such missiles

Significance of MIRV Technology

- MIRV technology offers several advantages, including launching satellites into orbits and providing multiple target options to the attacker, potentially overwhelming the defender's anti-missile defenses.
- It also enhances operational range and the ability to evade ballistic missile defenses, contributing to a more balanced nuclear deterrent relationship between nations.

Challenges in MIRV Technology Adoption

Challenges include pushing rivals to adopt more aggressive nuclear postures, the requirement for additional fissile material (such as plutonium), highly demanding technical criteria for missile development, and confusion regarding the number of warheads a missile can carry.

Steps for Improving MIRV Technology

Steps include further development by institutions like the Bhabha Atomic Research Centre (BARC) and DRDO, maintaining guidance and accuracy, ensuring adequate nuclear testing, and addressing global apprehensions through international agreements and treaties.
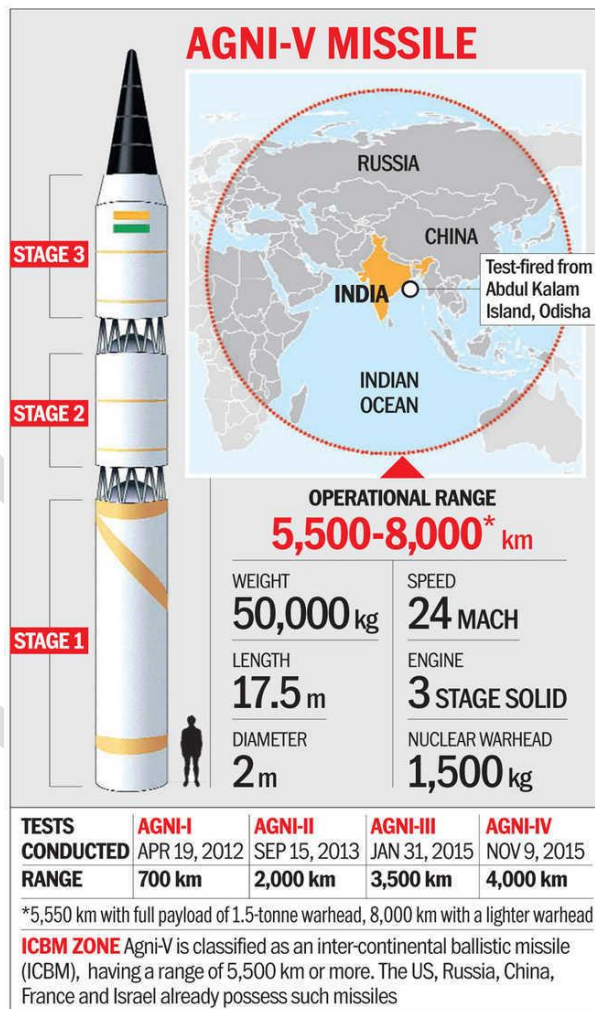
Conclusion

The successful testing of the Agni-5 ballistic missile with MIRVs signifies a significant milestone for India's nuclear deterrence capabilities, enhancing its strategic posture amidst evolving challenges. India's advancements in missile technology will continue to strengthen its position as a credible nuclear power, with potential developments like a long-range Submarine Launched Ballistic Missile (SLBM) further enhancing its capabilities.

NATO's DIANA Program

Context: Recently, the board of the Defence Innovation Accelerator for the North Atlantic (DIANA) initiative approved a proposal to establish an accelerator and two test centers in Finland. The mission is to promote technology, innovation, and business development for both civil and defense purposes.

What is NATO?

- NATO is a military alliance created by the North Atlantic Treaty in April 1949, consisting initially of the United States, Canada, and several Western European nations. Its purpose is to provide collective security against the Soviet Union.
- Currently, there are 30 member states, with the original members being Belgium, Canada, Denmark, France, Iceland, Italy, Luxembourg, the Netherlands, Norway, Portugal, the United Kingdom, and the United States.

> **About DIANA**
>
> DIANA is an organization established by the North Atlantic Treaty Organization (NATO) to accelerate dual-use innovation capacity across the Alliance. It supports companies with resources, networks, and guidance to develop advanced technologies for critical defense and security challenges. All NATO nations are members of DIANA, and its Board of Directors comprises representatives from every Allied country.

- Additional members joined over the years, including Greece and Turkey (1952), West Germany (1955, later as Germany from 1990), Spain (1982), and various Eastern European countries in subsequent years.
- France withdrew from NATO's integrated military command in 1966 but remained a member, rejoining the military command in 2009.
- Recently, Finland and Sweden have expressed interest in joining NATO.
- Headquarters Brussels, Belgium. Headquarters of Allied Command Operations Mons, Belgium.

Objectives of NATO

- NATO's primary purpose is to safeguard the freedom and security of all its members through political and military means.
- Politically, NATO promotes democratic values and facilitates member consultations on defense and security issues to build trust and prevent conflicts.
- Militarily, NATO is committed to peaceful dispute resolution. It can undertake crisis-management operations if diplomatic efforts fail, either under Article 5 of the Washington Treaty or a United Nations mandate.

North Atlantic Treaty Organization (NATO)

['nā-(,)tō]

A political and military alliance of North American and European countries, formed in 1949 as a counterweight to the Soviet Union.

- Article 5 was invoked only once, following the 9/11 attacks in 2001, demonstrating NATO's solidarity in collective defense.

Environment

India's leopard population rises to 13,874; M.P. on top

Context: The Environment Ministry reported an 8% increase in India's leopard population from 12,852 in 2018 to 13,874 in 2022, marking the fifth cycle of population estimation.

Key Highlights

Survey Details	Regional Breakdown	Reserve Statistics	Habitat and Conflicts	Population Trends	Impacts of Human Activities	Regional Anomalies	Northeastern Increase

- **Survey Details**: The survey, conducted in collaboration with the National Tiger Conservation Authority, Wildlife Institute of India, and state forest departments, focused on forested habitats within 18 tiger-range states, covering four major tiger conservation landscapes.

- **Regional Breakdown**: Madhya Pradesh recorded the highest leopard count (3,907), followed by Maharashtra (1,985), Karnataka (1,879), and Tamil Nadu (1,070). However, Uttarakhand witnessed a 22% decline due to poaching and conflicts. Conversely, Arunachal Pradesh, Assam, and West Bengal collectively saw a 150% increase.

- **Reserve Statistics**: Nagarjunasagar Srisailam in Andhra Pradesh, Panna, and Satpura in Madhya Pradesh were identified as reserves with the highest leopard numbers.

- **Habitat and Conflicts**: Unlike tigers, leopards are adaptable and often found in human habitats, leading to conflicts. The report emphasizes that conserving tiger reserves benefits leopard habitats.

- **Population Trends**: The study shows varied growth rates across different regions, with some experiencing declines while others, like Central India and the Eastern Ghats, saw growth.

- **Impacts of Human Activities**: There's a stable leopard population over four years, but minimal growth suggests possible impacts from human activities, especially in multiple-use areas.

- **Regional Anomalies**: Declines in leopard numbers in certain areas, like the Ramnagar forest division, amidst increasing tiger populations, were noted. Notably, a significant portion of leopards in the Shivalik landscape live outside protected areas.

Table E.1: Estimated leopard numbers in each landscape from 2018 and 2022 (Number in parenthesis are one standard error limit of the mean).

State	2018 Population (SE)	2022 Population (SE)
Bihar	98 (8)	86 (3)
Uttarakhand	839 (48)	652 (77)
Uttar Pradesh	316 (39)	371 (54)
Shivalik Hills & Gangetic Plains	1,253 (95)	1,109 (134)
Andhra Pradesh	492 (31)	569 (41)
Telangana	334 (16)	297 (20)
Chhattisgarh	852 (39)	722 (45)
Jharkhand	46 (10)	51 (10)
Madhya Pradesh	3,421 (150)	3,907 (215)
Maharashtra	1,690 (99)	1,985 (122)
Odisha	760 (33)	568 (35)
Rajasthan	476 (39)	721 (112)
Central India & Eastern Ghats	8071 (417)	8,820 (600)
Goa	86 (3)	77 (13)
Karanataka	1,783 (71)	1,879 (261)
Kerala	650 (28)	570 (76)
Tamil Nadu	868 (40)	1,070 (132)
Western Ghats	3387 (142)	3,596 (482)
Arunachal Pradesh	11 (3)	42 (10)
Assam	47 (9)	74 (11)
North Bengal	83 (17)	233 (21)
North Eastern Hills, and Brahmaputra Floodplains	141 (26)	349 (42)
India	12,852 (680)	13,874 (1,258)

- **Northeastern Increase**: The notable increase in leopard numbers in northeastern states was attributed to a lack of systematic surveys in previous years, indicating a sampling artefact.

Scientists discover the anatomy behind the songs of baleen whales

Context: Baleen whales use a larynx, or voice box, anatomically modified to enable underwater vocalisation, researchers say.

Analysis

- Baleen whales, such as the humpback, produce sound for communication in the vast oceans.
- They use low-frequency calls to communicate and navigate in dark waters.
- Humpback females and calves communicate with each other using vocalizations, while males sing to attract mates.
- Some baleen whales, like humpbacks and bowheads, produce high-pitched sounds known as whale songs.
- Baleen whales use their larynx, or voice box, to produce sounds underwater, similar to humans.
- Toothed whales, including dolphins and killer whales, have a different mechanism for producing sounds, utilizing a special organ in their nasal passages.

Baleen vs Toothed Whales

- Baleen whales have baleen plates to sieve prey from seawater, while toothed whales have teeth and actively hunt for food.
- Dolphins and porpoises, despite having teeth, are classified as toothed whales.
- Baleen whales have two blowholes on their heads, whereas toothed whales have one.
- Baleen whales are generally larger than toothed whales, with exceptions like the sperm whale, the largest toothed whale species.

Definition
- Mysticeti - Large marine mammals in the cetacean order.

Characteristic
- Presence of baleen plates for filter feeding.

Key Species
- Blue Whale (Balaenoptera musculus)
- Humpback Whale (Megaptera novaeangliae)
- Gray Whale (Eschrichtius robustus)
- Minke Whale (Balaenoptera acutorostrata)

Baleen Plates
- Made of keratin.
- Used for filter feeding.

Filter Feeding
- Ingest large mouthfuls of water.
- Use baleen plates to filter out water, retaining prey.

Migration
- Extensive migrations between feeding and breeding grounds.
- Cover thousands of kilometers.

Songs and Communication
- Notable in humpback whales.
- Complex songs related to breeding and communication.

Threats
- Entanglement, ship strikes, pollution, climate change.
- Habitat degradation, marine pollution, ocean acidification.

IUCN Status
- North Atlantic right whale - Critically Endangered.

Conservation Efforts
- International Whaling Commission (IWC).
- Regulation of whaling, protection measures.
- Reducing ship strikes and fishing gear entanglements.

Cultural Significance
- Prominent in folklore, art, and traditional practices.
- Emphasizes interconnectedness between humans and marine environment.

Prehistoric case of Edwards syndrome found for the first time

Context: Researchers have detected chromosomal disorders in prehistoric skeletal remains dating back up to 5,500 years, including six instances of Down syndrome and one instance of Edwards syndrome.

Details

- Nearly 10,000 genomes from ancient human skeletal remains from Ireland, Bulgaria, Greece, Spain, or Finland underwent screening for chromosomal trisomies.
- According to a paper published in the journal Nature Communications, these findings may represent the first identification of Edwards syndrome in historic or prehistoric remains.
- Previous documented cases of Down syndrome in ancient individuals have been scarce.
- Three cases of trisomy 21 [Down syndrome] and one case of trisomy 18 [Edwards syndrome] were identified in two contemporaneous sites in early Iron Age Spain (800-400 BCE), potentially suggesting a higher prevalence of trisomy carriers' burials in those societies.

Down Syndrome

- It is a genetic condition characterized by an extra copy of chromosome 21, sometimes involving an additional segment of the chromosome.
- Chromosomes contain genes that carry DNA, determining one's physical traits and bodily functions.
- The presence of an extra chromosome is termed trisomy, hence Down syndrome is also known as trisomy 21.
- This additional chromosome affects the development of a baby's body and brain, resulting in both mental and physical challenges.
- Down syndrome typically occurs randomly during fetal development and is not inherited.
- While there is no cure for Down syndrome, treatment options are available to help individuals achieve their full potential.

Edwards Syndrome

- It is a genetic disorder characterized by a third copy of material from chromosome 18, known as Trisomy 18.
- Most cases of Trisomy 18 are not inherited but occur due to problems in either the sperm or egg during the formation of the fetus.
- Trisomy 18 affects 1 in 6000 live births and is three times more common in girls than boys.
- Specific treatments for Trisomy 18 are not available, and treatment focuses on managing symptoms such as heart conditions, breathing difficulties, and infections.

Mating calls indicate endangered Hanguls are on a comeback trail

Context: Kashmir's Hangul, a critically endangered deer species prized for its shyness and sensitivity, witnessed a notably successful mating season last autumn, hinting at a potential population increase.

Key Highlights

- The Hangul population might exceed 300 this spring, marking the first instance in over three decades.
- Presently, there are 19.2 males for every 100 females, a ratio significantly below the optimal level.

Hangul Overview

- Hangul, also called the **Kashmir stag, is indigenous to the Jammu and Kashmir region in India.**
- Scientifically known as **Cervus hanglu**, it mainly inhabits the dense temperate forests of the Kashmir Valley and adjacent areas, spanning elevations from 1,700 to 3,000 meters above sea level.

Hangul Kashmir Stag
(Cervus hanglu hanglu)

Distribution — Dachigam NP

Total number of Hanguls left in the wild: **289**

Predators — Leopard, Himalayan black bear

Threats — Poaching, habitat destruction, overgrazing by livestock,

Extinct — Threatened — Least Concern
(EX) (EW) **(CR)** (EN) (VU) (NT) (LC)
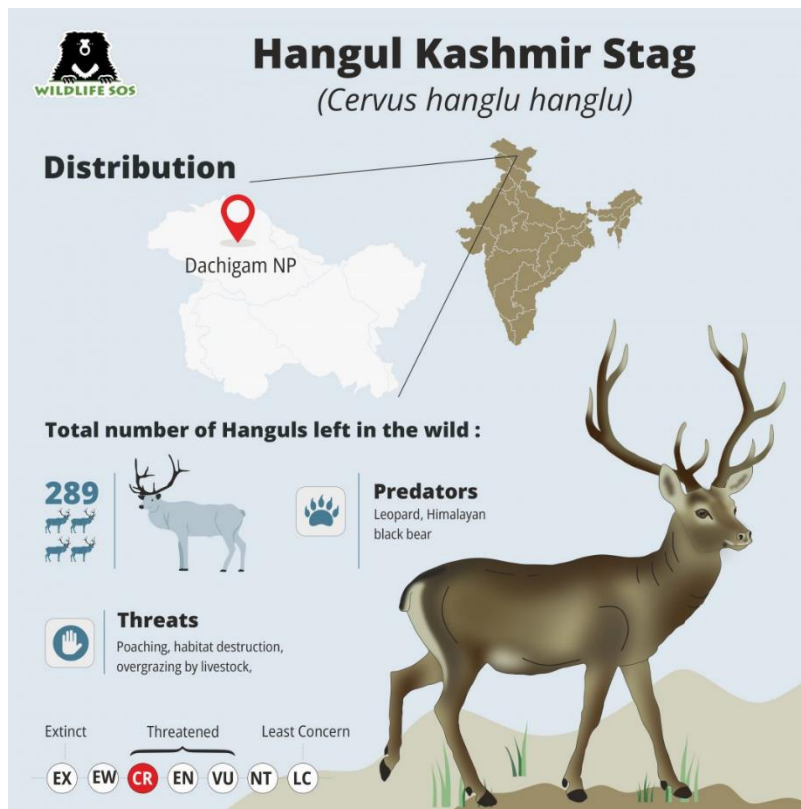
Challenges

- Habitat disturbance and human interference have adversely affected Hanguls, although efforts are underway to mitigate these issues.
- The Wildlife Department has identified water scarcity as a significant threat, driving Hanguls into disrupted habitats and elevating predation risks.

Conservation Efforts

| Dachigam National Park, the habitat of Hanguls, was temporarily closed during the rutting season in October. | Despite a sharp decline in population since 1947, recent conservation endeavors have resulted in a gradual increase, with the estimated population reaching 261 in 2021. | To bolster Hangul conservation, ten sites have been designated for protection, and a captive-breeding facility has been established at Shikargah Tral. |

Over 24,000 birds from 66 species recorded during Tamirabharani Waterbird Count

Context: The recently conducted Tamirabharani Waterbird Count 2024 has reported a sighting of over 24,000 birds in the irrigation tanks supplied by the perennial river.

Key Highlights

- World Wildlife Day was celebrated on March 3, coinciding with the event.
- The citizen-centric bird monitoring program, the Tamirabharani Waterbird Count, was initiated by ATREE's Agasthyamalai Community Conservation Centre (ACCC) in 2011.

- The 14th edition of the count was co-organized by ATREE's ACCC, Pearl City Nature Trust from Thoothukudi, Nellai Nature Club Trust, Tirunelveli, and Pushpalata Educational Centre, Tirunelveli.
- Among the observed birds, 40 out of 100 were identified as migratory species.
- Notable sightings include Black-tailed Godwit, various Egret species, migratory ducks such as Northern Pintail and Bar-headed Geese, Cormorant species, Spot-billed Duck, and Common Coot.
- The Tamirabharani river and its significant tributaries, including Chithar, Pachchaiyar, Gadana, and Ramanathi, play a vital role in providing water to the districts of Tirunelveli, Tenkasi, and Thoothukudi.
- Besides natural calamities, human-induced threats such as sewage water discharge, improper waste disposal, and misuse of tanks for illicit activities, particularly alcohol consumption, were observed in several tanks.
- The Vaeinthankulam tank in Tirunelveli city center is undergoing severe degradation due to activities like daytime alcohol consumption on the tank bund and its use for illicit activities during the evenings.
- The Veinthankulam restoration project, initiated under the 'Nellai Neervalam' in June 2021, has been joined by Care Earth.

Thamirabarani River flowing across Tirunelveli	
Country	India
State	Tamil Nadu
Districts	Tirunelveli, Thoothukudi
Tributaries	
- left	Karaiyar, Servalar, Gadananathi, Chittar River
- right	Manimutharu, Pachaiyar
Cities	Tirunelveli, Ambasamudram
Source	Pothigai hills
- coordinates	8.601962°N 77.264131°E [2]
Mouth	
- location	Gulf of Mannar
- coordinates	8.641316°N 78.127298°E [1]
Length	125 km (78 mi)
Discharge	for Sri Vai Kuntum
- average	32 m^3/s (1,130 cu ft/s)

List of Major tributaries of Thamirabarani				
Tributaries	**Length of Tributary**	**Origin**	**Joins at**	**Length of course of Thamirabarani**
Karaiyar		Mundanthurai reserve forests	Karaiyar Dam	6 km
Servalar River		Mundanthurai reserve forests	Papanasam Reservoir	22 km
Manimuthar River	9 km	Manjolai hills	Aladiyoor	36 km
Gadananathi		Agasthyamala Biosphere Reserve	Tiruppudaimaruthur	43 km
Pachaiyar River	32 km	Kalakkadu reserve forests	Tharuvai	61 km
Chittar River	80 km	Kutralam Hills	Sivalaperi	73 km

About the Thamirabarani River

- Thamirabarani is the only perennial river in South India, flowing through the districts of Tirunelveli and Thoothukudi in Tamil Nadu.
- Originating from the Pothigai hills of Western Ghats, it traverses approximately 128 kilometers along the southern edge of the country.
- Remarkably, the river originates and concludes its journey within the state of Tamil Nadu.
- The river holds significant cultural and ecological importance for the people of Tamil Nadu, supporting diverse wildlife including the Nilgiri marten, slender loris, lion-tailed macaque, and various amphibian and avian species like the galaxy frog and great hornbill.

National dam panel to examine Kaleshwaram project

Context: The National Dam Safety Authority (NDSA) has initiated an expert committee to investigate concerns regarding the Kaleshwaram Lift Irrigation Project (KLIP) due to issues with sinking piers at the Medigadda barrage.

Key Highlights

- This investigation is prompted by problems observed at the Medigadda barrage, Sundilla, and Annaram barrages.
- The NDSA has assembled a five-member committee, led by J. Chandrasekhar Iyer, former chairman of the Central Water Commission (CWC), to conduct a thorough assessment.

Medigadda Barrage

- The Lakshmi Barrage, or Medigadda Barrage, serves as the starting point of the Kaleshwaram Project, which involves the construction of three barrages between Yellampally and Medigadda.
- Its purpose is to harness Godavari water for both drinking and irrigation purposes. The Barrage/Project site is situated in Medigadda Village, Mahadevpur Mandal, Jayashankar Bhupalpally district, Telangana State, India.

> **National Dam Safety Authority (NDSA)**
> - The Dam Safety Act 2021 was enacted in response to dam failures attributed to inadequate surveillance and maintenance.
> - It delineates crucial responsibilities and mandates the formation of national and state-level bodies for its execution.
> - Key provisions include the establishment of a National Committee on Dam Safety to oversee policies and regulations, the creation of a National Dam Safety Authority to manage state-level disputes, and the appointment of the Chairman of the Central Water Commission (CWC) to oversee national dam safety protocols.
> - State-level bodies, namely the State Committee on Dam Safety (SCDS) and State Dam Safety Organisation (SDSO), are also required to be established.

Kaleshwaram Lift-Irrigation Project

- This project is a multi-purpose irrigation endeavor on the Godavari River in Kaleshwaram, Bhupalpally, Telangana.
- Originating at the confluence point of the Pranahita River and the Godavari River, it was initially known as the Pranahita-Chevella project in former Andhra Pradesh, but underwent redesign and extension, renaming as the Kaleshwaram project in Telangana in 2014.

Project Objectives

- It aims to provide drinking water and irrigation to underdeveloped areas of Telangana.
- Additionally, it intends to replenish groundwater levels by transitioning from groundwater usage for irrigation to surface water usage.
- The project will also complement Mission Kakatiya and Mission Bhagiratha schemes, which aim to enhance drinking water accessibility in numerous villages and enhance tank capacities.

KALESHWARAM PROJECT

Commissioned in 2019, the Kaleshwaram Lift Irrigation project comprises three barrages constructed across Godavari river. The first barrage is at Medigadda near Kaleshwaram (on the confluence of Pranahita river, a tributary of Godavari). Two more barrages are located at Annaram and Sundilla villages between Medigadda and Sripada Yellampally irrigation project.

ORIGINAL COST	Rs 80,000 crore	TOTAL DIVERSION		AREA THAT WILL BE IRRIGATED
NOW INFLATED TO	Rs 1.05 lakh crore	180 TMC OF WATER	13 BENIFICIARY DISTRICTS	18.25 LAKH ACRES
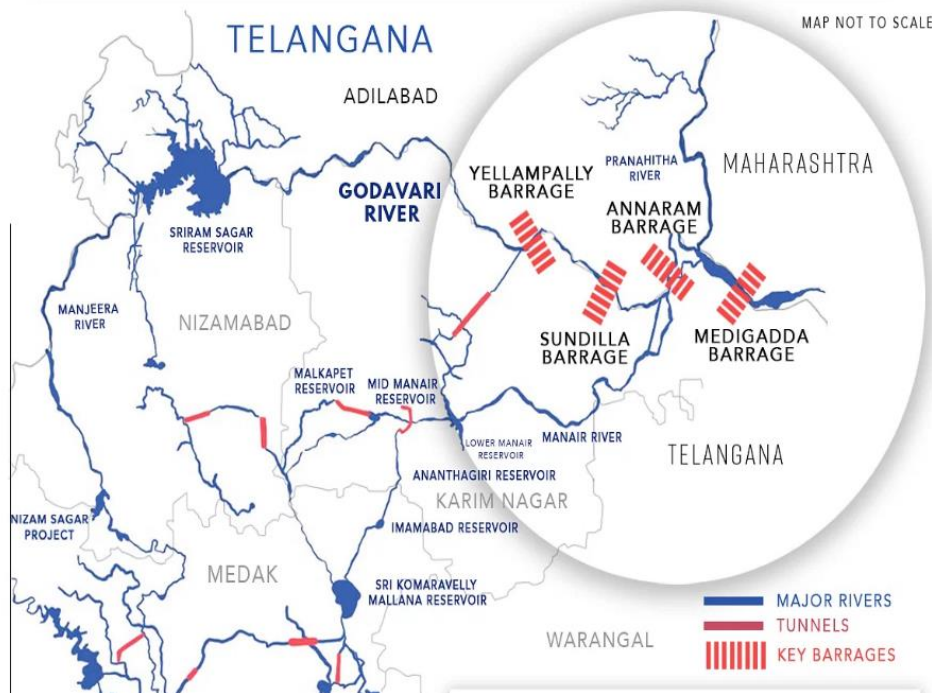
Trees in Corbett fell prey to greedy nexus, says Supreme Court

Context: The Supreme Court condemned the illegal felling of over 6,000 trees in Jim Corbett National Park, Uttarakhand, under the pretext of "eco-tourism," citing it as an alarming instance of collusion between politicians and officials for commercial gain at the expense of the environment.

Key Highlights

- The court mandated the Ministry of Environment, Forest and Climate Change to form a specialized committee to assess and offer recommendations on allowing tiger safaris in the buffer zones of tiger reserves.
- Emphasizing Uttarakhand's responsibility to fully restore the forest, the court stressed the vital link between tigers and their forest habitat, highlighting the crucial role of tigers in maintaining ecosystem health.
- The specialized committee will comprise members from the National Tiger Conservation Authority, Wildlife Institute of India, Central Empowered Committee, and a Ministry Joint Secretary, with a focus on safeguarding tigers and their surrounding ecosystems.

Guidelines For Safaris

- If the committee recommends allowing tiger safaris in the buffer zones, the court stipulated the need for comprehensive operational guidelines applicable nationwide.
- Criticizing the use of zoo tigers for safaris as per the 2019 NTCA guidelines, the court endorsed the 2016 NTCA guidelines, suggesting the use of injured, conflict, or orphaned tigers unfit for rewilding, sourced from the same landscape.
- Rejecting the idea of selecting safari animals approved by the Central Zoo Authority, the court opposed the creation of a CZA "Master Plan," advocating for minimal environmental impact, blending resorts with the natural environment, controlling noise levels, and locating safaris near animal rescue centers.
- Existing safaris, like the Pakhro zone in Corbett, will remain untouched, but the Uttarakhand government is instructed to establish an animal rescue center nearby.

Panel To Assess Damage

The appointed panel will evaluate the damage to the green cover of Corbett Reserve, estimate restoration costs, and identify those responsible for the damage.

Jim Corbett National Park

- Established in 1936 as Hailey National Park, Jim Corbett National Park is India's oldest national park, named after hunter and naturalist Jim Corbett.
- Located in Nainital and Pauri Garhwal districts of Uttarakhand, it was the first to come under the Project Tiger initiative, covering the Patli Dun valley formed by the Ramganga river.
- Major rivers flowing through the park include Ramganga, Sonanadi, Mandal, Palain, and Kosi, with the park falling under the World Wide Fund (WWF) for Nature's Terai Arc Landscape Program for protection.

Shanan Hydropower Project

Context: The central government has issued an order to maintain the status quo on the Shanan hydropower project, which is subject to competing claims from Punjab and Himachal Pradesh.

Historical Background

- In 1925 during the British era, Punjab was granted a lease for the 110-MW hydropower project in Jogindernagar, Mandi district of Himachal Pradesh on the river Uhl, a tributary of the Beas River.
- The lease agreement was formalized between Raja Joginder Bahadur of Mandi and Col BC Batty, representing the British government and serving as the Chief Engineer of Punjab.
- The project initially served the energy needs of undivided Punjab and Delhi before partition.

> **Legal Control under Punjab Reorganisation Act, 1966**
> - After the reorganisation of states in 1966, the project was transferred to Punjab as Himachal Pradesh became a Union Territory.
> - Punjab's legal control over the project was specified in a central notification issued on 1st May 1967.

Claims of Himachal Pradesh	Claims of Punjab
• Himachal Pradesh claims that before the 1925 lease, it had ownership and operational rights over the project. • The 1925 lease only granted operational rights to Punjab for a specific period, not ownership rights.	• Punjab asserts ownership and lawful possession of the Shanan Power House Project under the central notification of 1967. • Punjab has requested a "permanent Prohibitory Injunction" from the Supreme Court under Article 131 to prevent Himachal Pradesh from interfering with the project.

- Himachal Pradesh contends that the project should revert to them after the lease ends due to concerns about its deteriorating condition.

Interim Measures and Legal Framework
- The central government issued an order to maintain the status quo on the project before the conclusion of the lease agreement.
- The order invoked powers under Sections 67 and 96 of the Punjab Reorganisation Act, 1966, and Section 21 of the General Clause Act, 1887.
- The Inter-State Water Dispute (ISWD) Act, 1956, and its amendments in 2002 provide a legal framework for resolving inter-state water disputes through consultations and, if necessary, the constitution of tribunals.

Coral Bleaching in Great Barrier Reef

Context: Recent aerial surveys by Australian authorities confirm extensive coral bleaching across two-thirds of the Great Barrier Reef (GBR), indicating a severe threat exacerbated by climate change. Immediate action is necessary to mitigate the impacts and safeguard this crucial marine ecosystem.

Great Barrier Reef (GBR)

World's Largest Coral Reef System

- Situated in the Coral Sea off Queensland, Australia.
- Spans 2,300 km with about 3,000 individual reefs and 900 islands.
- Home to 400 coral species and 1,500 fish species, including endangered species like the dugong and large green turtle.
- Designated as a UNESCO World Heritage site in 1981.

UNESCO Heritage Status

- In 2023, the UNESCO Heritage Committee refrained from labeling Australia's Great Barrier Reef as "in danger" but cautioned about serious threats from pollution and ocean warming.

History of Bleaching Events

- Mass bleaching incidents observed in 1998, 2002, 2016, 2017, 2020, 2022, and now in 2024.

Factors **Contributing to Coral Bleaching in GBR**

Temperature Stress	Climate Change Impact	Other Environmental Stressors	Algae Relationship

- **Temperature Stress**
  - Elevated water temperatures cause corals to expel algae, resulting in whitening.
  - Prolonged high sea surface temperatures intensify heat stress, worsening bleaching.
- **Climate Change Impact**
  - Rising ocean temperatures, linked to climate change, heighten coral vulnerability to stress and mortality, leading to widespread bleaching globally during El Niño conditions.

- **Other Environmental Stressors**
  - o Cold water, pollution, runoff, and extreme low tides can also trigger coral bleaching, indicating a multifaceted issue.
- **Algae Relationship**
  - o Disruption of the symbiotic relationship between corals and algae affects corals' food source and makes them susceptible to disease.

GREAT BARRIER REEF FACTSHEET

AUSTRALIA'S JEWEL
2900 REEFS - 2300 KM
>400 CORAL SPECIES
WORLD'S LARGEST REEF

$ VALUE
6.4 BILLION
annual Australian economic contribution
56 BILLION
annual Australian economic, social and icon value
64,000 JOBS
2 MILLION
visitors every year

MAIN THREATS
STORMS
CROWN OF THORN STARFISH OUTBREAKS
CORAL BLEACHING

MAIN CAUSES
Human induced climate change
INCREASED carbon emissions ocean temperatures

CORAL BLEACHING
HEALTHY CORAL   BLEACHED CORAL   DEAD CORAL
RECOVERING CORAL
4 bleaching events in the last 20 years
1998, 2002, 2016, 2017
>65% CORAL COVER LOST
CO₂

THE GREAT BARRIER REEF IS STILL GREAT BUT NEEDS YOU TO ACT AND PROTECT

CORALWATCH GET INVOLVED WWW.CORALWATCH.ORG   Australian Government REEF TRUST   Great Barrier Reef Foundation   THE UNIVERSITY OF QUEENSLAND AUSTRALIA

Implications of Coral Bleaching

| Ecological Impact | Food Security | Climate Change Indicator | Loss of Ecosystem Services |
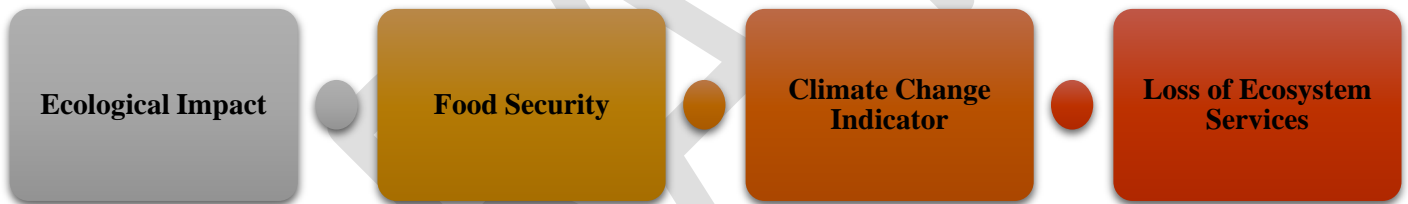
- **Ecological Impact**
  - o Coral reefs are crucial ecosystems supporting diverse marine life; bleaching leads to habitat loss and biodiversity decline, impacting fish populations and marine plants.
  - o Economic Consequences
  - o Coral reefs are vital for coastal protection, tourism, and fisheries, providing services worth USD 375 billion annually. Bleaching affects industries reliant on healthy reef ecosystems.
- **Food Security**
  - o Coral reefs sustain millions worldwide with food and livelihoods; bleaching threatens seafood availability and disrupts fishing and reef-related tourism.
- **Climate Change Indicator**
  - o Coral bleaching serves as a visible marker of climate change's impact on marine ecosystems.
- **Loss of Ecosystem Services**
  - o Coral reefs provide essential services like shoreline protection and carbon sequestration, but bleaching diminishes their ability to do so, affecting marine ecosystem health and coastal communities.

Great Barrier Reef

World's largest reef system covers over 2,300km. World Heritage site is recognised for its 'enormous scientific and intrinsic importance'

AUSTRALIA

Previous bleaching (2016 and 2017)

🔴 Most severe bleaching

🟢 No or negligible bleaching

2019-20: Central and southern regions more badly affected than in 2016 and 2017 events

In 2019, Australia downgraded reef's five-year outlook from poor to very poor, due to impact of human-induced climate change

100km

What Is Bleaching

① Healthy coral
Algae (zooxanthellae) lives in coral tissue, providing primary food and colour

② Stressed coral
Symbiotic relationship becomes stressed due to increase in water temperature or pollution – coral polyps expel algae from tissue

③ Bleached coral
Without algae, coral turns white and loses main source of food

BioCNG Production from Dung

Context: The Banaskantha District Co-operative Milk Producers' Union in Gujarat is transforming dung into BioCNG (compressed natural gas) and fertilizer, providing an additional income source for farmers while addressing waste management.

How Farmers are Utilizing Dung's Value?

Dung Fact

- Average Dung Production: Adult bovine animals produce 15-20 kg of fresh dung daily, while calves produce 5-10 kg.

Composition

- Fresh dung contains 80-85% water and weighs only 200 grams per kg when dried.

Methane Production

- Fresh dung contains methane, crucial for biogas production in anaerobic digestion.

Biogas Production Process

- Mixing Dung with Water
- Fresh dung is mixed with water in equal amounts to form a slurry.
- Anaerobic Digestion
- The slurry undergoes anaerobic digestion in a sealed vessel reactor for 35 days, involving hydrolysis, acidogenesis, acetogenesis, and methanogenesis stages.
- Methane Purification
- Raw biogas is purified to remove CO_2, H_2S, and moisture, compressed to 96-97% methane, and sold as BioCNG.
- Slurry Utilization
- After biogas production, the slurry is dewatered, and the solid residue is decomposed and sold as PROM or used for compost production.

Scalability and Replicability

- The BioCNG model is scalable, utilizing dung from district member unions and smaller Flexi Biogas plants for individual farmers.

Key Challenges and Solutions

Feedstock Management	Operational Efficiency	Technical and Financial Barriers	Storage Systems for Biogas	Social Acceptance

- **Feedstock Management**
  - Ensuring consistent supply and quality of organic feedstock.
  - Implementing effective waste segregation and collection systems.
- **Operational Efficiency**
  - Providing training and technical support for maintenance and monitoring.
  - Establishing standardized operating procedures and quality control measures.
- **Technical and Financial Barriers**
  - Accessing financing options and addressing infrastructure challenges.
  - Forming public-private partnerships and capacity-building programs.
- **Storage Systems for Biogas**: Implementing proper storage systems like gas holders or cylinders for efficient distribution.
- **Social Acceptance**: Conducting educational outreach to dispel misconceptions about dung gas and promote its hygienic and safe use.

IceCube

Context: Scientists reported discovering instances in IceCube's data from 2011 to 2020 that matched the signature of tau neutrinos, with over 99.999999% confidence.

About IceCube

- The IceCube Neutrino Observatory is the world's largest 'neutrino telescope,' designed to observe the cosmos from deep within the Antarctic South Pole ice.
- It is buried beneath one cubic kilometer of surface, extending to a depth of about 2,500 meters.
- A surface array called IceTop and a denser inner subdetector named DeepCore significantly enhance the observatory's capabilities, making it a versatile facility.
- The IceCube Collaboration built and maintains it, comprising around 300 physicists from 59 institutions in 14 countries.
- The National Science Foundation (NSF-USA) provided primary funding, with the University of Wisconsin–Madison leading the institution responsible for detector maintenance and operations.

Working of IceCube

When a neutrino interacts with the ice surrounding the sensors, it may produce charged particles and radiation.

The sensors detect this radiation to infer neutrino detection and use its properties to gain insights into the particle.

IceCube can identify some neutrino types in real-time, while for others, it collects data over years for scientists to analyze neutrino interaction events.

IceCube also observes cosmic rays interacting with Earth's atmosphere, revealing structures not yet understood.

About Neutrinos

- Neutrinos are light particles that rarely interact with matter, earning them the nickname "ghost particles."
- These high-energy astronomical messengers help probe violent astrophysical sources like exploding stars, gamma-ray bursts, and phenomena involving black holes and neutron stars.
- Scientists have named the three discovered types of neutrinos after the matter particles they interact with electron neutrino, muon neutrino, and tau neutrino.
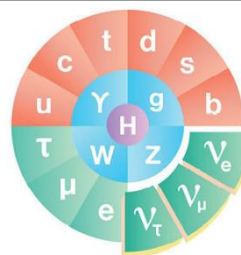
FUNDAMENTAL

Neutrinos are fundamental particles, which means that—like quarks and photons and electrons—they cannot be broken down into any smaller bits.

ABUNDANT

Of all particles with mass, neutrinos are the most abundant in nature. They're also some of the least interactive. Roughly a thousand trillion of them pass harmlessly through your body every second.

- A human-sized neutrino detector may need to wait a century for a single neutrino interaction, highlighting their elusive nature.
- Larger detector collecting areas increase the chances of detecting neutrinos.

Challenges of Handling Nuclear Waste

Context: India recently loaded the core of its long-delayed prototype fast breeder reactor (PFBR) vessel, marking progress towards stage II of its three-stage nuclear program, which involves using uranium and plutonium. By stage III, India aims to utilize its extensive thorium reserves for nuclear power generation.

Prototype Fast Breeder Reactor (PFBR)
- A breeder reactor generates more fissile material than it consumes by irradiating fertile material like Uranium-238 or Thorium-232 along with fissile fuel.
- PFBR is a 500-megawatt electric (MWe) fast-breeder nuclear reactor being built at the Madras Atomic Power Station in Kalpakkam (Tamil Nadu) and fueled by Mixed Oxide (MOX) Fuel.

What is Nuclear Waste?
- Neutrons bombard atomic nuclei in fission reactors, leading to destabilization and the creation of different elements, some of which become nuclear waste.
- Spent fuel, once removed from reactors, becomes highly radioactive and requires safe storage to prevent environmental contamination.

Managing Nuclear Waste Safely and Effectively
- Spent fuel, initially submerged in water for cooling, is later transferred to dry casks for long-term storage.
- International cooperation, strict regulations, and research into alternative disposal methods are crucial for effective waste management.
- Vitrification, where radioactive waste is encased in glass, and reprocessing, which recycles usable materials, are key techniques.

How do we dispose of nuclear waste?

At or near surface / Geological repositories

Centralized / Distributed = Geological disposition / = Geological disposal

Safe if resources are continually committed / Safe with reduced active measures

Challenges in Managing Nuclear Waste
- Risks of leakage in geological disposal pose human exposure risks.
- Lack of private sector involvement may hinder innovation.
- Unutilized funds allocated for waste management, as seen in the US, are a concern.
- Insufficient international cooperation can impede progress in waste management globally.

India's Approach to Nuclear Waste Management
- India has reprocessing plants in Trombay, Tarapur, and Kalpakkam, focusing on producing plutonium for reactors and weapons.
- Continued investment in research, regulatory oversight, and international collaboration are essential for India's nuclear waste management strategy.

INDIA'S THREE-STAGE NUCLEAR PROGRAMME

Homi Bhabha envisioned India's nuclear power programme in three stages to suit the country's low uranium resource profile

Natural Uranium — 10 GWe.40 y at 0.8 cap.factor — PHWR → ELECTRICITY — Stage 1 — Depleted U — Pu

Th ↓ Stage 2 — PU FUELLED FAST BREEDERS — 500 GWe.100 y at 0.8 cap.factor → ELECTRICITY

Stage 1 Heavy water reactors fuelled by natural uranium produce plutonium

Stage 2 Fuelled by a mix of plutonium and natural uranium. With sufficient stocks, thorium is introduced to convert it into U-233.

Pu / U-233 / Th

Stage 3 — U-233 FUELLED BREEDERS — 500 GWe.350 y at 0.8 cap.factor → ELECTRICITY

U-233

Stage 3 Mix of thorium and uranium fuels the reactors. Thorium transmutes to U-233, which powers the reactor.

Tarapur Atomic Power Station
- PHOTO: VV KRISHNAN

Way Forward
- Emphasize reprocessing and vitrification for waste reduction and long-term stability.
- Invest in research for innovative waste management technologies.
- Strengthen regulatory frameworks and promote international cooperation for responsible nuclear waste management globally.

Global E-waste Monitor 2024

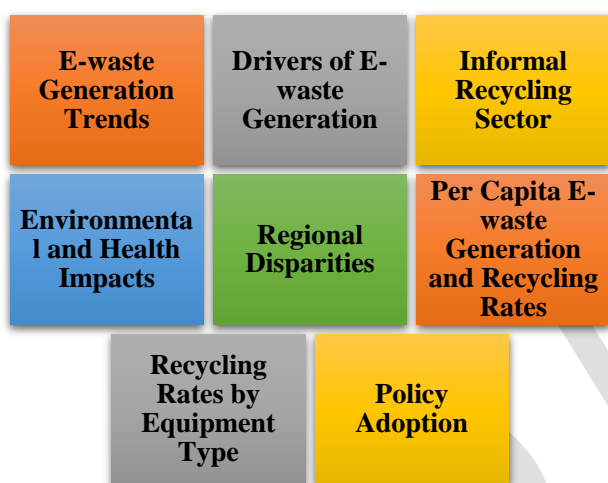**Context:** Recently, the Global E-waste Monitor 2024 was released by the United Nations Institute for Training and Research (UNITAR), highlighting that the world's electronic waste generation is increasing five times faster than documented e-waste recycling rates.

Key Highlights of the Global E-waste Monitor 2024 Report

E-waste Generation Trends	Drivers of E-waste Generation	Informal Recycling Sector
Environmental and Health Impacts	Regional Disparities	Per Capita E-waste Generation and Recycling Rates
Recycling Rates by Equipment Type	Policy Adoption	

- **E-waste Generation Trends**
  - Global e-waste generation has significantly increased from 34 billion (bn) kg in 2010 to 62 bn kg in 2022.
  - Projections indicate a continued rise, reaching 82 bn kg by 2030.
  - Only 13.8 bn kg of this 62 bn kg is formally collected and recycled in an environmentally sound manner.
  - Components of the 62 bn kg of e-waste include 31 bn kg of metals, 17 bn kg of plastics, and 14 bn kg of other materials.
- **Drivers of E-waste Generation**: Factors fuelling e-waste growth include technological advancements, higher consumption rates, limited repair options, short product life cycles,

INDIA'S E-WASTE MESS 'STINKS'

WHAT IS E-WASTE? Any electronic or electrical product which is discarded

WHAT'S THE ISSUE? India's e-waste generation is rising at the rate of 4 to 5%

WHAT'S THE PROBLEM? Huge gap between e-waste generation and e-waste dismantling/recycling

INDIA IS GENERATING E-WASTE AT AN ALARMING LEVEL WITH MEASURES TO KEEP CHECK ON IT LIMITED

WHAT CAN BE DONE? Handle e-waste in scientific manner

Proper disposal of all components that cannot be recycled

Increase number of dismantling/recycling units from the current number -148

Increase awareness amongst consumers

Admission Help Line: +91 9823256625 & 9579247470 (WhatsApp)
Email: info@iqraias.com, support@iqraias.com

increasing electronification, and inadequate e-waste management infrastructure.

- **Informal Recycling Sector**: Inadequate formal e-waste management infrastructure leads to a significant portion of e-waste being handled by the informal sector, both in high- and upper-middle-income countries and low- and lower-middle-income countries.
- **Environmental and Health Impacts**
  - Improper e-waste management, including informal recycling, results in the release of hazardous substances like mercury and brominated flame retardants, posing severe environmental and public health risks.
  - Brominated flame retardants are compounds containing bromine added to materials to inhibit fire ignition and spread.
- **Regional Disparities**
  - Europe shows the highest documented formal collection and recycling rates of e-waste (42.8%), while Africa struggles with low recycling rates (<1%) despite generating less e-waste.

Definition of e-Waste and India's Scenario
• E-waste encompasses old, discarded electrical and electronic equipment containing toxic chemicals like lead, cadmium, mercury, and nickel.
• India ranks third globally in e-waste generation, with significant efforts made through regulations like E-waste (Management) Rules, 2016 and 2022 to manage e-waste responsibly, including EPR, hazardous substance restrictions, and a Deposit Refund Scheme.

  - Asia, including India, generates a substantial amount of e-waste but lags in effective e-waste management practices.
- **Per Capita E-waste Generation and Recycling Rates**
  - Europe (17.6 kg), Oceania (16.1 kg), and the Americas (14.1 kg) lead in per capita e-waste generation in 2022, with advanced collection and recycling infrastructure.
- **Recycling Rates by Equipment Type**: Heavier equipment like temperature exchange equipment and screens have higher collection and recycling rates compared to lighter items like toys, microwave ovens, vacuum cleaners, and e-cigarettes.
- **Policy Adoption**: Eighty-one countries have adopted e-waste policies, with sixty-seven having Extended Producer Responsibility (EPR) provisions and forty-six specifying e-waste collection rate targets.

Economy

Govt concludes G-Sec borrowing for current fiscal

Context: The government has successfully completed Government Securities (G-Sec) borrowing for the current fiscal year 2023-24 and anticipates receiving a dividend from the Reserve Bank of India (RBI) in Financial Year 25 (FR 25), similar to the previous fiscal year.

Government's Borrowing Approach
- The government remains cautious in its borrowing approach, prioritizing prudent fiscal management and ensuring that borrowing aligns with actual needs.
- Completion of G-Sec borrowing, along with expectations for RBI

What are Government Securities (G-Sec)?

- G-Sec are tradable instruments issued by the Central Government or State Governments to borrow money from the public to finance Fiscal Deficit.
- They represent a contractual obligation by the issuer to pay the holder a fixed amount of money, known as principal or face value, on a specified date.
- G-Sec include short-term treasury bills and long-term government bonds or dated securities.
- They are considered risk-free gilt-edged instruments and are issued by both Central and State Governments.
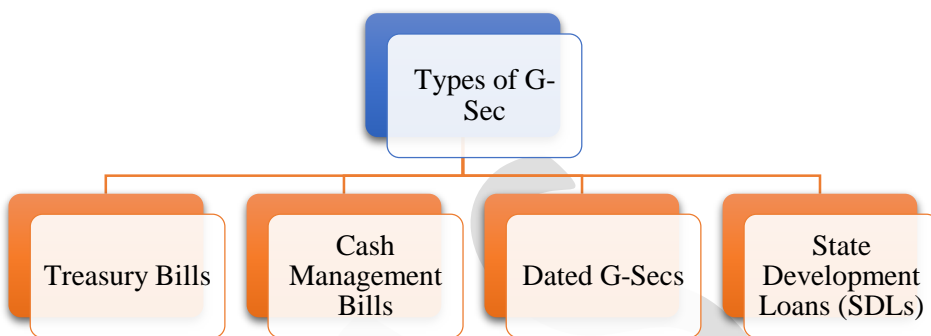
dividend income, reflects efforts to maintain fiscal stability and meet expenditure targets.

Rules for RBI Surplus Transfer to Government

- The RBI transfers its surplus to the government as per Section 47 (Allocation of Surplus Profits) of the Reserve Bank of India Act, 1934.
- A technical committee of the RBI Board, led by Y H Malegam in 2013, recommended a higher transfer to the government.
- Under this section, after making provisions for reserves and retained earnings, the RBI transfers surplus to the government based on various factors such as income from interest on domestic and foreign securities, fees and commissions, profits from foreign exchange transactions, and returns from subsidiaries and associates.
- On the expenditure side, the RBI incurs costs including printing currency notes, interest payments, staff salaries, operational expenses, and contingencies.

Issue Mechanism

- The RBI conducts Open Market Operations (OMOs) to adjust money supply conditions by selling or buying G-Secs.
- OMOs are conducted through commercial banks and help balance inflation while facilitating bank lending.
- Retail investors can purchase T-bills directly through the Retail Direct Gilt (RDG) platform provided by RBI or via select

Types of G-Sec

- Treasury Bills
- Cash Management Bills
- Dated G-Secs
- State Development Loans (SDLs)

How retail investors buy G-Secs

RBI has announced that it will allow retail investors to directly invest in auctions, and buy and sell bonds in the secondary market. We look at the current options available to investors vis-a-vis the central bank's announcemnt.

Investor → Exchange → RBI

1. An exchange takes an order from an investor and places it with RBI. The regulator allots securities, which an exchange deposits in the investor's demat account.

Investor ← Exchange

Investor → Stockbroker → Exchange

Investor ← Stockbroker ← Exchange ← RBI

2. An investor places an order with a stockbroker, which forwards it to an exchange. The exchange gets securities from RBI and gives it to the broker, who deposits them in the investor's demat account.

Investor → Mutual Fund → Bond Market

3. An investor approaches a MF and purchases units of a scheme that invests only in G-Secs. The investment is, however, volatile, and can even turn negative.

Investor ← Mutual Fund

HOW DIRECT INVESTMENT WILL WORK*

Investor → Primary Dealer → RBI

An investor can directly participate in the bond market and auctions through an RBI dealer (mostly banks).

Investor ← Primary Dealer

*RBI is yet to announce details. The process is as outlined by dealers.
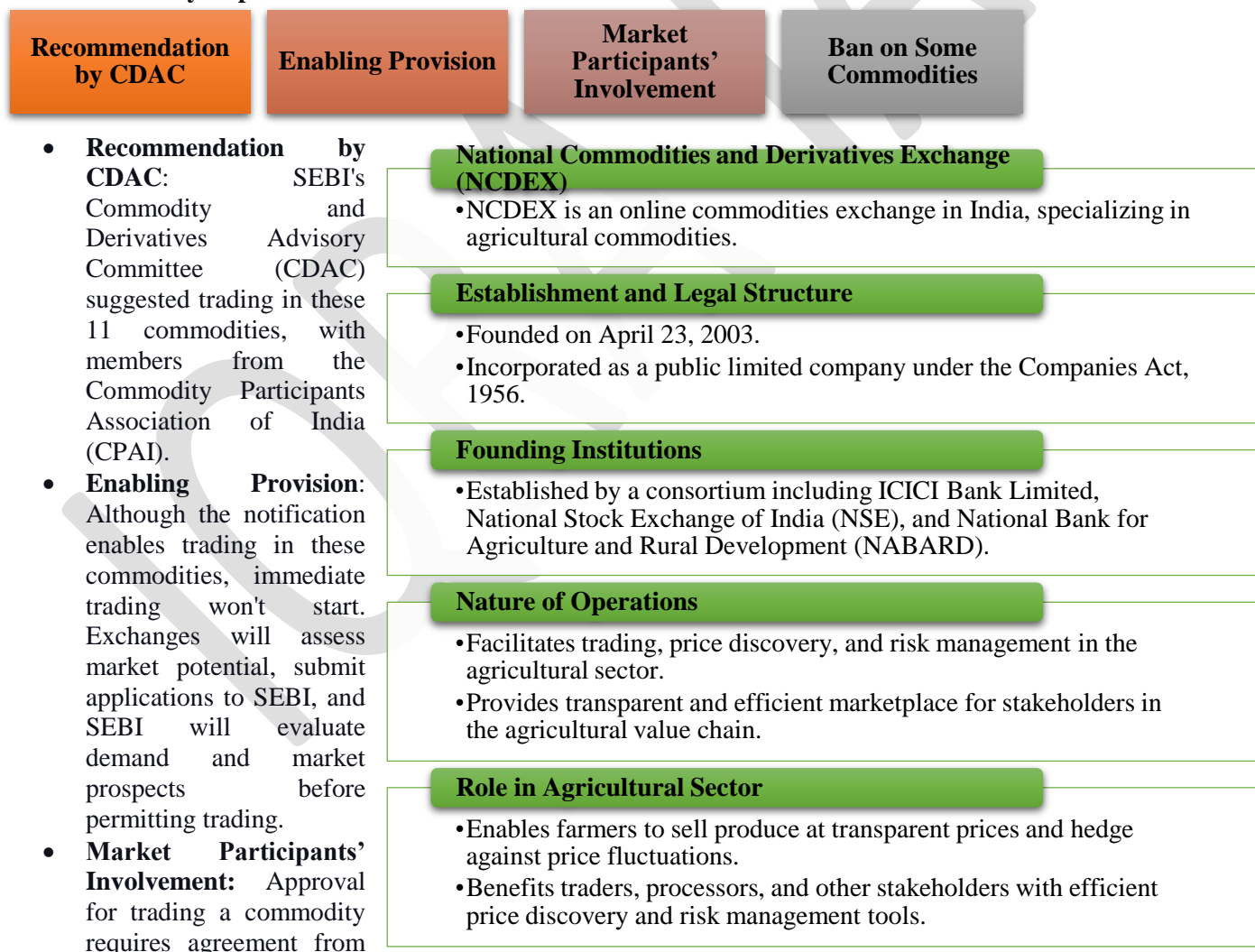
banks and registered primary agents.

- Retail investors participate in both primary and secondary markets for T-bills, allowing them to buy newly issued T-bills and trade them before maturity dates.

Derivatives Trading

Context: Recently, the Finance Ministry, upon the Securities and Exchange Board of India's (SEBI) recommendation, permitted derivatives trading in 11 additional commodities. It includes Skimmed Milk Powder, Cement, Apple, Bamboo, Timber, Weather, Freight, White Butter, Cashew, Metal Alloys and Manganese.

Date of Notification	The Finance Ministry issued the notification on March 1.
Legislation	These commodities are added under the Securities Contracts (Regulation) Act, 1956.
Total Number of Commodities for Derivatives Trading	With these additions, the total count of commodities eligible for derivatives trading now reaches 104.
Immediate Effect	The changes are effective immediately upon the notification's issuance.

Views of Industry Experts

Recommendation by CDAC	Enabling Provision	Market Participants' Involvement	Ban on Some Commodities

- **Recommendation by CDAC**: SEBI's Commodity and Derivatives Advisory Committee (CDAC) suggested trading in these 11 commodities, with members from the Commodity Participants Association of India (CPAI).
- **Enabling Provision**: Although the notification enables trading in these commodities, immediate trading won't start. Exchanges will assess market potential, submit applications to SEBI, and SEBI will evaluate demand and market prospects before permitting trading.
- **Market Participants' Involvement:** Approval for trading a commodity requires agreement from

National Commodities and Derivatives Exchange (NCDEX)
- NCDEX is an online commodities exchange in India, specializing in agricultural commodities.

Establishment and Legal Structure
- Founded on April 23, 2003.
- Incorporated as a public limited company under the Companies Act, 1956.

Founding Institutions
- Established by a consortium including ICICI Bank Limited, National Stock Exchange of India (NSE), and National Bank for Agriculture and Rural Development (NABARD).

Nature of Operations
- Facilitates trading, price discovery, and risk management in the agricultural sector.
- Provides transparent and efficient marketplace for stakeholders in the agricultural value chain.

Role in Agricultural Sector
- Enables farmers to sell produce at transparent prices and hedge against price fluctuations.
- Benefits traders, processors, and other stakeholders with efficient price discovery and risk management tools.

market participant associations. Some physical market participants express concerns about online derivatives trading, fearing price manipulation.

- **Ban on Some Commodities:** Trading in seven key agricultural commodities remains prohibited until December-end to curb inflation.

Expert Opinion

- **Price Discovery**: Derivatives trading in these commodities will aid in price discovery for widely traded items.
- **Inflation Concerns**: Experts express worries about inflation's impact, noting the government's caution regarding derivatives trading's role in price inflation.
- **Policy Certainty**: Hedgers and investors seek clarity and policy certainty concerning derivatives trading in agricultural commodities.

NBBL asked to start interoperable system for net banking in 2024

Context: The RBI has instructed NPCI Bharat BillPay Ltd. (NBBL) to implement an interoperable system for Internet Banking to speed up funds settlement for merchants. RBI highlights the advantages of this system for various payment transactions including income tax, insurance premiums, mutual fund payments, and e-commerce.

Current Scenario and Challenges

- **Non-Interoperability**: Transactions via Payment Aggregators (PAs) lack interoperability, requiring each bank to integrate separately with different PAs.
- **Delays and Settlement Risks**: Absence of standardized payment system leads to delays in payments receipt by merchants and poses settlement risks.

Objective of the Interoperable System

- **Facilitate Quicker Settlement**: The aim is to expedite funds settlement for merchants, ensuring faster transactions.
- **Simplified Transactions**: By creating an interoperable framework, specific arrangements between merchant's PA and customer's bank become unnecessary.

Benefits for Stakeholders

- **Merchants**
  - Faster and reliable settlement of funds.
  - Reduced settlement risks and delays in payments.
- **Banks**
  - Simplified integration process with a standardized system.
  - Enhanced efficiency in handling Internet banking transactions.
- **Customers**
  - Seamless payment experience without multiple arrangements.
  - Quicker processing of transactions for various services.

RBI's Approval and Implementation Timeline

- Approval to NPCI Bharat BillPay Ltd.: RBI has sanctioned NBBL to implement the interoperable system for Internet banking transactions.
- Expected Launch: Implementation of the system is expected within the current calendar year for a more efficient payment experience.

NPCI
- An umbrella organization for retail payments and settlement systems in India.
- Develops and operates payment systems like UPI, IMPS, NEFT, etc.

NBBL
- A subsidiary of NPCI, focused on the Bharat Bill Payment System (BBPS).
- Operates BBPS, a centralized bill payment system in India for utility bills and other services.

BBPS
- A centralized system in India for payment of bills and other services.
- Provides a one-stop solution for utility bill payments through various channels.

Conclusion

RBI's directive to implement interoperable Internet banking system through NPCI Bharat BillPay Ltd. marks significant progress in streamlining digital payments in India.

Indian app developers meet Ministers to resolve Google delisting issue

Context: The Indian start-up group has lodged a complaint with the Competition Commission of India (CCI) against Google, urging the regulator to enforce the reinstatement of apps removed by Google for alleged policy violations. This escalation highlights the intensifying conflict between Indian start-ups and the U.S. tech giant within a critical market.

Background
- Google removed over 100 Indian apps from its platform, citing violations of its policies, notably regarding in-app payment options.
- The removal follows an antitrust directive from 2022, prohibiting tech giants like Google from penalizing companies using alternative billing systems.

Start-ups' Appeal to CCI
- The Alliance of Digital India Foundation (ADIF) has petitioned the CCI, accusing Google of anti-competitive behavior through its app removals and emphasizing potential harm to market competitiveness.
- ADIF urges the CCI to instruct Google to reverse its decision, highlighting concerns over irreparable market damage.

Google's Response and Public Criticism
- Google denies wrongdoing and refrains from commenting on the appeal to the CCI.
- Indian companies criticize Google's actions, reflecting longstanding disputes over its practices.

Key Points
- The dispute impacts the competitiveness of the Indian app market and companies' freedom to use alternate billing systems.
- ADIF's appeal underscores the growing demand for regulatory oversight and fair practices in the digital ecosystem.

Competition Act, 2002
Enacted to promote competition and fair trade practices, the Act aims to prevent anti-competitive behavior in India.
Competition Commission of India (CCI)
• The CCI, established in 2009, enforces the Competition Act, 2002, to promote market competition and protect consumer interests. • It replaced the Monopolies and Restrictive Trade Practices Act, 1969 (MRTP Act), following the Raghavan Committee's recommendations. • The Commission comprises one Chairperson and six Members, appointed by the Central Government.

Features of Competition Act, 2002

Competition Act, 2002 (Act, for brief) has essential four Features:

- To prohibit Anti -Competition Agreements (Sec-3)
- To prohibit Abuse of dominant position (Sec-4)
- To regulate Combinations (Sec-5 & Sec 6)
- Competition advocacy (Sec-49)

- Both Google and the CCI are yet to respond, leaving the fate of removed apps and market dynamics uncertain.

Conclusion

The clash reveals challenges for tech platforms in India's digital landscape, with calls for regulatory scrutiny and fair competition. Stakeholders across the industry await the outcome of this dispute amid escalating tensions.

GI recognition for Narasapur crochet lace craft revives hopes of struggling artisan

Context: The Narasapur crochet lace craft from Andhra Pradesh's Godavari region has received the Geographical Indications (GI) tag, breathing new life into this traditional craft.

Key Highlights

- Bestowed by the Department of Promotion of Industry and Internal Trade (DPIIT) under the Ministry of Commerce and Industry.
- The craft centers around key trading hubs like Narsapur and Palacole in West Godavari district, and Razole and Amalapuram in the Konaseema region.
- It provides livelihoods for approximately 15,000 women artisans who specialize in crafting lace-based garments, home furnishings, and accessories.
- The state government operates the Alankriti Lace Park in Narasapur town.

Origin

- The Narasapur crochet lace craft, dating back to 1844, was introduced to local women in the Godavari region by Macrae and his wife, linked with a Christian missionary in Dummugudem, Scotland.
- They facilitated the sale of these products both domestically and internationally, sustaining the craft despite challenges like the Indian famine of 1899 and the Great Depression of 1929.

History of Narasapur

- Narsapur's history traces back to 1173 AD, with Dutch people arriving in 1626, using it as a port for shipbuilding.
- It became renowned for shipbuilding and was a trading port in the 18th century, exporting teak to other regions, though presently lacking port handling.
- Alexander Hamilton's A New Account of the East Indies (1727) notes Narsapur's significance in trade, but its commerce declined after the abolition of the company's factory in 1827.

Gig Workers suffer from Lack of Social Security, Regulation

Context: A recent study by the People's Association in Grassroots Action and Movements sheds light on the working conditions and challenges faced by app-based cab and delivery drivers in India. The study emphasizes the need for improved social security measures and regulatory oversight to protect the welfare of gig workers.

Key Findings on Gig Workers

Extended Working Hours	Caste-wise Impact	Financial Strain	Financial Hardship	Other Challenges

- **Extended Working Hours**
  - Around one-third of app-based cab drivers work for over 14 hours daily.
  - Over 83% work more than 10 hours, and 60% exceed 12 hours, indicating the demanding nature of their work.
- **Caste-wise Impact**
  - The study shows a disproportionate impact on drivers from Scheduled Castes and Tribes, with over 60% working beyond 14 hours compared to only 16% from the unreserved category.
- **Financial Strain**
  - More than 43% of participants earn less than ₹500 per day or ₹15,000 monthly after expenses, highlighting financial challenges.
- **Financial Hardship**
  - A significant majority (76%) of delivery persons struggle to meet their financial needs, reflecting economic challenges in the gig economy.
- **Other Challenges**
  - Issues like ID deactivation and customer misbehavior add to the difficulties faced by workers in the app-based transport and delivery sector.

Implications of the Report

Social Disparities: Income gaps worsen existing social inequalities, especially among workers from different caste backgrounds.	**Health and Safety Risks**: Prolonged working hours increase exhaustion and road accident risks, compounded by pressure from e-commerce platforms.	**Understanding the Gig Economy**: Temporary, flexible jobs are prevalent, connecting consumers with gig workers across various sectors.

Key Drivers for Gig Economy Growth

- **Changing Work Preferences**: Millennials prefer flexible work arrangements due to hectic lifestyles and a desire for autonomy.
- **Startup Culture**: Startups hire freelancers to reduce costs, fostering gig economy growth.
- **Freelancing Platforms**: Platforms connect gig workers with businesses, enabling seamless transactions.
- **Post-Pandemic Transition**: Laid-off employees explore freelance opportunities, expanding the gig economy.

Advantages and Challenges in Gig Economy

Advantages for Workers	**Advantages for Employers**	**Challenges in the Gig Economy**
•Profit through Diversification •Empowerment and Flexibility •Cost Savings and Convenience	•Efficiency and Productivity •Cost Savings	•Lack of Employment Perks •Job Insecurity •Legal Protections •Access and Connectivity

Way Forward

Policy Reforms	New Legislation	Collaborative Efforts	Technology Integration

- **Policy Reforms**: Fine-tune social security policies to address gig workers' needs.
- **New Legislation**: Consider the Platform-Based Gig Workers (Registration and Welfare) Bill, 2023.
- **Collaborative Efforts**: Establish industry-wide standards and best practices.
- **Technology Integration**: Leverage tech for better access and streamlined processes.

Kerala-Owned OTT Platform

Context: Kerala recently launched CSpace, a government-owned OTT platform focused on promoting quality films with artistic and cultural value.

Overview of Over-The-Top Platforms (OTT)

- OTT platforms like Netflix, Amazon Prime Video, and Hotstar provide audio and video hosting and streaming services. They have expanded into producing short movies, feature films, documentaries, and web series.
- These platforms use Artificial Intelligence (AI) to recommend content based on users' past viewership.
- OTT platforms often offer free content along with a subscription fee for premium content not available elsewhere.

> **About CSpace**
> - CSpace highlights its role in supporting Malayalam cinema and culture.
> - The platform will exclusively stream films already released in theaters to avoid affecting producers and exhibitors' interests.
> - Managed by the Kerala State Film Development Corporation (KSFDC), CSpace ensures transparency in profit-sharing and viewer statistics.
> - A 60-member curator panel will select content based on its artistic, cultural, and infotainment merits.

OTT Platforms in India

- India's OTT market is the world's fastest-growing and is projected to become the sixth-largest by 2024.
- The current valuation of the OTT industry in India is 35 billion INR, driven by nearly 500 million internet users.
- In January 2019, eight video streaming services agreed to a self-regulatory code prohibiting specific types of content:
  - Disrespecting the national emblem or flag
  - Promoting child pornography
  - Outraging religious sentiments
  - Encouraging terrorism
  - Distributing banned content

Challenges with OTT Platforms

> OTT platforms lack laws or autonomous bodies to monitor digital content, leading to unfiltered content availability to the public.

> Unlike traditional media regulated by governments, OTT platforms operate with little to no regulation on content selection, subscription rates, and certification for adult movies.

National Urban Cooperative Finance and Development Corporation Limited

Context: The National Urban Cooperative Finance and Development Corporation Limited (NUCFDC) was inaugurated by the Union Minister for Cooperation, serving as an umbrella organization for urban cooperative banks (UCBs).

NUCFDC has obtained approval from the Reserve Bank of India (RBI) to operate as a non-banking finance company and a self-regulatory body for the urban cooperative banking sector.

History

- The urban cooperative banking movement in India started in the late 19th century, influenced by successful cooperative experiments in Britain and Germany.
- The earliest mutual aid society in India was the "Anyonya Sahakari Mandali" in the princely State of Baroda.
- The first urban cooperative credit society was registered in Canjeevaram (Kanjivaram) in the former Madras province in October 1904.
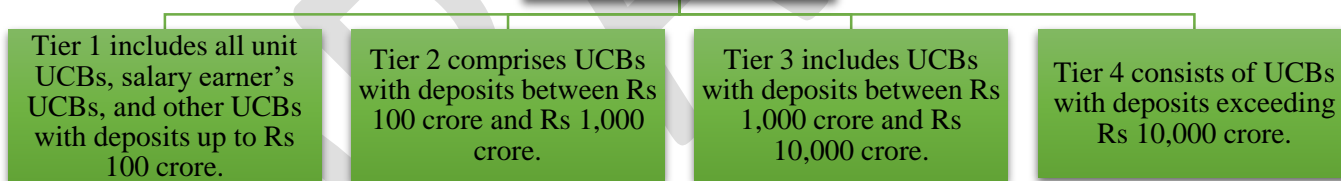
Urban Cooperative Banks (UCBs)

- Cooperative banks are financial institutions owned and operated by their members, providing banking services like loans to support community financial needs.
- In India, they are registered under the Cooperative Societies Act of the relevant state or the Multi-State Cooperative Societies Act, 2002.
- Urban Co-operative Banks (UCBs) are primary cooperative banks located in urban and semi-urban areas.

Regulatory Framework

- The Reserve Bank regulates the banking functions of Urban Cooperative Banks under the Banking Regulation Act, 1949.
- State Cooperative Banks, District Central Cooperative Banks, and Urban Cooperative Banks registered with Deposit Insurance and Credit Guarantee Corporation are insured.
- In 2021, the N. S. Vishwanathan committee proposed a 4-tier structure for UCBs.

Four-Tier Structure

Tier 1 includes all unit UCBs, salary earner's UCBs, and other UCBs with deposits up to Rs 100 crore.	Tier 2 comprises UCBs with deposits between Rs 100 crore and Rs 1,000 crore.	Tier 3 includes UCBs with deposits between Rs 1,000 crore and Rs 10,000 crore.	Tier 4 consists of UCBs with deposits exceeding Rs 10,000 crore.

Minimum Capital and Risk-Weighted Assets (RWA)

- Tier 1 UCBs in a single district should have a minimum net worth of ₹2 crore, while all other UCBs should have ₹5 crore.
- Tier 1 UCBs must maintain a minimum Capital to Risk (Weighted) Assets Ratio of 9% of RWAs, while Tier 2 to 4 UCBs should maintain 12% of RWAs.

Current Status

- India has 1,514 UCBs, accounting for 11% of total credit to agriculture, with a total deposit base of ₹5.26 trillion.

Major Issues Related to UCBs

High Non-performing Assets (NPAs) at 2.10%.

Limited Technology Adoption.

Fraud and Mismanagement, leading to depositor confidence erosion and licence cancellations by RBI.

Way Forward

- Embrace transparency and accountability.
- Implement proactive credit risk management.
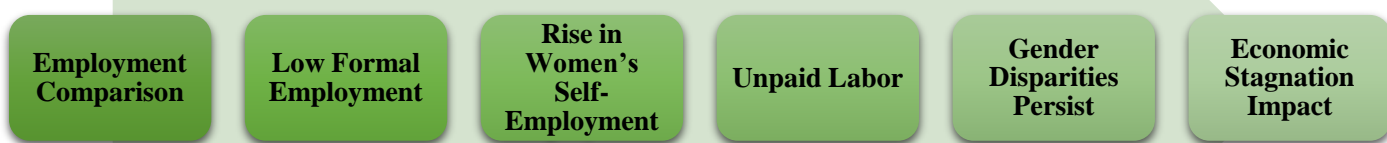- Invest in capacity building for staff to enhance skills and expertise in banking operations.

No major change in employment status or wages in 10 years

Context: Recently, a report by Bahutva Karnataka indicates a rise in self-employed workers' share, contrasting with a low share of those in formal employment.

Report Details

- **Economic Stagnation**: The report reflects stagnation in economic growth in India, notably seen in households earning below the proposed National Floor Level Minimum Wage (NFLMW) of ₹375 daily, with about 34% falling below this mark.
- **Wage Inequality**: The gap between rich and poor widened, with the top 1% and 10% holding 22% and 57% of national income in 2022, respectively, compared to the bottom 50% with a mere 12.7%, per World Inequality Database data.

Key Highlights

Employment Comparison	Low Formal Employment	Rise in Women's Self-Employment	Unpaid Labor	Gender Disparities Persist	Economic Stagnation Impact

- **Employment Comparison**: The report compares employment shares across categories in 2011-12 and 2022-23 for men and women.
- **Low Formal Employment**: Formal sector employment stayed below 25%, while self-employment dominated with over 50% of the workforce engaged.
- **Rise in Women's Self-Employment**: Self-employed women notably increased from 56.5% in 2011-12 to 64.3% in 2022-23, indicating a rising trend in entrepreneurial activities.
- **Unpaid Labor**: More women engaged in unpaid labor within family businesses or farming, reflecting limited formal sector opportunities and stagnant household earnings.
- **Gender Disparities Persist**: Despite increased self-employment, gender gaps persist, with women often in informal or unpaid roles due to formal sector limitations.
- **Economic Stagnation Impact**: Limited formal sector growth pushes individuals, especially women, towards self-employment and unpaid labor for livelihood.
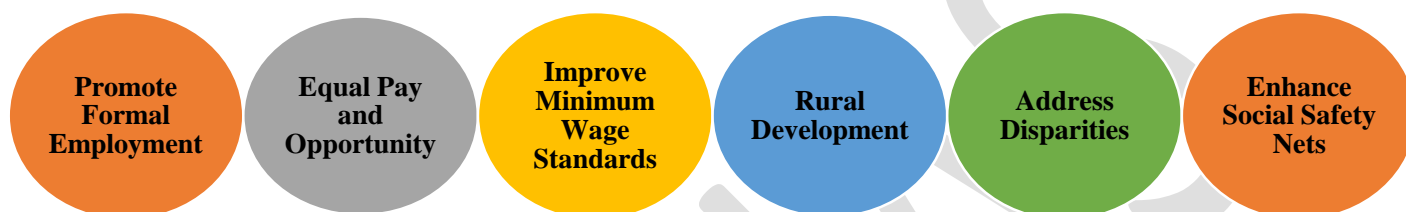
Major Observations in India

Stagnant Income Growth	Low Earnings	Regional Disparities	Wealth Distribution

- **Stagnant Income Growth**: No significant income growth in the past five years across various employment categories.
- **Low Earnings**: Many households earn less than NFLMW, highlighting income disparities and economic challenges.
- **Regional Disparities**: In several states, over 20% of households earn below ₹375 daily, with states like Chhattisgarh and Uttar Pradesh exceeding 50%.
- **Wealth Distribution**: The wealthiest 10% hold a growing share of national wealth, while the poorest 50% face declining shares, indicating increasing wealth disparity.

Measures to Address Issues

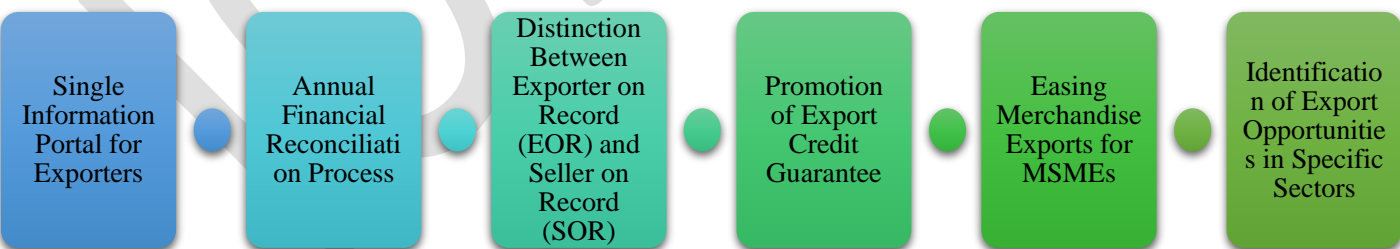| Promote Formal Employment	Equal Pay and Opportunity	Improve Minimum Wage Standards	Rural Development	Address Disparities	Enhance Social Safety Nets

- **Promote Formal Employment**: Encourage policies supporting stable formal jobs with social security benefits and incentivize businesses for job creation.
- **Equal Pay and Opportunities**: Enforce equal pay laws and eliminate gender discrimination in hiring and promotions.
- **Improve Minimum Wage Standards**: Regularly review and adjust minimum wage standards to ensure decent living standards.
- **Rural Development**: Develop rural areas to create alternative livelihoods and reduce agriculture dependence.
- **Address Disparities**: Focus on infrastructure, skills, and investments in economically backward regions.
- **Enhance Social Safety Nets**: Strengthen programs like Universal Basic Income (UBI), healthcare, and education for vulnerable households.

Addressing stagnant incomes and rising self-employment requires promoting formal jobs, equal opportunities, rural development, and robust social safety nets.

Boosting Exports from MSMEs NITI Aayog

Context: The NITI Aayog recently released a report titled Boosting Exports from MSMEs, advocating for easier export opportunities for smaller firms through e-commerce platforms.

Key Recommendations of the Report

Single Information Portal for Exporters	Annual Financial Reconciliation Process	Distinction Between Exporter on Record (EOR) and Seller on Record (SOR)	Promotion of Export Credit Guarantee	Easing Merchandise Exports for MSMEs	Identification of Export Opportunities in Specific Sectors

- **Single Information Portal for Exporters**
  - Create a single information portal using AI-based interfaces for exporters, offering updated market tariffs, paperwork requirements, finance sources, service providers, incentives, and potential customers.
  - Establish a comprehensive National Trade Portal (NTN) to streamline MSME export processes, ensuring competitive advantage and operational efficiency.

- **Annual Financial Reconciliation Process**
  - Introduce an annual financial reconciliation process for e-commerce exporters.
  - Provide exemptions on import duties for rejects or returns and create a green channel clearance for e-commerce exports.
- **Distinction Between Exporter on Record (EOR) and Seller on Record (SOR)**
  - Differentiate between EOR and SOR for e-commerce exports, allowing a reduction in invoice value without a percentage ceiling.
- **Promotion of Export Credit Guarantee**
  - Promote Export Credit Guarantee to enhance working capital availability.
  - Create incentives to increase uptake from the current 10% to 50% or more.
- **Easing Merchandise Exports for MSMEs**
  - Relax compliance requirements for MSMEs temporarily.
  - Implement a time-bound disbursement process for incentives to avoid blocking working capital.
- **Identification of Export Opportunities in Specific Sectors**
  - Identify sectors like handicrafts, handloom textiles, ayurveda, herbal supplements, leather goods, imitation jewellery, and wooden products for global market potential exceeding USD 340 billion.

> **Current Scenario of the MSME Sector in India**
> - MSMEs contribute significantly to India's economy, providing over 11 crore jobs and contributing around 27% of GDP.
> - Rapid growth in MSME establishment, with approximately 40 lakh new units between FY 2019 and FY 2021, especially in micro-enterprises.
> - Manufacturing MSMEs, particularly small and medium enterprises, contribute significantly to export-oriented manufacturing activities.

Current Challenges Related to the MSME Sector in India

Financial Constraint	Lack of Innovation	Majority of Small Firms	Lack of Formalisation

- **Financial Constraint**
  - Limited access to timely finance, with only 16% of SMEs having access.
  - Reliance on internal resources due to financial constraints.
- **Lack of Innovation**
  - MSMEs lack innovation and rely on outdated technologies.
  - Limited adoption of new technologies and tools due to a shortage of entrepreneurs.
- **Majority of Small Firms**
  - Over 80% of MSMEs are micro and small businesses, facing communication gaps and unawareness of government initiatives.
- **Lack of Formalisation**
  - MSMEs lack formalisation, leading to credit gaps and unregistered businesses.

Government Initiatives Related to MSMEs
- Raising and Accelerating MSME Performance (RAMP) Scheme
- Credit Guarantee Trust Fund for Micro & Small Enterprises (CGTMSE)
- Interest Subsidy Eligibility Certificate (ISEC)
- A Scheme for Promoting Innovation, Rural Industry & Entrepreneurship (ASPIRE)
- Credit Linked Capital Subsidy for Technology Upgradation (CLCSS)
- Zero Defect & Zero Effect (ZED)

Addressing challenges such as limited export participation and regulatory constraints is crucial to unlocking the full potential of the MSME sector in India, which plays a vital role in employment generation and economic growth.

RBI Integrated Ombudsman Scheme

Context: Recently, the Reserve Bank of India (RBI) reported a significant surge of 68.2% in complaints under its Integrated Ombudsman Scheme (RB-IOS) for the financial year 2023, reaching a total of 703,000 complaints. This increase marks a notable rise compared to previous years, with FY22 experiencing a 9.4% increase and FY21 witnessing a 15.7% hike in complaints.

Factors Behind the Surge in Complaints

- The central bank's robust public awareness initiatives played a crucial role in encouraging people to voice their concerns and grievances, increasing the likelihood of reporting issues with banks and non-bank payment systems.
- The implementation of a streamlined process for lodging complaints has made it easier for the public to report issues encountered with financial institutions, leading to increased engagement and complaint submissions.

> **Understanding an Ombudsman**
> - An ombudsman is a government official responsible for addressing complaints made by ordinary people against public organizations, a concept originating from Sweden.
> - In India, an ombudsman is appointed to resolve grievances in sectors such as Insurance, Income Tax, and Banking.

- With the rise in digital transactions, especially in mobile and electronic banking, there is a higher probability of encountering issues such as unauthorized or fraudulent transactions, contributing to the surge in complaints.
- The convenience of digital banking also means that any disruptions in the system can affect a large number of users simultaneously, further driving the increase in complaints.

RBI Integrated Ombudsman Scheme (RB-IOS)

About

- RB-IOS integrates three ombudsman schemes of RBI the banking ombudsman scheme of 2006, the Ombudsman scheme for NBFCs of 2018, and the Ombudsman scheme of digital transactions of 2019.
- The unified scheme aims to address customer complaints regarding services provided by RBI-regulated entities like banks, NBFCs, and prepaid instrument players if not resolved satisfactorily within 30 days.

Need

- The integration addresses concerns regarding the lack of maintainable grounds for challenging actions of regulated entities or complaints rejected on technical grounds.
- Expanding the grounds for complaints is expected to improve consumer response and reduce reliance on consumer courts.

Features
- The scheme defines 'deficiency in service' as grounds for complaints, with specified exclusions, ensuring complaints are not rejected solely based on non-listed grounds.
- It is jurisdiction-neutral with a centralized processing center in Chandigarh, leveraging Artificial Intelligence tools for efficient coordination.
- Customers can file complaints, track status, and provide feedback via email or a multilingual toll-free number.
- Regulated entities cannot appeal against ombudsman awards for unsatisfactory or delayed information provision.

Appellate Authority
- RBI's Executive Director overseeing the Consumer Education and Protection Department serves as the Appellate Authority under the scheme.

Significance
- The integrated scheme enhances grievance redress mechanisms, ensuring uniformity, user-friendliness, and improved customer experience, contributing to financial inclusion and customer satisfaction.

RBI to Review NBFCs

Context: The Reserve Bank of India (RBI) is preparing for a thorough assessment of the classification of Non-Banking Finance Companies (NBFCs) in 2024. This review is viewed as a preliminary step that could lead to certain NBFCs being considered for bank licenses in the future. Elevating specific NBFCs is seen as an initial and evaluative measure toward potential consideration for bank licenses down the line.

What are NBFCs?

An NBFC is a company registered under either the Companies Act, 1956, or the Companies Act, 2013, engaged in various financial activities such as lending, investing in securities, leasing, and insurance. While they offer banking services, NBFCs do not possess a banking license.

Classification of NBFC	Based on Deposits	Deposit-taking non-banking finance companies
		Non-Deposit taking Non-Banking Financial Institutions
	Based on Major Activity	Investment and Credit Company
		Consumer Durable Loan Finance
		Core Investment Company (CIC)
		Infrastructure Finance Company (IFC)
		Infrastructure Debt Fund (IDF)
		Asset Reconstruction Companies (ARC)
		Factoring Companies
		Gold Loan Companies
		Fintech companies P2P Lenders

Key Features
- NBFCs provide a range of financial services including personal loans, home loans, vehicle loans, gold loans, microfinance, insurance, and investment management.
- They can accept public deposits for periods ranging from 12 to 60 months but are not authorized to accept demand deposits.
- NBFCs are not part of the payment and settlement system and cannot issue self-drawn cheques.

Licensing
- Companies must be registered under the Companies Act, 2013, as either public or private companies.
- They must have a minimum net owned fund of Rs. 10 crores to qualify for NBFC registration.
- At least one-third of the directors must possess relevant work experience in the finance sector.
- The company's credit history and financial credibility with CIBIL must be sound.
- Compliance with regulations under Capital Compliances and Foreign Exchange Management Act (FEMA) laws is mandatory.

Regulation
- The RBI, under the RBI Act 1934, is empowered to register, formulate policies, issue directives, conduct inspections, regulate, supervise, and exercise surveillance over NBFCs meeting the 50-50 criteria for principal business.
- The Scale Based Regulation (SBR) introduced in October 2021 categorizes NBFCs into different layers based on asset size and scoring criteria, facilitating regulatory oversight.

Registration of NBFC

- In terms of Section 45-IA of the RBI Act, 1934, it is mandatory that every NBFC should be registered with RBI to commence or carry on any business of non-banking financial institution as defined in clause (a) of Section 45 I of the RBI Act, 1934

What is the 50-50 Criteria of Principal Business?
- The RBI defines a company's principal business as financial if over 50% of its total assets and gross income derive from financial activities.
- This criterion ensures that companies primarily involved in financial operations fall under RBI's regulatory purview, while those primarily engaged in non-financial activities do not come under RBI regulation.

This assessment, known as the "50-50 criteria," determines a company's level of involvement in financial business.

Science & Technology

Rocky vista of medicinal cannabis that research is bringing into view

Context: Cannabis sativa is being researched for its effects on mood and cognition, especially in managing conditions like schizophrenia, cannabis-use disorders, and heroin-use disorders.

Clinical Trial on Cannabidiol (CBD) for Bipolar Depression
- The University of British Columbia is conducting a clinical trial to investigate the use of CBD for treating bipolar depression, which lacks effective treatment options for its depressive episodes.
- CBD is a phytocannabinoid found in cannabis plants, comprising up to 40% of the plant's extract.

What Is Bipolar Disorder?

Bipolar disorder is a mental health disorder whose core feature is a disturbance in mood. The hallmark feature of the diagnosis is mania. Mania is a dysregulated form of mood instability where an individual can feel extreme elation with accompanying disturbances in thinking and behavior. While depression may be present, it is not necessary for a diagnosis. What is needed for a diagnosis is at least one lifetime manic episode.
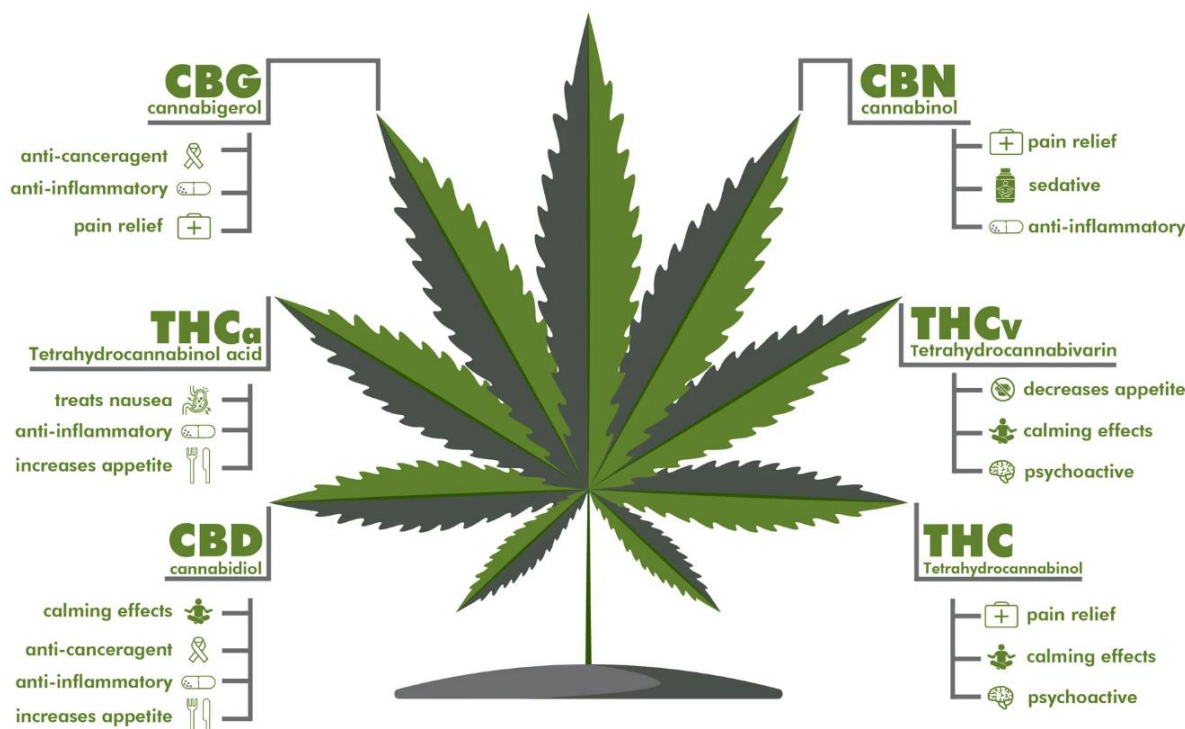
Cannabinoids in Cannabis and Their Effects

- CBD and tetrahydrocannabinol (THC) are identified cannabinoids in cannabis, with THC being the primary psychoactive component.
- CBD is known for its possible antipsychotic, anti-inflammatory, and neuroprotective benefits.
- Cannabis potency is higher in flowering parts compared to leaves.
- Marijuana, composed of buds and leaves of pollinated female plants, is typically grown outdoors.

The Cannabinoid System

- The human cannabinoid system includes CB1 and CB2 receptors, playing roles in modulating neurotransmitter release and regulating various bodily functions.

Indica

Sativa

Supposed Description
Broad leaves
Short in stature
Short flowering cycle

Supposed Description
Narrow leaves
Tall in stature
Long flowering cycle

Supposed effects
Sedating
Calming
Good for stress
and pain relief

Jean Baptiste Lamarck
One of the first scientists
to propose two species
of cannabis

Supposed effects
Uplifting
Mood-enhancing
Good for social settings

BENEFITS OF CANNABINOIDS

CBG
cannabigerol
- anti-canceragent
- anti-inflammatory
- pain relief

CBN
cannabinol
- pain relief
- sedative
- anti-inflammatory

THCa
Tetrahydrocannabinol acid
- treats nausea
- anti-inflammatory
- increases appetite

THCv
Tetrahydrocannabivarin
- decreases appetite
- calming effects
- psychoactive

CBD
cannabidiol
- calming effects
- anti-canceragent
- anti-inflammatory
- increases appetite

THC
Tetrahydrocannabinol
- pain relief
- calming effects
- psychoactive

- THC affects motor control and memory and has implications for treating conditions like PTSD.
- The rimonabant debacle involved a CB1 receptor blocker for weight loss, which was associated with severe side effects and withdrawn from the market.
- THC and synthetic cannabinoids have medical applications, including pain management and appetite stimulation.

THC Addiction and Withdrawal
- THC's addictive potential remains debated, with mixed human data on escalation of consumption.
- THC withdrawal symptoms include sleep issues, appetite loss, restlessness, and irritability.

Effects on Anxiety and Mood
- Cannabis effects on mood are complex, with limited scientific investigation for conditions like treatment-resistant depression.
- Cannabis use may increase the risk of bipolar disorder or trigger its onset.
- Cannabis use, especially in youth, may hasten the onset of schizophrenia in genetically predisposed individuals.

Policy Considerations
- Cannabis is widely used globally, leading to debates on decriminalization, especially for medical applications.
- Policymakers are urged to consider regulations to prevent commercialization and protect vulnerable populations from the harmful effects of cannabis.

India-specific AI model to find gestational age developed

Context: Researchers have created a specific artificial intelligence model for India to accurately determine the gestational age of a fetus during the second and third trimesters of pregnancy.

Significance of Accurate Gestational Age (GA)

Crucial for appropriate care and determining precise delivery dates.

Named 'Garbhini-GA2,' the model is India-specific.

Key Highlights
- BRIC-THSTI Faridabad and IIT Madras researchers collaborated to develop this India-specific model, known as Garbhini-GA2.
- It is the first late-trimester gestational age estimation model validated using Indian population data.
- Currently, gestational age is determined using formulas designed for Western populations, which may be inaccurate for Indian pregnancies due to fetal growth variations.

Challenges with Current Models

Current GA formulas developed for Western populations.

Pronounced errors in later pregnancy due to variations in Indian foetal growth.

Benefits of 'Garbhini-GA2'

Reduces estimation errors by almost three times.

Improves care, potentially lowering maternal and infant mortality rates in India.

Future Deployment

Collaboration with Gurugram Civil Hospital, Safdarjung Hospital, and more.

Prospective pan-India validation for deployment across clinics.

- Garbhini-GA2 significantly reduces error in estimating gestational age for Indian pregnancies, by nearly threefold.
- Accurate gestational age estimation is crucial for proper prenatal care and determining delivery dates, thereby reducing maternal and infant mortality rates.
- Collaboration between clinicians and data scientists is essential for developing technically sound and clinically relevant solutions, integrated into healthcare workflows.

Why needed?

- Early pregnancy ultrasound dating is standard practice for estimating gestational age, but many Indian women have their first ultrasound in the second or third trimester.
- Using Indian-specific gestational age formulas can improve pregnancy care and outcomes for these women.
- Accurate dating can also improve epidemiological estimates for pregnancy outcomes in India.
- Once validated in pan-India cohorts, Garbhini-GA2 can be implemented in clinics nationwide, improving care and reducing maternal and infant mortality rates.

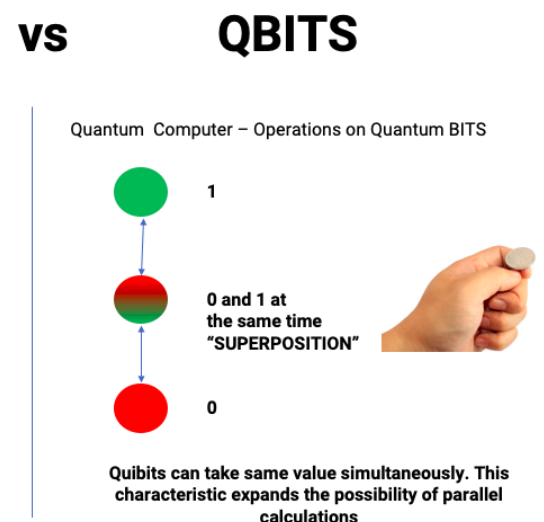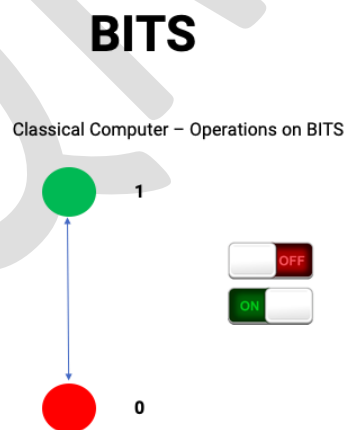## Will 'colour molecules' make quantum computers accessible

Context: Many physical systems serve as potential qubits, but most operate at very low temperatures. Researchers are exploring alternative technologies to reduce costs and make quantum computers commercially viable.

Difference between Classical Computers and Quantum Computers

Classical Computer	Quantum Computer
- A classical computer consists of information storage units called bits, each with two states (0 and 1). - Computations are based on manipulating the states of these bits.	- A qubit is the fundamental component of a quantum computer. - Unlike classical computers, a qubit can exist in a superposed state with contributions from both 0 and 1.

Challenges with Quantum Devices

- Grouping qubits to form a quantum device requires meeting certain criteria:
- Identical qubits are preferred but difficult to guarantee due to manufacturing imperfections.
- Integration of multiple qubits should be relatively easy and controllable.
- Qubit systems should be robust enough to function at room temperature without losing quantum features for extended periods.

BITS vs QBITS

Classical Computer – Operations on BITS

Quantum Computer – Operations on Quantum BITS

0 and 1 at
the same time
"SUPERPOSITION"

Quibits can take same value simultaneously. This characteristic expands the possibility of parallel calculations

Admission Help Line: +91 9823256625 & 9579247470 (WhatsApp)
Email: info@iqraias.com, support@iqraias.com

Available Qubits

- Various physical systems, such as superconducting junctions, trapped ions, and quantum dots, can serve as qubits.
- However, these systems typically operate as qubits only at very low temperatures or in high vacuum conditions.

Commercial Viability

- Quantum computers based on existing technologies are costly and may not be economically viable in the long run.
- Researchers in Japan recently achieved qubits at room temperature using a metal-organic framework (MOF).

> **Metal-Organic Framework (MOF)**
> - A MOF consists of repeated molecular arrangements with metal atoms or ions attached to organic molecules.
> - These structures allow for the rotation of chromophores, which play a crucial role in qubit devices.

Chromophores and Qubits

- Chromophores are organic molecules that absorb specific colors of light.
- Singlet and triplet states of chromophores are important for qubit operations.
- Singlet fission and singlet-induced superposition are key phenomena in achieving qubits in MOF-based systems.

Room Temperature Coherence

- The porous nature of MOF networks allows for the rotation of chromophores, leading to interactions between adjacent chromophores.
- This interaction results in long-lived superposition of triplet states, even at room temperature.
- Achieving coherence at room temperature for extended durations is a significant advancement in quantum computing.

Blanets: worlds around black holes

Context: In Christopher Nolan's 2014 sci-fi masterpiece Interstellar, three planets (aside from Earth) mesmerize viewers with their extreme environments. Surprisingly, these worlds, technically termed Blanets, may not be purely fictional and could exist in reality.

What are Blanets?

Formation Theory

In 2019, Japanese scientists proposed a theory suggesting that planets could form within massive dust and gas clouds surrounding supermassive black holes.

Unique Characteristics

Blanets, unlike Earth, are not expected to resemble habitable worlds due to their formation near black holes.

Surrounding Environment

Black holes are encircled by colossal discs of gas and dust, influenced by the black hole's gravitational pull and heating effects.

Galactic Presence

Nearly every galaxy is believed to harbor a supermassive black hole at its center, acting as a gravitational nucleus around which stars organize.

Formation Process

- **Similar Mechanism**: Planets near young stars form from the collision and aggregation of dust and gas particles in swirling disks. A comparable process could occur near supermassive black holes.
- **Blanet Characteristics**: Blanets are anticipated to be approximately 3,000 times larger than Earth and must orbit the black hole at a distance of about 100 trillion km to avoid gravitational disruption during their formation.
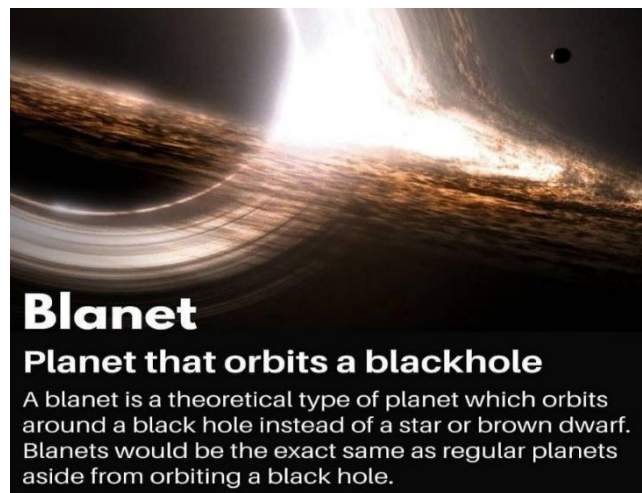
Implications and Speculations

Extreme Environments	Scientific Inquiry

- **Extreme Environments**: Blanets represent worlds of extremes, vastly different from habitable planets like Earth.
- **Scientific Inquiry**: The study of blanets offers insights into the dynamic interactions between black holes and their surrounding environments, pushing the boundaries of astrophysical understanding.

Health

What is 'dry ice' at the centre of the Gurugram restaurant incident?

Context: At a restaurant in Gurugram, patrons were mistakenly served "dry ice" as a mouth freshener, resulting in severe health reactions, including vomiting blood.

Dry Ice

- Dry ice is the solid state of carbon dioxide, identified as a hazardous substance by authoritative bodies such as the Food Safety and Standards Authority of India (FSSAI), the United States Food and Drug Administration (FDA), and the Centers for Disease Control and Prevention (CDC).
- Direct contact with skin or ingestion can cause significant harm due to its extremely cold temperatures and the risk of sublimation into carbon dioxide gas, potentially leading to breathlessness.

Primary Use

- Primarily used as a cooling agent for food products, dry ice is preferred for its ability to maintain lower temperatures than water ice without leaving any residue other than incidental frost.
- It is employed in preserving frozen foods where traditional mechanical cooling is impractical and in fog machines for theatrical effects and temporary refrigeration needs.
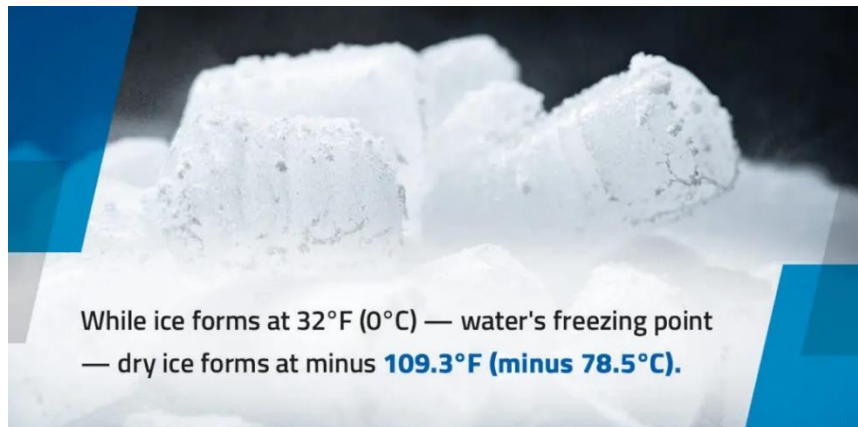
While ice forms at 32°F (0°C) — water's freezing point — dry ice forms at minus **109.3°F (minus 78.5°C)**.

Characteristics
Sublimates at 194.7 K (-78.5 °C; -109.3 °F) under Earth's atmospheric pressure and can cause hypercapnia if outgassed in confined spaces.

Safe Handling Guidelines
- Awareness campaigns are crucial to educate food business operators and citizens on the proper and safe handling of dry ice.
- FSSAI advises against storing dry ice in enclosed spaces and stresses the necessity of well-ventilated areas to minimize health risks.
- The FDA warns against compromising food safety with dry ice, recommending against direct consumption or skin contact.
- Establishments using dry ice should implement safety protocols and train employees to prevent accidental ingestion or contact, according to the FDA.
- The CDC suggests using cold temperature gloves and safety goggles and working in well-ventilated areas when handling dry ice, strictly prohibiting consumption.

A bold step towards a cervical cancer-free future

Context: The interim Union Budget for 2024-25 highlights women's health, notably by supporting the vaccination of girls aged nine to 14 against cervical cancer, a significant step for women's health and safety in India.

The '90-70-90' targets, global programs
- Despite medical advancements, cervical cancer remains a major challenge in India, being the second most common cancer among women with over 127,000 cases and around 80,000 deaths annually.
- The human papillomavirus (HPV) is a key factor in cervical cancer, leading to the adoption of HPV vaccination as a crucial preventive measure.

CERVICAL CANCER

MALIGNANT TUMOR that ORIGINATES in CERVIX

TREATMENT
* LOCAL ABLATION MODALITIES
* SURGICAL RESECTION
* CHEMOTHERAPY
* RADIOTHERAPY
(DEPENDING on AGGRESSIVENESS & EXTENSION of TUMOR)

SYMPTOMS
* VAGINAL BLEEDING AFTER INTERCOURSE
* HEAVY or PROLONGED PERIODS
* ODOROUS DISCHARGE

DIAGNOSIS
* PAP SMEAR
* HPV DNA TESTING
* COLPOSCOPY

- The World Health Organization (WHO) aims to achieve '90-70-90' targets by 2030 vaccinating 90% of girls by age 15, screening 70% of women by ages 35 and 45, and treating 90% of women with cervical cancer.
- These goals are pivotal in global efforts to eradicate cervical cancer, highlighting the significance of India's HPV vaccination initiative.

International and regional efforts
- Globally, over 100 countries have introduced HPV vaccination programs, substantially reducing cervical cancer incidence.
- Success stories include Scotland and Australia, with no cervical cancer cases among vaccinated women and Australia on track to eliminate cervical cancer by 2035.
- Rwanda's vaccination campaign significantly reduced HPV prevalence among women, demonstrating the vaccine's effectiveness.
- In the Southeast Asia Region, six countries, including Bhutan, have implemented national HPV vaccination programs, with Bhutan achieving a 95% vaccination rate among targeted girls.

The Sikkim Model
- Sikkim's HPV vaccination campaign achieved 97% coverage in 2018, emphasizing comprehensive communication strategies in public health initiatives.
- This approach involved educating various stakeholders about the vaccine's benefits.

India's initiatives

India's indigenous quadrivalent HPV vaccine, Cervavac, priced at ₹2,000 per dose, is a significant advancement in accessibility and affordability.

The potential inclusion of adolescent boys in the vaccination program, along with evidence supporting single-dose efficacy, suggests a comprehensive strategy against HPV infections.

HPV vaccination aims to reduce the societal and economic burdens of cervical cancer, benefiting women's health and overall well-being.

Challenges
- India faces challenges such as vaccine hesitancy and equitable access to vaccination, requiring community engagement and combating misinformation.
- The introduction of U-WIN aims to maintain an electronic registry of immunizations for real-time responsiveness in vaccination programs, similar to the Co-WIN platform.

Yaounde Declaration

Context: The Yaoundé Declaration, a significant step in the battle against malaria, was recently adopted by health ministers from 11 African countries, pledging to eradicate malaria deaths.

About
- Global malaria cases saw an increase from 233 million in 2019 to 249 million in 2022, with Africa experiencing a notable surge to 233 million cases.
  - Africa contributes to 94% of global malaria cases and 95% of related deaths.

- Progress in combating malaria has stalled in the WHO Africa region, although the 11 African countries involved in the Yaoundé conference carry more than 70% of the global malaria burden.
- The declaration's objectives include strengthening health infrastructure, boosting personnel capacity, and improving program implementation.
  - It also aims to establish partnerships for funding, research, and innovation.
- Despite the declaration's adoption, experts emphasize the urgency of taking tangible actions.
  - The African Union's target to control and eliminate malaria by 2030 faces substantial financial shortfalls, requiring USD 1.5 billion to maintain basic malaria services and additional funding for climate adaptation in the health sector.
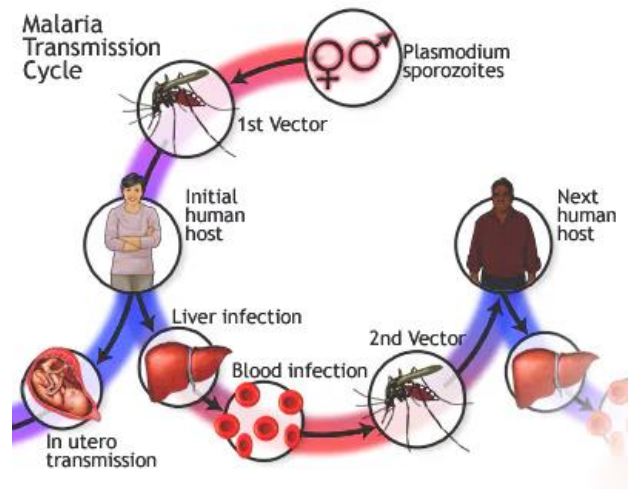
Abortion

Context: The French lawmakers recently passed a bill to include abortion rights in France's constitution, making it the only country explicitly guaranteeing a woman's right to choose abortion. This bill responds to global concerns about abortion rights, notably after the US Supreme Court's decision in the Roe v Wade case in 2022.

For and Against Abortion

Proponents	Opponents
• Supporters of abortion rights argue it as a fundamental reproductive right, enabling individuals to make decisions about their bodies, health, and future. • Access to safe and legal abortion services is crucial in preventing unwanted pregnancies, safeguarding women's health, and supporting reproductive autonomy.	• Opponents of abortion, often termed "pro-life," believe it is morally wrong and should be restricted or banned entirely. • They argue that life begins at conception, equating abortion to taking a human life and violating the rights of the unborn.

What is Abortion?

- Abortion is the intentional termination of pregnancy, typically performed within the first 28 weeks of gestation using various medical methods or medications, based on the pregnancy stage and individual preferences.
- It is a highly debated topic involving ethical, moral, religious, and legal aspects.

What is Abortion?

Abortion is a procedure of terminating a pregnancy by removing the fetus/embryo.

Legal Provisions Related to Abortion in India

- Until the 1960s, abortion was illegal in India under Section 312 of the Indian Penal Code.
- The Medical Termination of Pregnancy (MTP) Act, 1971 legalized safe abortions, protecting women's health and reducing maternal mortality.
- The Act permits abortions up to 20 weeks with a single registered medical practitioner's approval, with updates in 2002 and 2021.
- The MTP Amendment Act, 2021 extends abortion to 24 weeks for specific cases like rape survivors, with approval from two doctors.
- It establishes state Medical Boards for abortions after 24 weeks due to substantial fetal abnormalities, and allows unmarried women access to abortion services.
- Consent requirements vary by age and mental state, ensuring medical oversight.

● Stage till abortion is legal ● Exception

US
● Any stage
● None

UK
● 24 weeks
● Depends on risks

AUSTRALIA
● Any stage
● States have own laws

CANADA
● 24 weeks
● Doctors advice

FRANCE
● 14 weeks
● Depends on risks

GERMANY
● 12 weeks
● Up to 23 weeks if doctors advice

JAPAN
● Not allowed
● Depends on risks

BRAZIL
● Not allowed
● Depends on risks

INDIA : Abortion is legal till 20 weeks

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Concerns Related to Abortion

- **Unsafe Abortions**: Major cause of maternal mortality, especially for unmarried and economically disadvantaged women.
- **Male Child Preference**: Selective abortions of female foetuses persist where male children are favored, notably in parts of Asia.
- **Medical Expert Shortage**: Limited access to qualified obstetrician-gynaecologists, particularly in rural areas.

Way Forward

- Ensure access to safe and legal abortion services without stigma or barriers.
- Expand abortion services availability, train healthcare providers, and raise awareness about women's rights under the MTP Act.
- Support healthcare providers in delivering quality care while addressing ethical and legal concerns.

THE ABORTION LAW

➤ The existing Medical Termination of Pregnancy (MTP) Act of 1971, sought to 'liberalise' the British-era 'very strict penal law', which was in existence for over a century

➤ Before the 1971 Act, abortion was a crime for which 'the mother as well as the abortionist could be punished except where it had to be induced in order to save the life of the mother'

➤ The government brought in the MTP Act as a 'health measure'

➤ It allowed abortion 'when there is danger to the life of or risk to physical or mental health of the woman', on humanitarian grounds – such as when pregnancy arises from a sex crime like rape or intercourse with a lunatic woman', and 'eugenic grounds – where there is substantial risk that the child, if born would suffer from deformities and diseases'

THE 20-WEEK BAR: Section 3(2) of the MTP Act bars termination of pregnancy beyond 20 weeks by any doctor

Up to 12 weeks it requires no reason. **Between 12 and 20 weeks** it requires two registered doctors to opine in good faith:

➤ That continuance of the pregnancy would involve a risk to the life of the pregnant woman or grave injury physical or mental health

➤ That there is a substantial risk that if the child were born, it would suffer from such physical

or mental abnormalities as to be seriously handicapped

➤ Under section 5 of the MTP Act there is an exception to the 20-week bar if doctors certify serious risk to the pregnant woman's life in case it is continued

IDF recommends more sensitive test to indicate risk of developing diabetes

Context: The International Diabetes Federation (IDF) suggests using a test that measures blood sugar one hour (1-h PG) after administering an Oral Glucose Tolerance Test (OGTT) to assess the risk of diabetes.

About

- Extensive epidemiological data supports the superiority of 1-h PG over fasting PG (FPG), HbA1c, and 2-hour PG across different demographics like ethnicity, sex, and age groups.
- 1-h PG is a more sensitive biomarker for identifying high-risk individuals at an earlier stage.

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- The measurement of blood sugar one hour after consuming a 75 gm sugar solution is recommended for screening intermediate hyperglycemia (IH) and type 2 diabetes (T2D) in at-risk individuals, with cut-off points set at 155 mg/dL for IH and 209 mg/dL for T2D.
- IDF also advises revising glycemic thresholds for better prediction and management of diabetes risk.
- The Oral Glucose Tolerance Test is crucial for early detection and treatment of diabetes, preventing undiagnosed cases.

Regarding Diabetes mellitus

- Diabetes mellitus is a metabolic disorder characterized by high blood sugar levels due to issues with insulin secretion or action.
- Insulin, produced by the pancreas, regulates blood glucose levels, but in diabetes, this regulation is impaired.

Type 1 diabetes
- Type 1 diabetes results from the destruction of insulin-producing beta cells in the pancreas, often due to an autoimmune process targeting these cells.
- Genetic factors contribute to the autoimmune response, though the exact causes are not fully understood.

Type 2 diabetes
- Type 2 diabetes involves inadequate insulin production despite the body's ability to produce insulin.
- Genetic predisposition, family history, and obesity are key risk factors for type 2 diabetes.

Report & Index

Lancet study shows obesity rates going up across world

Context: The Lancet study found that in 2022, 12.5 million children (7.3 million boys and 5.2 million girls) aged between 5 and 19 were obese, up from 0.4 million in 1990.

Key Findings of the Study

In 2022, there were 44 million obese women and 26 million obese men aged above 20 in India, compared to just 2.4 million women and 1.1 million men in 1990.

India ranks 182 among 197 countries for the prevalence of obesity in women and 180 for men in 2022, compared to 174 for both girls and boys.

Obesity prevalence among children and teens increased by over 3% points from 1990.

Female obesity prevalence increased sharply, with women at 9.8% prevalence, up by 8.6 percentage points from 1990. For men, this number stood at 5.4%, up by 4.9 percentage points.

Relevance of the Study for India

- The findings are significant due to the high burden of non-communicable diseases in India, such as heart disease, strokes, and diabetes, which are exacerbated by obesity.
- Obesity is a major risk factor for these diseases and can trigger their early onset, even in teenagers.
- The study can guide necessary remedial actions to address the widespread obesity issue in India.

THE OBESITY MAP

India	1990	2022	World	1990	2022
Men	1.1	26	Men	67	374
Women	2.4	44	Women	128	504
Boys	0.2	7.3	Boys and girls (total)	31	160
Girls	0.2	5.2			

Source: Lancet   *All figures in million*

Major Causes of Obesity

Primary drivers include a shift in dietary choices away from traditional foods and physical inactivity.	Traditional diets were low in animal products, salt, refined oils, sugars, and flours, whereas modern diets are high in energy but low in nutrients.	Eating behaviors such as snacking, restrained eating, dieting, binge eating, and dining out contribute to obesity.	Consumption of added sugars, particularly through beverages, plays a significant role.	Sedentary activity has significantly increased over the years.

Problems of Malnutrition and Being Underweight

- Severe undernutrition is prevalent among all age groups in India.
- India ranks highest in the world for underweight girls and second highest for boys.
- Maternal malnutrition, including micronutrient deficiencies, contributes to underweight issues.
- Reasons for Faster Rise of Obesity in Women:
- Cultural, socio-economic, and biological factors contribute to obesity in women.
- Limited access to physical activity, healthy food options, healthcare, and education are key factors.
- Biological factors such as pregnancy and menopause uniquely affect women's weight.

Ways to Tackle Obesity and Malnutrition

Availability And Affordability Of Healthy Foods	Targeted Interventions	Regulation Of Unhealthy Food Sales

- Improving availability and affordability of healthy, nutritious foods is crucial.
- Targeted interventions include government policy, community initiatives, and individual actions promoting physical activity and healthy diets.
- Regulation of unhealthy food sales and advertisements targeted at children, nutritional labeling, and promotion of healthier options are essential.

Conclusion

- The Lancet study underscores the urgent need for comprehensive strategies to address the growing epidemic of obesity in India, particularly among women and children.
- Tackling obesity alongside undernutrition is crucial for public health and overall economic growth.

Centre discloses key consumption survey findings after 11-year gap

Context: After approximately 11 years, the government has released data from the All-India Household Consumption Expenditure Survey conducted between August 2022 and July 2023.

Background

The Consumer Expenditure Survey (CES), usually conducted every five years by the National Statistical Office (NSO), was last conducted in the 68th round (July 2011 to June 2012).
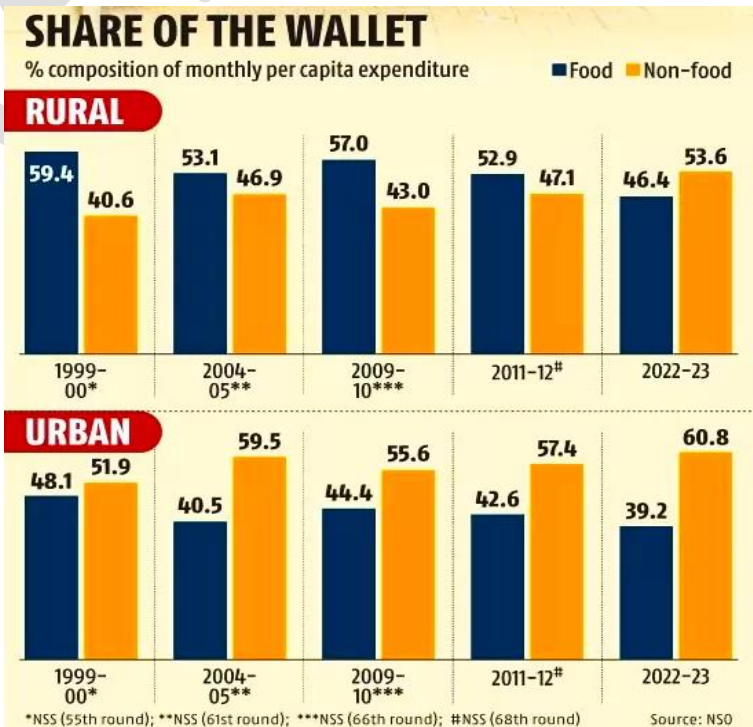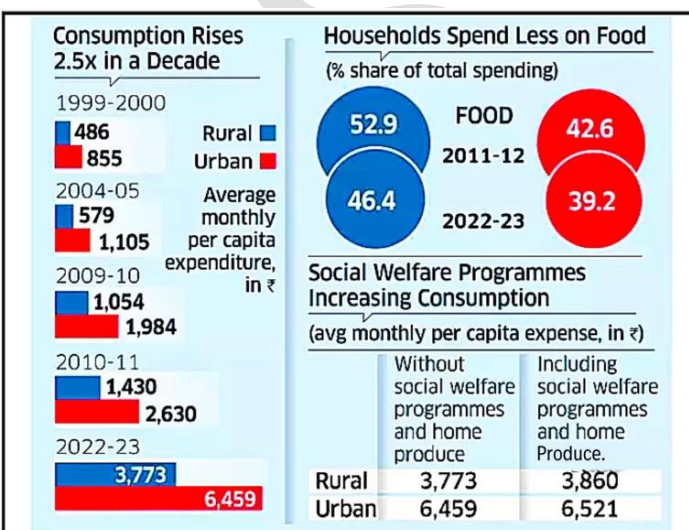
The government decided to conduct the latest survey in July 2022 after addressing data quality issues highlighted in the previous 2017–18 survey.

Significance of Consumer Expenditure Survey (CES)

- Helps gauge demand dynamics and shifting spending priorities.
- Assists in assessing living standards and growth trends across different demographics.
- Acts as an invaluable tool for analysis and forecasting, aiding policymakers and businesses.

Key Findings of the Household Consumption Expenditure Survey 2022-23

- Average monthly per capita consumption expenditure (MPCE) increased by 33.5% in urban households and 40.42% in rural households since 2011-12.
- Rural-urban MPCE disparity reduced from 83.9% to 71.2%.
- Bottom 5% of rural population had an average MPCE of Rs 1,373, compared to Rs 2,001 for the bottom 5% of urban population.
- Top 5% of rural population had an MPCE of Rs 10,501, while it was Rs 20,824 for the top 5% of urban population.
- Share of expenditure on food decreased from 52.90% to 46% in rural India and from 42.62% to 39% in urban India.
- Consumption expenditure on non-food items increased, particularly in conveyance, consumer services, and durable goods.
- Sikkim had the highest MPCE in both rural (₹7,731) and urban (₹12,105) areas, while Chhattisgarh had the lowest with ₹2,466 for rural households and ₹4,483 for urban households.

Consumption Rises 2.5x in a Decade

Year	Rural	Urban
1999-2000	486	855
2004-05	579	1,105
2009-10	1,054	1,984
2010-11	1,430	2,630
2022-23	3,773	6,459

Average monthly per capita expenditure, in ₹

Households Spend Less on Food
(% share of total spending)

FOOD
2011-12: Rural 52.9, Urban 42.6
2022-23: Rural 46.4, Urban 39.2

Social Welfare Programmes Increasing Consumption
(avg monthly per capita expense, in ₹)

	Without social welfare programmes and home produce	Including social welfare programmes and home Produce
Rural	3,773	3,860
Urban	6,459	6,521

SHARE OF THE WALLET
% composition of monthly per capita expenditure ■Food ■Non-food

RURAL

Year	Food	Non-food
1999-00*	59.4	40.6
2004-05**	53.1	46.9
2009-10***	57.0	43.0
2011-12#	52.9	47.1
2022-23	46.4	53.6

URBAN

Year	Food	Non-food
1999-00*	48.1	51.9
2004-05**	40.5	59.5
2009-10***	44.4	55.6
2011-12#	42.6	57.4
2022-23	39.2	60.8

*NSS (55th round); **NSS (61st round); ***NSS (66th round); #NSS (68th round)   Source: NSO

India 134th in global human development index: UNDP

Context: India's rank on the United Nations Human Development Index (HDI) improved by one position in 2022, standing at 134 out of 193 countries compared to 135 out of 191 countries in 2021. Switzerland holds the top position.

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Human Development Index

The HDI is a composite index first published in 1990 by the UNDP, measuring a country's average achievement in three basic dimensions.

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Human Development Index (HDI) 2023-24: Background

- Developed by Pakistani economist Mahbub ul Haq, the HDI is used to assess a country's development as part of the United Nations Development Programme's Human Development Report.
- Alongside HDI, the HDR presents indices like the Multidimensional Poverty Index (MPI), Inequality-adjusted Human Development Index (IHDI), Gender Inequality Index (GII) since 2010, and Gender Development Index (GDI) since 2014.
- The HDI reflects Amartya Sen's "capabilities" approach, focusing on human well-being's ends rather than means.

Key Highlights of India's Human Development Report 2023-24

Theme of the report	The 2023/24 Human Development Report (HDR) is titled "Breaking the Gridlock: Reimagining Cooperation in a Polarized World."
India's ranking	India moved from 135 in 2021 to 134 in 2022 on the HDI.
India in the medium human development category	Between 1990 and 2022, India's HDI value increased by 48.4% from 0.434 to 0.644.
India's performance on various indicators	Life expectancy at birth improved from 67.2 years in 2021 to 67.7 years in 2022.
	Expected years of schooling (EYS) increased by 5.88% from 11.9 to 12.6 years, moving up 18 places.
	Gross National Income (GNI) per capita rose from $6,542 to $6,951.
Performance of India's neighborhood	Sri Lanka (78) and China (75) are ahead in the High Human Development category.
	Bhutan (125) and Bangladesh (129) follow, while Nepal (146) and Pakistan (164) are ranked lower than India.
India's progress in reducing gender inequality	India ranks 108 out of 166 countries in the Gender Inequality Index (GII) 2022.
	India's GII value of 0.437 is better than the global average (0.462) and South Asian average (0.478).

Observations by the Human Development Index
- The report notes a reversal in the trend of reducing inequalities between wealthy and poor nations over two decades.
- Collective action failures in climate change, digitalization, poverty, and inequality hinder human development and erode trust in institutions.
- Political polarization globally impacts policy approaches and democratic processes.

Areas for Immediate Action proposed by the Human Development Report
- Planetary public goods for climate stability.
- Digital global public goods for equitable technology use.
- New financial mechanisms and international cooperation.
- Addressing political polarization through new governance approaches and tackling misinformation.

Law Commission's 287th report

Context: The Law Commission's 287th report proposes mandatory registration of marriages involving Non-Resident Indians (NRI) and Overseas Citizens of India (OCI) to address the challenges faced by Indian women deserted by their NRI or OCI spouses.

Key Recommendations
- The report suggests amendments to the pending Registration of Marriage of Non-Resident Indians Bill, 2019, to encompass OCIs and introduce new provisions.
- These provisions entail penalties for failing to register divorce, maintenance, child support, and non-compliance with legal procedures.
- The recommendation aims to tackle fraudulent marriages and offer legal recourse for women susceptible to abandonment or exploitation.
- Additionally, the report proposes amending the Passport Act, 1967, to mandate marital status declaration in passports and establishing a dedicated division within the Ministry of Home Affairs or External Affairs to maintain a registry for NRI and OCI marriages.

Gender Inequality Index (GII)

Context: Recently, the Gender Inequality Index (GII) for 2022 has been published by UNDP in their Human Development Report for 2023-

India's Position in GII
- India is ranked 108th out of 193 countries in the Gender Inequality Index, with a score of 0.437.
- This signifies a significant improvement from India's position in the previous year's index, where it stood at 122nd out of 191 countries with a score of 0.490.
- Over the past decade, India has consistently improved its rank in the GII, indicating progress in advancing gender equality.

Major Issues Related to Gender Inequality in India
- Gender-Based Violence: Women and girls in India face various forms of violence, including domestic abuse, sexual harassment, rape, dowry-related violence, and honor killings.

Gender Inequality Index (GII)
- GII is a composite measure of gender inequality that encompasses three dimensions reproductive health, empowerment, and the labor market.
- It assesses the disparity in human development potential caused by gender-based inequality in achievements within these areas.
- GII values range from 0 (indicating equality) to 1 (indicating extreme inequality), with lower values suggesting less inequality between genders.

- Unequal Access to Education: Disparities persist in enrollment, retention, and completion rates between boys and girls, hindered by cultural norms, economic constraints, and safety concerns.
- Invisible Labor: Women often undertake significant unpaid care work like household chores, childcare, and eldercare, which is undervalued and contributes to economic dependency and time poverty.
- Gender Wage Gap: Women generally earn less than men for similar work across sectors and levels of employment, reflecting a substantial gender wage gap.
- Child Marriage: This disproportionately affects girls, denying them opportunities and exposing them to health risks; although prevalence has decreased, certain states still have higher rates than the national average.

Global Gender Gap Report (World Economic Forum)
- The report annually benchmarks gender parity across key dimensions.
- India was ranked 127th out of 146 countries in the Gender Gap Report for 2023.

Indian Government Initiatives for Gender Equality

Initiative	Description
Beti Bachao Beti Padhao (BBBP)	Focuses on the protection, survival, and education of the girl child.
Mahila Shakti Kendra (MSK)	Aims to empower rural women through skill development and employment.
National Creche Scheme	Provides safe environments for children, enabling women's employment.
Pradhan Mantri Matru Vandna Yojna	Provides maternity benefits to pregnant and lactating mothers.
Pradhan Mantri Awas Yojana	Ensures housing under women's names.
Sukanya Samriddhi Yojna (SSY)	Economically empowers girls through bank accounts.
Gender Budget	Allocates funds towards programs/schemes dedicated to women since 2005.
Nirbhaya Fund Framework	Supports initiatives enhancing women's safety and security.
One Stop Centres (OSCs)	Offers integrated services for women victims of violence.
Constitution (106th Amendment) Act, 2023	Reserves one-third of seats for women in legislative bodies.
Vigyan Jyoti program	Encourages girls to pursue STEM education and careers.
Other initiatives	Stand-Up India; Mahila e-Haat, Entrepreneurship; Skill Development Programme (ESSDP); Pradhan Mantri Mudra Yojana (PMMY) promote women entrepreneurs.

Way Forward

Comprehensive Legal Reforms	Gender-Sensitive Education	Freelancing Platforms	Support for Unpaid Care Work	Equal Pay and Workplace Policies

- **Comprehensive Legal Reforms**: Strengthening and enforcing laws related to gender-based violence and workplace discrimination.
- **Gender-Sensitive Education**: Implementing curricula and policies to promote gender equality in education.
- **Freelancing Platforms**: Facilitating access to online platforms for women's economic empowerment.
- **Support for Unpaid Care Work**: Recognizing and valuing women's unpaid care work and promoting shared responsibilities.
- **Equal Pay and Workplace Policies**: Enforcing equal pay policies and creating supportive work environments.

IPCC Reports and Equity in Climate Change Mitigation

Context: Recently, a study examined over 500 future emissions scenarios assessed by the UN Intergovernmental Panel on Climate Change (IPCC), which provide forecasts for the world's climate trajectory. The findings of the study revealed significant inequities within the projected pathways of climate action in the IPCC Reports.

Assessment of Future Scenarios
- The IPCC uses 'modelled pathways' to estimate how to limit the warming of the earth's surface.
- Integrated Assessment Models (IAMs) describe human and earth systems, providing policy-relevant guidelines on climate action.
- However, these models prioritize least-cost assessments and may overlook historical responsibilities and economic realities.

About IPCC Assessment Reports

- The IPCC regularly releases comprehensive assessment reports that synthesize scientific literature on climate change.
- These reports include three working group assessments focusing on physical science, climate adaptation, and mitigation actions, along with a synthesis report consolidating their findings.

Findings of the New Study
- Researchers analyzed 556 scenarios in IPCC's AR6 report and found troubling projections.
- These scenarios predict disparities in per-capita GDP and consumption between developed and developing regions, unfairly burdening developing nations with mitigation efforts.

Why Equality Matters in Tackling Climate Change
- Wealthier nations have historically contributed more to greenhouse gas emissions, necessitating acknowledgment and fair distribution of mitigation efforts.
- Developing nations are most vulnerable to climate impacts but lack resources for adaptation.
- Equity ensures developing countries have access to climate funding and technology transfer.

Intergovernmental Panel on Climate Change (IPCC)

- The IPCC assesses climate science and provides the basis for climate policies globally.
- It has delivered six Assessment Reports since 1988, guiding climate-related policies and negotiations.

- Climate change exacerbates social injustices, requiring equitable climate policies.
- Equity principles foster global cooperation in addressing climate change.

Conclusion
- The analysis of IPCC scenarios underscores disparities in climate action responsibilities.
- Moving forward, recalibrating climate strategies is crucial to prioritize equity and fairness, considering historical responsibilities and economic realities.

World Air Quality Report 2023

Context: India has been identified as the world's third most polluted country, according to the World Air Quality Report 2023 by the Swiss organization IQAir.

Key Highlights of the World Air Quality Report 2023

India's Air Quality Ranking	Health Impacts and WHO Guidelines	Global Air Quality	Global Impact of Air Pollution	WHO Air Quality Guidelines	Particulate Matter (PM	Air Pollution

- **India's Air Quality Ranking**
  - Ranked as the world's third most polluted country, with an average annual PM2.5 concentration of 54.4 micrograms per cubic meter.
  - Bangladesh and Pakistan surpassed India in pollution levels, becoming the most and second most polluted countries, respectively.
  - Nine out of the top 10 most polluted cities in the world are from India.
  - India's air quality deteriorated compared to the previous year, with Delhi emerging as the world's most polluted capital city for the fourth consecutive time.
  - Begusarai in Bihar is labeled as the world's most polluted metropolitan area, with an average PM2.5 concentration of 118.9 micrograms per cubic meter.
- **Health Impacts and WHO Guidelines**
  - Approximately 136 million Indians (96% of the Indian population) face PM2.5 concentrations (seven times) higher than the World Health Organization's recommended levels of 5 micrograms per cubic meter.
  - Over 66% of Indian cities have reported annual averages higher than 35 micrograms per cubic meter (µg/m3).
  - PM2.5 pollution, primarily from burning fossil fuels, is linked to increased rates of heart attack, stroke, and oxidative stress, with severe health implications.
- **Global Air Quality**
  - Seven countries met the WHO annual PM2.5 guideline (annual average of 5 µg/m3 or less), including Australia, Estonia, Finland, Grenada, Iceland, Mauritius, and New Zealand.
  - Africa remains the most underrepresented continent, with a third of its population lacking access to air quality data.
  - Some countries, including China and Chile, reported decreases in PM2.5 pollution levels, indicating progress in combating air pollution.
  - Pollution disperses beyond its source due to prevailing winds, highlighting the need for international cooperation in addressing air quality issues.

- **Global Impact of Air Pollution**
  - Air pollution causes approximately seven million premature deaths worldwide annually, contributing to approximately one in every nine deaths worldwide.
  - PM2.5 exposure leads to health issues such as asthma, cancer, stroke, and mental health complications.
  - Exposure to elevated levels of fine particles can impair cognitive development in children, lead to mental health issues, and complicate existing illnesses, including diabetes.
- **WHO Air Quality Guidelines**: The World Health Organization (WHO) updates its air quality guidelines regularly to protect public health from air pollution, covering particulate matter (PM) and gaseous pollutants like PM2.5, PM10, ozone (O3), nitrogen dioxide (NO2), sulfur dioxide (SO2), and carbon monoxide (CO).
- **Particulate Matter (PM)**: PM refers to a mixture of small particles and liquid droplets suspended in the air, including PM10 (coarse particles) and PM2.5 (fine particles).
- **Air Pollution**
  - It contaminates the environment through various sources like household devices, vehicles, industrial facilities, and forest fires, causing respiratory diseases and high mortality rates.
  - WHO data shows that 99% of the global population breathes air exceeding guideline limits, with low- and middle-income countries facing the most significant challenges.
  - Air quality is interconnected with the Earth's climate and ecosystems, and measures to reduce air pollution offer dual benefits for climate and health.
  - All of India's 1.4 billion people are exposed to unhealthy levels of ambient PM2.5, resulting in significant economic losses.

Initiatives for Controlling Air Pollution in India	
	National Clean Air Programme (NCAP).
	Bharat Stage Emission Standards.
	Solid Waste Management Rules, 2016.
	System of Air Quality and Weather Forecasting and Research (SAFAR) Portal.
	Air Quality Index.
	Graded Response Action Plan.
	National Air Quality Monitoring Programme (NAMP).
	Commission for Air Quality Management.
	Turbo Happy Seeder (THS) Machine.

Way Forward

- Strengthen regulations with strict air quality standards and emission limits, imposing heavy penalties for non-compliance.
- Transition to clean energy by promoting renewable sources and phasing out fossil fuels, along with investing in sustainable transportation like electric vehicles.
- Improve industrial practices with clean technologies, waste minimization, and incentives for pollution control.
- Raise public awareness, conduct research for innovative pollution control methods, and foster global cooperation to address air quality as a shared responsibility.

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Important Days

Rani Chennamma

Context: Social groups across India are organizing a national campaign titled "Naanoo Rani Chennamma" (I am Rani Chennamma too) to commemorate the 200th anniversary of Rani Chennamma's rebellion. The campaign seeks to empower women to combat patriarchal, anti-democratic, and casteist forces in the country, drawing inspiration from Rani Chennamma's legacy of courage and resistance.

About Rani Chennamma

- Rani Chennamma, the Queen of Kittur, led the Kittur revolt of 1824, one of the earliest woman-led anti-colonial uprisings against British rule in India.
- Born in 1778 in present-day Karnataka, she married Raja Mallasarja of Kittur and played a crucial role in defending her kingdom after his demise.
- When the British declined to recognize her adopted son as the legitimate successor under the 'doctrine of lapse', she initiated a rebellion against them.
- Despite initial victories, the British eventually seized Kittur Fort in December 1824, leading to Rani Chennamma's imprisonment and subsequent demise in 1829.
- Her valor and leadership in resisting colonial oppression have established her as a symbol of Karnataka's political consciousness and a prominent figure in Indian history.

St. Patrick's Day

Context: India and Ireland are set to commemorate 75 years of diplomatic relations this year. St. Patrick's Day, a national day, presents an occasion to celebrate Ireland alongside the more than 70 million people worldwide who claim Irish ancestry and others who express their affinity for Ireland in various ways.

India-Ireland Relations	Historically, India and Ireland have maintained friendly relations since our independence movement.
Economic ties	There are synergies between flagship programs like Skill India and Digital India and Ireland's esteemed educational institutions.
Bilateral trade	Two-way trade in goods, which was Euro 463 million in 2010, has now risen to Euro 650 million. •Total trade in goods and services reached €2.48 billion in 2013, up from €2.2 billion in 2012.
Indian Community	Ireland is home to about 26,000 Indians or people of Indian origin, with approximately 17,000 being Indian nationals. •Most Indians in Ireland are in healthcare, IT, engineering, and senior management roles.
Education Hub	Ireland is increasingly attracting Indian students for higher education, especially postgraduate and doctoral studies, with over 1,400 Indian students enrolled in Irish higher educational institutions.

Ireland's Stand on Conflicts
- Ireland maintains a principled stance on conflicts, advocating for accountability in international affairs.
- Strong Support: Ireland supports Ukraine's journey towards EU membership and condemns acts of terrorism, such as Hamas's attack in October.
- Humanitarian Focus: Ireland calls for upholding international humanitarian law, humanitarian ceasefires, and providing sustained humanitarian aid to civilians in conflict zones like Gaza.

Role of Young People in Growth
- Young talent is central to Ireland's success, making it an attractive destination for investment, trade, visits, and education.
- Hub for Innovation: Ireland hosts all five of the world's top software companies and 14 of the top 15 medical technology firms due to its economic stability, business-friendly environment, and access to the EU market.
- Talent Pool: The country boasts a dynamic workforce of globally-connected young professionals from the EU, contributing to its enterprise culture and innovation ecosystem.
- Education Excellence: Irish universities attract students worldwide with a safe, welcoming, and culturally rich environment, reflected in Ireland's high ranking on the UN Human Development Index.

Way Forward

Mutual Contributions	Enduring Partnerships	Future Prospects

- **Mutual Contributions**: India contributes significantly to Irish society, especially in IT, healthcare, and other key sectors, strengthening bilateral ties.
- **Enduring Partnerships**: The partnership transcends trade and investment into areas like culture, sports, education, and tourism, fostering enduring relationships.
- **Future Prospects**: Collaborative efforts and support between India and Ireland, along with a focus on young talent, will continue to shape the partnership positively for years to come, reflecting the Irish saying, "Ar scáth a chéile a mhaireann na Daoine" (We live in each other's shadow).

World Sparrow Day 2024

Context: Every year, March 20 marks the observance of World Sparrow Day, highlighting the importance of sparrows in preserving biodiversity and ecological equilibrium.

Key Highlights of World Sparrow Day 2024
- **Theme**: The theme for World Sparrow Day 2024 is "Sparrows: Give them a tweet-chance!", "I Love Sparrows", and "We Love Sparrows".

Key Facts About Sparrows

- **Importance:** Sparrows play a crucial role in biodiversity and plant growth by consuming and excreting seeds, aiding in seed dispersal and vegetation promotion.
- **Threats:** Sparrow populations face declines due to habitat degradation, urbanization, and changes in agricultural practices. Loss of nesting sites, foraging areas, and declining insect populations are major contributing factors.
- **Conservation**: Efforts Conservation initiatives include urban greening projects and agroecological practices to create suitable habitats for sparrows.

- **History**: The inaugural World Sparrow Day was on March 20, 2010, initiated in India by the Nature Forever Society founded by Mohammed Dilawar, an Indian conservationist. The society's goal is to underscore the significance of conserving house sparrows and other common birds.

Common Sparrow Species Habitat and Distribution in India

- **House Sparrow (Passer domesticus)**: Found in urban and rural areas, widely distributed across India. It is the state bird of Bihar and Delhi, with a conservation status of Least Concern on the IUCN Red List.
- **Eurasian Tree Sparrow (Passer montanus)**: Prefers woodlands, parks, and gardens, found in various regions across India but less common than house sparrows.
- **White-throated Sparrow (Zonotrichia albicollis)**: Mainly in northern regions and mountainous areas like Jammu & Kashmir or Himachal Pradesh.
- **Chestnut-shouldered Petronas (Petronia xanthocollis)**: Inhabits dry forests and scrublands, found in regions like Rajasthan or Gujarat.
- **Rufous Treepie (Dendrocitta vagabunda)**: Prefers wet regions and forests, commonly seen in areas such as Assam or West Bengal.
- **Baya Weaver (Ploceus philippinus)**: Found in coastal areas and wetlands, commonly observed in coastal regions like Goa or Kerala.

Other Important Days

Date	Event	Details and Significance
1 March	**Zero Discrimination Day**	Zero Discrimination Day is celebrated globally on March 1 every year so that everyone lives life with dignity regardless of age, gender, ethnicity, skin colour, height, weight, etc. The symbol of Zero Discrimination Day is the butterfly. Firstly, on March 1, 2014, the UN celebrated this day.
1 March	**World Civil Defense Day**	World Civil Defense Day is celebrated every year on March 1 to bring the attention of the world public to the importance of civil protection and to pay tribute to the efforts, sacrifices, and accomplishments of all the services responsible for fighting against disasters. The International Civil Defence Organization (ICDO) decided to celebrate this day in 1990.
1 March	**Employee Appreciation Day**	Employee Appreciation Day is observed on March 1. The day reminds us that for any successful business it is important to have a strong employer-employee relationship.
1 March	**Self-Injury Awareness Day**	Its purpose in celebrating the day is to remove the stigma attached to self-injury and to encourage parents, family members, educators, and healthcare professionals to recognise signs of self-harm.
3 March	**World Wildlife Day**	This day is celebrated globally on 3rd March and is closely aligned with Sustainable Development Goal 12 that is Life without water, which focuses on marine species and highlights the problems, critical issues of marine wildlife to our everyday life. The theme of World Wildlife Day 2023 is "Recovering key species for ecosystem restoration".

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Date	Event	Details and Significance
3 March	**World Hearing Day**	World Hearing Day is observed on 3rd March every year to raise awareness about how to prevent deafness and to promote hearing across the world.
4 March	**National Safety Day**	National Safety Day is celebrated in India on 4th March by the National Safety Council of India. This day is celebrated to make people get safe from several issues like financial loss, health problems, and also any other problems that people are facing in their life.
8 March	**International Women's Day**	This day is observed globally every year on 8 March to celebrate the social, economic, cultural, and political achievements of women. Also, it is an action for accelerating gender parity. Purple is the colour that symbolizes women internationally. The combination of the purple, green and white colour is to symbolize the equality of women which is originated from the Women's Social and Political Union in the UK in 1908.
10 March	**CISF Raising Day**	The Central Industrial Security Force (CISF) Raising Day is observed every year on 10 March. The CISF was set up in 1969 under the act of the Parliament of India. It works under the Union Ministry of Home Affairs and its headquarter is in New Delhi. This organization works for seaways, airways, and some of the major installations in India. There are some reserved battalions in the CISF which work with the state police to protect law and orders.
13 March	**No Smoking Day (Second Wednesday of March)**	No Smoking Day is observed every year on the second Wednesday of March to raise awareness about the harmful health effects of tobacco via smoking and to encourage people all over the world to quit smoking.
14 March	**Pi Day**	On 14 March Pi Day is celebrated around the world. Pi is a symbol used in mathematics to represent a constant. It is the ratio of the circumference of a circle to its diameter which is approx. 3.14.
14 March	**International Day of Action for Rivers**	Every year on 14 March, the International Day of Action for Rivers is observed to raise voices to protect rivers and demand for improving the policies for Rivers. It is a day to educate one another about the threats facing our rivers and to find solutions.
15 March	**World Consumer Rights Day**	It is observed on 15 March every year for raising global awareness about consumer rights and needs. This day is a chance to demand that the rights of all consumers are respected and protected and to protest against social injustices.
15 March	**World Sleep Day**	World Sleep Day is held the Friday before the Spring Vernal Equinox of each year. This year, it will be observed on 15 March. It is a call to action on important issues related to sleep, including medicine, education, social aspects, and driving. The slogan of 'Sleep is essential for Health'.
16 March	**National Vaccination Day**	On 16 March every year, National Vaccination Day is observed in India which is also known as National Immunisation Day (IMD). It was first observed on 16 March 1995 when the first dose of the Oral Polio Vaccine was given. It is an attempt to increase awareness for the eradication of polio from the planet earth.
18 March	**Ordnance Factories Day (India)**	On 18th March, Ordnance Factories Day is observed every year all over India. On this occasion, the Ordnance Factory, Field Gun Factory, Small

Date	Event	Details and Significance
		Arms Factory, Ordnance Parachute Factory, and Ordnance Equipment Factory acknowledge the day.
20 March	**International Day of Happiness**	International Day of Happiness is observed every year on 20 March. Since 2013, the United Nations has celebrated this day to recognize the importance of happiness in the lives of people around the world. The UN launched the 17 Sustainable Development Goals in 2015 to end poverty, reduce inequality and protect our planet which are the three key aspects that lead to well-being and happiness.
20 March	**World Sparrow Day**	World Sparrow Day is celebrated across the world on 20 March to raise awareness about the conservation of sparrows. This day also celebrates the relationship between people and sparrows; spreads a love for sparrows, awareness about their importance in our lives, etc.
20 March	**World Oral Health Day**	World Oral Health Day is celebrated on 20 March to raise awareness about oral health. The theme of World Oral Health day 2023 is "Be Proud Of Your Mouth". In other words, value and take care of it.
21 March	**World Forestry Day**	On 21st March, World Forestry Day or International Day of Forests is celebrated every year to raise public awareness about the values, significance, and contributions of the forests to balance the life cycle on the earth. In 1971, World Forestry Day was established at the 23rd General Assembly of the European Confederation of Agriculture.
21 March	**World Down Syndrome Day**	World Down Syndrome Day is observed every year on 21st March. Down syndrome is a naturally occurring chromosomal arrangement in human which results in variable effects on learning styles, physical characteristics or health. The General Assembly has declared 21st March in December 2011 as World Down Syndrome Day.
22 March	**World Water Day**	On 22 March, World Water Day is observed annually to raise awareness about the importance of freshwater and advocate for the sustainable management of freshwater resources. It was recommended to celebrate in 1992 at the United Nations Conference on Environment and Development (UNCED) in Rio de Janerio. And then, in 1993 the first World Water Day is celebrated.
23 March	**World Meteorological Day**	World Meteorological Day is celebrated on 23rd March every year to attract attention towards weather and climate for the safety and well-being of the society. On 23rd March 1950, the World Meteorological Organisation came into force. The theme of World Meteorological Day 2023 is "Early Warning and Early Action. Hydrometeorological and Climate Information for Disaster Risk Reduction."
23 March	**Martyr's Day**	Martyr's Day or Shaheed Diwas is observed in India on several dates. March 23 is remembered as the day when three brave freedom fighters, namely Bhagat Singh, Shivaram Rajguru, and Sukhdev Thapar, were hanged by the British. Also, January 30th is observed as Martyr's Day or Shaheed Diwas in the memory of Mahatma Gandhi.
24 March	**World Tuberculosis (TB) Day**	World TB Day is celebrated every year on 24 March annually to commemorate the date when Dr. Robert Koch announced his discovery of

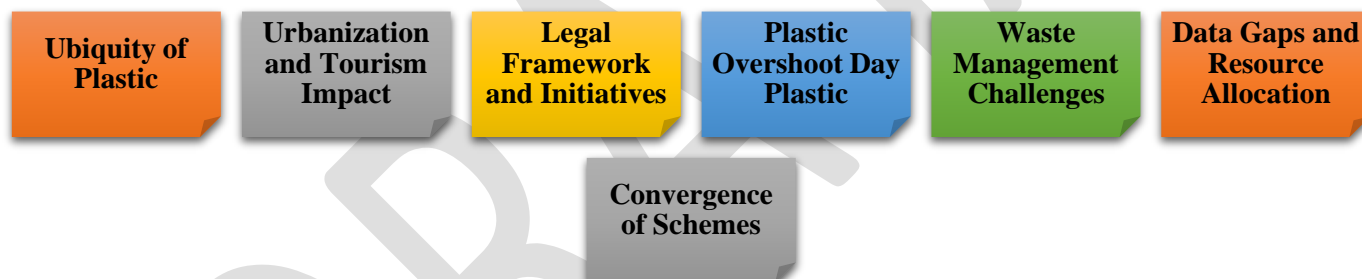| Date	Event	Details and Significance
		Mycobacterium tuberculosis, the bacillus that causes TB in 1882. This Day is observed to educate people about TB, its impact around the world.
25 March	**International Day of the Unborn Child**	It is observed on 25th March. It is an annual commemoration of unborn fetuses and is observed as a day of opposition to abortion.
26 March	**Purple Day of Epilepsy**	It is observed on 26 March to spread awareness about epilepsy and its impact on people's lives. The day also reminds people suffering from epilepsy that they are not alone.

Important Editorials of the Month

Plastic Are Choking The Himalayan States

Why in News?

Plastic pollution has become a severe environmental crisis in the Indian Himalayan Region, impacting water sources, biodiversity, and human health. The indiscriminate disposal of plastic waste, exacerbated by rapid urbanization and increased tourism, has led to alarming levels of pollution. Despite existing regulations and initiatives, the region is grappling with the adverse consequences of plastic pollution. Therefore, empowering local bodies and creating the necessary infrastructure for waste management in the Indian Himalayan Region need immediate attention.

Key Highlights

Ubiquity of Plastic	Urbanization and Tourism Impact	Legal Framework and Initiatives	Plastic Overshoot Day Plastic	Waste Management Challenges	Data Gaps and Resource Allocation

Convergence of Schemes

- **Ubiquity of Plastic**: Plastic is pervasive in the Indian Himalayan Region, found in mountains, rivers, lakes, and even inside the human body.
  - Microplastics, formed through improper disposal, accumulate in glaciers and are released during snow melting, affecting critical water sources like the Indus, Ganges, and Brahmaputra rivers.

- **Urbanization and Tourism Impact**: Unplanned urbanization and changing consumption patterns contribute to the plastic waste crisis.
  - Increased tourist footfall aggravates the problem, as highlighted by the Social Development for Communities Foundation's report on towns drowning in plastic waste in Uttarakhand.

- **Legal Framework and Initiatives**: The Solid Waste Management Rules (SWM) 2016, Plastic Waste Management (PWM) Rules 2016, and Extended Producer Responsibility (EPR) 2022 form the regulatory framework.
  - States like Himachal Pradesh, Sikkim, and Mizoram have enacted laws to curb plastic use, but challenges persist due to inadequate infrastructure.

- **Plastic Overshoot Day Plastic:** Overshoot Day in 2023 marked the point where plastic waste surpassed the capacity of waste management systems in India.

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o Despite claims of a 60% recycling rate, statistical analysis reveals a lower actual recycling rate, and a significant portion of plastic waste is burned.

- **Waste Management Challenges**: The duty of waste management falls on local bodies, but the devolution of power to them is incomplete.
  o Waste segregation at source is crucial, but existing practices show landfills overflowing with mixed waste, causing pollution and environmental damage.

- **Data Gaps and Resource Allocation**: There is a need to address data gaps in waste generation and quality in the region.
  o Empowering local bodies, creating necessary infrastructure, and promoting waste segregation through public education campaigns are essential.

- **Convergence of Schemes**: Convergence of existing schemes like Swachh Bharat Mission, Mahatma Gandhi National Rural Employment Guarantee Act, and Finance Commission grants could enhance infrastructure and operations.
  o The Swachh Bharat Kosh Trust and Atal Mission for Rejuvenation and Urban Transformation (AMRUT) can be utilized to channel resources for combating plastic pollution in the Indian Himalayan Region.
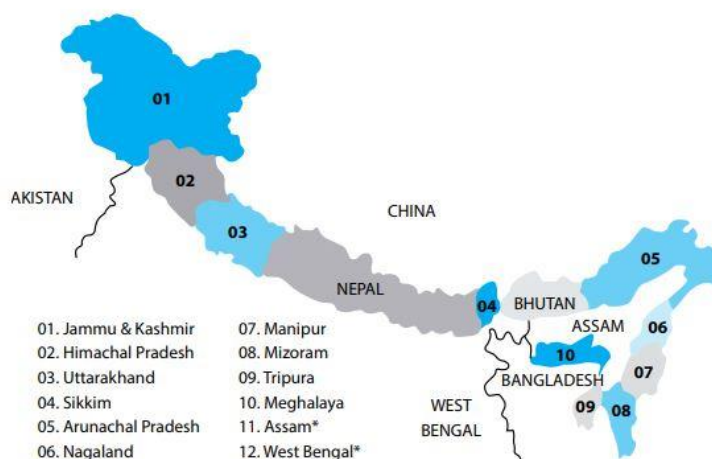
Indian Himalayan Region
- The Indian Himalayan Region is spread across 13 Indian States/Union Territories namely:
  o Jammu and Kashmir
  o Ladakh
  o Uttarakhand
  o Himachal Pradesh
  o Arunachal Pradesh
  o Manipur
  o Meghalaya
  o Mizoram
  o Nagaland
  o Sikkim
  o Tripura
  o Assam
  o West Bengal

The Indian Himalayan Region (Source: National Mission on Himalayan Studies)

01. Jammu & Kashmir   07. Manipur
02. Himachal Pradesh   08. Mizoram
03. Uttarakhand   09. Tripura
04. Sikkim   10. Meghalaya
05. Arunachal Pradesh   11. Assam*
06. Nagaland   12. West Bengal*

- It stretches across 2500 km. Nearly 50 million people reside in this region, which is characterized by a diverse demographic, and versatile economic, environmental, social and political systems.

Indian Himalaya And Waste Crisis?
- **Significance of the Indian Himalayan Region (IHR)**: Home to one of the 34 global biodiversity hotspots, the IHR includes states, union territories, and hill districts.
  o Provides crucial ecosystem goods and services, supporting 50 million people and constituting 16.2% of India's total geographical area.
  o The Himalaya serves as the source of water for the Indo-Gangetic plains.
- **Waste Crisis in the IHR**: The fragile socio-ecology of the IHR is facing a waste crisis, especially concerning plastic waste.

- o Rapidly changing production and consumption patterns, along with increasing tourist footfalls, contribute to the exacerbation of the waste crisis.
  - o Even remote villages in the IHR are not immune to plastic pollution.
- **Waste Disposal Practices**: Solid waste is predominantly dumped unsegregated in landfills, down hills, rivers, and streams, and often burned.
  - o Limited waste collection and insufficient linkages to recycling units result in a significant amount of plastic ending up in the environment.

> **Findings from The Himalayan Cleanup and Waste Audit**
> - The Himalayan Cleanup initiatives from 2018 to 2022 and the National Productivity Council of India's waste and brand audit highlight the increasing presence of plastic waste, especially non-recyclables, in the IHR.
> - Changing waste profiles, with a large volume of multi-layered plastics (MLP), pose challenges for effective solutions.
> - Home-based waste audits in 2021 and 2022 show a significant portion of plastic waste, particularly related to food packaging.
> - The results of the waste audit from The Himalayan Clean-up in 2022 revealed that 92.7% of the waste consisted of plastic, of which 72% was non-recyclable plastic.
> - B) At the Ramsar site of Deepor Beel in Assam, Greater Adjutant storks have been observed consuming plastic waste from the landfill instead of relying on fish from the wetland.

- **Link between Changing Food Trends and Waste Crisis**: Changing food habits contribute to a shifting waste profile, with a focus on food and drinks packaging.
  - o Increased consumption of packaged food with excess sugar and salt leads to health issues, while the associated plastic packaging exacerbates the waste crisis.
- **Need for Contextualized Legal Framework**: The legal framework for waste management, including Waste Management Rules, needs contextualization to address specific issues and challenges of the mountainous region.
  - o Appropriate resource allocation and support, considering the rich biodiversity, ecological sensitivity, and geographical challenges, is essential to tackle the waste crisis in the Himalayan region.

Why The Himalayas Are Drowning In Waste?

| Implementation Challenges in the Himalayan Region | Waste Generation in the Indian Himalayan Region (IHR) | Waste Disposal Practices | Data Gaps and Impact on Biodiversity | Tourism Influence on Waste Generation | Adverse Effects on Biodiversity |
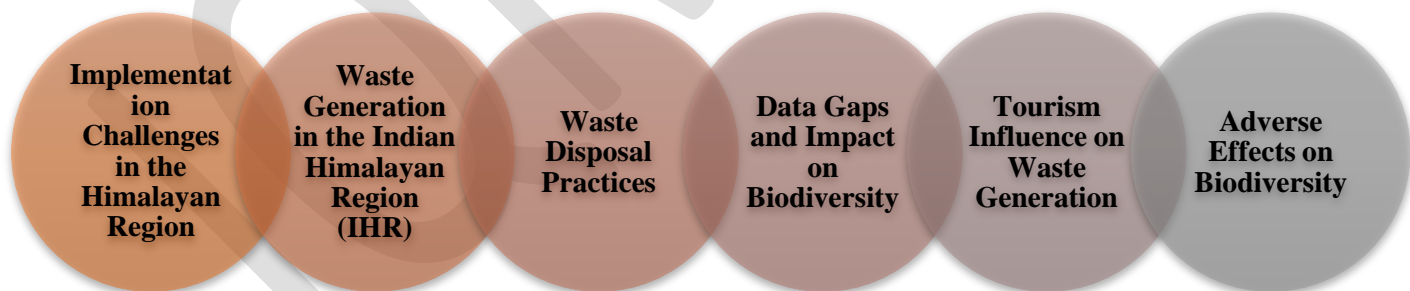
The Ministry of Environment, Forest, and Climate Change announced a ban on certain single-use plastics, including disposable cutlery, balloons, and polystyrene, starting from July 2022.

- **Implementation Challenges in the Himalayan Region**: The implementation of the pan-India ban poses significant challenges, particularly in smaller towns and hilly areas, including the Himalayan region.
  - o Monitoring the ban across diverse terrains and regions is anticipated to be a Herculean task.
- **Waste Generation in the Indian Himalayan Region (IHR)**: Reports from NITI Aayog and the World Bank estimate that the IHR generates more than five to eight million metric tons of waste annually.

- Uttarakhand and Himachal Pradesh, with over 400 million tourists since 2010, face challenges in solid waste management, leading to poor waste collection and infrastructure.
- **Waste Disposal Practices**: Over 60 percent of waste in the IHR is dumped, burned, or swept downstream into key rivers like the Ganga, Yamuna, and Sutlej due to inadequate waste management practices.
  - Poor waste collection infrastructure exacerbates the issue, disproportionately affecting marginalized communities.

- **Data Gaps and Impact on Biodiversity**: The World Bank report highlights a lack of sufficient data on the quantity and type of waste generated in the Himalayan landscapes.
  - Waste collection systems are primarily present in urban areas, with collected waste often dumped in open landfills near rivers, adversely impacting marginalized communities and local flora and fauna, including rare species on the verge of extinction.
- **Tourism Influence on Waste Generation**: Uttarakhand and Himachal Pradesh, popular tourist destinations with over 400 million visitors since 2010, face challenges in managing the waste generated by the tourism industry.
- **Adverse Effects on Biodiversity**: The dumping of waste has detrimental effects on the more than 30,000 species of local flora and fauna, some of which are rare and face extinction, emphasizing the environmental impact of poor waste management practices in the Himalayan region.
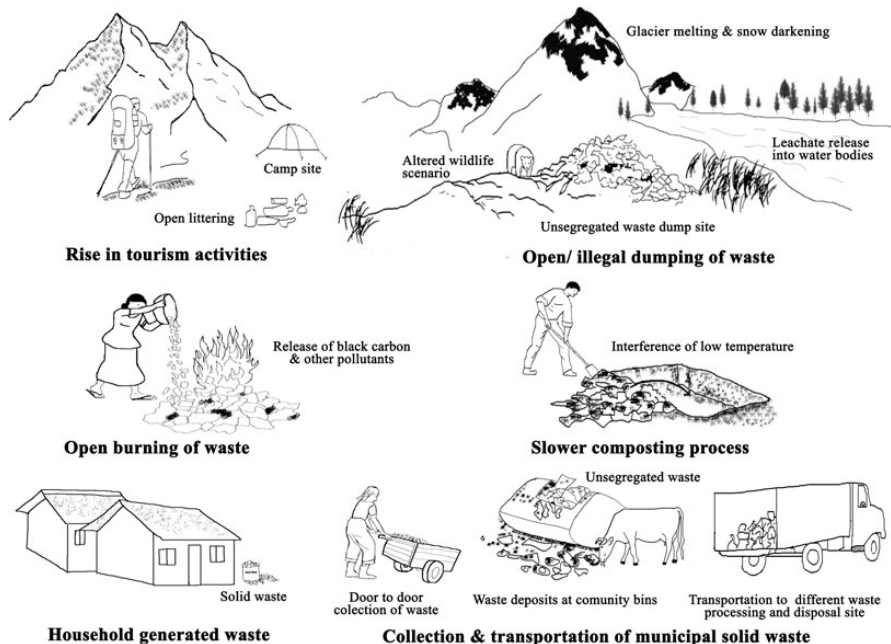
Waste Management Challenge in the Himalayas

Changing Consumption Patterns	Waste Generation in Rural Areas	Tourism Influence on Waste Generation	Infrastructure Challenges
Extended Producer Responsibility (EPR) Challenges	Policy Enforcement Challenges	Insufficient Funding	Global Investment Needed

- **Changing Consumption Patterns:** Historical reliance on biodegradable waste in rural and hilly areas has shifted due to the introduction of non-biodegradable materials, especially fast-moving consumer goods (FMCGs) in multilayered plastic packaging.
  - Traditional household products made of local materials are being replaced by cheaper plastic alternatives, leading to increased non-biodegradable waste generation.
- **Waste Generation in Rural Areas:** Villages with road access to tourist destinations generate around 6 kg of waste per household monthly, while remote villages generate over 2 kg of dry waste per household monthly.

- o Popular tourist destinations, like the Govind Wildlife Sanctuary, generate significant amounts of dry waste, contributing to environmental pollution.
- **Tourism Influence on Waste Generation:** Increased tourism in Himalayan states influences local residents to adopt urban consumption patterns, leading to a higher demand for packaged FMCGs, PET bottles, and single-use plastics.
  - o Widespread littering, dumping, and burning of waste occur in and around tourist areas, exacerbating the waste problem.
- **Infrastructure Challenges:** Difficult Himalayan terrain increases operational costs, complicates transportation logistics, and widens the distance from recycling facilities.
  - o Insufficient infrastructure for waste collection, dry waste processing, and wet waste processing in the Indian Himalayan Region (IHR).
- **Extended Producer Responsibility (EPR) Challenges:** Despite the mandate for FMCG brands to support reverse logistics for plastic waste under the Plastic Waste Management Rules 2016, most brands do not invest in hilly areas due to high collection costs.
  - o Local brands in villages lack the capacity for reverse logistics, and waste left behind by tourists often goes uncollected or recycled.
- **Policy Enforcement and Collaboration Challenges:** Sporadic waste collection in the IHR, with informal waste pickers focusing mainly on urban and tourist areas.
  - o Lack of collaboration and coordination among government departments hampers effective waste management efforts.
  - o Social stigma associated with waste-related livelihoods poses a challenge in rural areas.
- **Insufficient Funding and Systemic Nature of the Problem:** Insufficient per capita funding from the central government under the Swachh Bharat Mission-Gramin guidelines for gram panchayats in hilly areas.
  - o The systemic nature of the waste management problem requires comprehensive efforts, and current initiatives are deemed inadequate in addressing the scale of the issue.
- **Global Investment Needed:** Emphasis on the urgent need for significant global investment, similar to efforts to tackle ocean plastic pollution, to address and protect the Himalayas from the waste management crisis.

Concerns Regarding Plastic Waste Management in India

- **Excessive Mismanaged:** Waste In 2023, India encountered its plastic overshoot day on January 6th, highlighting a shocking scenario.
  - o Despite claims of a systemic ability to manage plastic waste, the Extended Producer Responsibility (EPR) portal of the Central Pollution Control Board (CPCB) reveals a very high Mismanaged Waste Index (MWI) of 98.55%, ranking among the world's highest after Kenya, Nigeria, and Mozambique.

Excessive Mismanaged

Inadequate Waste Recycling

Neglect of Hill Regions' Special Needs

Environmental Impact of Landfills

- **Inadequate Waste Recycling:** The Government of India asserts a 60% plastic waste recycling rate, but statistical analysis by the Centre for Science and Environment (CSE) using CPCB data exposes a meager 12% achieved through mechanical recycling.
  - o Approximately 20% of plastic waste is directed towards end-of-life solutions like co-incineration, plastic-to-fuel, and road-making, signifying a substantial portion being burned and falsely labeled as 'recycling,' while 68% remains unaccounted for.
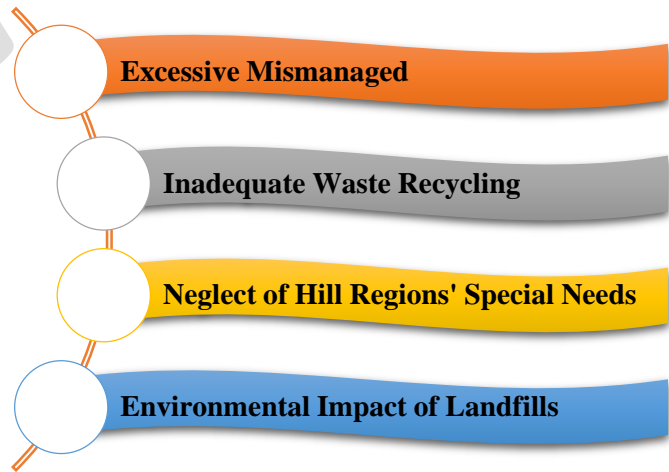
- **Neglect of Hill Regions' Special Needs:** The regulatory framework for plastic waste management in India includes Solid Waste Management Rules (SWM) 2016, Plastic Waste Management (PWM) Rules 2016, and EPR 2022.
  - o While the SWM acknowledges the special needs of hill areas, this consideration is overlooked in mandates for local bodies and Producers, Importers, and Brand Owners (PIBOs). PWM and EPR fail to recognize the unique requirements of hill regions.
- **Environmental Impact of Landfills:** Despite the existence of waste segregation policies, landfills are observed to overflow with mixed waste.
  - o Leachate from such mixed waste contributes to soil and groundwater pollution, while emissions from landfills result in air pollution.
  - o A substantial volume of recyclable plastic waste remains trapped in landfills, indicating a significant environmental concern.

Various Steps Required to Mitigate the Crisis in Indian Himalayan Region?

Ensuring Adequate Investments → **World Bank Study in Collaboration with KGGTF** → **Adoption of State-Specific Initiatives** → **Devolving Powers to Local Bodies** → **Including Traditional Institutions** → **Integrating Biodiversity with Waste Management** → **Plugging Data Gaps** → **Augmenting Resources on Expedited Basis**
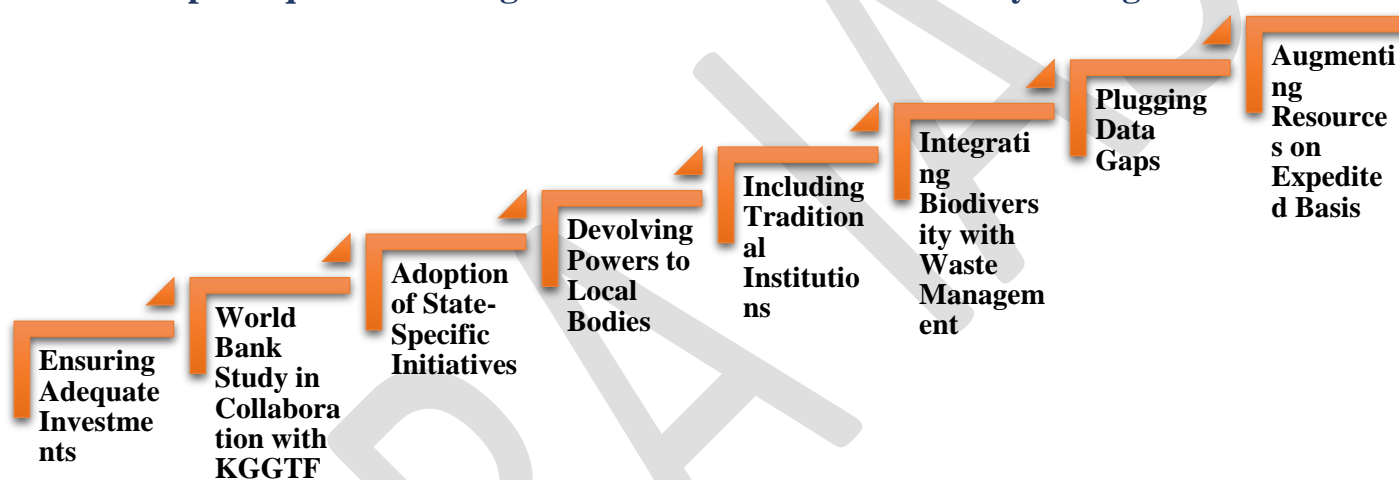
- **Ensuring Adequate Investments:** Recognizing the systemic nature of the waste management issue in the Indian Himalayan Region (IHR) that cannot be attributed to a singular institution or stakeholder.
  - o Urgent action is needed to align efforts with the scale of the problem, emphasizing the necessity for significant global investment similar to endeavors tackling ocean plastic pollution.
  - o Coordination with Rural Residents: Encouraging collaboration between gram panchayats, village development officers, and entities like the National Rural Livelihoods Mission to overcome the social stigma associated with waste-related livelihoods.
  - o Supporting rural residents in waste collection operations, material recovery, and alternative product market linkages to generate livelihood opportunities.

> **Plastic Waste Management Rules 2016**
> The Plastic Waste Management Rules 2016 dictate that those generating plastic waste must adopt measures to reduce its generation, prevent the littering of plastic waste, and ensure segregated storage of waste at its source, among various other measures.
>
> These rules also outline the responsibilities of entities such as local bodies, gram panchayats, waste generators, retailers, and street vendors in effectively managing plastic waste. The objective is to stimulate the development of innovative alternatives to plastics and establish a roadmap for businesses to transition towards sustainable plastic packaging.

- **World Bank Study in Collaboration with KGGTF:** Highlighting the collaborative study by the World Bank and the Korean Green Growth Trust Fund (KGGTF) to address the data gap and analyze the current Plastic Waste Management (PWM) situation in India, Nepal, and Pakistan.
  - o Recommending a systematic and phased approach to enhance PWM services in these mountainous regions, acknowledging the simultaneous execution of various Solid Waste Management (SWM) activities.

- **Adoption of State-Specific Initiatives:** Recognizing the need for states to adopt successful initiatives implemented by others.
  - o Highlighting specific laws and policies enacted by states such as Himachal Pradesh, Sikkim, Mizoram, and Tripura to curb plastic use and improve waste management.
  - o Segregating Different Types of Plastics: Emphasizing the collective mandate of SWM/PWM/EPR for waste segregation at source.
  - o Stressing the importance of segregating not only plastic from other waste but also different types of plastics for effective and sustainable plastic waste disposal.

- **Devolving Powers to Local Bodies**: Acknowledging the role of local bodies in waste management under SWM, PWM, and EPR.
  - o Urging for a more comprehensive devolution of power to local bodies and highlighting the potential value of EPR certificates earned by Producers, Importers, and Brand Owners (PIBOs) in the IHR.

- **Including Traditional Institutions:** Urging the inclusion of traditional institutions within the definition of local bodies in the IHR, as seen in several northeastern states.
  - o Noting the allocation of funds to traditional institutions under Swachh Bharat Mission and the Fifteenth Finance Commission.

- **Integrating Biodiversity with Waste Management:** Stressing the need for resource allocation and support that considers the rich biodiversity, ecological sensitivity, and fragility of the IHR.
  - o Highlighting the importance of addressing specific geographical challenges related to mountain waste management.

- **Plugging Data Gaps:** Recognizing the need to fill data gaps concerning the quantity and quality of waste in the Indian Himalayan Region.

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- Suggesting convergence in existing schemes like SBM, Mahatma Gandhi National Rural Employment Guarantee Act, and Finance Commission's grants to create, maintain, and run waste management operations.

- **Augmenting Resources on Expedited Basis:** Proposing the utilization of the Swachh Bharat Kosh Trust to augment resources through philanthropic contributions and corporate social responsibility funds.
  - Advocating for collaboration between the Atal Mission for Rejuvenation and Urban Transformation (AMRUT) and Smart Cities Scheme to address scientific waste management in the Indian Himalayan Region.

Way Forward

Addressing Data Gaps	Considerations in Allocating Resources	Allocation of Resources and Empowerment	Engagement and Educational Initiatives	Scheme Integration for Enhanced Resources

- **Addressing Data Gaps:** Initiating effective waste management in the IHR requires tackling existing data gaps as the primary step. It is imperative to comprehend both the volume and nature of waste generated in the region's states, providing the foundation for customized solutions.
- **Considerations in Allocating Resources:** Crucial to navigating the plastic pollution crisis in the IHR is the judicious allocation of resources. This allocation must account for the region's abundant biodiversity, ecological sensitivity, and the distinct challenges posed by its mountainous topography. Recognizing the inadequacy of traditional waste management methods, there is a pressing need for innovative solutions tailored to the geographical constraints of the area.
- **Allocation of Resources and Empowerment:** Ensuring effective waste management in the region demands sufficient resource allocation, comprehensive infrastructure development, and empowerment of local bodies. This approach takes into account the ecological sensitivity of the area.
- **Engagement and Educational Initiatives:** Tackling the plastic waste crisis requires active public involvement facilitated by ongoing education campaigns and initiatives promoting waste segregation. Public awareness is key to sustainable solutions.
- **Scheme Integration for Enhanced Resources:** Enhancing resources for waste management infrastructure and operations can be achieved through the strategic convergence of existing schemes. Integrating initiatives like Swachh Bharat Mission, Finance Commission grants, and corporate social responsibility funds can substantially boost capabilities in waste management.

Parliamentary Privileges

Why in News?

Recently, the Supreme Court (SC) overturned a 25-year-old majority opinion in the P V Narasimha Rao v State (CBI/Spe) Case, 1998 also known as the JMM (Jharkhand Mukti Morcha) bribery case. The SC stated that the bribery is not protected by parliamentary privileges.

Key Highlights

Overruling Previous Judgment	Case Background	Reconsideration of Previous Ruling	Doctrine of Stare Decisis	Constitutional Parameters	Purpose of Legislative Privileges
Interpretation of Bribery and Immunity	Offence of Bribery	Jurisdiction of Courts and House	Erosion of Democracy	Application of Privileges	

Taking away privilege

A look at the observations made by the seven-judge Bench of the Supreme Court in its unanimous verdict:

- The JMM bribery case judgment of 1998, granting lawmakers immunity from prosecution for bribery, had wide ramifications on public in-terest, probity in public life and par-liamentary democracy

- A claim of immunity should fulfil the twofold test that it is tethered to the collective functioning of the House and that it is necessary for the discharge of the essential duties of a legislator

- The offence of bribery is complete at the point when the legislator accepts the bribe

THE TIMELINE

- **April 17, 1998:** A five-judge Constitution Bench held in the Narasimha Rao vs CBI case that lawmakers have immunity against criminal prosecution for any speech made and the vote cast inside the House under Articles 105(2) and 194(2) of the Constitution

- **February 17, 2014:** Jharkhand HC refuses to quash criminal case against JMM leader Sita Soren for allegedly taking bribe in Rajya Sabha polls in 2012

- **September 23, 2014:** A two-judge SC Bench places before a larger Bench the plea of JMM leader Sita Soren

- **March 7, 2019:** A three-judge Bench refers the issue related to immunity of lawmakers to a larger Bench

- **September 20, 2023:** A five-judge Bench refers the issue and reconsideration of the 1998 verdict to a Bench of seven judges

- **October 5, 2023:** The seven-judge Bench reserves judgment

- **March 4, 2024:** Observing that bribery is not protected by parliamentary privileges, the seven-judge Bench overturns five-judge Bench's interpretation in the 1998 verdict in the JMM bribery case

The Supreme Court ruled that MPs and MLAs cannot claim immunity from prosecution for accepting bribes to cast a vote or make a speech in a particular fashion.

- **Overruling Previous Judgment**: The Court unanimously overruled its 1998 judgment in P.V Narasimha Rao v. State, enabling law enforcement agencies to initiate prosecution against legislators in bribery cases under the Prevention of Corruption Act, 1988.

- **Case Background**: The case originated from allegations against Sita Soren, a JMM member, accused of accepting a bribe to cast her vote in favor of a certain candidate in the Rajya Sabha elections of 2012.

- **Reconsideration of Previous Ruling**: The ruling revisited the interpretation of Article 105(2) and Article 194(2) of the Indian Constitution concerning legislative immunity and bribery.

- **Doctrine of Stare Decisis**: The Court dismissed the contention that overruling the previous judgment violated the doctrine of stare decisis, stating that a larger bench can reconsider prior decisions in appropriate cases.

- **Constitutional Parameters**: The judgment emphasized that legislative privileges are subject to constitutional parameters and can be reviewed judicially.

About the Privileges Committee

It comprises 15 members in the Lok Sabha and 10 in the Rajya Sabha and safeguards the freedom, authority, and dignity of Parliament. It examines breaches of privilege, determines facts, and makes recommendations. If a matter is referred, it investigates and presents a report to the House for consideration, followed by a debate and action based on the House's decision. Typically, it handles cases where MPs allege breach of privilege by outsiders or other MPs, with powers to recommend admonitions, reprimands, suspension, or expulsion, often resolved with an apology.

What does Article 105(2) and 194(2) say?

Articles 105(2) and 194(2) provide members of Parliament and state legislatures with immunity from prosecution in courts for anything they say or any votes they cast in their respective legislative bodies. This immunity guarantees that legislators can carry out their duties without the threat of legal repercussions.

- **Purpose of Legislative Privileges**: The ruling clarified that legislative privileges aim to sustain an environment for debate and deliberation, and immunity from prosecution in bribery cases undermines this purpose.

- **Interpretation of Bribery and Immunity**: The judgment emphasized that bribery is not immune under Article 105(2) and Article 194(2) and highlighted a two-fold test for claims of privilege.

- **Offence of Bribery**: The Court asserted that the offence of bribery is complete upon acceptance of the bribe, irrespective of subsequent actions, and highlighted the paradoxical outcome of immunity in certain scenarios.

> **What are the Parliamentary Privileges?**
> Parliamentary privileges refer to special rights, immunities, and exemptions granted to the two Houses of Parliament, their committees, and their members. These privileges are defined in Article 105 of the Indian Constitution. They provide members of Parliament with immunity from civil liability (but not criminal liability) for any statements made or actions taken in the course of their duties. These privileges are applicable only while an individual is a member of the respective house. Once membership ends, these privileges cease to apply.

- **Jurisdiction of Courts and House**: The ruling clarified that judicial proceedings and disciplinary actions by the House operate in distinct spheres and cannot exclude each other.

- **Erosion of Democracy**: Corruption by legislators erodes the foundation of democracy and undermines probity in public life.

- **Application of Privileges**: Legislative privileges apply equally to various functions of legislators, including Rajya Sabha elections, and extend beyond law-making activities.

Background

PV Narasimha Rao Case

- In the 1993 P V Narasimha Rao case, certain members (MPs) of the Jharkhand Mukti Morcha (JMM) were accused of accepting bribes in exchange for voting against a No-Confidence motion.
- This case highlighted allegations of corruption within the parliamentary system, raising concerns about the integrity of legislative processes and the accountability of elected representatives.

Court's Observation in 1998 Case

- The Supreme Court's ruling in 1998 established immunity for MPs (Members of Parliament) and Member of Legislative Assembly (MLAs) from prosecution in bribery cases as long as they fulfilled their end of the bargain.
- The Supreme Court held that the bribe takers who cast their vote against the no-confidence motion were immune from criminal prosecution under Parliamentary Privilege (Article 105(2)).
- This decision underscored the importance of stability in governance and the functioning of parliamentary democracy.
- The court's observation prioritized the smooth operation of the government over individual accountability, suggesting that prosecuting lawmakers for bribery could potentially disrupt the stability of the government.

Different Parliamentary Privileges

| Freedom of Speech in Parliament | Freedom from Arrest | Right to Prohibit the Publication of Proceedings | Right to Exclude Strangers |

- **Freedom of Speech in Parliament**: The freedom of speech and expression guaranteed to a citizen under Article 19(2) differs from that provided to a member of parliament.
  - Guaranteed under Article 105(1) of the Indian Constitution, this freedom is subject to rules and orders regulating parliamentary proceedings.
- **Freedom from Arrest**: Members enjoy immunity from arrest in any civil case 40 days before and after the adjournment of the house or during a session.
  - Arrest within the Parliament's limits requires the house's permission.
  - If a member is detained, the chairman or speaker must be informed of the reason for the arrest. However, arrest outside the house's limits can occur on criminal charges under acts such as the Preventive Detention Act, the Essential Services Maintenance Act (ESMA), or the National Security Act (NSA).

Limitation of Freedom Of Speech in Parliament

- Limitations:Freedom of speech in parliament must adhere to constitutional provisions and parliamentary rules, as stated in Article 118 of the Constitution.
- Article 121 prohibits members of parliament from discussing the conduct of Supreme Court or High Court judges while they are performing their duties, except in cases involving a motion to present an address to the President requesting the judge's removal.

Privileges of Individual Member

- Freedom of Speech in Parliament (Article 105(1))
- Immunity to a Member from any proceedings in any court in respect of anything said or any vote given by him in Parliament or any Committee thereof [Article 105(2)].
- Immunity to a person from proceedings in any court in respect of the publication by or under the authority of either House of Parliament of any report, paper, votes or proceedings (Article 105(2)).
- Prohibition on the Courts to inquire into the validity of any proceedings in Parliament on the ground of any alleged irregularity of procedure. [Article 122(1)].
- Freedom from arrest of Members in civil cases during the continuance of the meeting of the House or of a Committee thereof and forty days before its commencement and forty days after its conclusion (Section 135A of the Code of Civil Procedure, 1908).

Collective Privilege of House

- Right of the House to receive immediate intimation of the arrest, detention, conviction, imprisonment and release of a Member.
- Immunity from arrest and service of legal process within the precincts of the House without obtaining the permission of the Chairman/ Speaker.
- Protection of publication of the proceedings of a secret sitting of the House.
- The evidence tendered before a Parliamentary Committee and its report and proceedings cannot be disclosed or published by anyone until these have been laid on the Table of the House.
- Members or officers of the House cannot give evidence or produce in courts of law, documents relating to the proceedings of the House without the permission of the House.

- **Right to Prohibit the Publication of Proceedings**: Article 105(2) states that no person shall be held liable for publishing reports or discussions of the house under a member's authority.
  - Public dissemination of proceedings is crucial for informing citizens about parliamentary activities of paramount and national importance.
- **Right to Exclude Strangers**: Members have the power and right to exclude non-members (strangers) from house proceedings.
  - This right is essential for ensuring free and fair discussions within the house.

Overturning of P.V. Narasimha Rao v. State Case, 1998

Immunity Overturned	Emphasis on Bribery Impact	Criminal Act Distinction	Prevention of Corruption Act	Limited Immunity Scope	Shift Towards Accountability	Upholding Democratic Ideals

A 7-Judge Constitution Bench overturned the 5-Judge Bench verdict of P.V. Narasimha Rao v. State Case, 1998.

- **Immunity Overturned**: The earlier ruling established immunity for Members of Parliaments (MPs) and Members of Legislative Assemblies (MLAs) if they cast votes in the House after accepting bribes.
- **Emphasis on Bribery Impact**: The Supreme Court (SC) emphasized the detrimental impact of bribery on democratic principles and governance.
- **Criminal Act Distinction**: Highlighted that accepting a bribe constitutes a separate criminal act, unrelated to the core duties of lawmakers within the Parliament or legislative assembly.
- **Prevention of Corruption Act**: Section 7 of the Prevention of Corruption Act deals with 'offence relating to public servant being bribed', emphasizing the criminal nature of bribery.
- **Limited Immunity Scope**: The immunity provided under Articles 105 and 194 of the Constitution does not extend to cases of bribery.
- **Shift Towards Accountability**: This decision signifies a shift towards prioritizing accountability and integrity in governance over stability alone.
- **Upholding Democratic Ideals**: Aiming to uphold the ideals of a responsible, responsive, and representative democracy in India.

'LEGISLATORS NOT ABOVE COMMON LAW'

> Object of 1998 JMM verdict, which gave **immunity from prosecution to MPs/MLAs** under Articles 105(2) and 194(2), was **not to set them apart as persons with higher privileges** than other citizens in application of criminal laws, says CJI-led bench bench

> Court observes this while hearing a 2014 case of voting in Jharkhand. **Sita Soren**, JMM MLA and sister-in-law of CM Hemant Soren, **contended that she**

couldn't be prosecuted despite **taking bribe** for voting for a candidate in the House for whom she eventually did not vote

'NEED FOR A RELOOK' | 2 of 5 judges who gave the JMM verdict told **TOI** in 2008 that the judgment **needed review**

> This was after BJP MP **Ashok Argal** had shown **wads of notes** in Parliament claiming these to be bribe paid for him to abstain in a trust vote brought by the Manmohan Singh government

BRIBES & IMMUNITY

1991 | Congress-led alliance came to office after **1991 general elections** and formed a minority govt. Congress won 232 of 487 seats, below the majority mark

1993 | In the wake of the financial crisis (1991) and Babri masjid demolition (1992), the opposition introduced a **no-confidence motion against the P V Narasimha Rao's govt** in July 1993

> 10 MPs of JMM and Janata Dal had cast their votes to defeat a no-confidence motion in Lok Sabha against the minority govt of Rao. The govt survived by a 14-vote margin

1994 | A year later, **allegations were made against 7 JMM MPs**, including party stalwart and former Jharkhand chief minister Shibu Soren, of taking bribes to vote for the govt

1998 | The Supreme Court judgment in the bribery case provided **immunity to legislators** from prosecution for bribery

> Supreme Court judge SC Agarwal had held that **in case MPs voted against the no-confidence motion after taking bribes,** they will be entitled to immunity from criminal prosecution for bribery and criminal conspiracy conferred on them by Article 105(2) of the Constitution

Arguments For and Against Immunity Against Arrest

Arguments for	Arguments against
•**Absolute Protection**: Advocates contend that legislators enjoy complete immunity from legal action under constitutional provisions. They argue that the Speaker holds authority to address moral infractions through expulsion. •**Interpretation of Articles**: The dissenting opinion in Narasimha sought to narrow the scope of immunity, but proponents stress adherence to the literal interpretation of constitutional language.	•**Completion of Offence**: Critics argue that the offence of bribery is consummated upon acceptance of the bribe, irrespective of subsequent actions. They advocate holding legislators accountable from the moment the bribe is accepted. •**Legitimate Legislative Actions**: Distinguishing between legitimate and illegitimate actions, advocates assert that actions stemming from criminal conduct, such as vote-buying, should not be shielded by immunity.

International Practices Regarding Parliamentary Privileges

United Kingdom	Canada	Australia
•Parliament at Westminster enjoys similar privileges, including freedom of speech, immunity from arrest, and the right to regulate its own proceedings. •Privileges are established through a combination of statute, common law, and precedent.	•The Parliament of Canada has established privileges for its members, including freedom of speech, immunity from arrest, and the right to punish breaches of privilege. •These privileges are outlined in the Constitution Act, 1867, and the Parliament of Canada Act.	•The Parliament of Australia follows similar principles, with privileges enshrined in its Constitution. •Members enjoy freedom of speech, immunity from arrest, and the right to regulate their own proceedings.

Is there any need to Codify Parliamentary Priveleges?

For	Against
• **Clarity and Precision:** Codification would provide a clear and precise definition of parliamentary privileges, eliminating ambiguity and specifying what constitutes a violation of privileges. • **Enhanced Accountability:** Clearer guidelines would facilitate better accountability mechanisms, allowing parliamentarians to exercise privileges responsibly while subjecting them to appropriate scrutiny and oversight. • **Modernization and Adaptation:** Codification presents an opportunity to update and modernize laws to reflect contemporary governance practices and societal norms, ensuring relevance and effectiveness.	• **Risk of Encroachment on Autonomy**: Codification might subject parliamentary affairs to greater judicial scrutiny or government intervention, potentially encroaching on legislative autonomy. • **Against Constitutional Mandate**: Article 122 restricts courts from questioning Parliament's proceedings, suggesting a potential conflict with codification efforts. • **Loss of Flexibility**: Codification may limit flexibility in adapting to unforeseen circumstances or changing political dynamics. • **Complexity and Lengthy Process**: The process of codifying privileges could be complex and time-consuming, requiring extensive deliberation and consensus-building.

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- **Checks and Balances:** Introducing checks and balances would prevent misuse of privileges and curtail unnecessary encroachment on press freedom.

Way Forward

Purpose of Privileges	Alignment with Fundamental Rights	Preservation of Democratic Essence	Responsible Use

- **Purpose of Privileges**: Parliamentary privileges are bestowed upon members to facilitate smooth functioning of legislative processes.
- **Alignment with Fundamental Rights**: It is imperative that these privileges are in alignment with fundamental rights, as Members of Parliament (MPs) represent the citizens.
- **Preservation of Democratic Essence**: Conflict between privileges and fundamental rights undermines the essence of democracy.
- **Responsible Use**: MPs should exercise their privileges responsibly, ensuring they are not misused or exploited.

India's Palestine Policy

Why in News?

India's historical policy towards Palestine has been evolving, but a permanent fix to the Palestine question should not be lost sight of.

- Historically, India has been a firm supporter of the Palestine cause.
- And even when India's relationship with Israel flourished in the past three decades, New Delhi has maintained a careful balance between its new partnership and historical commitment towards Palestine.
- In recent years, there have been questions on whether India is abandoning this balance and tilting towards the Jewish state in a changing West Asia, where even Arab nations have been ready to sidestep the Palestine question for better bilateral ties with Israel.

Key Highlights

- Immediately after the October 7 Hamas attack in Israel, in which at least 1,200 people, mostly civilians, were killed, Prime Minister said he was "deeply shocked by the news of terrorist attack". He said, "We stand in solidarity with Israel at this difficult hour."
- Mr. Modi, who became the first Indian Prime Minister to visit Israel in 2017, has a good personal chemistry with Israel Prime Minister Benjamin Netanyahu.

- On October 26, barely three weeks after the Hamas attack, India abstained from a vote at the United Nations General Assembly (UNGA) that called for an "immediate, durable and sustainable humanitarian truce" in Gaza.
  - India explained its stand by saying that there was no explicit condemnation of the October 7 "terror attack in the resolution".
- All these factors suggested that India's historical policy towards Palestine was undergoing a paradigm shift.

Background & Evolving Approach

India's Palestine policy has evolved over the years. When the UN General Assembly voted on a resolution to partition Palestine into a Jewish state, an Arab state and an international city (Jerusalem) in November 1947, India, along with Pakistan and the Arab bloc, voted against it.

Prime Minister Jawaharlal Nehru had compared the settler Zionists in historical Palestine to the Muslim League of undivided India. His position was that India, having gone through the horrors of Partition, should not support the partition of Palestine.

But when the state of Israel was declared in May 1948, India swiftly adopted a pragmatic line: in 1950, it recognised Israel, but stopped short of establishing full diplomatic relations.

Throughout the Cold War, India, an advocate of Third World autonomy, was one of the most vocal supporters of the Palestine cause.

After it established full diplomatic relations with Israel in 1992, bilateral ties between New Delhi and Tel Aviv began to deepen and broaden (today, Israel is one of India's major defence and technology partners).

But India publicly maintained its support for "a negotiated solution, resulting in a sovereign, independent, viable and united State of Palestine, with East Jerusalem as its capital, living within secure and recognized borders, side by side at peace with Israel, as endorsed in the Arab Peace Initiative, the Quartet Road map and relevant UNSC Resolutions" — this means that India supported the creation of a Palestine state with East Jerusalem as its capital and based on the 1967 borders.

This position has evolved further after Mr. Modi became Prime Minister. In February 2018, when he visited Ramallah in the occupied West Bank, he called for dialogue to find a permanent solution to the crisis, but stopped short of saying anything on the status of Jerusalem or borders.

It does not mean that India supports Israel's claim over the whole of Jerusalem (New Delhi voted against the U.S. decision to recognise Jerusalem as Israel's capital), but it will not talk about the contentious issues such as the capital and border any more, while remaining a partner of Israel and a supporter of the two-state solution. Realpolitik displaces the moral content of India's Palestine policy.

After October 7

- A close analysis of India's voting record at the UN, **post-October 7**, and the statements made by the Ministry of External Affairs (MEA) suggests that this position of balancing has not changed.
- It is neither a strong moral critic, like Brazil or South Africa, of the way Israel is conducting the war, nor a mute spectator or enabler of Israel, like the United States or the United Kingdom.
- A few days after Mr. Modi's tweet declaring solidarity with Israel over the "terror attack", the MEA stated that India backed "a sovereign, independent viable state of Palestine". After its first abstention, there were at least four votes at the UNGA on Israel.
- On **November 12, 2023**, India voted in favour of a resolution that condemned Israeli settlements "in the occupied Palestinian territories, including East Jerusalem and the occupied Syrian Golan".
- Two weeks later, New Delhi voted in favour of another resolution that expressed "deep concern" over Israel's continuing occupation of Syria's Golan Heights.
- **On December 12**, India supported a resolution that called for "an immediate humanitarian ceasefire". And on **December 19**, it voted for the Palestinian right to self-determination.

The voting record speaks for itself. One cannot have a two-state solution if Israeli settlements continue in Palestinian territories. And the only path towards a solution is diplomacy, not war, as there is no balance of power between Israel, the mightiest military in West Asia, and the Palestinian militants.

So, in essence, if one supports the two state-solution, there should be a call for an immediate end to violence, support dialogue, condemn settlements and, in principle, back Palestinian right to self determination. This is what India has done, unlike the U.S., which claims to be supporting the two-state solution while voting against all resolutions at the UN and refusing to back the ceasefire call.

Palestinian Loss of Land 1947 to Present
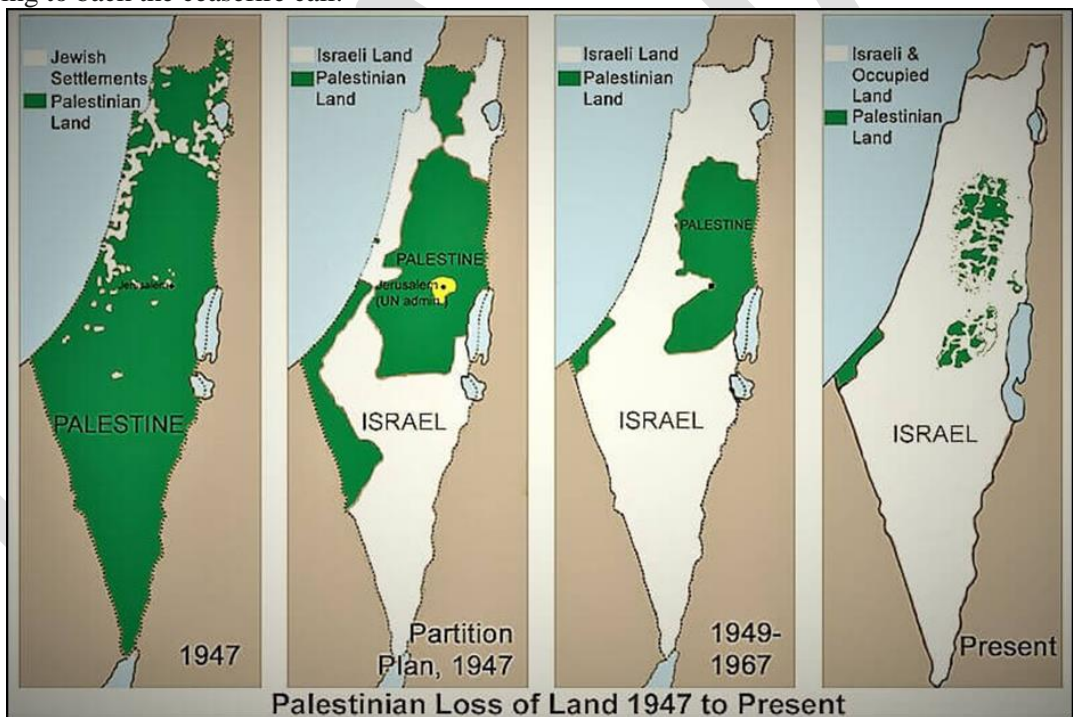
Current Policy and Diplomatic Nuances

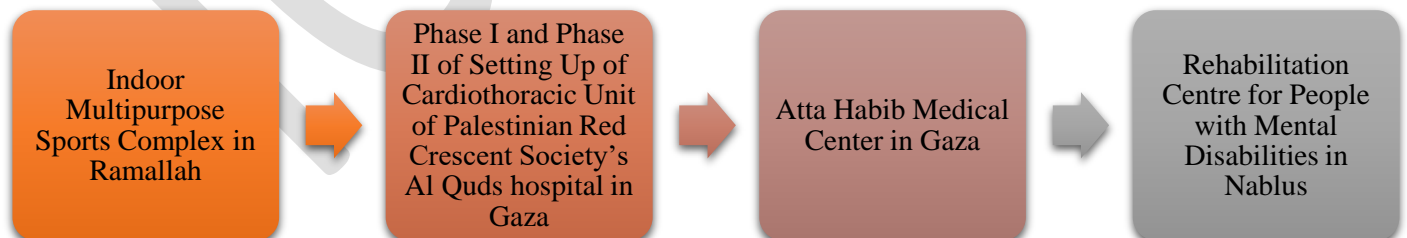| Relations with Israel as a National Interest	• India's relations with Israel have strengthened considerably in recent years, encompassing various sectors like trade, technology, defense, and counter-terrorism cooperation.

	• India's support for Israel is seen as a response to its fight against cross-border terrorism, although the situations in Israel and India differ significantly.
Stands With Palestne's Cause	• Besides growing relations with Israel, India has reiterated its stand for Palestine's cause. • Amid the ongoing tensions, USD 29.53 million has been contributed by India to the UN Relief and Works Agency (UNRWA) for Palestinian refugees. • India also sent nearly 6.5 tonnes of medical aid and 32 tonnes of disaster relief material for the people of Palestine.
India Balancing its Stance	• In 2017, the Indian Prime Minister for the first time visited Israel and in 2018 he made an official visit to Palestine for the first time. • In 2017, India voted against the U.S. and Israel for an attempt to declare unilaterally all of Jerusalem as the Israeli capital. • India's policy is clear, they condemn terrorism but do not support indiscriminate reprisal bombings.
India's Official Stand	• India's official position on the Israel-Palestine conflict remains unchanged, advocating for a two-state solution with Israel and Palestine as good neighbors. • It was only after the mediation of the US, in the 1991 Madrid Peace conference a two-state solution was agreed to resolve the Israeli-Palestinian conflict. • This is evidenced by the Indian Prime Minister's visit to Ramallah in the West Bank in 2018.

Indian and Palestine Relations

IBSA Cooperation	Bilateral Trade	Culture & People to People relations	The Palestine-India Techno Park	United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA)	MOUs between India and Palestine

IBSA Cooperation

- India, Brazil, South Africa (IBSA) Fund has also financed five projects in Palestine, namely

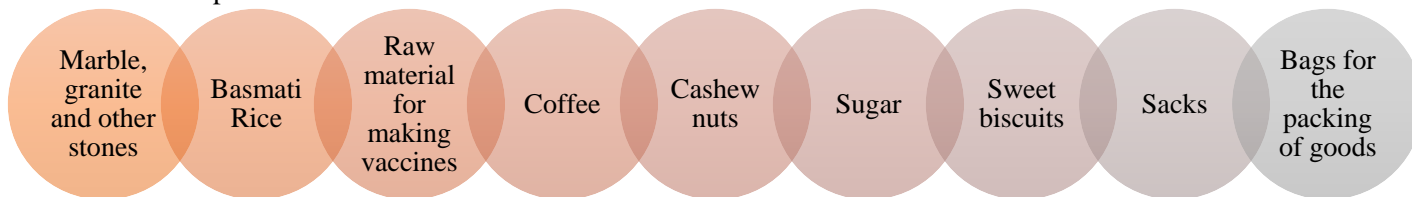| Indoor Multipurpose Sports Complex in Ramallah	→	Phase I and Phase II of Setting Up of Cardiothoracic Unit of Palestinian Red Crescent Society's Al Quds hospital in Gaza	→	Atta Habib Medical Center in Gaza	→	Rehabilitation Centre for People with Mental Disabilities in Nablus

Bilateral Trade

- Trade between India and Palestine is conducted through Israel and therefore, comprehensive trade statistics are not available.
- Limited data suggests that India-Palestine annual bilateral trade is worth about **US$ 40 million**

- Indian exports include

| Marble, granite and other stones | Basmati Rice | Raw material for making vaccines | Coffee | Cashew nuts | Sugar | Sweet biscuits | Sacks | Bags for the packing of goods |

- Palestinian exports are mainly **virgin olive oil and its fractions, dates, etc**.
- In terms of sectors **automotive spare parts, medical tourism, agro-products, textiles, fabrics, readymade garments, household appliances, stationery products, leather and leather products, agrochemicals, plastic products, pharmaceuticals and engineering goods** could be the target sectors for Indian manufacturers and exporters.

Culture & People to People relations

- **Indian arts and culture**, especially Indian movies are very popular in Palestine.
- Several **cultural activities**, including film shows and photo exhibitions have been organized by the Representative Office of India in various Palestinian cities in addition to screening of documentaries prepared by Public Diplomacy division, MEA in local TV channels, schools and youth clubs.
- The **first Indian restaurant** in Ramallah was opened in January 2018.
- **India-Palestine Youth Exchange Programme** was started in 2017.

The Palestine-India Techno Park

- The park will be located next to the **Birzeit University Academic Campus**.
- The Representative of India to Palestine, Sunil Kumar, released third tranche of funding, worth $3 million, for the construction of a Palestine-India Techno Park.
- In total, India has made a commitment of investing over $12 million, part of India's broader framework of capacity building in Palestine. The Indian government pays $3 million on a half-yearly basis.

- The Techno Park is meant to create a national business environment and culture "that will enable knowledge-based and creative enterprises as well as technology clusters to successfully operate locally, regionally and globally".
- Its **objectives** include establishing an environment that is accessible to industry, supporting the process of commercialization and industrialization, supporting entrepreneurship and bridging the knowledge gap between the private sector and academia.
- India's investment towards the park is part of India's support to the Palestinian cause.
- Once completed, the Technopark will serve as an **IT hub in Palestine** with complete IT facilities offering a one-stop solution to all IT-related service requirements, providing state of-the-art technology, hosting IT companies and foreign companies benefitting local business, Universities and other institutions.

United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA)

At the Extraordinary Ministerial Conference of the UNRWA held in Rome in March 2018, India announced the enhancement of annual contribution to the UNRWA from US$ 1.25 million to US$ 5 million from 2018-19.

MOUs between India and Palestine

- In 1997, an MoU between India and Palestine was signed, which provides for promoting scientific, technical and industrial cooperation including provision of training facilities in specialized areas and undertaking of mutually agreed projects.

- During the visit of President Abbas to India in 2012, three MoUs were signed in the field of setting up of a Centre of Excellence in IT, Building of two schools in Palestine and providing equipment and training to Vocational Training Centers in Palestine. During the visit of President of India to Palestine in October 2015, six MOUs were signed; one between the Palestinian Ministry of Culture and the Indian Council for Cultural Relations and the remaining five MOUs were signed between Indian and Palestinian Universities.
- During the State Visit of President Abbas to India in May 2017, six MOUs were signed, namely

Agriculture	Health	Youth Affairs & Sports	Information Technology	Agreement for exemption of visas for Diplomatic & Official Passport Holders	MOU between PTI and WAFA (Palestinian News Agency)

- During the visit of Prime Minister in February 2018, six MOUs were signed, namely

MoU for Construction of India-Palestine Super-Specialty Hospital at Beit Sahour in Bethlehem Governorate	MoU for Construction of School in Muthalath al Shuhada village in Jenin Governorate	MoU for Construction of School in Tamoon village in Tubas Governorate
MoU for Construction of an additional floor at Jawaharlal Nehru Secondary School for Boys in Abu Dees	MoU for Construction of India Palestine Centre for Empowering Women "TURATHI" - a National Centre for Development and Marketing of Palestinian Heritage Projects	MoU for Procurement of Equipment and Accessories for New National Printing Press in Ramallah

Scholarships and ITEC training for Palestinian Nationals

ICCR	ITEC
• India offers 50 ICCR scholarships for Palestinian students annually for higher studies in Graduate, Post-Graduate and Ph.D courses in India. • During the visit of Prime Minister in February 2018, it was announced that ICCR Scholarships for Palestine would be enhanced from 50 to 100 from the next academic year.	• 150 slots are offered to Palestine annually under the Indian Technical & Economic Cooperation Programme (ITEC) for training courses in India aimed at capacity building and skill enhancement. • More than 1000 Palestinian nationals have availed ITEC training in India.

Implications of Israel Palestine Conflict on India

Defense Deals with Israel	• India has a significant defense relationship with Israel, with defense procurement and technology cooperation. The conflict may impact this relationship, as Israel may focus more on its security needs during the conflict. • Israel supplies the most military equipment to India, with the military business between the two countries worth around USD 2.1 billion.

Energy Security	• India is dependent on oil imports from the Middle East, and any escalation in the region could affect energy prices and, subsequently, India's economy.
	• Since all the world economies are interconnected therefore, if countries like Saudi Arabia and Iran get involved in ongoing Israel-Palestine conflict then definitely there will be direct consequences over India's energy supply, economy and investment.
Impact on India-Middle East-Europe Economic Corridor	• The conflict has the potential to affect the stability of the Middle East, a region of strategic importance to India.
	• An escalation of hostilities could have implications for India's interests and engagements in the region.
	• India recently signed the India-Middle East-Europe Economic Corridor (IMEC) as an ambitious infrastructure project aimed at connecting India, the Middle East, and Europe through various transportation modes, including shipping and rail networks.
	• Instability in the region can create security challenges, and affect the smooth operation of the IMEC.

Way Forward

- Maintaining a status quo in the Israel-Palestine conflict is a challenging endeavor, and India can play a constructive role by promoting a peaceful resolution based on a two-nation theory.
- India should continue its diplomatic efforts and use its international influence to encourage both Israel and Palestine to return to the negotiating table.
- India must continue to act as a mediator and provide humanitarian assistance to the Palestinian people to address the immediate needs and alleviate suffering in conflict-affected areas.
- Encourage dialogues and exchanges between Israeli and Palestinian civil society groups, academics, and youth to promote mutual understanding and trust.

India's free trade pact with four EU nations

Why in News?

India signed a Trade and Economic Partnership Agreement (TEPA) with a bloc of four European countries — Iceland, Liechtenstein, Norway and Switzerland, formally known as the European Free Trade Association (EFTA). The pact has been in the works since 2008 but slipped off India's to-do list after the UPA government's exit.

Key Highlights

Market Access Improvements	Trade Benefits	India's Trade Dynamics	Geopolitical Significance	Ongoing Negotiations

- **Market Access Improvements**
  - o Easier visa rules for Indian services firms, facilitating access to European markets.
  - o Opportunities for professionals such as architects, accountants, and nurses.
- **Trade Benefits**
  - o Duty-free treatment for most goods exports in Switzerland.
  - o Aim to attract $100 billion of fresh foreign direct investment into India and create a million jobs over 15 years.
  - o Potential for cheaper wines and chocolates for Indian consumers, along with access to cheaper machinery for producers.

- **India's Trade Dynamics**
  - Speedy negotiation and sealing of the EFTA deal is commendable.
  - Second major trade pact after the United Arab Emirates, first with a western nations' grouping.
  - Symbolic significance indicating India's willingness to engage in free trade.
  - Departure from past aversion to trade pacts since 2014, signaling a shift towards free trade.

India's trade with EFTA (in million dollars)

EFTA countries	Exports	Imports	Trade balance
Iceland	13	5	8
Liechtenstein	0	8	-8
Norway	484	782	-298
Switzerland	1,382	19,657	-18,275
TOTAL	1,879	20,452	-18,574

*CY2023

- **Geopolitical Significance**
  - Marks India's openness to include non-trade issues like labor, human rights, environment, and gender in economic agreements.
  - Positive sign for potential allies like the EU, which prioritize such issues.
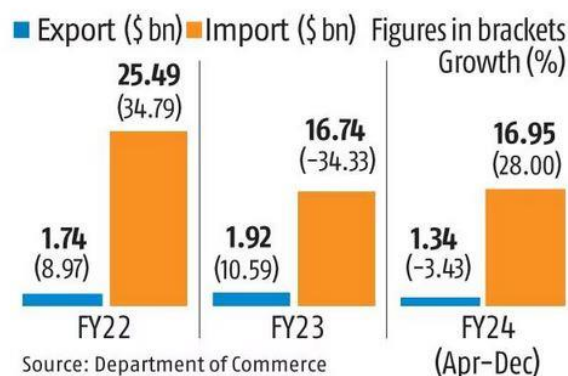- **Ongoing Negotiations**
  - Ongoing talks with the European Union (EU) and the United Kingdom, with the latter likely in the final stages.
  - Interim deal with Australia in 2022 yet to be followed through to a comprehensive agreement.
  - Talks with the Gulf Cooperation Council since 2004 have not progressed.
  - Political frictions have waylaid a deal with Canada.

India and European Free Trade Association (EFTA)

- India and European Free Trade Association (EFTA) signed the Trade and Economic Partnership Agreement (TEPA) on March 10, 2024.
- The Union Cabinet, chaired by the Hon'ble Prime Minister, approved the TEPA with EFTA States, comprising Switzerland, Iceland, Norway, and Liechtenstein.
- EFTA, established in 1960, promotes free trade and economic integration for its four Member States.
- Minister of Commerce and Industry, highlighted TEPA as a modern and ambitious trade agreement, marking India's first FTA with four developed nations.
- TEPA encompasses 14 chapters focusing on various aspects including market access, rules of origin, trade facilitation, and sustainable development.
- Switzerland is India's largest trading partner among EFTA countries.

INDIA–EFTA TRADE

■ Export ($ bn) ■ Import ($ bn) Figures in brackets Growth (%)

FY22: 1.74 (8.97), 25.49 (34.79)
FY23: 1.92 (10.59), 16.74 (-34.33)
FY24 (Apr-Dec): 1.34 (-3.43), 16.95 (28.00)

Source: Department of Commerce

- Key highlights of TEPA include commitments to increase foreign direct investments by $100 billion and create 1 million direct jobs in India over the next 15 years.

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- EFTA offers market access covering 92.2% of its tariff lines, while India covers 82.7% of its tariff lines.
- TEPA facilitates services exports, including IT services and professional services, with commitments from EFTA on digital delivery and commercial presence.
- Provisions for Mutual Recognition Agreements in Professional Services are included in TEPA.
- TEPA addresses Intellectual Property Rights at TRIPS level and promotes sustainable development and environmental protection.
- It fosters transparency, efficiency, and simplification of trade procedures.
- TEPA empowers Indian exporters and provides opportunities for services sector to access more markets.
- It offers integration into EU markets, particularly through Switzerland, and encourages domestic manufacturing under "Make in India" and Atmanirbhar Bharat initiatives.
- TEPA aims to accelerate the creation of direct jobs and facilitate technology collaboration and access to leading technologies over the next 15 years.

India and EFTA

- India's exports to EFTA nations totaled USD 1.92 billion, with imports reaching USD 16.74 billion in 2022-23.
- Bilateral trade between India and EFTA amounted to USD 18.65 billion during the same period.
- Switzerland emerges as India's primary trading partner, followed by Norway.
- Notably, India experiences a trade deficit with Switzerland, primarily due to gold imports.
- In March 2024, India and the European Free Trade Association signed a Trade and Economic Partnership Agreement (TEPA).

Power of four

India's gains from the proposed FTA with the 4-nation EFTA will mostly flow from the $100-bn investment promised by the bloc

- Goods exports may gain minimally due to insignificant existing tariffs, GTRI says
- Tariffs in Switzerland, Iceland, Norway and Liechtenstein are already zero or very low
- Low scope for raising market access for goods in EFTA could be a concern as India had a trade deficit of $18.58 bn in CY23
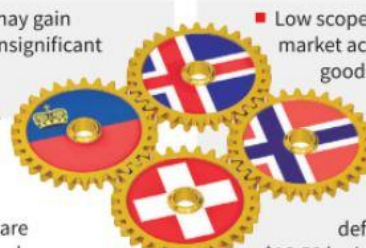
European Free Trade Association (EFTA)

About EFTA	• An intergovernmental organization established to promote free trade and economic integration among its four Member States: Iceland, Liechtenstein, Norway, and Switzerland. • Aims to benefit its members and their trading partners worldwide.
History	• Founded through a Convention signed in Stockholm on January 4, 1960. • Initially conceived as an alternative trade bloc for European states not joining the European Economic Community (EEC), precursor to the European Union (EU).
Main Tasks	• Maintaining and developing the EFTA Convention, governing economic relations among its four member states. • Overseeing the European Economic Area (EEA Agreement), integrating EU member states with three EFTA states (Iceland, Liechtenstein, and Norway) into a single market. • Expanding EFTA's global network of free trade agreements.

Trade and Economic Partnership Agreement (TEPA)

Coverage of the Agreement: Consists of 14 chapters covering areas such as trade in goods, rules of origin, intellectual property rights, trade in services, investment promotion, government procurement, and technical barriers to trade.

Key Highlights

- EFTA pledges to boost investments, aiming to increase foreign direct investments by USD 100 billion in India over 15 years, creating 1 million direct jobs.
- A historic commitment to promoting targeted investment and job creation within the FTA framework.
- EFTA offers tariff concessions covering 92.2% of its tariff lines, encompassing 99.6% of India's exports.
- India reciprocates by offering tariff concessions covering 82.7% of its tariff lines, addressing 95.3% of EFTA exports, notably including gold.
- EFTA's market access includes 100% coverage of non-agricultural products and tariff concessions on Processed Agricultural Products (PAP).
- India provides access to 105 sub-sectors, with commitments secured from Switzerland (128), Norway (114), Liechtenstein (107), and Iceland (110).
- TEPA incorporates provisions for Mutual Recognition Agreements in professional services such as nursing, chartered accountancy, and architecture.

> **Objectives of TEPA**
> - Facilitate trade and investment opportunities between India and EFTA by eliminating or reducing tariffs and non-tariff barriers across various products.
> - Ensure fair and transparent market access conditions for service providers and investors, enhancing cooperation on intellectual property rights (IPRs) protection and enforcement.
> - Streamline trade procedures, foster customs cooperation, and establish effective dispute resolution mechanisms.

Significance of TEPA

Investment Boost	Trade Expansion	Market Access	Geopolitical Significance	Knowledge Sharing and Innovation	Template for Future Deals

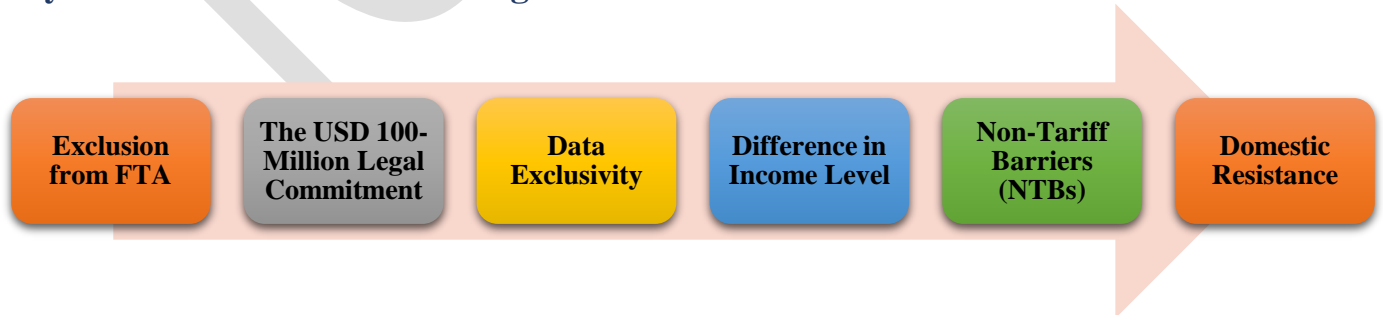| Free Trade Champion	Streamlined Processes	Sustainable Development

- **Investment Boost**: The anticipated USD 100 billion in FDI from EFTA countries over 15 years is crucial for India's infrastructure development, technological advancement, and job creation. TEPA will give impetus to "Make in India" and Atmanirbhar Bharat by encouraging domestic manufacturing in sectors such as Infrastructure and Connectivity, Manufacturing, Machinery, Pharmaceuticals, Chemicals, Food Processing, Transport and Logistics, Banking and Financial Services and Insurance.
- **Trade Expansion**: TEPA would stimulate our services exports in sectors such as IT services, business services, personal, cultural, sporting and recreational services, other education services, audio-visual services etc.
- **Market Access**: Under the India-EFTA free-trade agreement, Indian customers will get access to high-quality Swiss products such as watches, chocolates, biscuits, and clocks at lower prices as India will phase out customs duties under the trade pact on these goods over 10 years.

- **Geopolitical Significance**: The deal strengthens India's economic ties with Europe, fostering a more multipolar global trade landscape. This reduces dependence on any single trading partner and provides strategic benefits for India.
- **Knowledge Sharing and Innovation**: The deal can foster knowledge sharing and joint research ventures, accelerating India's technological development. It facilitates technology collaboration and access to world-leading technologies in precision engineering, health sciences, renewable energy, Innovation and R&D.
- **Template for Future Deals**: The successful implementation of the India-EFTA TEPA can serve as a template for future trade agreements with other European nations like the UK and potentially even the EU. TEPA provides an opportunity to integrate into EU markets. Over 40% of Switzerland's global services exports are to the EU. Indian companies can look to Switzerland as a base for extending its market reach to EU.
- **Free Trade Champion**: India's successful negotiation and signing of the TEPA reinforces its image as a champion of free trade. This can attract further foreign investment and position India as a key player in the global trade arena.
- **Streamlined Processes**: The agreement goes beyond just tariffs, addressing areas like intellectual property rights, services trade, and government procurement. This comprehensive approach fosters a stronger economic partnership with long-term benefits. Commitments related to Intellectual Property Rights in TEPA are at the TRIPS level.
- **Sustainable Development**: The TEPA incorporates provisions for promoting sustainable development practices in trade and investment. This ensures environmentally conscious growth and aligns with global sustainability goals.

Key Issues in the India-EFTA Agreement

Exclusion from FTA	The USD 100-Million Legal Commitment	Data Exclusivity	Difference in Income Level	Non-Tariff Barriers (NTBs)	Domestic Resistance

- **Exclusion from FTA**
  - Sensitive sectors like agriculture and dairy are excluded from significant tariff reductions.
  - Sectors such as dairy, soya, coal, and sensitive agricultural products are on the exclusion list, without duty concessions.
  - The effective duty on Gold, a major EFTA export to India, remains untouched, potentially limiting benefits for some exporters.
- **The USD 100-Million Legal Commitment**: If the USD 100-million investment commitment isn't met, India can "re-balance or suspend" duty concessions.
- **Data Exclusivity**: Proposal for data exclusivity (DE) could delay generic drug manufacturing, as it prevents utilization of original patent holders' preclinical and clinical trial data.
- **Difference in Income Level**: Significant disparity in per capita incomes between India and EFTA countries needs consideration for equal opportunity.
- **Non-Tariff Barriers (NTBs)**: Streamlining differing product standards and technical regulations is crucial to avoid hurdles for businesses.
- **Domestic Resistance**: Concerns about job losses or unfair competition from EFTA imports may arise in certain Indian sectors.

Way Forward to Ensure Success of the India-EFTA Deal

Addressing Asymmetries by Finding Common Ground	Bridging the Regulatory Gap Through Streamlining for Efficiency	Building Capacity By Providing Tools for Growth	Fostering Collaboration With A Shared Vision

Addressing Asymmetries by Finding Common Ground
- Include provisions for investment protection to foster a conducive business environment.
- Consider phased tariff reductions for sensitive sectors like agriculture.
- Provide compensation packages for affected industries and establish an effective dispute resolution mechanism.

Bridging the Regulatory Gap Through Streamlining for Efficiency
- Reduce non-tariff barriers such as technical regulations and customs procedures.
- Establish Mutual Recognition Agreements (MRAs) and joint technical committees for harmonizing regulations.

Building Capacity By Providing Tools for Growth
- Invest in training programs for customs officials and businesses.
- Upgrade infrastructure to handle increased trade volume efficiently.

Fostering Collaboration With A Shared Vision
- Maintain regular dialogues between governments, businesses, and civil society.
- Encourage knowledge exchange programs to benefit from best practices and technological advancements.

E-Evidence & New Criminal Law

Why in News?
The text discusses the enactment of three new criminal laws in India, namely the Bharatiya Nyay Sanhita, Bharatiya Nagarik Suraksha Sanhita, and Bharatiya Sakshya Adhiniyam, scheduled to come into force on July 1, 2024.

Additionally, Section 106(2) of the Bharatiya Nayay Sanhita has been temporarily put on hold by the Central government. The Ministry of Home Affairs and State governments are making preparations for a smooth transition.

Key Highlights

Enactment of New Laws	Section 106(2) on Hold	Preparations for Transition	Electronic Evidence Changes	Clarity on Electronic Record Definitions

Admissibility of Electronic Records	Expert Certification and Hash Algorithms	Increased Workload for Cyber Laboratories:	Call for General Awareness and Infrastructure Readiness

- **Enactment of New Laws**: Three new criminal laws are introduced to replace existing ones: Bharatiya Nyay Sanhita (Indian Penal Code replacement), Bharatiya Nagarik Suraksha Sanhita (Code of Criminal Procedure replacement), and Bharatiya Sakshya Adhiniyam (Indian Evidence Act replacement). These laws are set to be effective from July 1, 2024.
- **Section 106(2) on Hold**: Section 106(2) of Bharatiya Nayay Sanhita, imposing 10 years imprisonment for not immediately reporting fatal accidents, has been put on hold by the Central government.
- **Preparations for Transition**: The Ministry of Home Affairs and State governments are actively preparing for a smooth transition to the new laws, with some adjustments made in Bharatiya Nagarik Suraksha Sanhita regarding investigation and police functioning.
- **Electronic Evidence Changes**: The Bharatiya Sakshya Adhiniyam introduces some changes, such as a slightly broadened scope of secondary evidence and modifications in provisions related to electronic evidence.
- **Clarity on Electronic Record Definitions**: Clarity on electronic record definitions, including the definition of "document" encompassing electronic and digital records. It specifies types of electronic records like emails, server logs, and messages.
- **Admissibility of Electronic Records**: The admissibility of electronic records is discussed, referencing Section 63 of the Bharatiya Sakshya Adhiniyam, equivalent to Section 65-B of the Indian Evidence Act. The Supreme Court's ruling in Arjun Panditrao Khotkar vs Kailash Kushanrao Gorantyal & Ors. (2020) is highlighted, emphasizing the importance of the required certificate for admissibility.
- **Expert Certification and Hash Algorithms**: Section 63(4) of Bharatiya Sakshya Adhiniyam requires a certificate to be signed by two persons, including an expert. The expert must verify the certificate using specific hash algorithms (e.g., SHA1, SHA256, MD5) to ensure the integrity of data. The potential impact on cyber laboratories and the need for general awareness about encryption methods are discussed.
- **Increased Workload for Cyber Laboratories**: The requirement for expert certification may increase the workload of cyber laboratories, especially concerning crimes involving smartphones and electronic records. There is a concern about the capacity of some labs, as not all are equipped with sufficient manpower or notified under the IT Act.
- **Call for General Awareness and Infrastructure Readiness**: A need for a general awareness drive on encryption methods, particularly for private agencies. Enforcement agencies are urged to ensure that the necessary infrastructure is in place before the laws come into effect in July 2024.

Key changes in the bills

ADDITIONS
- Definition of terrorist acts expanded to include threats to "monetary stability" and "economic security" among other things
- Clear definition clause for "cruelty" against women in a marital relationship
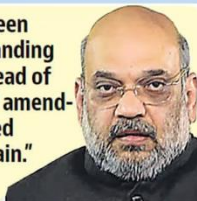- Penalises publication of court proceedings that may disclose identity of rape victims

OMISSIONS
- Panel's recommendation on adultery and non-consensual gay sex not accepted
- A key provision that proposed 7 yrs in jail for mob lynching was deleted
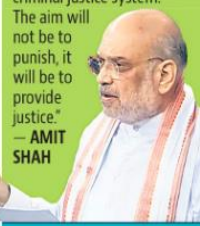
WHAT'S NEXT?
Debate on the bills will take place on Thursday and Union home minister Amit Shah will give his reply on Friday.

"The bills had had been examined by the standing committee and instead of coming with official amendments, it was decided to bring the bills again."
— AMIT SHAH

Three bills introduced in Lok Sabha

Indian Penal Code (IPC), 1860
TO BE REPLACED BY
Bharatiya Nyaya Sanhita Bill, 2023
- It will have 356 sections (instead of 511 sections in IPC)
- 175 sections have been amended
- 8 sections have been added, and 22 sections have been repealed

Code of Criminal Procedure (CrPC), 1973
TO BE REPLACED BY
Bharatiya Nagarik Suraksha Sanhita, 2023
- It will have 533 sections (instead of 478 sections in CrPC)
- 160 sections have been changed
- 9 sections have been added, and 9 sections have been repealed

Indian Evidence Act, 1872
TO BE REPLACED BY
Bharatiya Sakshya Bill, 2023
- It will have 170 sections (instead of 167 sections in IEA)
- 23 sections have been changed
- 1 section has been added, and 5 sections have been repealed

"From 1860 to 2023, the country's criminal justice system functioned as per the laws made by the British. I can assure the House that these bills will transform our criminal justice system. The aim will not be to punish, it will be to provide justice."
— AMIT SHAH

WHAT NEXT
The three bills will be studied by the standing committee on home affairs, which is chaired by BJP MP Brijlal (who is a retd IPS officer).

Evolution of Criminal Justice

Historical Context

- Throughout India's history, various criminal justice systems have evolved in different regions under different rulers.

British Rule and Codification

- During the British rule, criminal laws were codified in India. The Indian Penal Code (IPC) was drafted in 1860, following the establishment of the first law commission in 1834 under the Charter Act of 1833. The IPC became effective on January 1st, 1862.

Indian Evidence Act (IEA)

- The IEA, originally passed by the Imperial Legislative Council in 1872 during the British Raj, provides rules governing the admissibility of evidence in Indian courts of law.

Code of Criminal Procedure (CrPC)

- The Code of Criminal Procedure (CrPC), enacted in 1973, provides procedures for administering criminal law in India. It became effective on April 1st, 1974.

Recent Legislative Changes

- In December 2023, the Indian Parliament passed three significant Bills: Bharatiya Nyaya (Second) Sanhita, 2023; Bharatiya Nagarik Suraksha (Second) Sanhita, 2023; and Bharatiya Sakshya (Second) Bill, 2023, aiming to overhaul the criminal justice system.

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Introduction of New Bills

Replacement of British-Era Laws	Objective and Soul of the New Laws	Consultation Process	Modernization and Digitization	Focus on Forensic Science	Zero FIR and e-FIR	Enhanced Punishments
Judicial Reforms	Abolishment of Sedition Law	Definition of Terrorism	Trial in Absentia	Overall Changes	Focus on Women and Children	Crackdown on Heinous Crimes
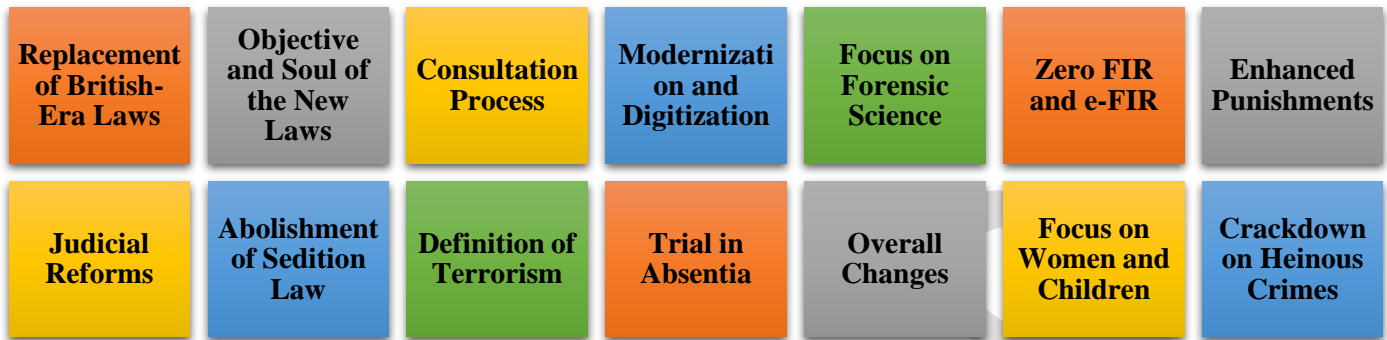
Union Home Minister Shri Amit Shah introduced three bills in the Lok Sabha; Bharatiya Nyaya Sanhita Bill 2023, Bharatiya Nagarik Suraksha Sanhita Bill 2023, and Bharatiya Sakshya Bill 2023.

- **Replacement of British-Era Laws**: The new bills aim to replace the British-era laws, specifically the Indian Penal Code, 1860; Criminal Procedure Code, 1898; and Indian Evidence Act, 1872.
- **Objective and Soul of the New Laws**: The new laws are designed to protect the rights given to Indian citizens by the constitution. The emphasis is on justice rather than punishment, in contrast to the earlier laws that focused on strengthening British rule.
- **Consultation Process**: The formulation of these laws involved extensive consultation, including inputs from 18 states, 6 union territories, the Supreme Court, High Courts, law universities, Members of Parliament, and the public.
- **Modernization and Digitization**: The new laws incorporate modern technologies, including an expanded definition of documents to include electronic records. The entire process from FIR to judgment will be digitized, and videography during search and seizure is made compulsory.
- **Focus on Forensic Science**: A historic decision to establish the National Forensic Science University is announced. The goal is to increase the number of forensic science experts, aiming for a conviction ratio above 90%.

Changes in the Bills

- **Bharatiya Nagarik Suraksha Sanhita Bill**: 533 sections, 160 sections changed, 9 new sections added, and 9 sections repealed.
- **Bharatiya Nyaya Sanhita Bill 2023**: 356 sections, 175 sections changed, 8 new sections added, and 22 sections repealed.
- **Bharatiya Sakshya Bill**: 170 sections, 23 sections changed, 1 new section added, and 5 repealed.

- **Zero FIR and e-FIR**: Introduction of Zero FIR after 75 years of independence for citizen convenience. Provision of e-FIR and designated police officers to inform the family of the arrested person about the arrest online and in person.
- **Enhanced Punishments**: Provisions for harsh punishments in cases of inter-state gangs, organized crimes, and crimes against women. Introduction of community service as a form of punishment.
- **Judicial Reforms**: Time limits set for filing charge sheets and framing charges. Courts bound to give notice of framing charges within 60 days. Online availability of orders within 7 days.
- **Abolishment of Sedition Law**: The sedition law is to be completely repealed, emphasizing the right to freedom of speech in a democratic India.
- **Definition of Terrorism**: For the first time, crimes like secession, armed insurgency, subversive activities, separatism, and challenges to the unity, sovereignty, and integrity of India are defined as terrorism.

- **Trial in Absentia**: A historic decision allows the trial and sentencing of a person declared a fugitive in absentia. Appeals against the sentence must follow Indian law.
- **Overall Changes**: A total of 313 changes are made in the laws to bring about widespread changes in India's criminal justice system, aiming for quicker justice delivery within a maximum of 3 years.
- **Focus on Women and Children**: Special provisions are made to protect the rights of women and children, with an emphasis on preventing police misuse of power.
- **Crackdown on Heinous Crimes**: While repealing certain laws, provisions for punishment for exploiting women, tackling mob lynching, and cracking down on organized crimes and terrorism are introduced.

Provisions of Bharatiya Sakshya Adhiniyam, 2023 (BSA)
Retained Provisions from IEA, 1872

Admissible Evidence

- Parties can present admissible evidence.
- Admissible evidence includes 'facts in issue' or 'relevant facts.'

Facts in Issue

- Determine the existence, nature, or extent of any right, liability, or disability.

Relevant Facts

- Pertinent to a given case.
- Includes documentary and oral evidence.

Proven Fact

- A fact is considered proven when the Court believes it exists based on presented evidence.

Police Confessions

- Confessions to police officers are inadmissible.
- Confessions in police custody are inadmissible unless recorded by a Magistrate.
- Information received from an accused in custody may be admitted if it distinctly relates to the fact discovered.

Key Changes Incorporated in BSA, 2023

Documentary Evidence

- A document includes electronic records in addition to writings, maps, and caricatures.
- Primary evidence includes original documents, electronic records, and video recordings.
- Secondary evidence expanded to include oral and written admissions, and testimony of a qualified document examiner.

Oral Evidence

- Oral evidence includes statements made electronically.
- Allows witnesses, accused persons, and victims to testify through electronic means.

Admissibility of Electronic or Digital Records as Evidence

- Documentary evidence includes information in electronic records stored in optical or magnetic media produced by a computer.
- Information may be stored or processed by a combination of computers.

Changes proposed in criminal laws

Union home minister Amit Shah has introduced three key bills in the Lok Sabha that, if approved, will overhaul India's criminal justice system. A look at key aspects of the bills

THE BHARATIYA NYAYA SANHITA (BNS) BILL, 2023
Proposed to replace **Indian Penal Code (IPC), 1860**

The IPC, which was framed by the British, is the official criminal code of India that lists various crimes and its punishments

KEY TAKEAWAYS

- Sedition deleted, but another provision **penalising secessionism**, separatism, rebellion and acts against sovereignty, unity and integrity of India brought in
- Provision of **death penalty** for gang rape of minors and for mob lynching
- **Community service introduced** as one of the punishments for the first time

THE BHARATIYA NAGARIK SURAKSHA SANHITA, 2023
Proposed to replace **Code of Criminal Procedure (CrPC), 1973**

The CrPC lays down the procedure for investigation, arrest, court hearing, bail and punishment in criminal cases

KEY TAKEAWAYS

- **Time-bound investigation**, trial and judgment within 30 days of the completion of arguments
- **Video-recording** of the statement of sexual assault victims to be made mandatory
- New provision for **attachment of property and proceeds** of crime

THE BHARATIYA SAKSHYA BILL, 2023
Proposed to replace the **Indian Evidence Act, 1872**

The IEA applies to all judicial proceedings in the country and defines the particulars of evidence produced and admissible in courts

KEY TAKEAWAYS

- **Documents to also include** electronic or digital records, e-mails, server logs, computers, smart phones, laptops, SMS, websites, locational evidence, mails, messages on devices
- **Digitisation of all records** including case diary, FIR, charge sheet and judgement
- Electronic or digital record shall have the same legal effect, validity and enforceability as paper records

Joint Trials

- In a joint trial, if a confession affects multiple accused, it is treated as a confession against all (IEA provision).
- BSA adds an explanation, stating that a trial involving an absconded accused or one not responding to an arrest warrant is considered a joint trial.

Concerns Regarding Provisions of Bharatiya Sakshya Adhiniyam, 2023 (BSA)

Tampering of Electronic Records	• Acknowledged susceptibility of electronic records to tampering. • Emphasized the risk of a miscarriage of justice without adequate safeguards.
Ambiguity in Admissibility of e-Records	• Admissibility of electronic records allowed. • Court discretion to consult an Examiner of Electronic Evidence for opinion. • BSA includes electronic records in the document definition.

	• Retains IEA provision: All documents admissible as primary evidence unless qualified as secondary (destroyed or with the person against whom it must be proved).
Information Obtained in Police Custody	• Information from an accused in police custody is admissible if it distinctly relates to the fact discovered. • Supreme Court and Law Commission reports highlighted concerns about facts discovered in custody due to duress and torture.
Discrimination Between Accused	• Information received from an accused in police custody is admissible if it relates to a fact discovered. • Similar information from an accused outside police custody is not admissible. • BSA retains this distinction.

Steps Need to be Taken to Make BSA More Effective

Recommendations of Standing Committee on Home Affairs (2023)
- Safeguard authenticity and integrity of electronic records prone to tampering.
- Mandate secure handling and processing of electronic records through a proper chain of custody during investigations.

Guidelines by Karnataka High Court (2021)
- Qualified forensic examiner to accompany the search team.
- Prohibition on Investigating Officer's use of seized electronic devices during searches.
- Seizure and packing of electronic storage devices in Faraday bags to block electromagnetic signals.

Directive Proposal of EU
- Mandate use of electronic evidence only with sufficient evidence of non-manipulation or forgery.
- Ensure secure handling of evidence from production to chain of custody.
- Involvement of IT experts at the accused's request.

Law Commission Recommendations (2003)
- Prohibition of provability of facts discovered through threats, coercion, violence, or torture.
- Relevance of facts discovered in or outside police custody.
- Presumption of police-caused injuries if a person in custody is injured.

Malimath Committee Recommendations (2003)
- Introduction of 'social welfare offences' category for minor violations.
- Replacement of adversarial system with a 'mixed system.'
- Reduction of the standard of proof required for conviction.
- Admissibility of confessions made before a senior police officer.

Recommendations of Standing Committee on Home Affairs (2023)

Guidelines by Karnataka High Court (2021)

Directive Proposal of EU

Law Commission Recommendations (2003)

Malimath Committee Recommendations (2003)

The Bharatiya Sakshya Adhiniyam brings clarity to electronic records' definition and admissibility, emphasizing expert certification and hash algorithms. However, challenges for cyber laboratories are anticipated due to increased workload. It is crucial for enforcement agencies to raise awareness about encryption methods and ensure necessary infrastructure before the laws take effect, reflecting a commitment to modernize criminal laws in India for emerging digital challenges.

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A tribe in the Western Ghats in need of a lifeline

Why in News?

The Phani Yerava tribe in Karnataka's Western Ghats faces challenges like addiction, impacting livelihoods and education, necessitating policy attention.

Key Highlights

- Makuta village is situated in Karnataka's section of the Western Ghats.
- It's under Betoli gram panchayat of Virajpet taluka in Kodagu district.
- The village falls under the Makuta Aranya Valaya near the Kerti reserved forest.
- The area is part of the Talacauvery sub-cluster, identified as a World Heritage Site.
- Inhabited by the 'Phani Yerava' tribe, a Girijan colony.
- 19 Yerava households successfully claimed land under the Forest Rights Act.
- They reside on 135 acres of forest land.
- Historically dependent on the forest for livelihood.
- Reduced dependence due to tiresome collection of minor forest produce and exploitation by middlemen.
- Majority now prefer working as daily laborers, primarily in Kasaragod, Kerala.
- Collect minor forest produce like fuelwood, honey, dhoopa, and shekakai for consumption, not for stockpiling.
- Prevalence of alcohol addiction causing significant concern.
- Entire community found intoxicated, including adolescents.
- Addiction affecting children's attendance in schools and community's awareness of external affairs.
- Important documents kept in custody of non-tribal members due to community's condition.
- Efforts by Department of Social Welfare for de-addiction drives.
- Similar issues found across various tribal villages in the Western Ghats.
- Lack of attention to social issues in policy matters according to NGOs and government officials.
- Leaders of local tribal communities emphasize the need for serious consideration of social issues by the government.
- Advocacy for policies beneficial to all tribal communities, not just numerically dominant ones, to address existential concerns like addiction effectively.

WHAT'S AT STAKE

1,64,280 sq km

The Western Ghats cover a total area of 1,64,280 sq km across six states: Gujarat, Maharashtra, Goa, Kerala, Karnataka and Tamil Nadu.

They form the major watershed in peninsular India, affecting rainfall patterns across the country.

They also neutralise an estimated 4 million tonnes of carbon every year — about 10% of the emissions neutralised by all of India's forests.

Forest Rights Act, 2006

Enacted in 2006, the Forest Rights Act (FRA) acknowledges the rights of forest-dwelling tribal communities and traditional forest dwellers to access forest resources. These resources have been crucial for their livelihoods, habitation, and socio-cultural practices.

Objectives

- Rectifying historical injustices experienced by forest-dwelling communities.
- Ensuring land tenure, livelihood, and food security for Scheduled Tribes and traditional forest dwellers.
- Strengthening forest conservation efforts by assigning responsibilities and authority to Forest Rights holders for sustainable resource use, biodiversity conservation, and ecological balance maintenance.

Rights Granted Under the Act

The Forest Rights Act recognizes three types of rights:

Land Rights

- Provides ownership rights for land cultivated by forest dwellers, capped at 4 hectares per family.
- Ownership is limited to cultivated land and inheritance is the sole means of transfer.
- Prohibits sale or transfer of the land to others.

Use Rights

- Grants rights to extract Minor Forest Produce, utilize grazing areas, and access pastoralist routes.
- Excludes rights over timber.

Right to Protect and Conserve

- Empowers forest-dwelling communities to protect and manage forests.
- Crucial for safeguarding forests and wildlife against threats from illegal activities and land encroachment.

Eligibility for Claiming Rights

These Rights can be claimed by:

- Scheduled Tribes residing in and depending on forests for livelihoods.
- Any community residing in forest lands for at least three generations (75 years) before December 13, 2005, for livelihood purposes.

Recognition Process

- Section 6 of the Forest Rights Act outlines a transparent three-step procedure for rights recognition
- Gram Sabha recommendation regarding land cultivation, minor forest produce collection, etc.
- Review of Gram Sabha's recommendation by screening committees at Taluka and District levels.
- Final decision made by the District Level Committee comprising three government officers and three elected individuals. Enacted in 2006, the Forest Rights Act (FRA) acknowledges the rights of forest-dwelling tribal communities

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

and traditional forest dwellers to access forest resources. These resources have been crucial for their livelihoods, habitation, and socio-cultural practices.

Tribal Forest Rights

- Colonial era marked by absolute state control over forests for timber demand.
- Indian Forest Act, 1927 established legal framework for forest control
- Exclusive focus on timber production detrimental to non-timber species
- Adivasis heavily dependent on forests for livelihoods
- Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 aimed to secure forest management rights and land tenure for forest-dwelling communities
- SAL 2021 report highlights diminishing significance of forests for Adivasi livelihoods in Jharkhand and Odisha
- Majority of Adivasi villages located near forests
- Low percentage of Adivasi households report income from Non-Timber Forest Products (NTFP)
- Forest income contributes only a small percentage to total income
- Adivasi households near forests earn less income than those farther away
- Income from forests decreases with increasing distance from forests
- Adivasis rely on forests for food, fuel, fodder, housing material, and medicines
- Concerns over decreasing availability of forest resources due to biodiversity loss
- Spiritual connection of Adivasis with forests
- Curbing Adivasis' access to forests increases vulnerability of their livelihoods
- Forest department's focus on timber leads to loss of biodiversity
- FRA aims to reverse this cycle by granting forest management rights to Adivasis
- FRA encompasses rights of self-cultivation, habitation, grazing, fishing, and access to water bodies in forests

Rights for the dwellers

What the Forest Rights Act, 2006, entails

- Tenurial security over the forestland under occupation prior to December 13, 2005
- Recognition of community right over forest and forest products
- Protection and conservation of community forest resources
- Conversion of all forest villages and habitation located inside the forestland into revenue villages
- In situ rehabilitation of displaced persons evicted without compensation prior to December 13, 2005
- Recognition of ancestral domain (habitat) right to

Residents of Gunduribadi village in Odisha's Nayagarh district get ready for mapping their land boundaries for the Forest Rights Act implementation. ■ SPECIAL ARRANGEMENT
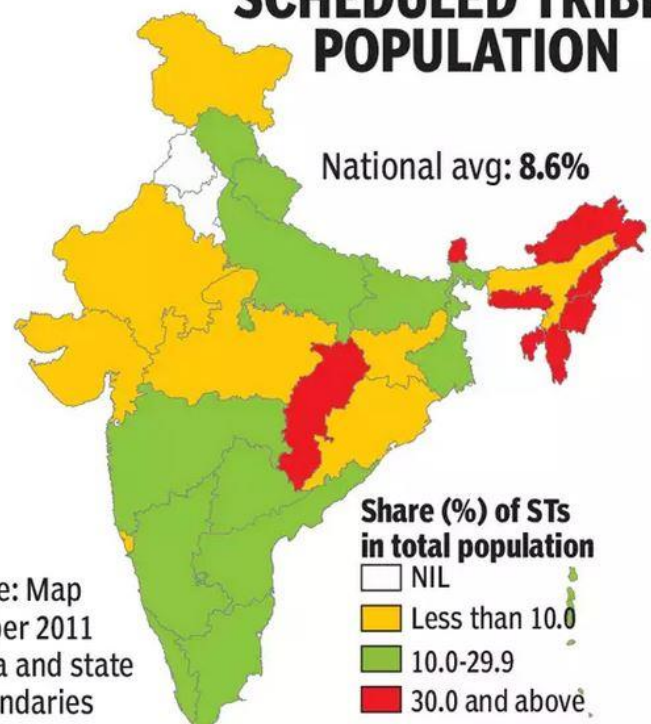
Particularly Vulnerable Tribal Groups
- Seasonal access to nomadic, pastoral and semi-nomadic communities over forestland

- Conversion of all leases granted by erstwhile governments, zamindars and king into permanent land records

SCHEDULED TRIBES POPULATION

National avg: **8.6%**

Note: Map as per 2011 data and state boundaries

Share (%) of STs in total population
- NIL
- Less than 10.0
- 10.0-29.9
- 30.0 and above

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- Implementation of FRA could significantly change livelihood status of Adivasis in Jharkhand and Odisha.
- Under Forest Rights Act 2006, a total of 21.99 lakh Individual titles and a total of 1.08 lakh Community titles have been distributed.

Tribals of Western Ghats

Tribal Group	Description	Population	Geographical Distribution	Main Occupation	Literacy Rate
Jenu Kuruba	Original inhabitants of Karnataka, with a population of 36,076. Mostly found in Mysore, Kodagu, Chamrajanagara, and parts of Shivamoga. Also present in border areas of Tamil Nadu and Andhra Pradesh. Members of primitive tribal groups.	36,076	Karnataka (Mysore, Kodagu, Chamrajanagara), Tamil Nadu, Andhra Pradesh	Daily laborers in plantations, rarely blend with other tribes	36.25%
Kadu Kuruba	Original inhabitants of Nagarhole and Kakanakote forests in Karnataka. Population around 11,953. Mostly residing in Mysore and Kodagu. Some also in Tamil Nadu and Kerala regions.	11,953	Karnataka (Mysore, Kodagu), Tamil Nadu, Kerala	Occupations include blacksmithing, carpentry, collection of NTFPs, shifting cultivation, livestock nurturing	20.12%
Kattunayakan	Inhabit regions across Tamil Nadu, Kerala, Karnataka border in Western Ghats, and parts of Puducherry. Considered primitive in Kerala. Hindu by religion, speak local languages.	NA	Tamil Nadu, Kerala, Karnataka, Puducherry	Cultivation, collection of NTFPs	NA
Korga	Primitive tribals scattered over Tamil Nadu, Karnataka, and Kerala. Particularly found in Udupi, Kodagu, and parts of Nilgiri hills.	NA	Tamil Nadu, Karnataka, Kerala	Alcohol consumption, smoking, poor dietary habits, malnutrition	5-6%
Yarava	Primitive tribals of Tamil Nadu, residing in thickly forested slopes and foothills of Western Ghats and Nilgiri hills.	NA	Tamil Nadu (Western Ghats, Nilgiri hills)	Knowledge of medicinal and aromatic plants	8.56%

Empowering Tribals, Transforming India

Recognition of Tribal Contributions	Pradhan Mantri Janjati Adivasi Nyaya Maha Abhiyan (PM JANMAN)	Empowerment through Constitutional Safeguards	Educational Empowerment	Economic Empowerment

Infrastructure Development and Livelihood Opportunities	Health Initiatives	Tribal Welfare Beyond Ministry of Tribal Affairs	Honoring Tribal Heritage and Legacy

Recognition and Commemoration of Tribal Contributions
- Tribal movements integral to India's history.
- Recognition of Tribal Freedom Fighters' sacrifices.
- Commemoration of Bhagwan Birsa Munda's birth anniversary as Janjatiya Gaurav Divas.

Pradhan Mantri Janjati Adivasi Nyaya Maha Abhiyan (PM JANMAN)
- Launched for the development of Particularly Vulnerable Tribal Groups (PVTGs).
- Budget of approximately Rs 24,000 crore.
- Focus on basic facilities, education, health, and livelihood opportunities.

Empowerment through Constitutional Safeguards and Legislation
- Special provisions in the Constitution for tribal welfare.
- Ministry of Tribal Affairs established in 1999.
- Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006.

Ministry of Tribal Affairs: Nearly **3X** increase in budget outlay in last 9 years

Year	Amount in Rs. crore
2015-16	4495
2016-17	4822
2017-18	5318
2018-19	5995
2019-20	7328
2020-21	5495
2021-2022	6174
2022-23 (RE)	7301
2023-24 (BE)	12462

Educational Empowerment
- Establishment of Eklavya Model Residential Schools (EMRS).
- Scholarship and Fellowship Programs for ST students.

Economic Empowerment
- Increased budget allocation for Ministry of Tribal Affairs.
- Financial support for entrepreneurship and tribal livelihoods.
- Initiatives through TRIFED for marketing tribal products.

Infrastructure Development and Livelihood Opportunities: Pradhan Mantri Adi Adarsh Gram Yojana (PMAAGY) for basic infrastructure in tribal villages.
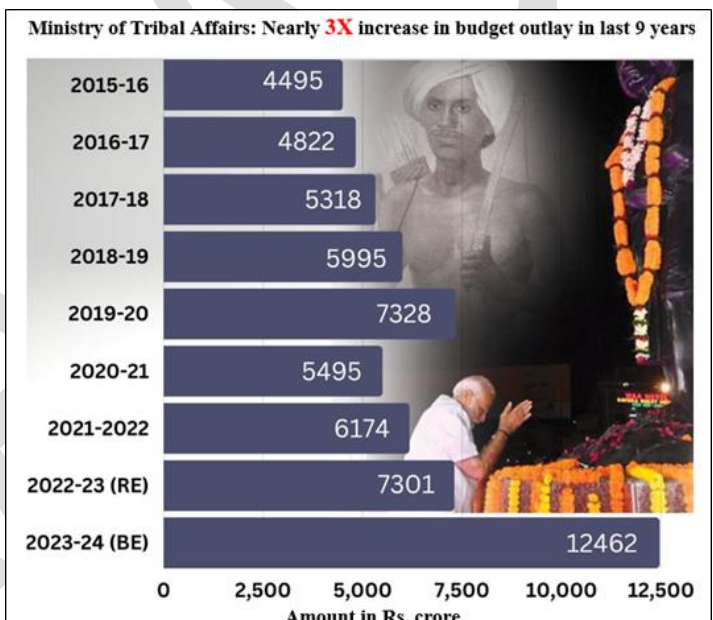
Health Initiatives
- Focus on health issues specific to tribal communities, such as Sickle Cell Disease.
- National Health Mission initiatives.

Tribal Welfare Beyond Ministry of Tribal Affairs
- Cross-sectoral initiatives for tribal welfare, including housing, road connectivity, financial empowerment, and sanitation.

Honoring Tribal Heritage and Legacy
- Museums and memorials dedicated to tribal freedom fighters.
- Development of national memorials like Mangarh Dham.

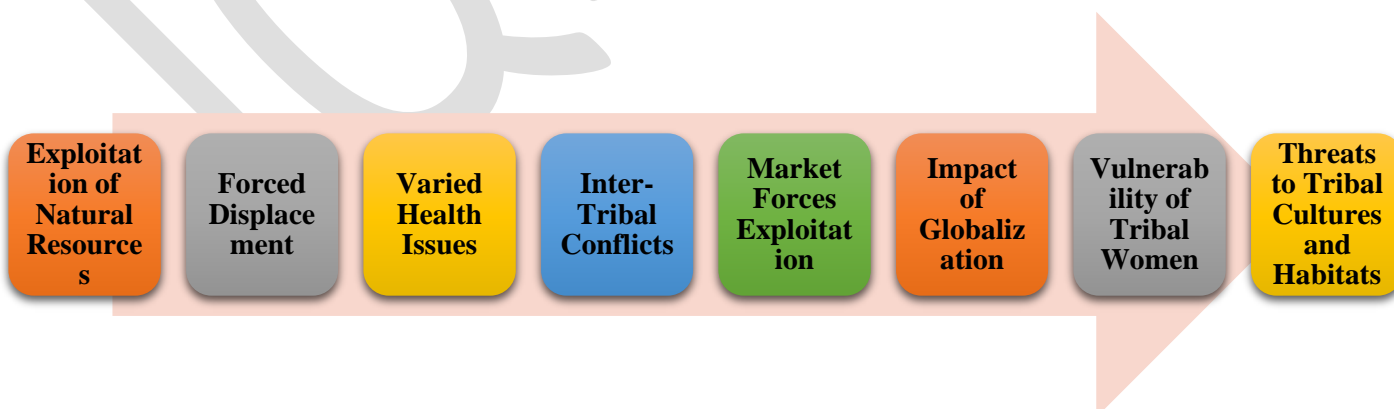| Tribal Schemes	
	Special Central Assistance to Tribal Sub-Plan (SCA to TSP)
	Pradhan Mantri Jan Dhan Yojana (PMJDY)
	Pradhan Mantri Jan Arogya Yojana (PMJAY)
	Forest Rights Act (FRA)
	Integrated Tribal Development Programme (ITDP)
	Adivasi Mahila Sashaktikaran Yojana (AMSY)
	PM PVTG Mission
	Eklavya Model Residential Schools
	Pradhan Mantri Adi Adarsh GramYojna
	Pradhan Mantri Janjatiya Vikas Mission (PMJVM)

Constitutional Provisions for Tribal Development and Safeguard

Constitutional Provisions	Description
Article 16(4)	Empowers states to make provisions for reservation in appointments or posts for any backward class to ensure adequate representation.
Article 16(4A)	Allows states to make provisions for reservation in promotions for SC/STs if they are not adequately represented in services under the state.
Article 16(4B)	Clarifies that backlog vacancies will not be considered together with the vacancies of the current year for determining the ceiling of 50 percent reservation.
Article 244(1)	Applies the Fifth Schedule provisions for the administration and control of Scheduled Areas and Scheduled Tribes in states other than Assam, Meghalaya, Mizoram, and Tripura, which are covered under the Sixth Schedule.
Article 275	Provides Grants-in-Aid to specified states (STs & SCs) covered under the Fifth and Sixth Schedules.
Article 23	Abolishes bonded labor and prohibits trafficking in human beings and forced labor. Violation of this provision is a punishable offense.

Constitutional Provisions	Description
Article 24	Forbids child labor, preventing children below the age of 14 from working in factories, mines, or hazardous activities.
Article 15(4)	Ensures special provisions for the educational advancement of Scheduled Tribes.
Article 46	Mandates the state to promote the educational and economic interests of Scheduled Castes and Scheduled Tribes and protect them from social injustice and exploitation.
Article 350	Allows the right to conserve distinct languages, scripts, or cultures.
Article 330	Reservation of seats for Scheduled Tribes in the House of the People.
Article 332	Reservation of seats for Scheduled Tribes in Legislative Assemblies of the States.
Article 334	Reservation of seats and special representation to cease after sixty years.
Article 338A	National Commission for Scheduled Tribe.
Article 164(1)	Provides for a Minister in charge of tribal welfare in certain states.
Article 371A	Special provisions with respect to the State of Nagaland.
Article 371B	Special provisions with respect to the State of Assam.
Article 371C	Special provisions with respect to the State of Manipur.
Article 371F	Special provisions with respect to Sikkim.

Issues Faced by Tribals in India

Exploitation of Natural Resources | Forced Displacement | Varied Health Issues | Inter-Tribal Conflicts | Market Forces Exploitation | Impact of Globalization | Vulnerability of Tribal Women | Threats to Tribal Cultures and Habitats

Exploitation of Natural Resources
- Government policies prioritize resource extraction for economic growth, conflicting with tribal views.
- Resource extraction leads to ecological damage in tribal territories.

Forced Displacement
- Large development projects often displace tribal communities.
- Displaced communities struggle to find proper rehabilitation.

Varied Health Issues: Some tribal communities suffer from poor health conditions, including shorter life expectancy and higher rates of diseases like Sickle Cell Anemia.

Inter-Tribal Conflicts: Conflicts arise among tribes over access to natural resources and territorial control.

Market Forces Exploitation: Tribal people are often left unemployed or forced into low-paying, exploitative jobs due to market interests.

Impact of Globalization
- Globalization exacerbates social exclusion and vulnerability for tribal communities.
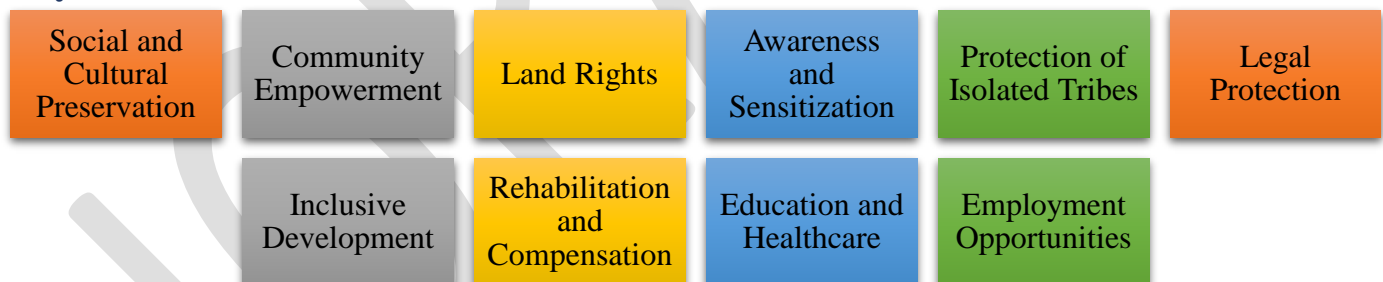- Sub-national movements seek greater autonomy or recognition for tribal areas.

Vulnerability of Tribal Women
- Tribal women are directly impacted by corporate exploitation of lands.
- Poverty drives many to migrate to urban centers, where they face exploitation and poor living conditions.

Threats to Tribal Cultures and Habitats
- Immigrant laborers and development projects threaten tribal cultures and habitats.
- Isolated tribes like the Sentinelese require protection from interference.

Way Forward

Social and Cultural Preservation	Community Empowerment	Land Rights	Awareness and Sensitization	Protection of Isolated Tribes	Legal Protection
	Inclusive Development	Rehabilitation and Compensation	Education and Healthcare	Employment Opportunities	

Social and Cultural Preservation
- Preserve tribal communities' unique cultural heritage and practices.
- Protect sacred sites and cultural spaces.

Community Empowerment
- Involve tribal communities in decision-making processes.
- Support traditional governance systems.

Land Rights
- Ensure clear ownership of tribal lands.
- Address issues of land alienation and illegal acquisitions.

Awareness and Sensitization
- Create awareness about tribal communities' rights and issues.
- Sensitize officials and the public to their challenges.

Protection of Isolated Tribes: Enforce the "eyes on, hands off" policy to protect isolated tribes and their habitats.

Legal Protection: Prioritize implementation of the Forest Rights Act to secure tribal communities' land rights.

Inclusive Development
- Undertake development projects with local community consent.
- Aim to uplift tribal livelihoods and preserve culture.

Rehabilitation and Compensation: Ensure fair compensation and rehabilitation for displaced tribal communities.

Education and Healthcare: Improve access to quality education and healthcare services in tribal areas.

Employment Opportunities: Promote skill development and sustainable employment options in tribal regions.

Agni-5 MIRV Missile

Why in News?

The Agni-5 ballistic missile test dubbed the "Divyastra", that was conducted by the Defence Research and Development Organisation (DRDO), is strategically consequential. With a range of over 5,000 kilometres, the Agni-5 is the longest-range missile India has tested so far.

Key Highlights

- India's nuclear deterrent is enhanced with the integration of Multiple Independently Targetable Re-entry Vehicles (MIRVs) into their ballistic missiles, specifically the Agni-5.
- India joins a select group of countries, including the US, Russia, China, France, and the UK, in possessing MIRV-capable projectiles.
- MIRV technology allows for striking multiple targets simultaneously and evading ballistic missile defenses.
- China's ballistic missile defenses are progressing, but their capacity to intercept India's IRBMs like the Agni-5 is still uncertain.
- Integration of MIRVs with Agni-5 restores balance in the Sino-Indian nuclear deterrent relationship.
- Developing MIRV-capable ballistic missiles is technically demanding, requiring miniaturization of warheads, precise configuration of re-entry vehicles, and spin stabilization during atmospheric re-entry.
- India's achievement in MIRV development is significant given past challenges with nuclear testing and engineering limitations.
- The exact number of warheads Agni-5 can carry remains classified, with speculation suggesting a maximum of three warheads.
- India's nuclear capabilities against China are further bolstered by potential future projects like long-range Submarine Launched Ballistic Missiles (SLBMs).
- The successful test of Agni-5 MIRV missile signifies India's progress towards becoming a credible nuclear and missile power, putting China on notice regarding India's preparedness to counter their missile and missile defense advancements.

MIRV Technology

Inception	Global Adoption and Proliferation	Strategic Significance	Challenges

Inception

- Originated in the United States in 1970 with the deployment of a MIRVed Intercontinental Ballistic Missile (ICBM).
- Enables a single missile to carry multiple warheads (3-4), each capable of independent targeting.
- Enhances missile effectiveness by increasing the number of potential targets it can engage.
- Can be launched from land-based and sea-based platforms like submarines, expanding operational flexibility and range.

Global Adoption and Proliferation

- Nations possessing MIRV technology include major nuclear powers: US, UK, France, Russia, China, and India.
- Pakistan tested MIRV technology with the Ababeel Missile in 2017.
- India tested MIRV technology for the first time with the Agni-5, aiming to deploy multiple warheads at different locations in a single launch.
- Agni-5 equipped with indigenous avionics systems and high-accuracy sensor packages for precise targeting.

> **Multiple Independently Targetable Re-entry Vehicles (MIRVs)**
> A MIRV is a 'missile bus' whose passengers are nuclear bombs and which facilitates a single booster to deliver them to different targets. It means MIRV can target multiple targets that can be hundreds of kilometers apart with a single missile.

Strategic Significance

- Initially designed to enhance offensive capabilities rather than to defeat ballistic missile defenses.
- Ability to deploy multiple warheads independently makes them challenging to defend against.
- Enhances deterrence and strategic flexibility in nuclear arsenals.

Challenges

- Complex challenges include miniaturization of warheads, development of advanced guidance systems, and ensuring reliability of individual re-entry vehicles.
- Addressing these challenges is crucial for maintaining effectiveness and reliability of MIRV systems in strategic operations.

How MIRV Works?

Launch Phase	Post-Boost Phase	Deployment	Re-entry and Impact
• A MIRV-equipped missile is launched and follows a ballistic trajectory into space, similar to any other ballistic missile.	• After the boost phase, the missile's upper stage, known as the "bus," reaches a suborbital spaceflight. • In this phase, the bus maneuvers and aligns itself based on the designated targets.	• The bus sequentially deploys multiple warheads along with decoys and countermeasures. • Each warhead can be assigned a different trajectory.	• The warheads re-enter the Earth's atmosphere independently and proceed to their respective targets.

Significance of MIRV Technology

Launching Satellites Into Orbits	Many Target Options to the Attacker	Greater Operational Range	Evading Ballistic Missiles

Launching Satellites Into Orbits
- MIRV technology tested on ISRO rockets for commercial launches, enabling placement of multiple satellites in orbit.

Many Target Options to the Attacker
- MIRV-tipped missiles like Agni-IV or Agni-V provide tactical advantages, offering multiple target options to attackers.
- Defender faces challenges defending against simultaneous attacks with anti-missile defenses possibly overwhelmed.

Greater Operational Range
- Agni-V with MIRV technology features redesigned components for multiple warheads while maintaining operational range.
- Lightweight subsystems and electro-mechanical actuators improve reliability and maintenance.

Evading Ballistic Missiles
- MIRV-equipped missiles target multiple objectives simultaneously, evading ballistic missile defenses.
- China's development of ballistic missile defenses necessitates India's integration of MIRVs for strategic balance.

Challenges in Adoption of MIRV Technology

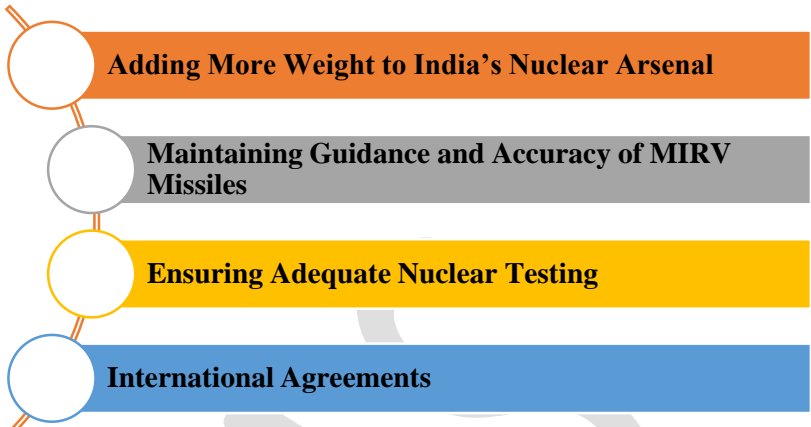| Pushing Rivals To Adopt More Aggressive Postures	Requirement of Additional Fissile Material	Highly Demanding Technical Criteria	Confusion Regarding Carrying Number of Warheads

- **Pushing Rivals To Adopt More Aggressive Postures**: Possession of MIRV missiles may lead to aggressive nuclear postures by rivals, increasing security threats and risks of nuclear conflict.
- **Requirement of Additional Fissile Material**: Shortage of plutonium poses challenges for production of new MIRV missiles, requiring additional fissile material.
- **Highly Demanding Technical Criteria**: Developing MIRV-capable missiles demands miniaturization of warheads, lightweight receptacles, and precise configuration of re-entry vehicles.
- **Confusion Regarding Carrying Number of Warheads**: Uncertainty surrounds the number of warheads MIRV missiles can carry, complicating strategic planning.

Steps Required to Improve MIVR Technology

- **Adding More Weight to India's Nuclear Arsenal**: Further R&D needed to enhance India's nuclear arsenal, including testing SLBMs integrated with MIRVs.
- **Maintaining Guidance and Accuracy of MIRV Missiles**: Precision guidance and accuracy crucial for MIRV effectiveness, requiring ongoing technical development and testing.

- **Ensuring Adequate Nuclear Testing**: Adequate nuclear testing necessary to miniaturize warheads and optimize re-entry vehicles for multiple targets.
- **International Agreements**: Establish agreements to oversee MIRV technology advancement and deployment, addressing global concerns and threats posed by emerging powers like China.

Adding More Weight to India's Nuclear Arsenal

Maintaining Guidance and Accuracy of MIRV Missiles

Ensuring Adequate Nuclear Testing

International Agreements

Recent Developments in India's Missile Program

Successful Test of MIRV Technology
- India successfully tested MIRV technology using the Agni-V ballistic missile.
- MIRVs can be installed on other Indian ballistic missiles, including the Agni series and submarine-launched missiles.

Capabilities of MIRV Technology
- MIRV enables a single missile to carry and launch multiple warheads.
- Reduces the number of missiles required for multiple target engagements.
- Warheads can be deployed at different speeds and directions, enhancing effectiveness.

Strategic Significance
- MIRV-equipped missiles travel at hypersonic speeds, making them difficult to detect and intercept.
- India joins an elite group of nations possessing MIRV technology, including the US, UK, France, Russia, China, and now India.
- Implications for India's nuclear doctrine and regional balance of power.

Impact on India's Nuclear Doctrine
- MIRV capabilities enhance India's deterrent posture, changing the strategic balance.
- Potential reevaluation of India's No First Use (NFU) policy due to increased retaliatory flexibility.
- Raises questions about command and control issues, especially with the deployment of submarine-launched ballistic missiles (SLBMs).

Strategic Considerations
- MIRV technology increases the urge for a nuclear first strike, potentially leading to increased deterrence.
- Raises concerns for India's adversaries, compelling them to improve their ballistic missile defenses.

Production and Deployment Challenges
- Installation of MIRVs requires production of more nuclear warheads.
- India will need to develop more warheads to fully utilize MIRV technology.

Command and Control Issues
- The Nuclear Command Authority (NCA) retains exclusive authorization for nuclear weapon use.
- Deployment of SLBMs raises questions about command chain and decision-making processes.
- Requires consideration for future amendments to India's nuclear doctrine.

Agni-5 Intermediate Range Ballistic Missile (IRBM)

Specification	Details
Origin	Indigenously-developed
Type	Surface-to-surface missile
Range	More than 5,000 km
Payload Capability	Can carry a nuclear warhead of more than one tonne

How Agni-5 Works?

Launch Process

- The missile is propelled into space during the "boost phase".
- A powerful gas generation system in the canister rapidly builds up pressure, launching the missile.
- The missile accelerates upwards with the ignition of the first stage, reaching supersonic speeds within 30 seconds.

Flight Phases

- The missile reaches heights of 170 kilometers with the second stage burn and 260 kilometers with the third stage.
- Gravity pulls the missile towards the target during the "ballistic phase".
- Course corrections are made with small side-thruster rockets.

Re-entry

- Friction with the atmosphere heats the outer surface to 4,000°C while maintaining the payload at 50°C.
- Radar-equipped naval warships monitor the missile's trajectory for precision targeting.

Significance of Agni-5

- The test marks the fourth successive successful launch of Agni-5 since April 19, 2012.
- The missile's 5,000-kilometer range enables it to deliver a nuclear payload anywhere in China, strengthening India's nuclear deterrence.
- It provides India with a reliable second-strike capability, essential for national security.
- Together with the commissioning of INS Arihant, India advances towards establishing a robust second-strike capability.

Agni Missiles

- The Agni missile class serves as the backbone of India's nuclear launch capability, alongside Prithvi short-range ballistic missiles, submarine-launched ballistic missiles, and fighter aircraft.
- Agni-1 to 5 missiles are designed and developed by the Defence Research and Development Organisation (DRDO).

Ranges of Agni Missiles

Agni I	•Range: 700-800 km.
Agni II	•Range: More than 2000 km.
Agni III	•Range: More than 2,500 km.
Agni IV	•Range: More than 3,500 km.
Agni V	•Range: Over 5,000 km.

Integrated Guided Missile Development Programme (IGMDP)
- Brainchild of renowned scientist Dr. APJ Abdul Kalam.
- Objective: Attain self-sufficiency in missile technology.
- Approval: Formally approved by the Indian government in 1983.
- Mission: Develop five missile systems to meet defence force requirements.
- Collaboration: Involves scientific community, academic institutions, R&D laboratories, industries, and the three defence services.
- Missiles Developed under IGMDP:
  - Prithvi: Short-range surface-to-surface ballistic missile.
  - Agni: Intermediate-range surface-to-surface ballistic missile.
  - Trishul: Short-range low-level surface-to-air missile.
  - Akash: Medium-range surface-to-air missile.
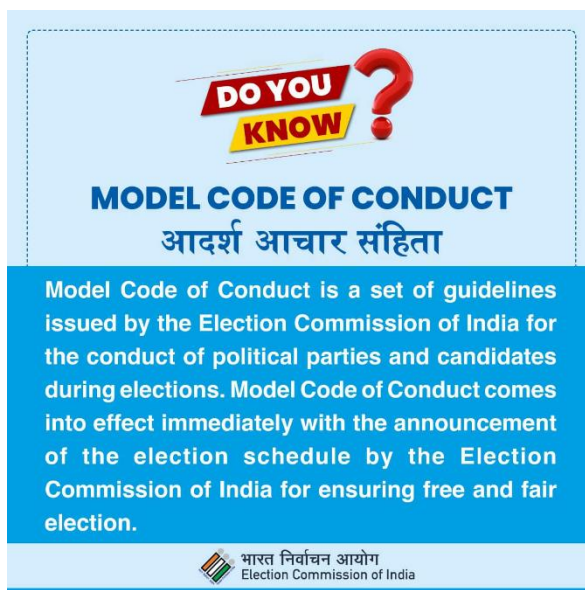 - Nag: Third-generation anti-tank missile.

Model Code of Conduct

Why in News?

Recently, the Model Code of Conduct (MCC) has come into force with the announcement of voting dates for the Lok Sabha elections 2024 by the Election Commission of India (ECI), marking a significant aspect of electoral governance.

What is Model Code of Conduct?
- The Model Code of Conduct (MCC) comprises guidelines established by the Election Commission of India (ECI) to oversee the conduct of political parties and candidates in the lead-up to elections.
- It aids the EC in fulfilling its mandate under Article 324 of the Constitution, empowering it to oversee and ensure the fairness of elections to the Parliament and State Legislatures.
- The MCC remains in effect from the announcement of the election schedule until the declaration of election results.

DO YOU KNOW?

MODEL CODE OF CONDUCT
आदर्श आचार संहिता

Model Code of Conduct is a set of guidelines issued by the Election Commission of India for the conduct of political parties and candidates during elections. Model Code of Conduct comes into effect immediately with the announcement of the election schedule by the Election Commission of India for ensuring free and fair election.

भारत निर्वाचन आयोग
Election Commission of India

Background of Model Code of Conduct

MCC's Evolution

- **Passive to Proactive**: Initially a passive document, the Model Code evolved into an effective tool for the Election Commission. It expanded to include public servants, not just political parties and candidates, ensuring broader compliance.
- **Assertive Enforcement**: The Election Commission has become increasingly assertive in enforcing the Model Code, ensuring adherence by all stakeholders. Judicial recognition of the Election Commission's authority to enforce the Code further strengthens its role in ensuring free and fair elections.

Year	Event	Description
1960	Kerala's Initiative	Kerala introduced a voluntary code of conduct for political parties during the 1960 general elections to the State Legislative Assembly, promoting peaceful campaigns.
1962	National Adoption	The Election Commission circulated Kerala's code to recognized political parties during the 1962 general elections to the Lok Sabha and state assemblies, maintaining a peaceful campaign environment nationwide.
1968	Mid-Term Elections	The Election Commission formulated a document titled "Role and Responsibilities of Political Parties during Elections," setting minimum standards of conduct for the 1968-69 mid-term elections.
1979	Enhancements	In September 1979, the Election Commission organized a conference with political parties to discuss a comprehensive Model Code of Conduct, issuing a revised code before the October 1979 general elections.
1991	Evolution	The 1991 General Election marked a significant milestone in the evolution of the Model Code, with further amplifications and proactive measures by the Election Commission to ensure its observance.

Current Status and Significance

Enforcement and Commitment	Legal Backing Debate	Preventing Misuse of Power	Upcoming Elections

- **Enforcement and Commitment**: The MCC immediately becomes operational upon the announcement of election schedules and remains in effect until the conclusion of the electoral process. Its enforcement underscores the commitment to conducting free and fair elections, ensuring a level playing field for all parties and candidates.
- **Legal Backing Debate**: Despite its significance, discussions persist regarding the legal backing of the MCC. Former Chief Election Commissioner SY Quraishi advocated for its legalization, emphasizing the need for stringent legal action against violators.
- **Preventing Misuse of Power**: The MCC imposes several restrictions to prevent the ruling party from misusing its official position for campaigning purposes. Prohibitions include announcing financial grants or launching projects that may influence voters in favor of the ruling party and utilizing official machinery for campaign purposes.

- **Upcoming Elections**: With India preparing for the next general elections, the enforcement of the MCC remains crucial. All eyes are on the Election Commission to ensure a smooth and transparent electoral process, adhering to the principles outlined in the Model Code of Conduct.

ARTICLE 324

Article 324 of the Constitution provides that the power of superintendence, direction and control of elections to the Parliament, State Legislatures, the office of the President of India and the office of the Vice-President of India shall be vested in the Election Commission.

Applicability of Model Code of Conduct (MCC)

General Elections to the House of People (Lok Sabha)	General Elections to the Legislative Assembly (Vidhan Sabha)	By-Elections
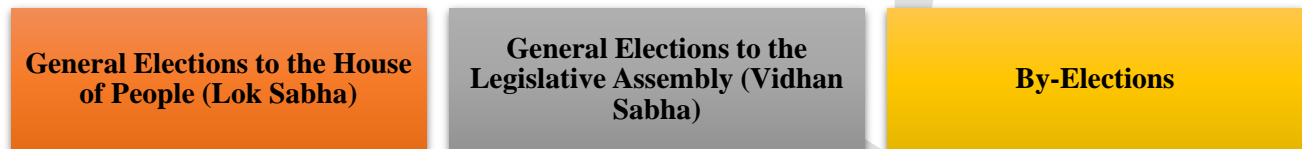
- **General Elections to the House of People (Lok Sabha)**: The MCC is applicable throughout the country during general elections to the Lok Sabha.
- **General Elections to the Legislative Assembly (Vidhan Sabha)**: The MCC is applicable in the entire state during general elections to the Legislative Assembly.
- **By-Elections**: If the constituency is situated in state capital/metropolitan cities/municipal corporations, the MCC is applicable in the area of the concerned Constituency only.
  - In all other cases, the MCC is enforced in the entire district covering the constituency going for the bypoll.

Parts of Model Code of Conduct

Part	Description
Part I	Lays stress on certain minimum standards of good behavior and conduct of political parties, candidates, and their workers and supporters during election campaigns.
Parts II and III	Deal with the holding of public meetings and taking out processions by political parties and candidates.
Parts IV and V	Describe how political parties and candidates should conduct themselves on the polling day and at the polling booths.
Part VI	Exhorts political parties and candidates to bring their complaints to the notice of the observers appointed by the Election Commission for remedial action.
Part VII	Deals with the conduct of parties in power, covering issues such as visits of ministers, use of government resources, announcements of schemes and projects, etc.
Part VIII	States that election manifestos should not contain anything repugnant to the ideals and principles enshrined in the Constitution.

Key Provisions of MCC

General Conduct → **Meetings and Processions** → **Polling Day** → **Party in Power**

General Conduct
- Parties or candidates must avoid activities that may escalate existing differences between castes, communities, religions, or languages.
- Usage of religion, race, caste, community, or language to promote enmity or hatred among people is prohibited.
- Criticisms towards other parties should focus on policies, historical performance, and initiatives rather than personal attacks.

Meetings and Processions
- Parties must inform local police authorities of meeting venues and times for adequate security arrangements.
- Coordination is required between parties planning processions along the same route to prevent clashes.
- Burning effigies representing members of other parties is prohibited.

Polling Day
- Only voters and those with valid passes from the EC are allowed in polling booths.
- Authorized party workers at booths should have suitable badges or identity cards.
- Identity slips given to voters should be on plain paper without any symbols, candidate names, or party names.
- Observers appointed by the EC will address any election conduct issues reported by candidates.

Party in Power
- The MCC, since 1979, restricts the conduct of the party in power, prohibiting ministers from combining official visits with election work or using official machinery for such purposes.

Issues Associated with MCC

Enforcement Challenges — **Ambiguity**

Impact on Governance — **Timing Issues** — **Limited Scope**

MODEL CODE OF CONDUCT
RULES FOR POLITICAL PARTIES AND CANDIDATES

General Conduct	Meetings	Procession	Polling Day
• Avoid activities causing communal tension • Criticism of other parties confined to policies, past work • Respect for every citizen's home life	Inform local police about venue & time of meeting	Notify local police about details in advance	Collaborate with authorities for peaceful polling
Polling booth	**Observers**	**Party in power**	**Election manifesto**
Access is limited to authorised individuals	Appointed by ECI to address complaints	No misuse of official position for campaigning	Must not contravene ideals and principles

- **Enforcement Challenges**: Inconsistent or inadequate enforcement may lead to unpunished violations due to lack of statutory backing.
- **Ambiguity**: Certain MCC provisions may be vague or open to interpretation, causing confusion among parties and candidates.
- **Limited Scope**: Critics suggest expanding the MCC's coverage to include electoral funding, social media usage, and hate speech.

- **Timing Issues**: The MCC is only effective during election periods, allowing misconduct outside these periods.
- **Impact on Governance**: MCC restrictions on government activities during elections may hinder governance.

Way Forward

| Strengthen Enforcement | Clarify Provisions | Expanding Scope | Legalizing MCC | Public Awareness | Continuous Review |

- **Strengthen Enforcement**: Enhance mechanisms to enforce MCC guidelines and ensure compliance by all parties.
- **Clarify Provisions**: Improve clarity and specificity of MCC rules to minimize ambiguity and facilitate better adherence.
- **Expanding Scope**: Consider broadening the MCC's coverage to address emerging issues such as digital campaigning and electoral funding transparency.
- **Legalizing MCC**: Evaluate proposals to legally institutionalize the MCC for enhanced effectiveness and enforceability.
- **Public Awareness**: Launch campaigns to educate voters, parties, and candidates about MCC compliance and its role in fair elections.
- **Continuous Review**: Establish a framework for regular evaluation and adaptation of the MCC to address evolving electoral dynamics and challenges.