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PREFACE

Welcome to our monthly current affairs magazine! We are thrilled to provide you with the latest information and updates on the most important events that happened in our country and around the world in the month of August 2024. Our magazine is designed to help you prepare for competitive examinations like UPSC and other State PSC Exams, and we hope that you will find it informative, engaging, and useful.

In this magazine, you will find a wide range of topics covering current affairs, including politics, economics, sports, science and technology, and many more. Our team of writers and editors work hard to bring you the most accurate and up-to-date information, so you can stay informed and prepared for any competitive exam.

We understand that preparing for competitive exams can be a daunting task, but we are here to make it easier for you. Our magazine is designed to be easy to read and understand, with clear and concise articles that will help you stay on top of the latest news and events.

We believe that knowledge is power, and we are committed to helping you achieve your goals. Whether you are preparing for a government job, entrance exam, or any other competitive exam, our magazine will provide you with the information and insights you need to succeed.

Thank you for choosing our magazine, and we hope that you find it helpful and informative.

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POLITY

INTERNATIONAL RELATIONS

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POLITY

I. RIGHTS ISSUES

1. AVOID ARREST OF BOYS WHO GO ON A DATE: HC IN RESPONSE TO PIL ON GENDER DISCRIMINATION

SOURCE: THE HINDU

The Uttarakhand High Court addressed the issue of arresting boys involved in teenage dating, emphasizing the need to reconsider such actions unless serious offenses are involved.

Court Observations:

- Boys should not be arrested for dating unless they commit an offense under POCSO Act Sections 3 to 7.
- The State should consider if a statement under CrPC Section 161 suffices to avoid arrest.

State's Role:

- Potential issuance of general police directives.
- Boys could be advised against dating rather than being arrested.

Public Interest Litigation (PIL):

- Filed by advocate Manish Bhandari.
- Addresses gender discrimination and wrongful arrests in teenage dating cases.

PUBLIC INTEREST LITIGATION (PIL)

Public Interest Litigation (PIL) in India is a legal mechanism that allows individuals or groups to seek judicial intervention in matters of public interest, ensuring justice for the marginalized and promoting accountability.

History of PIL in India

- PIL was introduced in the late 1970s and early 1980s.
- Instrumental in broadening the access to justice for underprivileged and marginalized sections of society.

Pioneering Cases:

- Hussainara Khatoon vs. State of Bihar (1979): Focused on the rights of prisoners and led to the release of thousands of undertrial prisoners.
- S.P. Gupta vs. Union of India (1981): Recognized the concept of PIL and expanded the scope of locus standi, allowing any public-spirited individual to file a PIL.

Expansion in Scope:

- **Bandhua Mukti Morcha vs. Union of India (1984):** Addressed bonded labor issues, expanding PIL to include the rights of workers.
- **Vishaka vs. State of Rajasthan (1997):** Established guidelines for preventing sexual harassment at the workplace.

Significant Developments:

- **Environmental PILs:** Cases like M.C. Mehta vs. Union of India led to significant environmental reforms, including the Ganga pollution case.
- **Social Justice**: PILs have addressed issues like child labor, human trafficking, and the right to education.

Criticism and Concerns:

- **Judicial Overreach:** Critics argue that PILs can lead to judicial overreach, where courts interfere in executive and legislative domains.
- **Frivolous PILs:** Increasing instances of frivolous PILs have burdened the judiciary

Conclusion

The court highlights the importance of treating teenage dating situations with sensitivity and fairness, focusing on counseling rather than criminalizing young boys.

2. KARNATAKA BILL MANDATING 50% QUOTA FOR LOCALS IN MANAGEMENT POSITIONS

SOURCE: THE HINDU

The Karnataka Cabinet has approved a significant legislative measure to ensure local representation in industrial employment.

This bill aims to prioritize local candidates in management and non-management positions within various establishments across the state.

Key Provisions of the Bill

Quota Allocation:

- **Management Positions:** 50% reservation for local candidates.
- **Non-Management Positions:** 75% reservation for local candidates.

Definition of Local Candidate:

- **Birth and Domicile:** Individuals born in Karnataka and domiciled in the state for at least 15 years.
- **Language Proficiency:** Must be capable of speaking, reading, and writing Kannada legibly.
- **Educational Requirement:** Must hold a secondary school certificate with Kannada as a language or

pass a Kannada proficiency test conducted by a nodal agency.

Implementation Measures:

- If suitable local candidates are unavailable, industries must collaborate with the government to train local candidates within three years.

Constitutional Provisions on Reservation

- **Article 16:** Guarantees equality of opportunity in matters of public employment.
- **Article 16(4):** Permits reservation for any backward class of citizens which, in the opinion of the state, is not adequately represented in public services.

Precedents and Judicial Interpretations

- **Example:** Haryana's law mandating 75% reservation for locals in private sector jobs faced challenges but aimed at similar goals of local employment enhancement.
- **Supreme Court Judgment:** The Supreme Court has emphasized that any reservation policy should not compromise the overall efficiency of administration (Article 335). It has also ruled that excessive reservation may violate the principles of equality.

Positives

- **Economic Growth:** Boosts local economy by increasing employment opportunities for residents.
- **Social Stability:** Reduces migration and associated social issues by providing jobs to locals.
- **Cultural Integration:** Encourages the use and preservation of local language and culture.
- **Political Support:** Gains political favor among local populace by addressing unemployment concerns.

Negatives

- **Reduced Meritocracy:** May limit opportunities for the most qualified candidates, potentially affecting industry efficiency.
- **Economic Disparity:** Could discourage investment from outside the state, affecting overall economic growth.
- **Implementation Challenges:** Difficulty in finding qualified local candidates may lead to operational inefficiencies.
- **Legal Challenges:** Potential conflicts with constitutional provisions on equality and non-discrimination.

Necessity of Skill Enhancement and Skill Census

- **Skill Enhancement:** Essential to ensure that local candidates meet industry standards and can contribute effectively to the workforce.

- **Skill Census:** Necessary to assess the current skill levels within the state, identify gaps, and tailor training programs to address these deficiencies, ensuring that the local workforce is adequately prepared for available job opportunities.

MANDAL CASE:

Background: The Mandal Commission was set up in 1978 by the Janata Party government to identify Socially and Educationally Backward Classes (SEBCs) in India and recommend measures for their upliftment.

Recommendations: The Commission submitted its report in 1980, recommending a 27% reservation for OBCs in government jobs and educational institutions.

Controversy: The implementation of the recommendations in 1990 by the V.P. Singh government led to widespread protests, particularly from forward caste groups who argued that it violated the principle of equality.

Indira Sawhney vs Union of India: A legal challenge against the reservation policy was mounted in the Supreme Court in the case of Indra Sawhney vs Union of India (1992).

Supreme Court Judgement: The Supreme Court upheld the Mandal Commission's recommendations, recognizing caste as a valid indicator of social backwardness. However, it introduced certain conditions, including the exclusion of the "creamy layer" (wealthy individuals) from OBC reservations and a cap of 50% on total reservations.

Conclusion

The Karnataka Bill aims to improve local employment opportunities and address regional disparities by prioritizing local representation in the workforce.

While this legislative move enhances local participation and can positively impact the local economy, it also poses challenges to efficiency and management within industries.

To ensure that the benefits outweigh the drawbacks, it is crucial to establish comprehensive guidelines that balance the need for local representation with the industry's demand for skilled and competent candidates.

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3. UTTARAKHAND HC ALLOWS PROTECTION TO INTERFAITH LIVE-IN COUPLE UNDER UCC

SOURCE: THE HINDU

The Uttarakhand High Court's recent judgment marks a significant implementation of the Uniform Civil Code (UCC) Act, allowing protection to an interfaith couple in a live-in relationship, contingent on mandatory registration under the new Act.

Case Details

Parties Involved: A 26-year-old Hindu woman and a 21-year-old Muslim man in a live-in relationship.

Court's Judgment

- **Mandatory Registration:** Under Section 378(1) of the UCC, live-in partners must submit a statement of their relationship to the registrar.
- **Penalties for Non-compliance:** Failure to register may result in up to three months' imprisonment or a fine of up to ₹10,000, or both.
- **Protection Order:** The court ordered protection for the couple for six weeks if they apply for registration within 48 hours.

Legal Context

- **Article 21:** The advocate highlighted that Article 21 of the Constitution guarantees protection of life and personal liberty.
- **Pending Challenges:** Petitions challenging the UCC are pending before the Supreme Court.

Registration Issues

- **Technical Difficulties:** The couple faced technical issues when applying for registration at the marriage registrar's office.

UNIFORM CIVIL CODE (UCC) IN INDIA

The Uniform Civil Code (UCC) is a proposal to formulate a common set of laws governing personal matters (like marriage, divorce, inheritance, adoption) applicable to all Indian citizens regardless of their religion.

Currently, different religious communities have their own personal laws based on their religious scriptures and customs.

Constitutional Provisions:

- The UCC finds mention in Article 44 of the Indian Constitution under the Directive Principles of State Policy. It states:
- "The State shall endeavour to secure for the citizens a uniform civil code throughout the territory of India."
- However, it's important to note that Directive Principles are not enforceable by law. They are guidelines for the state to strive towards in creating laws.
  Uniform Civil Code in Goa and Uttarakhand

Goa:

  Unique among Indian states, Goa retained a common family law, the Goa Civil Code, from its time as a Portuguese colony. This made Goa the only Indian state with a Uniform Civil Code before 2024.

- **Uttarakhand:**
  On February 7, 2024, Uttarakhand's Legislative Assembly passed the Uniform Civil Code (UCC) Bill.
  The bill received presidential assent from President Droupadi Murmu on March 13, 2024.

Personal Laws

- Laws applied to specific groups based on religion, caste, faith, and belief.
- Formulated considering customs and religious texts.
- Sources: Hindu and Muslim personal laws derive from ancient religious texts.

Uniform Civil Code (UCC)

Objective:

- Protect vulnerable sections such as women and religious minorities, as envisaged by B.R. Ambedkar.
- Promote national unity and a nationalistic spirit.

Simplification of Laws:

- Aims to consolidate and simplify existing personal laws segregated by religion, such as the Hindu code bill and Shariat law.
- Will standardize laws related to marriage, inheritance, succession, and adoption, making them uniform for all citizens.

Application:

- The same civil laws will apply to all citizens, irrespective of their religious beliefs.

Conclusion

The Uttarakhand High Court's decision underscores the legal implications of the newly enforced UCC Act and highlights the judiciary's role in safeguarding individual rights amid ongoing legal challenges.

II. LEGISLATURE

4. LEADER OF OPPOSITION IN LOK SABHA

The Leader of Opposition (LoP) in India plays a crucial role in the parliamentary system.

Sources of Authority

- **The Salary and Allowances of Leaders of Opposition in Parliament Act, 1977:** Defines the LoP's role and entitlements.
- **Direction 121:** Issued by the Speaker for recognizing a party or group for certain facilities in the House.

Role and Responsibilities

- **Voice of the Opposition:** The LoP serves as the main spokesperson for the opposition in the House.
- **Shadow Prime Minister:** The LoP is considered a shadow Prime Minister with a shadow Cabinet, ready to take over if the Government resigns or is defeated.
- **Participation in High-Powered Committees:** The LoP is a member of key committees chaired by the Prime Minister, responsible for appointing the Director of CBI, Central Vigilance Commissioner, Chief Information Commissioner, and members of the National Human Rights Commission and the Lokpal.
- **Ceremonial Duties:** The LoP enjoys certain privileges, such as escorting the Speaker-elect to the rostrum and occupying a front-row seat during the President's address to Parliament.

Benefits and Checks

- **Privileges and Allowances:** The LoP is entitled to specific privileges, including salary and allowances as defined by the 1977 Act.
- **Checks and Balances:** The LoP ensures government accountability by participating in crucial decision-making committees and voicing opposition concerns.

Historical Context

- **Vacancy Periods:** From 2014 to 2024, the LoP position in Lok Sabha was vacant as no party had the required 10% of the House's strength.
- **Significant Leaders:** Notable past Leaders of Opposition include Sushma Swaraj (2009-2014), LK Advani (2004-2009), Sonia Gandhi (1999-2004), and Sharad Pawar (1998-1999).

LEADER OF THE OPPOSITION (LOP)

Leader of the Opposition (LoP) isn't explicitly mentioned in the Indian Constitution. However, its significance is recognized through various practices and legislations:

House Rules:

- The LoP enjoys recognition through established practices and conventions of the Houses (Lok Sabha and Rajya Sabha).
- There's no specific mention in the official House rules, but conventions dictate certain privileges and roles for the LoP.

The Leaders and Chief Whips of Recognized Parties and Groups in Parliament (Facilities) Act, 1998:

- This act provides statutory recognition to the LoP and outlines some facilities, like a dedicated office space and staff, for effective functioning.

Salary and Allowances of Leaders of Opposition in Parliament Act, 1977:

- This act grants the LoP a salary and allowances at par with a Cabinet Minister, recognizing their crucial role in the parliamentary system.

Other Statutory References:

- In certain acts, like The Central Vigilance Commission Act, 2003, the Lop from the largest opposition party gets included in selection committees even if there's no officially recognized LoP.

Conclusion

The Leader of Opposition is pivotal in maintaining the democratic structure of India's parliamentary system by ensuring robust debate, government accountability, and readiness for administrative transition if required. **This position upholds the principle of "mutual forbearance" within the parliamentary framework.**

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5. THE PROBLEM OF SPECIAL PACKAGES

SOURCE: INDIAN EXPRESS

With coalition politics returning to the Union level, the demand for State-specific discretionary grants, or 'special packages', has surged.

This change contrasts with previous single-party majorities and raises questions about the impact on India's federal structure and fiscal federalism.

Coalition Politics and Special Packages

Rise of Coalition Politics:

- BJP's dependency on Janata Dal (United) and Telugu Desam Party.
- Contrast with single-party dominance in 2014 and 2019.

Impact on Federalism:

- Coalition partners act as checks on unitary trends.
- **Hypothesis:** Single-party dominance weakens federal tendencies, while coalition politics strengthens them.
- Fiscal Federalism and Special Packages

Need for Transparency:

- Fiscal boundaries and tax assignments must be transparent and objective.
- Asymmetric federal setup must address diversity through constitutional provisions.

Constitutional Provisions:

- Articles 371A to H address specific State issues.
- Article 282 allows discretionary grants, often used for political bargaining.

- Challenges of Discretionary Grants

Bargaining Power and Fiscal Distribution:
- Special packages often result from State-level political bargaining.
- This undermines fiscal federalism by diverting resources based on political outcomes.

Role of Finance Commission:
- Finance Commission's role in tax distribution and grants to States.
- The 16th Finance Commission must address concerns about declining State shares in Union taxes.
- Federal Structure and Grants

Discretionary vs. Formula-Based Grants:
- Discretionary grants under Article 282 overshadow Finance Commission's recommendations.
- Process of grant allocation is crucial for maintaining federalism.

Impact on Union-State Relations:
- Discretionary grants can weaken fiscal federalism.
- States' demands for special packages can disrupt equitable resource distribution.

Conclusion

The resurgence of coalition politics has brought the issue of State-specific discretionary grants to the forefront. While these grants can address immediate needs, their discretionary nature poses a challenge to India's fiscal federalism.

Ensuring transparency and adhering to constitutional provisions are essential for nurturing a healthy federal structure and equitable resource distribution.

6. THE CASE FOR A CASTE CENSUS

SOURCE: THE HINDU

The need for a caste census in India has become increasingly pertinent. Caste remains a foundational social construct, impacting various facets of Indian society.

Why a Caste Census?
- Caste influences social interactions, marriages, and residential patterns.
- Inter-caste marriages constitute only about 5% of Indian marriages (2011-12 data).
- Caste-based residential segregation is prevalent.

Legal Imperative:
- Essential for implementing constitutionally mandated social justice policies.

- The Supreme Court has repeatedly emphasized the need for detailed caste-wise data.

Administrative Imperative:
- Helps avoid wrongful inclusions/exclusions in reservation lists.
- Necessary for sub-categorizing castes within reserved categories.
- Important for determining the creamy layer within OBCs.

Moral Imperative:
- Lack of detailed caste-wise data benefits elite coteries among upper castes and dominant OBCs.
- Detailed data would ensure equitable distribution of resources and opportunities.

Arguments Against Caste Census
- Critics argue it could deepen social divisions.
- However, casteism persists despite not being officially enumerated.

Administrative Nightmare:
- Concerns about the complexity of enumerating numerous castes.
- Smooth enumeration of SCs and STs suggests it is manageable.

Increased Reservation Demands:
- Availability of data could lead to more objective policy-making.
- Helps curb arbitrary demands from caste groups.

Learning from Past Efforts
- The Socio Economic and Caste Census (SECC) 2011 failed due to poor design and execution.
- The Bihar caste survey of 2023, with a pre-drafted list of caste names, yielded better results.

Way Forward
- Amend the Census Act, 1948, to make caste enumeration mandatory.
- Enlist sociological and anthropological experts to draft state-specific caste lists.
- Publish draft lists online for public feedback before finalizing.
- Use internet-enabled devices with preloaded details to simplify data collection.

CASTE CENSUS IN INDIA:

The caste census is a critical exercise in India, aiming to enumerate the population based on caste categories. This data is essential for formulating policies and implementing social justice measures.

First Caste Census:

- The first caste census in India was conducted in 1881 by the British colonial administration.
- The caste census was carried out regularly in the decadal censuses from 1881 to 1931.

Post-Independence:
- After India gained independence, the 1951 Census excluded caste enumeration except for Scheduled Castes (SCs) and Scheduled Tribes (STs).
- **Since then, SCs and STs have been enumerated in every census, but other castes have not been systematically counted.**
- In 2011, the Socio Economic and Caste Census (SECC) was conducted, but it faced significant issues in design and execution, leading to unreliable data.

Authority to Conduct the Census
- The census in India is conducted under the Census Act, 1948.
- The Registrar General and Census Commissioner of India, under the Ministry of Home Affairs, is responsible for conducting the census.

Role of State Governments:
- While the central government conducts the national census, state governments can also conduct their own caste surveys.
- Examples include Karnataka's caste survey in 2015 and Bihar's caste survey in 2023.

Conclusion

A caste census is crucial for informed policymaking, ensuring social justice, and promoting inclusive development. **Amending the Census Act and learning from past efforts can pave the way for a successful caste enumeration in future censuses.**

III. JUDICIARY

7. NEW CRIMINAL LAWS IN FORCE; CR. PC, IPC APPLICABLE ONLY FOR OLD CASES

SOURCE: INDIAN EXPRESS

Three new criminal laws, the Bharatiya Nagrik Suraksha Sanhita (BNSS), Bharatiya Nyaya Sanhita (BNS), and Bhartiya Sakshya (BS), come into effect across India, despite objections from some non-BJP ruled states.
Historical Context of IPC
- The Charter Act of 1833 established a law commission in 1834.

- Thomas Babington Macaulay was appointed its chairman.

Need for Codification:
- The mix of Hindu, Muslim, and British laws required consolidation.
- Different presidencies had varied punishments for the same crime.
- The IPC was enacted by the British colonial government in 1860 and came into effect in 1862.

Criminal Procedure Code (CrPC):
- Enacted in 1973, the CrPC provides the procedure for law enforcement.
- Has seen several revisions to adapt to changing legal and social contexts.

Indian Evidence Act:
- Enacted in 1872, it lays down the rules for the admissibility of evidence in Indian courts.
- Updated periodically to align with modern legal requirements.

New Criminal Laws
Bharatiya Nagrik Suraksha Sanhita (BNSS):
- Replaces the Code of Criminal Procedure (Cr.PC).
- Prescribes procedures for arrest, bail, and custody.
- States can amend provisions as needed.

Bharatiya Nyaya Sanhita (BNS):
- Replaces the Indian Penal Code, 1860.
- Amendments may soon include provisions for sexual crimes against men and transgender persons.
- Police officers advised to use allied sections for such complaints until amendments are made.

Bharatiya Sakshya (BS):
- Replaces the Indian Evidence Act, 1872.

Implementation
- From July 1, over 650 district courts and 16,000 police stations must adopt the new system.
- Cognisable offences registered under Section 173 of BNSS instead of Section 154 of Cr.PC.
- IPC and Cr.PC will still apply to pending cases and crimes reported after July 1 but committed before that date.

Key Provisions of the Bharatiya Nyaya Sanhita (BNS) Bill
- **Sedition:** IPC's Section 124-A prescribes life imprisonment for sedition.BNS Bill's provision 150 addresses acts endangering India's sovereignty and unity.
- **Mob Lynching:** Specific provision with punishments from seven years to the death penalty.

- **Terrorism:** Terrorism defined as acts disturbing public order and threatening national security. Punishments range from five years to life imprisonment or death.
- **Organized Crime:** Comprehensive definition including offenses like kidnapping, robbery, and cybercrimes committed by crime syndicates.
- **Community Service:** Introduced as punishment for petty offenses, similar to practices in the US.Proposed Changes in BNS
- **Adultery and Gender-Neutral Provision:** Recommends criminalizing adultery in a gender-neutral manner.Aims to protect marriage while adhering to Supreme Court's 2018 ruling.
- **Non-Consensual Sex and Bestiality:** Clause to criminalize non-consensual sex among all genders and acts of bestiality.
- **Definition of Terms:** Improved definitions for terms like "community service" and "life imprisonment."

Positive Changes:
- Removal of Section 124A (Sedition).
- Provisions for prosecuting offenses in foreign countries.
- Arguments for Legalizing and Criminalizing Adultery
- **Legalizing Adultery:** Recognizes individual autonomy and right to privacy.
- **Criminalizing Adultery:** Protects marital sanctity and family structure.

IV. POLICIES / SCHEMES / ACTS / REPORTS / COMMITTEES IN NEWS

8. SAUBHAGYA SCHEME

SOURCE: HINDUSTHAN TIMES

The Government of India launched the Pradhan Mantri Sahaj Bijli Har Ghar Yojana (SAUBHAGYA) in October 2017.
Objective: Achieve universal household electrification by providing electricity connections to all un-electrified households in rural areas and all poor households in urban areas.
Key Features
Last-Mile Connectivity:
- Ensure that electricity connections are provided to all households in rural areas that currently do not have access to electricity.
- Ensure last-mile connectivity for economically poor un-electrified households in urban areas.

Solar Photo Voltaic (SPV) Systems:
- Provide SPV-based standalone systems for un-electrified households in remote and inaccessible villages/habitations where grid extension is not feasible or cost-effective.

Free Connections for BPL Families:
- In rural areas, BPL (Below Poverty Line) families receive LED bulbs, wires, holders, switches, etc., free of cost.
- Urban BPL families receive free power connections.

Affordable Connections for Non-BPL Families:
- In rural areas, non-BPL families receive electricity connections for Rs. 500, payable in 10 equal instalments of Rs. 50 each.

Implementation
- **Nodal Agency:** The Rural Electrification Corporation (REC) is assigned as the nodal agency for the Saubhagya scheme.
- **Beneficiary Identification:** The beneficiaries eligible for free electricity connections are determined using the data from the Socio-Economic and Caste Census (SECC) 2011.

Special Provisions
- **Solar Energy:** Families in rural areas, where grid supply is not feasible, are provided with solar energy solutions.
- **Exclusion of Non-Poor Urban Households:** Non-poor urban households are excluded from the benefits of this scheme.

V. INSTITUTIONS IN NEWS

9. 16TH FINANCE COMMISSION

SOURCE: INDIAN EXPRESS

The 16th Finance Commission (FC), established under Article 280 of the Indian Constitution, is tasked with addressing financial devolution to municipalities.
Despite past efforts, cities continue to face inadequate funding, impacting their productivity and quality of life.
Agenda for the 16th Finance Commission

- Recognize urbanization dynamics.
- Ensure intergovernmental transfers (IGTs) to urban areas are at least doubled.
- Address the need for substantial urban infrastructure investment, estimated at $840 billion over the next decade.

Challenges in Financial Devolution

- Five commissions since the 11th FC have failed to adequately devolve funds to cities.
- **Municipalities suffer from poor fiscal health, affecting city productivity and quality of life.**
- Rapid urbanization without proper fiscal action adversely affects development.
- **Current IGTs to Urban Local Bodies (ULBs) are around 0.5% of GDP, much lower than other developing nations (2-5%).**

Comparison with Other Countries

- **South Africa:** Allocates 2.6% of GDP to cities.
- **Mexico:** Allocates 1.6% of GDP to cities.
- **Philippines:** Allocates 2.5% of GDP to cities.
- **Brazil:** Allocates 5.1% of GDP to cities.

Impact of GST and Taxation

- GST introduction reduced ULBs' tax revenue from 23% (2012-13) to 9% (2017-18).
- **IGTs from States to ULBs are low, with recommendations for only about 7% of States' own revenue in 2018-19.**
- Increased IGTs as a percentage of GDP are necessary for financial strengthening of ULBs.

Significance of Census Data

- Reliance on outdated 2011 Census data hampers evidence-based fiscal devolution.
- **Accurate data on approximately 4,000 statutory towns, an equal number of Census towns, and 23,000 effectively urban villages are needed.**
- Migration trends to Tier-2 and 3 cities must be captured.

Importance of Supporting Local Governments

- The 13th FC noted the negative impact of parallel agencies on local governments.
- Union and State governments should provide funds, functionaries, and technical aid.
- **Parallel programs like the MPLADS and MLALADS distort the federal structure.**

FINANCE COMMISSION

Constitutional Body:

- Established under Article 280 of the Indian Constitution.

- Set up every five years or earlier by the President.

Functions:

- Recommend the vertical devolution of taxes between the Union and State governments (share of states in central tax pool).
- Determine the horizontal allocation of resources among states based on needs, capacities, and performance.
- Recommend grants-in-aid to specific states or sectors requiring assistance.

Composition:

- **Chairperson:** Eminent person with expertise in public finance or economics. (Current Chairperson - Dr. Arvind Panagariya as of July 2024)
- **Members:** Up to four members with experience in financial and economic matters.

Eligibility for Chairperson and Members:

- Proven ability in administration, public finance, or economics.
- Cannot hold any office of profit after appointment.

Related Constitutional Provisions:

- Article 270: Power to levy and collect taxes.
- Article 275: Distribution of revenue between Union and States.

Recent Focus Areas (may vary by commission):

- Fiscal consolidation (reducing budget deficits).
- Targeting resources to sectors like education and health.
- Addressing regional imbalances.
- Recommendations for disaster relief and economic revival.

Limitations:

- Recommendations are not binding on the government.
- Focus on revenue sharing, less emphasis on expenditure reforms.

Conclusion

To address the challenges posed by rapid urbanization, the 16th FC must prioritize substantial increases in IGTs, accurate data collection, and support for local governments. **Ensuring financial stability and operational efficiency of ULBs is crucial for the sustainable development of India's cities.**

10. ON THE JURISDICTION OF THE CBI

SOURCE: THE HINDU

The Central Bureau of Investigation (CBI) is a premier investigative agency in India, often called upon for high-profile cases involving corruption and serious crimes.

However, its jurisdiction and operational autonomy have been subjects of legal and political debate.

Inception of CBI

- **Formation:** The CBI was established in 1963 by a resolution of the Ministry of Home Affairs, evolving from the Special Police Establishment (SPE) set up in 1941.
- **Primary Purpose:** To investigate cases of corruption involving central government employees and other high-profile cases.

Constitutional and Legal Provisions

- **Constitutional Basis:** The CBI operates under the Delhi Special Police Establishment (DSPE) Act, 1946.
- **Section 6 of DSPE Act:** Requires the CBI to obtain consent from state governments to exercise jurisdiction within a state's territory.

Jurisdictional Controversies

- **State Consent:** States can withdraw general consent, necessitating individual consent for each case.
- **States Withdrawing Consent:** Since 2015, states like West Bengal, Chhattisgarh, Jharkhand, Kerala, and others have revoked general consent, citing central overreach.
- **Supreme Court Verdict (July 2024):** The SC upheld the maintainability of West Bengal's suit against the Union government for using the CBI without state consent post withdrawal.
- **Implication:** Affirmed that CBI is an independent agency and state consent is crucial for investigations within state boundaries.

Legal Interpretations and Implications

- **Union Government's Stance:** Argued that CBI functions independently under the DSPE Act.
- **Supreme Court Ruling:** Confirmed that states have the right to grant or withdraw consent for CBI investigations within their jurisdictions.
- **Impact on Investigations:** Without state consent, CBI's capacity to investigate is significantly limited.

Key Cases and Precedents

- **State of Rajasthan v. Union of India (1977):** Highlighted the need for cooperative federalism and state consent for CBI operations.
- **State of West Bengal v. Committee for Protection of Democratic Rights (2010):** SC ruled that CBI can investigate in states without consent if directed by the courts.

Conclusion

The CBI's jurisdiction and its need for state consent underscore the delicate balance between federal and state powers in India.

The recent Supreme Court rulings emphasize the agency's independence while reaffirming the constitutional requirement for state consent, ensuring that cooperative federalism is maintained in the investigative processes.

VI. PRELIMS POINTERS IN NEWS

11. eSANKHYIKI PORTAL

SOURCE: TIMES OF INDIA

The Ministry of Statistics and Programme Implementation (MoSPI) has launched the eSankhyiki portal to provide real-time statistical data for planners, policymakers, researchers, and the public.

This portal aims to streamline data management and facilitate the dissemination of official statistics across the country.

About eSankhyiki Portal

- **Purpose:** To establish a comprehensive data management and sharing system for ease of dissemination of official statistics.
- **User Base:** Planners, policy-makers, researchers, and the public at large.
- **Modules:** The portal comprises two primary modules:

Data Catalogue Module

- **Function:** Catalogues major data assets of MoSPI for ease of access.
- Users can search within datasets and download data.
- Enhances the value and re-usability of data.

Data Products:

- National Accounts Statistics
- Consumer Price Index
- Index of Industrial Production
- Annual Survey of Industries

- Periodic Labour Force Survey
- Household Consumption Expenditure Survey

Features:

- Filtering and visualizing data.
- Downloading custom datasets and visualizations.
- Sharing data through APIs.

Launch and Significance

- **Launch Date:** Officially launched on Statistics Day.
- **Theme:** Aligned with the Statistics Day theme, "Use of data for Decision making."
- **Objective:** Facilitates ease of access to data, a prerequisite for evidence-based decision making.
- **User-Centric:** The portal is designed to facilitate the use and reuse of information, creating impact through value addition and analysis.

Conclusion

The eSankhyiki portal is a significant initiative by MoSPI, aiming to enhance the accessibility and usability of official statistics.

By providing comprehensive and user-friendly data resources, the portal supports informed decision-making and research, aligning with the broader goal of evidence-based policy formulation.

12. EMPLOYEES' PENSION SCHEME (EPS)

SOURCE: INDIAN EXPRESS

The Employees' Pension Scheme (EPS) 1995 has been updated to allow proportionate withdrawal benefits for members with less than six months of contributory service.

Key Points

Recent Amendment:

- **Proportionate Withdrawal**: Members with less than six months of contributory service can now withdraw benefits proportionately, whereas previously, six months of service was mandatory.

About EPS 1995:

- **Nodal Ministry**: Managed by the Ministry of Labour & Employment.
- **Scheme Type**: A "Defined Contribution-Defined Benefit" scheme.

Contributions:

- **Employer**: 8.33% of wages.
- **Central Budget**: 1.16% of wages, up to ₹15,000 per month.

Withdrawal Benefits:

- **Eligibility**: Members who leave before 10 years of service.
- **Minimum Pension**: ₹1,000.

13. DISTRICT MINERAL FOUNDATION (DMF)

SOURCE: THE HINDU

The Minister of Mines has inaugurated the DMF Gallery at Shastri Bhawan, New Delhi.

About DMF

Establishment:

- Established under the Mines & Minerals (Development & Regulation) (MMDR) Act, 2015.
- Required in all districts impacted by mining activities.

Objective:

- Aims to benefit and support communities and areas affected by mining.

Composition and Functions:

- Details on composition and functions are prescribed by the State Government.

Responsibilities:

- Implements the Pradhan Mantri Khanij Kshetra Kalyan Yojana, a scheme for improving the welfare of mining-affected areas.

14. EXPUNCTION IN PARLIAMENT

SOURCE: THE HINDU

Recent parliamentary sessions have seen certain speeches from opposition leaders expunged from the record.

About Expunction

Definition:

- Expunction refers to the removal of specific words, phrases, or expressions from parliamentary records that are deemed defamatory, indecent, or unparliamentary.

Authority:

- The Speaker in the Lok Sabha and the Chairman in the Rajya Sabha have the power to decide what is expunged.

Rules:

- **Lok Sabha:** Rule 380 and 381

- **Rajya Sabha:** Rule 261 and 262
- These rules govern the process to prevent misuse of parliamentary speech.

Constitutional Protection:

- Article 105(2) of the Indian Constitution ensures that MPs cannot face court action for their statements made in Parliament.

PATENTS IN INDIA

Recently, the Union Minister of Commerce and Industry emphasized that India granted approximately one hundred thousand patents in 2024, indicating a substantial rise in patent approvals.

About Patents

- **Definition:** A patent grants exclusive rights to an inventor or entity over their invention, preventing others from replicating, using, or selling it without permission.
- **Territorial Limitation:** Patents are enforceable only within the territory of India, not globally.
- **Legal Framework:** Governed by the Patents Act, 1970, with recent amendments like the Patents (Amendment) Rules, 2024.
- **Criteria for Patentability:** An invention must be novel, non-obvious, and capable of industrial application to qualify for a patent.

Significance of Granting Patents

- **Encouraging Innovation:** Provides inventors with exclusive rights, incentivizing them to invest in research and development.
- **Attracting Foreign Direct Investment (FDI):** Strong IP protection regimes attract FDI by assuring investors that their innovations will be safeguarded.
- **Creating a Knowledge-Based Economy:** Protecting intellectual assets like copyrights and trademarks promotes economic development through innovation and commercialization.

Challenges in the Patenting System

- **Lengthy Approval Process:** Patent examination can take months to years, delaying the protection of inventions.
- **Backlog of Applications:** High volumes of applications lead to a backlog, exacerbating approval delays.
- **Limited Awareness:** Many inventors lack knowledge about patents and the application process, hindering their ability to protect their inventions effectively.
- **Resource Constraints:** Costly process involving fees for attorneys, applications, and maintenance can be prohibitive for small inventors.
- **Stringent Criteria:** Specific exclusions under Section 3 of the Patents Act limit patentability, posing challenges for certain innovations.
- **Enforcement Issues:** Even with patents, enforcing rights against infringers can be costly and time-consuming.

Steps Needed to Improve the Patenting System

Simplifying Procedures:
- Introduce online filing and user-friendly interfaces.
- Provide clear guidelines for patent drafting and prosecution.

Streamlining Approval Process:
- Increase manpower and resources in patent offices.
- Offer expedited examination options for critical inventions.

Clearing Backlog:
- Implement efficient case management strategies.
- Ensure timely disposal of applications.

Creating Awareness:
- Incorporate IP education in STEM curricula.
- Set up intellectual property support centres and offer pro bono legal services.

Financial Support:
- Introduce subsidies and fee reductions for small inventors and startups.
- Promote collaborative research and patent pools to share costs.

Relaxing Criteria:
- Review and align patentability criteria with international standards.
- Provide pre-filing consultations to assess patentability.

Strengthening Legal Mechanisms:

- Establish specialized IP courts for faster adjudication.
- Promote alternative dispute resolution mechanisms.

Protecting Traditional Knowledge:

- Implement stricter regulations against biopiracy.
- Develop a national database for traditional knowledge protection.

India's Patenting Landscape and Global Position

- **Recent Developments:** India issued approximately one lakh patents in 2024, indicating significant growth in patent approvals.
- **Global Innovation Index (GII):** India ranked 40th in GII 2023, showcasing improvement in innovation capabilities.

Conclusion

- **Role of Patents:** Crucial for fostering innovation, attracting investment, and building a knowledge-driven economy.
- **Challenges and Solutions:** Addressing procedural complexities, awareness gaps, and enforcement issues is vital for enhancing India's patenting system.
- **Future Directions:** Continued reforms and strategic initiatives will bolster India's position in global innovation indices and promote sustainable economic growth.

MAINS QUESTION:

Q. Explain the significance of patents in fostering innovation and economic development in India. Discuss the challenges faced by the patenting system and suggest measures to improve its efficiency. (150 WORDS)
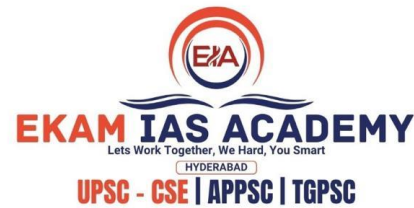
INTERNATIONAL RELATIONS

I. INDIA AND ITS NEIGHBOURHOOD

1. THE ANTI-QUOTA PROTESTS IN BANGLADESH

SOURCE: HINDUSTHAN TIMES

The anti-quota protests in Bangladesh have intensified, led primarily by students and teachers opposing the reinstatement of a 30% job quota for descendants of those who fought for the nation's freedom from Pakistan.

This has sparked significant unrest, affecting various facets of public life.

Background of the Protests

- **Initiation:** Protests began in April and escalated significantly by July 15, resulting in violent clashes and extensive injuries.
- **Main Grievance**: Opposition to the reinstatement of a 30% government job quota for freedom fighters and their descendants.

Government Response

- **Security Measures:** All public gatherings banned, internet services suspended, and news channels restricted.
- **Appeal to Protesters:** Prime Minister's office urged students to maintain peace, promising to address their concerns.

Reasons for Protests

- **Economic Concerns:** Job market strain and the perception that the quota system exacerbates unemployment.
- **Social Impact:** Allegations that the quota system perpetuates inequality and undermines meritocracy.

Historical Context

- **Previous Quota System:** Originally implemented in 1972, extended over time, creating tension among job seekers.
- **Political Implications:** The quota issue has been a recurring theme in Bangladeshi politics, reflecting deeper socio-political divides.

Conclusion

The anti-quota protests in Bangladesh highlight the ongoing struggle for equitable employment policies in a rapidly changing socio-economic landscape.

Addressing these concerns requires a balanced approach that considers both historical contributions and contemporary meritocratic principles.

2. WHAT DO CHINESE STEALTH FIGHTERS ON A TIBETAN BASE MEAN FOR INDIA

SOURCE: INDIAN EXPRESS

The recent deployment of Chinese J20 stealth fighters at the Shigatse air base in Tibet has raised concerns about the shifting military dynamics in the region, particularly regarding India's air power capabilities.

This move has significant strategic implications for India's national security.

Strategic Significance of J20 Deployment

PLAAF Capability Display:

- The deployment highlights the People's Liberation Army Air Force (PLAAF)'s ability to operate advanced platforms like the J20 at high-altitude air bases.
- This indicates a shift in focus from traditional territorial disputes to issues related to sovereign airspace, potentially altering regional security dynamics.

Strategic Intent:

- The presence of J20 fighters may impact the effectiveness of Indian Air Force (IAF) operations near disputed areas, as buffer and aerial buffer zones could be established.
- China's strategic aim appears to be neutralizing India's air power advantage by enhancing its operational presence in the region.

Strategic Challenges and Future Preparedness

IAF's Current Fleet:

- The IAF's current fleet includes fourth-generation fighters, with a limited number of Rafale squadrons providing an asymmetric advantage. However, this advantage may be challenged by the deployment of J20 fighters.

Urgent MRFA Requirement:

- There is an urgent need to address the Multi-Role Fighter Aircraft (MRFA) gap to maintain air superiority. Delays in developing indigenous fifth-generation fighters could weaken India's combat air power.

Reducing Dependence:

- It is crucial for India to reduce its dependence on single-source suppliers like Russia and volatile markets like the US. Strategic acquisitions and boosting indigenous production are essential for strengthening defense capabilities.

Maintaining Deterrence and Capability

Impact on Deterrence:

- China's efforts to counterbalance India's air power pose challenges to maintaining deterrence in the region.

Strategic Imperatives:

- India must leverage international partnerships, accelerate indigenous defense production, and prioritize key acquisition programs to safeguard its national security and ensure robust defense preparedness.

3. NORTHEAST INDIA'S BATTLE AGAINST DRUGS

SOURCE: DOWN TO EARTH

Northeast India is facing a severe drug problem, which has profound social, economic, and security implications.

The region's proximity to the Golden Triangle, porous borders, and challenging socio-economic conditions contribute to the complexity of this issue.

Drug Trafficking and Consumption Patterns

Golden Triangle Connection:

- Northeast India is vulnerable to drug trafficking due to its close proximity to Myanmar, a key part of the Golden Triangle, known for producing and trafficking drugs.

Types of Drugs:

- The most commonly abused drugs in the region include heroin (54.3%), opioids (47.1%), and methamphetamine (41.2%), with Manipur being particularly affected.

Youth Vulnerability:

- Young people aged 15-30 are particularly susceptible to drug abuse, with a significant 48.6% of respondents in Manipur using injectable drugs.

Challenges in Combating the Drug Menace

Porous Borders:

- The 1,642-km border with Myanmar facilitates easy smuggling of drugs into Northeast India despite efforts to increase surveillance.

Political Instability:

- Civil unrest in Myanmar creates an environment conducive to drug cartels, particularly in the Wa and Shan states, which further complicates efforts to combat drug trafficking.

Insurgency-Drug Nexus:

- Some insurgent groups in Northeast India are allegedly involved in drug trafficking to fund their activities, adding another layer of complexity to the drug problem.

Government Responses and Initiatives

Hi-tech Surveillance:

- The government has deployed long-range reconnaissance, observation, and battlefield surveillance radars along the Myanmar border to monitor and curb drug smuggling.

'Drug-free India' Campaign:

- In 2022, the government destroyed around 40,000 kg of narcotic substances across Northeast India as part of this campaign.

Technological Advancements:

- Drones, artificial intelligence, and satellite mapping are being used to identify and control opium cultivation areas in the region.

Impact and Statistics

Prevalence Rates:

- High opioid use rates have been recorded in Arunachal Pradesh (22.1%), Mizoram (25.67%), Nagaland (25.22%), and Manipur (14.22%).

Seizures and Arrests:

- Between 2014-2022, authorities seized 330,000 kg of drugs worth Rs 20,000 crore, a significant increase compared to 152,000 kg worth Rs 768 crore during 2006-2013.

Health Concerns:

- The widespread drug addiction has led to a rise in HIV/AIDS infections in the region, further exacerbating the public health crisis.

Way Forward

Comprehensive Approach:

- A multi-pronged strategy addressing both supply and demand aspects of the drug problem is essential.

International Cooperation:

- Strengthening collaboration with neighboring countries, particularly Myanmar, is crucial to tackling cross-border drug trafficking effectively.

Rehabilitation and Awareness:

- Expanding rehabilitation facilities and intensifying awareness campaigns, especially among the youth, are vital to combatting the drug menace in Northeast India.

GOLDEN TRIANGLE
Geographical Scope:

The Golden Triangle covers approximately 950,000 square kilometres across Thailand, Laos, Myanmar, and China, producing a significant portion of the world's opium.

Current Situation:

Nearly 95% of the total opium produced in the Golden Triangle is cultivated in Myanmar, making the region a major global drug supplier.

4. THIRD PLENUM OF CHINA'S 20TH PARTY CONGRESS

SOURCE: THE HINDU

The Third Plenum of China's 20th Party Congress, scheduled for July 15-18, 2024, has attracted worldwide attention due to its potential impact on China's economic and foreign policy directions.

This meeting is seen as a critical juncture that could shape China's strategy for the coming years.

Significance of the Third Plenum:

Historical Context:

- Third Plenums have historically been significant in setting China's long-term economic policies.
- The 1978 Plenum, led by Deng Xiaoping, was particularly notable for initiating major economic reforms.

Economic Challenges:

- China is currently grappling with several economic issues, including an aging population, a shrinking workforce, high debt levels, and a slowing economy.
- These challenges may prompt the leadership to consider new reforms.

Global Expectations:

- There is global speculation about whether China will introduce major reforms to ensure continued economic growth.
- However, there is also uncertainty about whether the current leadership is open to experimenting with new approaches.

China's Current Approach and International Perspectives:

Assertive Foreign Policy:

- Analysts expect China to maintain its assertive stance, using tactics like disinformation, military provocations, and threats, particularly towards Taiwan.

Global Initiatives:

- China's Global Development Initiative (GDI), Global Security Initiative (GSI), and Global Civilization Initiative (GCI) highlight its focus on national security and promoting its values internationally.

Regional Implications:

- Asian countries may face challenges from China's cultural and national security ambitions, leading to increased regional tensions.

India-China Relations and Future Outlook:

Strained Relations:

- Relations between India and China have been tense since 2020, primarily due to ongoing border disputes.

Strategic Concerns:

- India's strategic thinkers are concerned about China's expanding missile and nuclear capabilities, space advancements, and electronic warfare potential.

Diplomatic Opportunities:

- Despite the tensions, the article suggests that India, given its current geopolitical position, might explore diplomatic avenues to improve ties with China.
- This could lead to mutual benefits and contribute to global stability.

This Third Plenum could signal important shifts in China's policies, affecting not only China but also its relations with neighboring countries, including India, and the broader global landscape.

II. INDIA'S RELATION WITH MAJOR POWERS

5. THE SEA ROUTE FROM CHENNAI TO VLADIVOSTOK

SOURCE: INDIAN EXPRESS

The Chennai-Vladivostok Eastern Maritime Corridor, recently announced by Prime Minister Modi in Moscow, represents a significant advancement in India-Russia relations.

This strategic maritime route connects Chennai, a major port city in India, with Vladivostok, an important port in Russia, offering new avenues for trade and investment between the two countries.

About the Project
Route Overview:

- The Chennai-Vladivostok Maritime route links Chennai on India's east coast with Vladivostok, Russia's eastern port city.
- Vladivostok is strategically located at the end of the Trans-Siberian Railway, making it a crucial logistics hub.
- The route passes through the Sea of Japan, the Korean peninsula, the South China Sea, and the Strait of Malacca before reaching Chennai, covering approximately 5,647 nautical miles (10,500 km).

Need for the New Route
Enhanced Connectivity:

- The lack of direct connectivity has limited trade between India and Russia, which has been stagnant at around USD 12-13 billion.
- Currently, trade between the two countries is routed through a longer and more time-consuming path via the Red Sea, Mediterranean Sea, and Baltic Sea.
- The new corridor offers a shorter alternative, reducing the shipping distance and transport time significantly.

Significance of the Corridor
Shorter Route:

- The Chennai-Vladivostok corridor offers a shorter and faster alternative to the existing Mumbai-St. Petersburg route, reducing the distance to about 5,400 km and the transport time to approximately 24 days.

Strategic Location:

- Chennai's position on the Bay of Bengal makes it a key gateway for trade with Southeast Asian countries like Thailand, Vietnam, and Indonesia.
- The corridor is expected to facilitate the faster movement of key commodities such as crude oil, coal, LPG, and other goods.

Trade Enhancement:

- The corridor is poised to improve trade not only between India and Russia but also with Southeast Asian nations, providing better access to markets and resources.

Economic Impact
Boosting Chennai's Economy:

- The corridor is expected to enhance Chennai's economic prominence by increasing cargo traffic with Southeast Asia and potentially reaching landlocked Mongolia.
- This development positions Chennai as a significant economic hub similar to Mumbai.

Increasing Trade Volume:

- Russia aims to double its current trade volume with India through the Vladivostok port, leveraging this new maritime route.

Far East and INSTC Connection
Far East Significance:

- The Far East is Russia's easternmost region, rich in natural resources such as diamonds, gold, tungsten, coal, and seafood.
- Vladivostok provides access to these resources, creating opportunities for Indian businesses in energy, mining, and technology sectors.

INSTC Integration:

- The International North-South Transport Corridor (INSTC) complements the Chennai-Vladivostok corridor, ensuring robust transportation links between India's western and eastern coasts with Russia.
- Established in 2002, the INSTC connects India, Iran, Russia, and several other countries, enhancing regional trade and connectivity.

6. THE 'GEO-CALCULUS' OF THE MOSCOW VISIT

SOURCE: THE HINDU
The Indian Prime Minister's upcoming visit to Russia holds immense significance as it marks the first bilateral meeting

between the Indian PM and Russian President since Russia's invasion of Ukraine in February 2022.

The visit, part of the annual India-Russia summit, highlights the deep-rooted ties between the two nations, especially in the current complex global environment.

Significance of the Visit:

- **First Bilateral Meeting Post-Ukraine Conflict:** This visit is crucial as it is the first official bilateral engagement between the Indian PM and the Russian President since the conflict in Ukraine began.
- **Breaking Tradition:** The PM's decision to prioritize Russia for his first bilateral visit after re-election deviates from the norm, where new Indian PMs typically visit neighboring countries first.
- **Strategic Importance:** Russia and India share a relationship spanning over seven decades. The USSR's past support continues to influence current ties, particularly in defense, space, and nuclear collaborations.

Key Areas of India-Russia Engagement:

Defense Cooperation:

- India relies heavily on Russian defense equipment, with an estimated 60-70% of its arsenal being of Russian origin.
- The partnership has evolved from mere purchases to joint research, development, and production of key defense technologies.

Energy Security:

- India has been purchasing large quantities of discounted Russian oil, especially since the Ukraine conflict, to mitigate rising global oil prices.
- This has led to a significant increase in bilateral trade, with trade volumes reaching $65.70 billion in FY 2023-24.

Challenges for India:

Trade Imbalance:

- The trade relationship heavily favors Russia, with India's imports from Russia, mainly oil and raw materials, far exceeding its exports.

Diplomatic Balancing Act:

- India has maintained a neutral stance on the Ukraine conflict, abstaining from condemning Russia at international forums, which has created diplomatic challenges with Western allies.

Managing Russia-China Relations:

- Russia's growing closeness with China poses strategic concerns for India, necessitating careful diplomacy during the PM's visit.

Way Forward:

- **Strengthening Defense Ties:** India's primary focus will be on bolstering its defense partnership with Russia.
- **Diplomatic Strategy:** The PM will aim to reinforce historical ties while ensuring that Russia's relationship with China does not undermine India's strategic interests.

III. INDIA'S RELATION WITH OTHER NATIONS

7. INDIA-AUSTRIA RELATIONS

India and Austria have strengthened their bilateral partnership, focusing on sustainable economic and technological initiatives.

This collaboration was reinforced during meetings between Prime Minister Narendra Modi and Austrian Chancellor Karl Nehammer in Vienna.

Key Areas of Collaboration

Strategic Partnership:

- Both countries agreed to advance their relationship by establishing a "bilateral sustainable economic and technology partnership."
- The partnership will emphasize green and digital technologies, infrastructure development, renewable energy, and efficient water management.

Research and Innovation:

- The leaders highlighted the importance of joint efforts in research, innovation, and business engagements.
- Key areas of focus include life sciences, smart cities, mobility solutions, and transportation enhancements.

Global and Regional Cooperation:

- The agreement reflects a shared commitment to a free and open Indo-Pacific, respect for international law, and support for peace in regions like Europe and the Middle East.
- Cooperation in counterterrorism, UN reforms, and mutual support for each other's candidacies for the UN Security Council also underscore their shared vision for global stability and development.

IV. AGREEMENTS INVOLVING INDIA AND/OR AFFECTING INDIA'S INTERESTS.

8. GLOBAL BIOFUELS ALLIANCE (GBA)

The Global Biofuels Alliance (GBA) was launched in September 2023, spearheaded by key G20 nations including India, the United States, and Brazil.

This India-led initiative is poised to gain diplomatic status, with New Delhi expected to sign a headquarters agreement with the agency soon.

The GBA aims to unite governments, international organizations, and industries to promote the adoption and development of biofuels globally, positioning them as a crucial element in the energy transition.
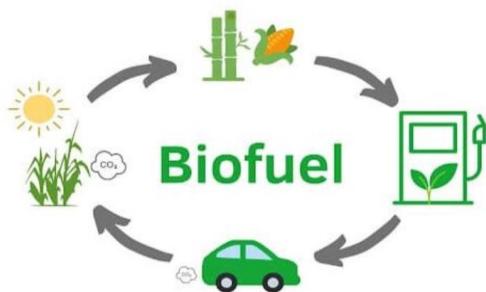
About the Global Biofuels Alliance (GBA):
Purpose and Objectives:
- GBA is designed to bring together the world's largest consumers and producers of biofuels.
- The initiative seeks to drive the development and deployment of biofuels, emphasizing their role in the global energy transition.
- It aims to contribute to job creation, economic growth, and sustainable energy practices.

Members and Supporters:
Countries:
- G20 Members Supporting GBA: Argentina, Brazil, Canada, India, Italy, South Africa, USA.
- G20 Invitee Countries: Bangladesh, Singapore, Mauritius, UAE.
- Non-G20 Nations: Iceland, Kenya, Guyana, Paraguay, Seychelles, Sri Lanka, Uganda, and Finland.

International Organizations:
- Supporting organizations include the World Bank, Asian Development Bank, World Economic Forum, UN Energy for All, and International Renewable Energy Agency, among others.

National Biofuel Policy:

Goals and Targets:
- The policy aims to achieve a 20% blending of biofuels with fossil fuels by 2030.
- It focuses on ensuring a stable supply of domestic feedstock for biofuel production.
- The policy is designed to boost farmers' incomes, reduce fuel imports, generate employment, and promote waste-to-wealth initiatives.
- It aligns with the government's broader goal of strengthening the nation's energy infrastructure while supporting sustainability.

About Biofuels:
- Biofuels are liquid fuels derived from renewable biological sources like plants and algae.
- They offer an alternative to traditional energy sources such as solar and wind power.

Advantages:
Widespread Availability:
- Biofuels can be produced from biomass, which is widely available, making them relatively easy to produce.

Waste Reduction:
- They can be produced from waste materials, such as municipal sewage and non-edible crop parts, helping to reduce overall waste.

Energy Security:
- Biofuels help reduce dependence on crude oil and other non-renewable energy sources.

Economic Impact:
- The production process of biofuels can create jobs, especially in rural areas where second-generation biofuel production units are established.

Disadvantages:
Lower Efficiency:
- Biofuels are less efficient than fossil fuels, producing less energy per unit.

Biodiversity Loss:
- The cultivation of genetically modified crops for fourth-generation biofuels could lead to a decline in biodiversity.

Land and Space Requirements:
- Biofuel production demands significant land, particularly for non-food crops, potentially leading to land use challenges.

Food Security Concerns:
- The use of food crops for first-generation biofuels could exacerbate food shortages.

Water Consumption:

- Large amounts of water are needed for biofuel crop irrigation and fuel production, which could strain local water resources, though this is less of an issue with third-generation biofuels.

The Global Biofuels Alliance represents a significant step towards integrating biofuels into the global energy landscape, offering both opportunities and challenges that must be carefully managed for sustainable development.

9. COLOMBO PROCESS

For the first time since its creation in 2003, India is chairing the Colombo Process. This platform focuses on managing overseas employment and labor migration among Asian countries.

About the Colombo Process

Purpose: The Colombo Process is a Regional Consultative Process aimed at overseeing labor migration and overseas employment from Asian countries.

Objectives:

- **Exchange of Information:** Facilitates sharing of experiences and best practices among member countries.
- **Consultation:** Addresses challenges faced by migrants and works to improve their welfare.
- **Optimization of Benefits:** Seeks to enhance developmental gains from organized labor migration and fosters dialogue with destination countries.
- **Review and Monitoring:** Continuously reviews and monitors recommendations and action steps.

Function: Acts as a forum for sharing best practices related to overseas employment and labor migration.

Composition: Includes 12 Asian countries that are major sources of migrant workers:

- **Members:** Afghanistan, Bangladesh, China, Cambodia, India, Indonesia, Nepal, Pakistan, the Philippines, Sri Lanka, Thailand, and Vietnam.

Governance:

- **Decision-Making:** Decisions are made by consensus and are non-binding.
- **Coordination:** Managed through the Permanent Missions of member states at the UN in Geneva.

International Organization for Migration (IOM)

Role: Provides technical support and functions as the Secretariat for the Colombo Process.

Thematic Area Working Groups (TAWGs):

- **Skills and Qualification Recognition** (Sri Lanka)
- **Fostering Ethical Recruitment** (Bangladesh)
- **Pre-Departure Orientation and Empowerment** (Philippines)
- **Remittances** (Pakistan)
- **Labour Market Analysis** (Thailand)

V. GLOBAL ISSUES

10. IVORY COAST JOINS THE UN WATER CONVENTION

Ivory Coast recently became the 10th African country to join the United Nations Water Convention. This significant move aims to bolster transboundary water management, especially in the face of increasing water stress and the impacts of climate change.

The decision underscores the importance of sustainable water resource management for economic growth, poverty alleviation, and climate adaptation across Africa.

Significance for Africa:

Economic Growth and Poverty Reduction:

- Africa's vast water resources hold the potential to drive economic development, support livelihoods, and reduce poverty.
- Transboundary water systems are crucial, covering about 62% of the continent's land area.

Adapting to Climate Change:

- Regions like the Niger basin are highly susceptible to climate change, with predictions of significant reductions in river flows.
- Cooperation on transboundary water management is essential to address these challenges.

Enhancing Water Security:

- Ivory Coast's participation in the UN Water Convention strengthens efforts to manage water resources sustainably.
- This is particularly vital given the country's vulnerability to climate change and ongoing challenges in water security.

Challenges and Impact:

- **Water Stress and Population Growth:** Ivory Coast faces significant challenges in meeting the water demands of its 30 million people, exacerbated by urbanization, the impacts of climate change, and pollution.
- **Uneven Water Availability:** The northern and northeastern regions of Ivory Coast experience more severe water stress, highlighting the need for targeted and effective water management strategies.

Legal and Institutional Frameworks:

Transboundary Cooperation:

- The UN Water Convention mandates that member states collaborate on the sustainable management of shared water resources, ensuring fair usage and conflict prevention.

Operational Arrangements:

- Currently, only 25% of Ivory Coast's transboundary basin areas are under operational management agreements, indicating the need for stronger legal and institutional frameworks.

Required Measures:

Strengthening Legal Systems:

- It is crucial to invest in legal measures that prevent illegal exploitation of water resources and ensure accountability for violations.

Training and Coordination:

- Enhancing the skills of enforcement officials, expanding labor inspections to high-risk sectors, and improving coordination between labor and criminal law enforcement are essential steps.

Comprehensive Management Approach:

- A holistic approach to enforcement is necessary, focusing on addressing root causes, protecting victims, and ensuring sustainable management of water resources.

Expansion of the Water Convention:

Upcoming Accessions:

- Other African nations, such as Sierra Leone, Zambia, and Zimbabwe, are in the final stages of joining the Water Convention, which will further enhance cooperation on transboundary water management.

Global Cooperation:

- The accession of these nations opens up new possibilities for strengthened international collaboration, particularly in regions like Sub-Saharan Africa, the Middle East, and Latin America.

UN Water Convention:

Background and Purpose:

- The UN Water Convention, formally known as the Convention on the Protection and Use of Transboundary Watercourses and International Lakes, was adopted in Helsinki in 1992 and came into effect in 1996.
- It is the only legally binding international treaty that promotes the sustainable management of shared water resources, contributing to the achievement of the Sustainable Development Goals (SDGs), conflict prevention, and regional integration.

Core Requirements:

- The Convention obligates member states to prevent, control, and reduce transboundary impacts, use shared waters equitably and sustainably, and cooperate through specific agreements and joint bodies.

Framework Agreement:

- While the Convention provides a framework for cooperation, it does not replace bilateral or multilateral agreements for specific basins or aquifers.
- Instead, it encourages the development and implementation of such agreements.

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11. WORLD BANK GROUP GUARANTEE PLATFORM

SOURCE: HINDUSTHAN TIMES

The World Bank Group Guarantee Platform was launched in 2024 to enhance and simplify the process of issuing guarantees for global investments.

The platform is managed by the Multilateral Investment Guarantee Agency (MIGA) and aims to boost annual guarantee issuance to $20 billion by 2030.

About the Platform

Initiation and Management:

- Launched in 2024, the platform is housed within MIGA.
- It integrates products and expertise from the World Bank, International Finance Corporation (IFC), and

MIGA to provide a comprehensive solution for guarantee needs.

Objective:

- The platform's primary goal is to streamline and expand the issuance of guarantees, making it easier for clients to secure investments in developing countries.

Key Features

Simplified Guarantee Options:

The platform offers three main types of coverage:

- **Credit Guarantees:** Protect loans to both public and private sectors.
- **Trade Finance Guarantees:** Support trade finance projects involving public entities.
- **Political Risk Insurance:** Shields against non-commercial risks in private sector projects or public-private partnerships.

Comprehensive Service:

- It serves as a one-stop shop for all guarantee-related needs, offering a simplified and user-friendly menu of options.

Significance

Consolidation and Efficiency:

- By consolidating guarantee products and experts from across the World Bank Group, the platform enhances efficiency and accessibility.

Investment De-risking:

- The platform helps de-risk investments in developing countries, making it easier for clients to select the appropriate guarantee instrument that meets their specific needs.

Process Streamlining:

- The platform eliminates redundancies, streamlines processes, and provides greater access to guarantee solutions, ultimately fostering increased investment in challenging markets.

12. THE US SECRET SERVICE

SOURCE: THE HINDU

The United States Secret Service (USSS) is one of the oldest federal law enforcement agencies, established in 1865.

Initially created to combat currency counterfeiting, its role expanded significantly after the assassination of President William McKinley in 1901.

History and Evolution

Founding and Early Mandate:

- The Secret Service was founded in 1865, originally tasked with addressing the widespread issue of counterfeit currency in the post-Civil War United States.

Expansion of Duties:

- Following President McKinley's assassination, the Secret Service was given the full-time responsibility of protecting the President in 1902.
- This marked a significant shift in its mandate, from primarily financial crimes to personal security of national leaders.

Structure and Organizational Details

Departmental Affiliation:

- The Secret Service is part of the Department of Homeland Security (DHS), a critical component of the U.S. government's protective and investigative framework.

Personnel Composition:

- The agency employs about 3,200 special agents, 1,300 Uniformed Division officers, and over 2,000 technical, professional, and administrative support staff.
- These personnel are highly trained and work in specialized roles to ensure comprehensive protection and law enforcement.

Protective Mandate

Primary Protection Responsibilities:

The Secret Service is responsible for the protection of:

- The President and Vice President of the United States, along with their immediate families.
- Former Presidents, their spouses (unless remarried), and their children up to the age of 16.
- Major candidates for the offices of President and Vice President, including their spouses, beginning 120 days before a general election.
- This protection extends to others deemed necessary by the Secretary of Homeland Security after consultation with an advisory committee.

Protection Teams:

The agency's protection duties are carried out by specialized teams:

- **Counter Sniper Team:** Utilizes long-range binoculars and sniper rifles to identify and neutralize distant threats.
- **Counter Assault Team:** Focuses on neutralizing immediate threats to allow for the safe evacuation of the person under protection.

Functions and Powers

Security Preparations:

- For large events like campaign rallies, Secret Service agents conduct thorough security checks, scanning venues for potential threats such as bombs.
- This task is supported by the Explosive Ordnance Disposal teams and military communications resources.

Law Enforcement Authority:

- The Secret Service is authorized to carry firearms and has the power to make arrests without a warrant if there are reasonable grounds to suspect an offense or felony.

Conclusion

The US Secret Service plays a crucial role in safeguarding the highest offices of the United States government.

Over time, its responsibilities have expanded from financial crimes to a comprehensive protective mandate, ensuring the safety of key figures in American politics.

VI. PRELIMS POINTERS IN NEWS

13. ASIAN DISASTER PREPAREDNESS CENTRE (ADPC)

SOURCE: THE HINDU

The Asian Disaster Preparedness Centre (ADPC) is an autonomous international organization established in 1986.

ADPC focuses on disaster risk reduction (DRR) and building climate resilience across the Asia-Pacific region.

Key Points:

Mission and Activities:

- ADPC promotes cooperation among countries for implementing disaster risk management (DRM) strategies.
- The organization offers training, deploys DRM strategies, and works to reduce the impacts of natural disasters and climate change.

Founding Members:

- India, along with Bangladesh, Cambodia, China, Nepal, Pakistan, Philippines, Sri Lanka, and Thailand, is among the founding members of ADPC.

Recent Development:

- India recently took over the chairmanship of the ADPC, marking its significant role in regional disaster preparedness.
- Shri Rajendra Singh, Member & HoD of the National Disaster Management Authority (NDMA), assumed the chairmanship from China.

- The 5th Board of Trustees (BoT) meeting, chaired by India, was held on July 25, 2024, in Bangkok, Thailand.

14. JOINT CREDITING MECHANISM

SOURCE: INDIAN EXPRESS

India and Japan are collaborating to establish a Joint Crediting Mechanism (JCM) to promote carbon trading and carbon credit adjustment.

A Memorandum of Cooperation is set to be signed to formalize the JCM under Article 6.2 of the Paris Agreement.

Key Points:

Implementation and Guidelines:

- The JCM will be implemented following the domestic laws and regulations of both countries.
- A committee will create rules and guidelines, covering aspects like project cycle procedures, methodologies, project design, monitoring, and third-party entity designation.

Carbon Credits Management:

- The mechanism allows mutual recognition of carbon credits, ensuring they contribute to the Nationally Determined Contributions (NDCs) of both countries without double counting.
- Carbon credits will be tracked through a registry and allocated to the respective registries of India and Japan for use towards their NDCs.

Technology Transfer and Capacity Building:

- Japan will support India by transferring technology, finance, and building capacity for new technologies under the JCM.

Economic and Environmental Benefits:

Investment and Job Creation:

- The JCM is expected to attract investments in low-carbon and clean technologies, leading to job creation.

Technology Diffusion:

- The mechanism will aid in spreading advanced decarbonizing technologies, equipment, and infrastructure, promoting environmental sustainability.

15. HANNIBAL DIRECTIVE

SOURCE: THE HINDU

The Hannibal Directive, also known as the Hannibal Procedure or Protocol, is an operational doctrine of the Israel Defense Forces (IDF).

It was designed to prevent the capture of Israeli soldiers, even at the potential cost of the soldier's life and the lives of civilians.

Background and Origin
Formulation:

- The doctrine was formulated in response to the 1985 Jibril Agreement, where Israel exchanged 1,150 Palestinian prisoners for three captured Israeli soldiers.
- The directive is named after the Carthaginian general Hannibal, who chose death over capture by the Romans in 181 BCE.

Implementation and Evolution
First Use:

- The Hannibal Directive was first implemented by Yossi Peled, head of the IDF's Northern Command, in 1986 after an abduction attempt by Hezbollah.

Operational Changes:

- Initially, the directive permitted light arms fire to prevent abductions.
- Over time, its interpretation broadened to include heavier military actions, such as the use of attack helicopters.
- The directive was based on the belief that captured Israeli soldiers would be mistreated, and that preventing capture was a higher priority, even if it meant sacrificing the soldier's life.

Criticism
Controversy:

- The Hannibal Directive has faced significant criticism from legal experts and human rights advocates for its apparent disregard for human life, raising ethical and legal concerns.

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16. FIRST BIMSTEC FOREIGN MINISTERS' RETREAT

SOURCE: THE HINDU

The first BIMSTEC (Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation) Foreign Ministers' retreat was recently held in New Delhi, marking a significant step in regional diplomacy.

Key Discussions and Participants
Indian Emphasis:

- External Affairs Minister S. Jaishankar highlighted the importance for BIMSTEC countries to tackle regional challenges through internal strategies.

Participants:

- The retreat was attended by representatives from Bangladesh, Thailand, Myanmar, and Bhutan.

Focus Areas
Goals and Cooperation:

- The meeting underscored long-standing objectives such as enhancing capacity-building and fostering economic cooperation amidst evolving global and regional contexts.

Myanmar's Instability:

- The ongoing instability in Myanmar was a major topic, as it affects developmental projects and connectivity within the BIMSTEC region.

Key Discussions
Engagement with Myanmar:

- Conversations included discussions with Myanmar's Deputy Prime Minister and Foreign Minister about improving connectivity, ensuring border stability, and exploring options for humanitarian aid.

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17. INDIA'S ROLE IN THE 132ND IMO COUNCIL SESSION

SOURCE: THE HINDU

The 132nd session of the International Maritime Organization (IMO) Council was recently held in London.

India played an active role in this important maritime meeting.
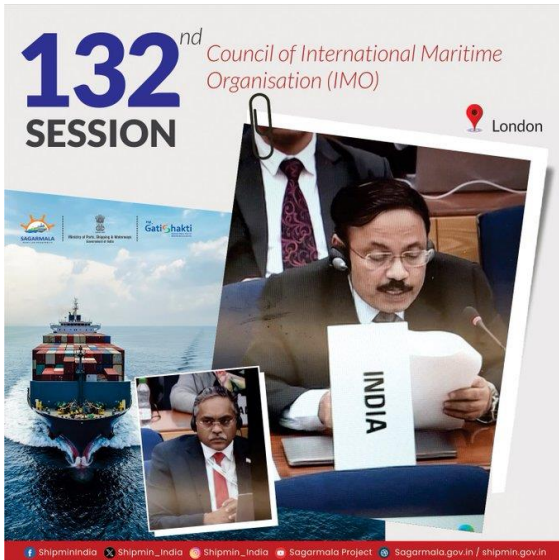
India's Involvement

Elected Member:

- India, representing countries with significant international maritime interests, is an elected member of the IMO Council.

Focus on Seafarer Abandonment:

- India highlighted the pressing issue of seafarer abandonment, citing 44 active cases involving 292 Indian seafarers.
- India is part of the Joint Tripartite Working Group at the IMO, focusing on seafarer welfare and maritime operations.

Key Issues and Initiatives

Seafarer Welfare:

- India raised awareness about seafarer abandonment issues and its impact on maritime personnel.
- The country's inclusion in the Joint Tripartite Working Group aims to improve conditions and address related challenges.

Maritime Security:

- Discussions included recent maritime security threats in regions like the Red Sea and Gulf of Aden.
- India's Navy highlighted successful operations, such as rescuing MV Marlyn Luanda and intercepting MV Ruen to combat piracy.

Sustainable Maritime Transport:

- India proposed the establishment of the South Asian Centre of Excellence for Sustainable Maritime Transport (SACE-SMarT).
- The center aims to advance maritime technology, promote sustainability, and reduce greenhouse gas emissions in South Asia.

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18. UKRAINE PEACE SUMMIT

SOURCE: INDIAN EXPRESS

The Ukraine Peace Summit, aimed at resolving the ongoing conflict between Russia and Ukraine, took place recently.

Key Details

Location and Participants:

- The summit was held in Lucerne, Switzerland, at the Bürgenstock resort.
- It saw participation from 100 delegations, including representatives from 80 countries and four international organizations.

Focus Areas:

The summit concentrated on several critical issues:

- **Nuclear Safety:** Addressing potential threats related to nuclear facilities amidst the conflict.
- **Global Food Security:** Evaluating the impact of the conflict on global food supplies.
- **Humanitarian Concerns:** Discussing the humanitarian impact of the war, including the treatment of displaced persons.

Declaration Highlights:

- **Condemnation:** The summit's declaration condemned Russia's actions in Ukraine, citing significant human suffering and global crises.
- **Humanitarian Demands:** Calls were made for the release of prisoners of war and the return of deported and unlawfully displaced Ukrainian civilians and children.

Challenges and Criticisms

Absence of Key Players:

- **Russia:** Russia was not invited to the summit, which raised concerns about the summit's effectiveness. Switzerland's adherence to the Rome Statute could have led to potential legal issues for Russian leaders.
- **China:** China's absence was also criticized. There were calls for China to use its influence with Russia to help resolve the conflict.

SIMLA AGREEMENT AND INDIA-PAKISTAN RELATIONS

The Simla Agreement, signed on 2nd July 1972, marked a significant milestone in the history of India-Pakistan relations, aimed at resolving conflicts arising from the 1971 Indo-Pakistani War.

This agreement, facilitated by Prime Minister Indira Gandhi of India and President Zulfikar Ali Bhutto of Pakistan, sought to establish peace and normalize relations between the two nations.

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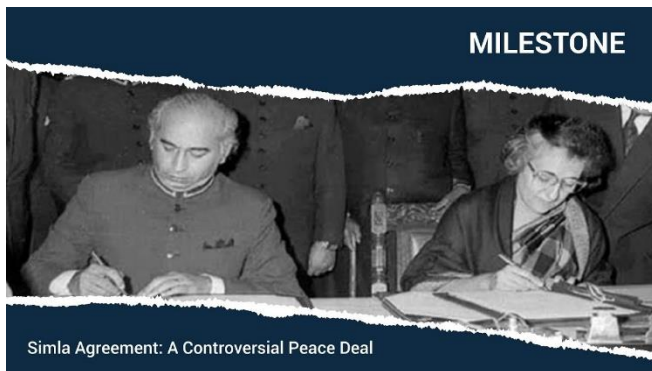
Simla Agreement: A Controversial Peace Deal

Origins and Context
Post-1971 War Dynamics

- **Independence of Bangladesh:** The 1971 war led to the emergence of Bangladesh (formerly East Pakistan) as an independent nation, following India's military intervention in support of Bangladeshi independence fighters.
- **Geopolitical Shifts:** India's decisive military action reshaped the South Asian geopolitical landscape, affecting relations between India, Pakistan, and the newly formed Bangladesh.

Key Negotiators

- **Indira Gandhi and Zulfikar Ali Bhutto:** The leaders of India and Pakistan respectively, played crucial roles in negotiating the terms of the Simla Agreement to stabilize relations post-war.

Objectives of the Simla Agreement
Resolution of Kashmir Issue

- **Bilateral Approach:** India aimed to resolve the Kashmir dispute through bilateral negotiations, avoiding internationalization of the issue.
- **Status Quo:** Both countries agreed to respect the Line of Control (LoC) in Kashmir without prejudice to their respective territorial claims.

Normalisation of Relations

- **Regional Stability:** India sought improved relations with Pakistan based on the new power balance in the region post-1971 war.

- **Avoidance of Humiliation:** India refrained from seeking to formalize the ceasefire line as a permanent border to prevent further hostilities and resentment in Pakistan.

Key Provisions of the Simla Agreement
Conflict Resolution and Bilateralism

- Emphasis on resolving all disputes through peaceful means and bilateral negotiations.
- Establishment of mechanisms for regular dialogue and diplomatic engagement between India and Pakistan.

Status of Kashmir

- Acknowledgment of the Line of Control (LoC) in Kashmir, with both sides agreeing not to alter its status unilaterally.
- Commitment to resolve the Kashmir issue through mutual dialogue and without external interference.

Withdrawal of Forces

- Agreement on the phased withdrawal of forces to the pre-war positions along the international border, promoting de-escalation and peace-building.

Future Diplomacy

- Provision for regular meetings between the heads of governments to sustain dialogue and address ongoing issues, including humanitarian concerns like repatriation of prisoners of war.

Significance of the Simla Agreement
Geopolitical Tensions

- The agreement remains crucial in managing and mitigating tensions between India and Pakistan, especially concerning Kashmir and broader bilateral relations.

Legal and Diplomatic Framework

- Provides a foundational legal framework for future negotiations and agreements between India and Pakistan, despite subsequent challenges and differing interpretations.

Criticism and Challenges
Unfulfilled Potential

- The Simla Agreement has not fully achieved its goal of fostering enduring peace and cooperation between India and Pakistan, with deep-seated mistrust and unresolved issues persisting.

Nuclearisation and Strategic Shifts

- Post-nuclear tests by both countries in 1998 have introduced a deterrence-based stability but also

reduced the relevance of conventional peace agreements like Simla in the context of strategic calculations.

Long-term Impact

- Despite periodic diplomatic efforts and confidence-building measures, sustained peace remains elusive due to recurring conflicts and cross-border tensions.

India-Pakistan Relations Over the Years

Partition and Independence (1947)

- The partition of British India into India and Pakistan led to immediate conflict over Kashmir, setting the stage for decades of contentious relations.

Wars, Agreements, and Terrorism

- **1965 and 1971 Wars:** Conflicts over territorial disputes and Bangladesh's independence reshaped bilateral dynamics.
- **Insurgency in Kashmir (1989):** Pakistan's support for militants in Kashmir escalated violence and human rights abuses.
- **Kargil War (1999):** Pakistan-backed incursions in Kargil strained relations, highlighting ongoing territorial disputes and military confrontations.
- **Mumbai Attacks (2008):** Terrorist attacks by Pakistan-based groups in Mumbai strained relations and triggered international pressure on Pakistan.

Current Situation (2023-2024)

- Political instability in Pakistan, ongoing militant activities, and cross-border tensions continue to hinder efforts towards peace and normalization.
- Geopolitical complexities, including China's influence in the region, add further challenges to Indo-Pak relations.

Conclusion

The Simla Agreement of 1972 represents a pivotal moment in India-Pakistan relations, aiming to resolve conflicts through bilateral dialogue and diplomacy.

Despite its limitations and challenges, the agreement remains relevant in understanding the dynamics of South Asian diplomacy and the complexities of managing regional security.

Efforts towards lasting peace face significant hurdles amidst historical grievances, geopolitical rivalries, and domestic political dynamics.

As both nations navigate these challenges, the legacy of Simla underscores the ongoing quest for stability and cooperation in the region.

MAINS QUESTION:

Q. Describe the objectives, key provisions, and significance of the Simla Agreement of 1972 in the context of India-Pakistan relations, highlighting its impact on regional stability and diplomatic engagements. (150 WORDS)

ECONOMY

I. GROWTH AND DEVELOPMENT

1. WITH NEW BUDGET, CHANCE FOR NEW VISION FOR INDIA

SOURCE: INDIAN EXPRESS

In India, the annual budget is crucial for setting the government's economic vision. Unlike advanced economies, where the budget is a routine event, India's budget presentation has significant implications, influenced by its colonial legacy and current economic goals.

Importance of the Budget

- The budget outlines the administration's vision for the economy.
- Budget announcements at the start of a government's term are particularly significant for setting long-term economic policies.

Expected Vision for 2024-25 Budget

- **Aim:** Transform India into a developed economy ("Viksit Bharat") by 2047.
- **Achieving** a per capita income growth from $2,500 to $14,000.
- **Sustaining** 9.2% growth rate in nominal dollar terms to reach upper middle-income status by 2030 and higher-income status by 2042.

Employment and Manufacturing:

- Boost labour-intensive manufacturing to leverage the demographic dividend.
- Enhance trade and competitiveness without compromising on services.
- Implement factor market reforms to improve capital to labour ratio.

Public Finance:

- Shift fiscal policy towards a scientific approach with public debt to GDP ratio as a medium-term anchor.
- Decrease India's debt-to-GDP ratio and fiscal deficit.
- Consider establishing an independent Fiscal Council for better fiscal management.

Other Key Areas:

- Develop agriculture markets.
- Improve higher education and health outcomes.
- Meet carbon emission limits.

Conclusion

The 2024-25 budget is an opportunity to set a long-term economic vision. Achieving 10% real GDP growth is feasible with sustained macroeconomic and political stability, and a push for physical and digital infrastructure. The budget should signal a commitment to comprehensive reforms to meet economic aspirations.

II. BANKING AND FINANCIAL INTERMEDIARIES

2. PROJECT NEXUS

SOURCE: INDIAN EXPRESS

Project Nexus, initiated by the Bank for International Settlements (BIS), aims to enhance cross-border payments by interlinking domestic Fast Payments Systems (FPSs).
The Reserve Bank of India (RBI) has joined this multilateral initiative to facilitate instant cross-border retail payments.

What is Project Nexus?

- **Conceptualized by:** BIS Innovation Hub.
- **Purpose:** To connect multiple domestic Instant Payment Systems (IPS) globally, enhancing cross-border payments.
- **Significance:** The first BIS Innovation Hub project in payments moving towards live implementation.

India's Participation

- **RBI's Role:** Collaborating to link India's FPS (UPI) with other countries' FPSs for cross-border Person to Person (P2P) and Person to Merchant (P2M) payments.
- **Current Bilateral Efforts:** India has been linking UPI with FPSs of various countries.

Benefits of Project Nexus

- **Standardization:** Simplifies the connection process by creating a single link to the Nexus platform, eliminating the need for custom connections for each new country.
- **Efficiency:** Facilitates instant cross-border payments, reducing transaction time to within 60 seconds.
- **Cost-Effective:** Near-zero cost for domestic payments, extending benefits to cross-border transactions.

Participating Countries

- **Founding Members**: India, Malaysia, Philippines, Singapore, Thailand.
- **Future Expansion:** Potential to include more countries, with Indonesia expected to join.

Agreement and Implementation

- **Signing Date:** June 30, 2024.
- **Location:** Basel, Switzerland.
- **Signatories:** Central banks of the founding countries - BNM, BOT, BSP, MAS, and RBI.

Conclusion

Project Nexus represents a significant advancement in global payment systems, promoting efficiency, speed, and cost-effectiveness in cross-border transactions. **By joining this initiative, India aims to expand the international reach of its payment systems and enhance global financial connectivity.**

3. SEBI TIGHTENS NORMS ON FINANCIAL INFLUENCERS

The Securities and Exchange Board of India (SEBI) has implemented new regulations to curb the influence of unregulated financial influencers on investors.

This move aims to ensure transparency and protect investors from misleading information.

Key Points

- Restrictions on Unregulated Financial Influencers
- **SEBI has prohibited brokers and mutual funds from using unregulated financial influencers for marketing and advertising.**
- This decision is to prevent investors from being misled by inappropriate claims made by unregulated entities.
- Financial influencers focusing on investor education are exempt from these restrictions.

Popularity of Financial Influencers

- The rise in the Indian stock market has increased the popularity of financial influencers on platforms like YouTube and Instagram.
- These influencers often have a significant following and provide advice on stocks and investments.

SEBI's Responsibility and Enforcement

- Regulated entities must ensure their associates adhere to SEBI's conduct rules, including not promising assured returns.

Additional SEBI Measures

Derivative-linked Stocks

- New criteria have been introduced to determine which stocks can be linked to derivative products like futures and options.
- The number of stocks eligible for derivative trading will slightly increase.

Changes to Delisting Rules

- SEBI has made it easier for companies to delist from stock exchanges.
- Companies can now offer shareholders fixed prices for shares as an alternative delisting mechanism, replacing the reverse book-building method.

About Finfluencers:

Finfluencers are social media personalities who focus on financial topics.

They use their platforms to share information and advice, often in an engaging way, on a variety of financial matters.

- **Financial Content:** They create content on various financial subjects like budgeting, investing in stocks and mutual funds, real estate, and even cryptocurrency.
- **Accessibility:** They aim to make financial information understandable and approachable for a general audience.
- **Engagement:** They use social media features like videos, posts, and live streams to connect with their followers and answer their questions.

Benefits:

- Finfluencers can potentially fill a gap in financial literacy, especially for younger generations who are comfortable consuming information online.
- They can provide a fresh perspective and make financial topics more relatable.

Listing:

- This is the process by which a company's shares become available for trading on a stock exchange.
- Companies need to meet specific financial and compliance requirements set by SEBI and the stock exchange itself.
- This ensures transparency and protects investors.

Delisting:

- **This is the removal of a company's shares from the stock exchange.**
- **It can be voluntary or compulsory.**
- **Voluntary Delisting:** A company decides to go private or merge with another company.
- **Compulsory Delisting:** This happens when a company fails to comply with listing regulations, such as minimum public shareholding or financial performance. SEBI also outlines the process for delisting and provides an exit mechanism for investors through a bidding process**.**

Conclusion

SEBI's new regulations are a significant step towards enhancing market integrity and protecting investors from misleading information. These measures aim to ensure a more transparent and fair market environment.

4. BHARAT BILL PAYMENT SYSTEM

SOURCE: INDIAN EXPRESS

The Reserve Bank of India (RBI) has mandated that all credit card bill payments via third-party applications must now be routed through the Bharat Bill Payment System (BBPS).

This move aims to enhance the reliability and safety of transactions for Indian consumers.

About Bharat Bill Payment System (BBPS)

- Developed by the Reserve Bank of India (RBI) and operated by the National Payments Corporation of India (NPCI).
- Created as a comprehensive payment platform for managing various bill payments.

Features

- Offers "Anytime Anywhere" bill payment service with certainty and reliability.
- Provides multiple payment modes and instant confirmation of payment receipt.
- Connects banks, non-banks, billers, payment service providers, and retail bill outlets.

- Catalogues various utility providers on a single platform for customer convenience.

Primary Bill Categories

- Electricity, telecom, mobile postpaid, DTH, gas, and water bills.

Additional Categories

- School/university fees, municipal taxes, mutual funds, insurance premiums, and various government taxes as decided by the RBI.

Payment Channels

- Physical Outlets
- Bank branches, agent collection stores, etc.
- Digital Channels
- Apps, websites, and other digital platforms.

Confirmation

- Provides instant confirmation of payment via SMS or receipt.

Conclusion

The integration of credit card bill payments through BBPS reflects the RBI's commitment to providing a secure, reliable, and accessible payment system for all bill payments in India. This initiative simplifies the bill payment process and ensures greater efficiency and customer convenience.

III. AGRICULTURE AND ALLIED

5. GOVERNMENT OUTLINES STRATEGY TO ENHANCE AGRICULTURAL PRODUCTIVITY

SOURCE: PIB

The Indian government has launched several initiatives to boost agricultural productivity and resilience.

These efforts focus on natural farming, achieving self-sufficiency in pulses and oilseeds, developing high-yielding and climate-resilient crop varieties, enhancing Digital Public Infrastructure (DPI) in agriculture, and strengthening the shrimp industry.

The overarching goal is to modernize agriculture and ensure its sustainable growth.

Key Initiatives

Natural Farming Initiative:

- **Objective**: Train 1 crore farmers in natural farming to enhance sustainability and productivity while providing access to premium markets.
- **Definition**: Natural Farming is a chemical-free, livestock-based system integrating crops, trees, and livestock, aimed at increasing farmers' income,

restoring soil fertility, and reducing greenhouse gas emissions.

- **Implementation**: The Bharatiya Prakritik Krishi Paddhati (BPKP) under the Paramparagat Krishi Vikas Yojana (PKVY) promotes these practices with a budget of Rs 4645.69 crore for 2019-20 to 2024-25.

Self-Sufficiency in Pulses and Oilseeds:

- **National Food Security Mission – Oilseeds (NFSM-OS)**: Targets increased oilseed production to reduce dependency on imports, achieving 41.4 million tonnes in 2022-23.
- **Minimum Support Price (MSP)**: Raised MSPs for pulses and oilseeds for 2024-25, ensuring economic viability and sustainability for farmers.

High-Yielding and Climate-Resilient Varieties:

- **Initiative**: Introduction of 109 new high-yielding, climate-resilient crop varieties across 32 crops.
- **Achievements**: From 2014-15 to 2023-24, 2593 high-yielding varieties, including 2177 climate-resilient ones, were released, enhancing production even under adverse conditions.

Digital Public Infrastructure (DPI) in Agriculture:

- **Objective**: Improve agricultural efficiency through digital technology. The first phase involves a digital crop survey in 400 districts to collect data on crop patterns, land use, and yields.
- **Impact**: Enhances precision in planning and implementing agricultural strategies, including subsidy distribution and disaster management.

Strengthening the Shrimp Industry:

- **Objective**: Improve shrimp breeding and provide financial support through NABARD. Establishing Nucleus Breeding Centres (NBCs) will enhance the quality and productivity of shrimp brood stocks.
- **Impact**: As a leading shrimp producer and exporter, India saw shrimp exports rise to Rs 40,013 crore in 2023-24.

Conclusion

These strategic initiatives by the Indian government aim to modernize the agricultural sector, ensuring productivity, sustainability, and resilience. **They are crucial for securing**

the future of Indian agriculture and supporting the livelihoods of millions of farmers.

6. PRIMARY AGRICULTURAL CREDIT SOCIETIES

SOURCE: THE HINDU

Primary Agricultural Credit Societies (PACS) play a crucial role in India's cooperative credit structure, providing essential financial support to farmers at the grassroots level.

Recently, Union Minister emphasized the need for expanding PACS to every village and block to strengthen agricultural financing.
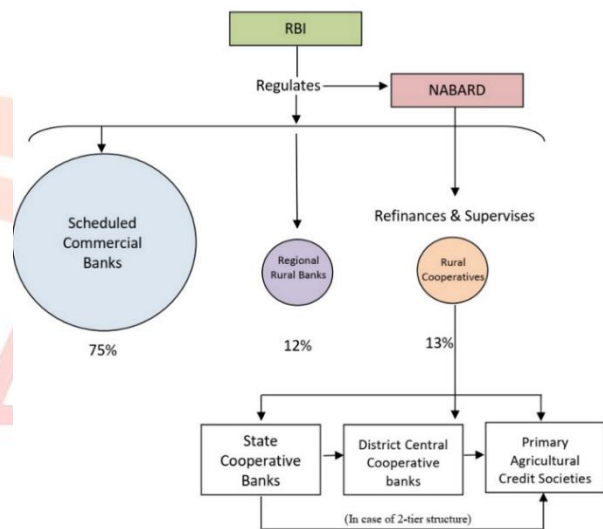
What are PACS?

Definition: PACS are local cooperative credit institutions that serve as the final link in a three-tier cooperative credit system in India.

Structure:

- **State Cooperative Banks (SCBs)**: Operate at the state level, providing funds to the next tier.
- **District Central Cooperative Banks (DCCBs)**: Function at the district level, receiving funds from SCBs and channeling them to PACS.
- **Primary Agricultural Credit Societies (PACS)**: Operate at the village level, directly dealing with farmers and providing them with credit.

Functions of PACS

- **Loan Provision**: PACS offer short-term and medium-term loans for various agricultural activities and farming needs.
- **Member-Based**: Farmers are members of PACS, and office-bearers are elected from within the society.

- **Accessibility**: PACS ensure timely access to credit with minimal paperwork, addressing farmers' needs efficiently.

Current Status of PACS

- **History**: The concept of PACS dates back to 1904.
- **Numbers**: There are over 100,000 PACS in India, with more than 13 crore farmers as members.
- **Functionality**: Out of these, approximately 65,000 PACS are actively operational.

Significance of PACS

- **Last-Mile Connectivity**: PACS provide essential financial services right at the village level, ensuring farmers have timely access to capital.
- **Efficiency**: They handle credit transactions with less bureaucratic hassle compared to commercial banks, making the process quicker and more farmer-friendly.

Challenges Faced by PACS

Political Influence: Political pressures often interfere with financial management and loan recovery.

Operational Issues: Common problems include:

- **Low Member Engagement**: Inactive participation from members.
- **Lack of Professionalism**: Insufficient professional management.
- **Poor Governance**: Absence of strong corporate governance practices.
- **Bureaucratic Issues**: Excessive bureaucratization affects efficiency.
- **Aging Workforce**: Employees often lack enthusiasm and modern skills.

Conclusion

PACS are vital for providing accessible and timely credit to farmers. While they offer significant advantages in terms of proximity and efficiency, addressing the challenges they face is essential for their effective functioning and overall contribution to agricultural development in India.

IV. RENEWABLE ENERGY

7. FUTURE INVESTMENTS IN INDIA'S EV SPACE

SOURCE: THE HINDU

The Indian government is considering extending its electric vehicle (EV) policy to include retrospective benefits.

This move aims to enhance local manufacturing, technology adoption, and competitiveness in the Indian EV industry, stimulating investment and reducing costs.

Revised Policy Overview

- **Extension of Benefits:** The revised policy will now extend incentives to entities that have already invested in local EV production.

- **Previous Criteria:** Initially, incentives were tied to setting up local facilities within three years of approval.
- **New Incentives:** Benefits will also be available for past investments in the domestic EV ecosystem.

Policy Objectives

- **Localisation of Production:** Encourages manufacturing and value addition within India.
- **Technology Adoption:** Aims to provide Indian consumers with access to the latest EV technology.
- **Competitiveness:** Seeks to enhance competition among EV players, boosting production volumes and achieving economies of scale.

Enhancing Local Manufacturing

- **Investment Incentives:** Reduction in import duty on EVs from 70%-100% to 15% for vehicles with a CIF value of $35,000 or more.
- **Domestic Value Addition:** Mandates that half of the value addition in manufacturing be done domestically within five years.
- **Global Transition Leader:** Positions India as a potential leader in the transition from internal combustion engines to electric vehicles.

Importance of Investment and Intervention

- **Consumer Economics:** A Niti Aayog report highlights the need for viable ownership and maintenance costs to accelerate EV adoption.
- **Cost Challenges:** India faces structural unit cost disadvantages in producing certain EV components.
- **Capital Investment:** Significant investment is required for producing components like separators, copper foil, and anode active material.

Focus on Localisation and Production Volume

- **Integrated Production Lines:** Similar to policies in the U.S., China, and Europe, India's policy includes incentives for setting up EV value chain manufacturing.
- **FDI and Domestic Capabilities:** Emphasizes the need for foreign direct investment to build critical components and transfer technology to local manufacturers.

LITHIUM BATTERIES:

Lithium batteries have become a cornerstone in modern technology, powering a wide range of devices from smartphones to electric vehicles (EVs). Their high energy density, long cycle life, and lightweight nature make them an ideal choice for various applications.

Key Features of Lithium Batteries

- **High Energy Density:** Lithium batteries can store a large amount of energy relative to their size and weight, making them suitable for portable electronics and EVs.
- **Long Cycle Life**: They can undergo many charge and discharge cycles before their capacity significantly diminishes, ensuring a longer operational life.
- **Lightweight**: Lithium batteries are lighter compared to other types of rechargeable batteries, enhancing the efficiency of the devices they power.
- **Low Self-Discharge:** These batteries have a low self-discharge rate, meaning they retain their charge longer when not in use.

Types of Lithium Batteries

- **Lithium-Ion (Li-Ion):** Commonly used in consumer electronics, EVs, and renewable energy storage. They offer high energy density and long cycle life.
- **Lithium Polymer (Li-Po):** Known for their flexible form factor, making them ideal for smartphones and other portable devices.
- **Lithium Iron Phosphate (LiFePO4):** Used in applications requiring high safety and thermal stability, such as power tools and some EVs.

Global Resources of Lithium

- **Australia:** The largest producer of lithium, primarily through hard rock mining (spodumene).
- **Chile:** Known for its vast lithium reserves in the Salar de Atacama, extracted from brine pools.
- **China:** Significant producer with both brine and hard rock mining operations.

- **Argentina:** Part of the "Lithium Triangle" in South America, known for its substantial lithium brine resources.
- **United States:** Lithium production is mainly concentrated in Nevada, with both brine and hard rock sources.
- **Portugal:** Europe's largest lithium producer, primarily through hard rock mining.

Emerging Lithium Producers

- **Canada:** Expanding its lithium mining operations, particularly in Quebec and Ontario.
- **Zimbabwe:** Home to significant hard rock lithium resources.
- **Brazil:** Increasing its lithium production from both brine and hard rock sources.

Challenges in Lithium Extraction

- **Environmental Impact:** Lithium extraction, especially from brine, can have significant environmental consequences, including water depletion and habitat disruption.
- **Supply Chain Issues:** Ensuring a stable and ethical supply of lithium is a challenge, with geopolitical and logistical factors playing a role.
- **Sustainability:** Developing more sustainable and less invasive extraction methods is a key focus for the industry.

Conclusion

Extending the EV policy to include retrospective benefits is a strategic move to bolster local manufacturing, enhance technology adoption, and improve competitiveness in the Indian EV market.

V. EXTERNAL SECTOR

8. RED FLAGS RAISED OVER SILVER IMPORTS FROM UAE THROUGH GIFT CITY

SOURCE: THE HINDU

The bullion market in India is experiencing significant disruptions due to the consolidation of silver imports by a few private players.

This shift is causing concern about potential revenue losses for the government and the integrity of import practices.

Shift in Silver Imports:

- Most of India's silver imports now handled by private players via Dubai through GIFT City exchange.
- Potential for significant revenue losses over time.

Trade Research Body Concerns:

- Probe sought into relationships between export and import firms to identify conflicts of interest.
- Warning that similar trends could affect gold, platinum, and diamonds.

Import Statistics:

- Silver imports from UAE increased by 210% in 2023-24 to $10.7 billion.
- Total silver imports at $5.4 billion.

Duty Reduction and CEPA:

- 87% of silver imports from Dubai at 8% duty via GIFT City.
- India to reduce duty on silver to 0% over 10 years under CEPA.

Regulatory Concerns:

- Questions about meeting rules of origin under CEPA.
- GIFT City exchange allows private traders, unlike RBI/DGFT-nominated agencies.

CEPA

CEPA stands for Comprehensive Economic Partnership Agreement. It's a trade agreement between two countries that goes beyond just reducing or eliminating tariffs on goods.

- It also covers a wide range of other areas, such as services, investment, intellectual property, and government procurement.
- The most recent CEPA is the one between India and the United Arab Emirates (UAE), which came into effect on May 1, 2022.
- This agreement is expected to increase bilateral trade in goods to over US$100 billion and trade in services to over US$15 billion within five years.

Benefits of CEPA for India:

- Increased market access for Indian goods and services in the UAE
- Lower tariffs on Indian exports to the UAE
- Easier movement of Indian professionals to the UAE
- Increased investment from the UAE into India

The CEPA is also expected to benefit the UAE by:

- Increased access to the Indian market for UAE goods and services

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- Lower tariffs on UAE exports to India
- More opportunities for UAE businesses to invest in India

Conclusion

The consolidation of silver imports through GIFT City poses challenges for revenue and regulatory compliance. There is a need for stricter oversight and possible renegotiation of CEPA terms to address these issues effectively.

VI. PRELIMS POINTERS IN NEWS

9. E-OFFICE PLATFORM

SOURCE: INDIAN EXPRESS

As part of its 100-day agenda, the Government of India has introduced a plan to implement the e-Office platform across 133 attached and subordinate offices, as well as autonomous bodies.

This initiative aims to streamline operations and enhance efficiency.

About the e-Office Platform

- **Objective:** To enhance operational efficiency across 133 identified offices.
- **Spearheading Ministry:** Ministry of Personnel, Public Grievances & Pensions.
- **Implementation Partner:** National Informatics Centre (NIC).

Key Components of e-Office

- File Management System (e-File)
- Workflow-based system.
- Extends manual file handling with an efficient electronic system.

Knowledge Management System (KMS):

- Central repository for organizational documents.
- Enables creation, management, and version tracking of electronic documents.

Work from Anywhere (WAW) Portal:

- Virtual office gateway.
- Secure access to office functions from anywhere.

Smart Performance Appraisal Report Recording Online Window (SPARROW):

- Web-based application for processing Annual Performance Appraisal Reports (APAR).
- Employees can fill, report, and review APARs through the official hierarchy.

Conclusion

The implementation of the e-Office platform is a significant step towards modernizing government operations. **By enhancing efficiency and accessibility, this initiative promises to improve the overall effectiveness of governmental functions and services.**

10. SKILL LOAN SCHEME

The Revamped Model Skill Loan Scheme, reintroduced by the Indian government in July 2015, aims to provide financial assistance to individuals pursuing skill development courses.

The scheme is designed to support the government's broader vision for strategic skill development in India.

Key Highlights
Increased Loan Limit:

- The maximum loan limit has been raised to Rs 7.5 lakh, significantly higher than the previous limit of Rs 1.5 lakh. This change is intended to make skill development courses more affordable.

Broader Lending Framework:

- The scheme now includes Non-Banking Financial Companies (NBFCs), NBFC-Microfinance Institutions (MFIs), and small finance banks as eligible lenders, expanding beyond traditional banks.

Expanded Course Eligibility:

- The scheme now covers a wider range of skill development courses, including those not aligned

with the National Skill Qualification Framework (NSQF), provided they are listed on the Skill India Digital Hub platform.

Rationale for Changes:

- The previous version of the scheme had limited uptake due to the low loan amount and increasing course fees. The revamp aims to address these issues and improve access to skill development opportunities.

Expected Impact:

- The government anticipates the revamped scheme will benefit 25,000 students annually, equipping them with the skills needed to thrive in a changing job market.

11. NEW RULES FOR SOLAR PANEL MANUFACTURERS

The Indian government has introduced new regulations for solar panel manufacturers to enhance transparency and ensure the use of domestic components in solar projects.

These measures are aimed at boosting local manufacturing and achieving ambitious solar energy targets.
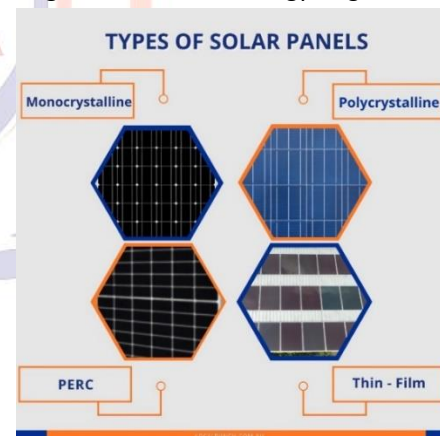
About the New Rules
Mandatory Data Submission:

- **Requirements**: Solar cell and module manufacturers are now required to upload details about their annual imports, exports, and manufacturing facility locations.
- **Online Portals**: This information must be submitted on two specific government-maintained online portals to ensure transparency and monitoring.

Self-Certification and Inspection:

- **Self-Certification**: Companies must self-certify that their solar components are either made in India or meet the standards set by the new regulations.

- **Review Process**: The National Institute of Solar Energy (NISE), part of the Ministry of New and Renewable Energy (MNRE), will review these self-certifications to verify compliance.

Domestic Content Requirement (DCR):

- **Digital Portal**: A new digital portal has been introduced to help verify compliance with the Domestic Content Requirement (DCR) policy.
- **Purpose**: The DCR policy is designed to boost local manufacturing by mandating that a specific percentage of solar components be produced within India.

Government Initiatives and Schemes for the Solar Sector

PM Surya Ghat Muft Bijli Yojna:

- **Program Launch**: The government has launched a ₹75,000 crore initiative to provide free solar electricity to one crore households.
- **Component Requirement**: To benefit from this scheme, the solar components used must be domestically produced.

Increased Solar Capacity:

- **Capacity Goal**: India aims to expand its solar energy capacity to at least 200 GW by 2030, up from the current 85 GW.
- **Domestic Production**: As part of this expansion, there is a focus on increasing the proportion of solar components manufactured within the country.

12. LIQUIDITY COVERAGE RATIO (LCR)

SOURCE: THE HINDU

The Reserve Bank of India (RBI) has issued new draft guidelines for banks concerning the Liquidity Coverage Ratio (LCR).

These guidelines aim to ensure that banks maintain a higher stock of liquid assets to manage their short-term financial obligations effectively.

About Liquidity Coverage Ratio (LCR)

Definition:

- The LCR measures the proportion of highly liquid assets a bank holds compared to its short-term obligations.
- It is designed to ensure that banks can cover their cash outflows for the next 30 days.

Purpose:

- **Objective**: The LCR is intended to ensure banks have enough liquid assets to handle short-term liquidity issues, such as sudden withdrawals or market disruptions.

Origin:

- **Basel III**: The LCR guidelines originated from the Basel III framework, an international regulatory standard aimed at strengthening financial regulation.

Calculation:

- **Formula**: LCR = (High-Quality Liquid Assets (HQLA)) / (Total Net Cash Outflows over the Next 30 Days).
- **HQLA**: High-Quality Liquid Assets include cash, reserves with central banks, and central government bonds. SLR securities are also considered part of HQLA.

Importance of New Guidelines

- **Enhanced Buffer**: The new guidelines require banks to hold more liquid securities, improving their ability to withstand short-term financial stress.

13. MINERAL IMPORT SURGES 80%

SOURCE: INDIAN EXPRESS

India's mineral imports have significantly increased in value over the past five years, reflecting a substantial rise in the import of non-critical minerals.

Major Minerals Imported

Mineral Import Increase:

- **Value Growth**: The value of mineral imports surged to ₹68,633 crore in FY24, up from ₹38,604 crore in FY19, marking an almost 80% increase.

Top Imported Minerals:

- **Copper Ore Concentrates**: This is the largest import by value, making up nearly 40% of total mineral imports in FY24. The value has doubled to ₹25,951 crore from ₹12,146 crore in five years.
- **Phosphorite**: Accounts for about 20% of the total mineral imports. The value increased to ₹12,649 crore in FY24, doubling from ₹5,625 crore.
- **Limestone**: Imported in the highest volume at 338.09 lakh tonnes, representing 55% of the total volume. Phosphorite follows with 55.98 lakh tonnes, about 14%.

Critical Minerals:

- **Value and Volume**: Critical mineral imports, excluding lithium-ion and copper, amounted to ₹1,396.6 crore in FY24, with a total volume of 82,260 tonnes.
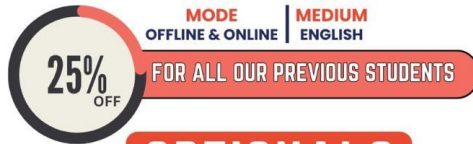
FINANCIAL ACTION TASK FORCE (FATF)

The Financial Action Task Force (FATF) is an intergovernmental organization that sets standards and promotes effective implementation of legal, regulatory, and operational measures to combat money laundering, terrorist financing, and other related threats to the integrity of the international financial system.

The Mutual Evaluation Report (MER) assesses member countries' compliance with these standards.

Highlights of the MER Report on India

Regular Follow-Up Category:

- India has been categorized under 'regular follow-up', indicating strong compliance with FATF standards but with areas needing improvement.
- India, alongside countries like Russia, France, Italy, and the UK, is required to submit progress reports on recommended actions by October 2027.
- This category signifies India's high level of technical compliance but highlights delays in prosecuting money laundering and terrorist financing cases.

Digital Economy Through JAM Trinity:

- India's transition to a digital economy, supported by the Jan Dhan Yojana (Jan Dhan), Aadhaar (Aadhaar), and Mobile (Mobile), has strengthened efforts against ML, TF, and proceeds from corruption and organized crime.
- Stricter cash transaction regulations have also contributed to mitigating financial risks.

Significance of the MER Report on the Indian Economy

- **Enhanced Global Financial Reputation**: Positive evaluation enhances India's financial system credibility, potentially lowering borrowing costs and attracting more international financial institutions to initiatives like GIFT City.
- **Increased Foreign Investment**: Trustworthy financial systems attract more foreign direct investment (FDI), especially in sectors requiring financial integrity such as fintech and e-commerce.
- **Expansion of Digital Payment Systems**: Endorsement supports global adoption of India's Unified Payments Interface (UPI), boosting its presence in international markets.
- **Boost to India's Fintech Industry**: Positive evaluation could accelerate growth in India's fintech sector, attracting more venture capital and encouraging innovation in digital technologies.
- **Enhanced Remittance Flows**: Efficient financial systems can streamline remittances from Non-Resident Indians (NRIs), a significant source of foreign exchange for India.

What is Money Laundering and Terrorism Financing (ML/TF)?

- **Money Laundering (ML)**: Concealing the origin of illegally obtained money to make it appear legitimate.
- **Terrorism Financing (TF)**: Providing financial support to terrorists or terrorist organizations.

Concerns and Suggestions by FATF for India

Vulnerability of Non-financial Sectors:

- Sectors like real estate are susceptible to illicit financial activities.
- Recommendations include stronger due diligence and improved reporting mechanisms.

Prolonged Legal Processes:

- Delays in prosecuting high-profile economic offenders hinder effective AML/CFT efforts.
- Solutions involve judicial reforms and enhanced use of technology in legal processes.

Virtual Asset Risks and Transnational Organized Crimes:

- Challenges posed by virtual assets (cryptocurrencies) require comprehensive regulations and international cooperation.
- India needs better mechanisms for sharing information and cooperating with other countries.

India's Efforts to Combat ML/TF

National Level Efforts:

- **Prevention of Money Laundering Act (PMLA)**: Enacted in 2002 to combat money laundering.
- **Enforcement Directorate (ED)**: Responsible for enforcing PMLA through investigation and prosecution.
- **Financial Intelligence Unit-India (FIU-IND)**: Central agency for receiving, processing, and disseminating financial intelligence.

Global Level Efforts:

- Ratification of UN Conventions and engagement with international bodies like Interpol and UNODC to align with global standards.

UPSC MAINS QUESTION

Q. "Discuss the significance of India's categorization under the 'regular follow-up' category by FATF and analyze the measures needed to strengthen India's financial integrity against challenges like virtual asset risks and transnational organized crimes." (150 WORDS)

GEOGRAPHY

I. PRELIMS POINTERS IN NEWS

1. MINAMI-TORISHIMA ISLAND

SOURCE: MINT

Researchers recently discovered approximately 230 million metric tons of minerals essential for electric car batteries on the seabed near Minami-Torishima Island.

This find has significant implications for the global supply of critical minerals.

About Minami-Torishima Island

- **Location:** Also known as Marcus Island, it is an isolated Japanese coral atoll in the northwestern Pacific Ocean.

Geography:

- **Easternmost territory of Japan.**
- Only Japanese territory on the Pacific Plate, beyond the Japan Trench.
- **Lies 1,950 km southeast of central Tokyo.**
- Equilateral triangle shape, formed by a raised coral reef (2 km on each side, 6 km perimeter).
- **Flat terrain, maximum altitude of 9 m, surrounded by steep cliffs (1,000 m deep) and waters reaching 6,000 m at their deepest.**
- **Climate:** An oceanic climate in the transitional area between tropical and subtropical zones has an average yearly temperature of 25.6°C.

Economic Significance

Exclusive Economic Zone (EEZ):

- The EEZ based on Minami-Torishima Island's baseline is approximately 430,000 km², larger than Japan's land area.
- Rich in minerals crucial for electric car batteries, highlighting its strategic economic importance.

Conclusion

Minami-Torishima Island's mineral wealth and strategic location make it a significant asset for Japan, potentially influencing global mineral supply chains for electric car batteries.

2. KAVERI RIVER

SOURCE: HINDUSTHAN TIMES

The Karnataka state government has established a nine-member committee to investigate the contamination of the Kaveri River, a major and sacred river in southern India.

About Kaveri River

- **Names:** Also known as Cauvery River.
- **Significance:** Considered sacred by Hindus.
- **Origin**: Brahmagiri Hill, Western Ghats, Karnataka.
- **Elevation:** 1,341 meters (4,400 feet) above sea level.

Flow Path:

- Flows south and east through Karnataka and Tamil Nadu.
- Crosses southeastern lowlands.
- Empties into the Bay of Bengal through two principal mouths.
- **Length:** 800 km.

Basin and Boundaries

- Western Ghats to the west.
- Eastern Ghats to the east and south.
- Ridges separating it from Krishna and Pennar basins to the north.

Cauvery Basin:

- Covers Tamil Nadu, Karnataka, Kerala, and Puducherry.
- Drainage area: 81,155 sq km.

Tributaries

- Left Bank Tributaries: Harangi, Hemavati, Shimsha, Arkavati.
- Right Bank Tributaries: Lakshmantirtha, Kabbani, Suvarnavati, Bhavani, Noyil, Amaravati.

Dams

- Krishna Raja Sagara Dam

- Mettur Dam
- Banasura Sagar Dam (on the Kabini River, a tributary of Kaveri).

Conclusion

The investigation into the contamination of the Kaveri River aims to address environmental concerns and ensure the preservation of this vital water resource.

3. PANGONG LAKE

SOURCE: INDIAN EXPRESS

Satellite images reveal China's military is gearing up for an extended presence around Pangong Lake in eastern Ladakh, indicating strategic preparations in this sensitive region.

About Pangong Lake

- **Location:** Himalayan region, approximately 140 km from Leh in Jammu and Kashmir.
- **Height:** Situated at an altitude of 4,350 m (14,270 ft).
- **Name Origin:** Derived from the Tibetan word "Pangong Tso," meaning "high grassland lake".
- **Type:** One of the world's highest brackish water lakes.

Geographic and Physical Features

- **Length:** 134 km (83 mi), extending from India to China, with 60% of its length in China.
- **Width:** 5 km (3.1 mi) at its broadest point.
- **Area:** Covers 604 sq.km.
- **Color:** Known for its color-changing water, from blue to red and green.
- **Winter:** Freezes completely despite being saline.

Hydrological and Geopolitical Aspects

- **Endorheic Nature:** Not part of the Indus River basin; a separate land-locked river basin.
- **Disputed Territory:** The Line of Actual Control (LAC) passes through the lake, marking a disputed region between India and China.

Conclusion

Pangong Lake is a high-altitude brackish water lake of immense geographical, ecological, and strategic importance. **The recent military build-up by China underscores the**

ongoing tensions and the need for careful monitoring of this critical area.

4. PANCHAGANGA RIVER

SOURCE: INDIAN EXPRESS

The Panchaganga River is an ancient river and a tributary of the Krishna River, located in Maharashtra.

Key Points:

Origin and Course:

- Emerges from the Sahyadri mountain ranges in Maharashtra.
- Originates at Prayag Sangam in Chikhlee Taluka, Kolhapur district, Maharashtra.
- Formed by the confluence of five rivers: Kasari, Kumbhi, Tulsi, Bhogawati, and Saraswati.
- Merges into the Krishna River at Kurundvad, Maharashtra.

Geographical Significance:

- The Panchaganga River valley is very fertile.
- **Sloping banks yield rich crops during the winter season.**
- The river and its feeders are fordable during the hot season.

Environmental Concerns:

- **Pollution levels in the Panchaganga River have been rising rapidly over the last decade.**
- Major source of pollution is the disposal of untreated municipal sewage from Kolhapur town.

Current Situation:

- The river water level has been rising and is expected to cross the warning level of 39 feet soon.
- **The Panchaganga River plays a crucial role in the agriculture and ecology of the region, but increasing pollution poses significant challenges.**
- Immediate action is needed to address the pollution and protect this vital water resource.

5. BAGMATI RIVER

Bagmati River: Flows through Nepal and Bihar, India, revered by Hindus and Buddhists alike for its spiritual significance.

Course and Characteristics:

- **Origin:** Begins in the Shivapuri Hills of central Nepal, at an elevation of approximately 2,690 meters.
- **Path:** Fed by springs and monsoon rains, it passes through Kathmandu Valley and the Shivalik Range before entering the plains of Bihar.
- **Tributaries:** Receives water from numerous tributaries as it traverses through diverse physiographic zones of the Nepal Himalayas.

Cultural Importance:

- **Holy Sites:** Banks of the Bagmati River host temples like Pashupatinath, a UNESCO World Heritage Site revered in Hinduism.
- **Spiritual Significance:** Pilgrims consider it auspicious to perform rituals and ceremonies along its banks.

Flood Situation in Muzaffarpur:

- Recent rise in water levels due to monsoon rains has led to flooding in Bihar's Muzaffarpur district.

Floods pose risks to local communities and agriculture, highlighting the river's dual role as a source of life and potential hazard during monsoon seasons.

HISTORY

I. ANCIENT HISTORY

1. ABHAYA MUDRA: SYMBOL OF FEARLESSNESS IN BUDDHIST AND HINDU TRADITIONS

SOURCE: THE HINDU

Mudras are symbolic hand gestures that have been integral to various religious traditions, including Buddhism, Hinduism, Jainism, and others.

These gestures convey specific meanings and are often used in religious art and rituals to represent divine concepts, reassure devotees, and narrate important spiritual events.

Among the many mudras, the abhaya mudra is particularly significant, symbolizing peace, protection, and freedom from fear.

It is a common element in depictions of various religious figures across multiple faiths, including Buddhism, Hinduism, and beyond.

Mudras: A Mode of Communication

- **Non-verbal Communication**: Mudras are hand gestures that serve as a non-verbal form of communication. They convey deep symbolic meanings without the need for spoken words.
- **Gestural Significance**: Each mudra is carefully composed of specific finger movements, creating a stylized gesture that can evoke the presence of divine powers or deities.
- **Symbolism**: Mudras are rich in symbolism, often representing divine attributes, protection, teaching, or enlightenment.

Mudras in Buddhism

Narrative Role:

- In Buddhism, mudras are not just symbolic but also narrative tools that depict key moments in the life of the Buddha.

- They help convey complex spiritual teachings in a visual and accessible manner.

The Five Primary Mudras:

- Although there are many mudras, Buddhist art traditionally emphasizes five main ones.
- Each of these mudras is associated with one of the five Dhyani Buddhas, who are symbolic representations of different aspects of enlightenment.

The Five Key Mudras in Buddhism

Abhaya Mudra:

- **Meaning**: The abhaya mudra, associated with the Dhyani-Buddha Amoghasiddhi, signifies peace, protection, and reassurance.
- **Depiction**: This gesture is typically made with the right hand raised, fingers extended, and the palm facing outward towards the viewer, symbolizing fearlessness.

Dharmachakra Mudra:

- **Meaning**: Linked to the Dhyani-Buddha Vairochana, the dharmachakra mudra represents the 'Wheel of Dharma', symbolizing the Buddha's first sermon after his enlightenment.
- **Depiction**: This mudra involves both hands, with the thumb and index finger of each hand touching to form a circle, representing the union of wisdom and method.

Bhumisparsha Mudra:

- **Meaning**: Associated with Dhyani-Buddha Akshobhya, this mudra signifies the Buddha's enlightenment and his victory over temptation.
- **Depiction**: The right hand reaches down to touch the earth, symbolizing the moment when the Buddha called the earth to witness his enlightenment.

Varada Mudra:

- **Meaning**: This mudra, connected to Dhyani-Buddha Ratnasambhava, symbolizes generosity and the granting of boons.
- **Depiction**: Usually performed with the left hand, the palm faces outward and downward, indicating a gesture of giving.

Dhyana Mudra:

- **Meaning**: Associated with Dhyani-Buddha Amitabha, the dhyana mudra represents meditation and concentration.
- **Depiction**: This gesture is typically performed with both hands resting on the lap, with the right hand

over the left, symbolizing inner peace and meditative focus.

Abhaya Mudra in Hinduism

- **Integration into Hinduism**: Over time, the abhaya mudra was incorporated into Hindu religious practices and art. It became a common gesture in depictions of various Hindu deities such as Shiva, Vishnu, and Ganesh.
- **Symbol of Reassurance**: In Hindu iconography, the abhaya mudra continues to symbolize protection, reassurance, and the absence of fear, reflecting the interconnectedness of Indian religious traditions.

Conclusion

Mudras, particularly the abhaya mudra, play a vital role in the spiritual and cultural expressions of several religions. Their universal symbolism of peace and protection transcends individual faiths, offering a common thread that unites diverse spiritual traditions.

Through these gestures, religious art and rituals continue to communicate profound spiritual truths across cultures and centuries.

II. PRELIMS POINTERS IN NEWS

2. STERIPHOPUS WANGALA AND WANGALA FESTIVAL

SOURCE: TIMES OF INDIA

Steriphopus wangala is a newly discovered species of spider found in the West Garo Hills district of Meghalaya.

It belongs to the Palp-Footed Spider family and is named after the Garo community's harvest festival, the Wangala festival, also known as the 100 Drums Festival.

About the Wangala Festival:

Cultural Significance:

- The Wangala festival is celebrated by the Garo tribe in Meghalaya, marking the end of the agricultural season.
- It is a time to express gratitude to the spirits and deities for a successful harvest and to seek blessings for the upcoming year.

Religious Rituals:

- During Wangala, offerings and sacrifices are made to the Garo tribe's main deity, Saljong, who is revered as the Sun God.
- The festival also signifies the onset of winter in the region.

Drumming Tradition:

- A highlight of the Wangala festival is the rhythmic beat of a hundred drums, hence its nickname, the 100 Drums Festival.
- These drums are traditionally crafted from tree trunks and play a central role in Garo cultural ceremonies.

Dance and Celebration:

- The festival spans several days, culminating in a grand celebration where large groups of dancers, accompanied by the drums, perform ceremonial and traditional dances.
- The dance is characterized by synchronized movements to the drumming rhythms, reflecting the unity and cultural identity of the Garo community.

3. SANTHAL TRIBAL COMMUNITY

SOURCE: THE HINDU

The Prime Minister recently honored the Santhal tribal community for their bravery and sacrifices.

The Santhals, known for their rich cultural heritage and historical significance, are the third largest scheduled tribe in India.
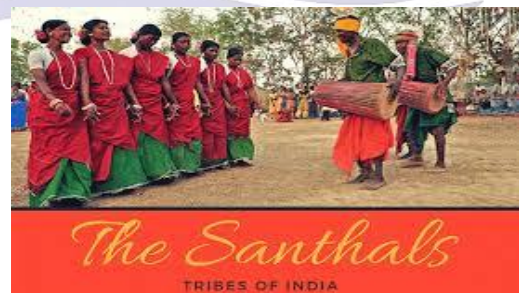
About the Santhal Tribal Community

- **Population:** Third largest scheduled tribe in India after Gonds and Bhils.
- **Geographical Concentration:** Predominantly found in Bihar, Jharkhand, West Bengal, and Odisha.

Language

- **Language:** Santhali, a dialect of Kherwari, a Munda (Austroasiatic) language.
- **Script:** Written in Ol Chiki script, recognized in the Eighth Schedule to the Constitution.

History and Settlement

- **Origins:** Originally a nomadic group, they settled on the Chotanagpur plateau.
- **Migration:** Concentrated in the Santhal Parganas of Jharkhand by the late 18th century, then migrated to Odisha and West Bengal.

Culture and Religion

- **Religion:** Nature worshippers, paying homage at Jaher (sacred groves).
- **Traditional Dress:** Men wear dhoti and gamuchha; women wear short-check sarees, typically in blue and green, and often have tattoos.
- **Marriage Customs:** Accept various forms of marriage including elopement and widow remarriage. Divorce is not taboo.

Occupation

- **Agriculture:** Primary occupation, supplemented by seasonal forest collection.
- **Income Source:** Subsidiary income from forest collection.

Cultural Practices

- **Dance and Music:** Integral to Santhal life, with dance (enej) and music (sereng).
- **Housing:** Homes (Olah) feature a distinctive three-color pattern: black soil at the bottom, white in the middle, and red at the top.

Historical Significance

- **Santhal Rebellion (1855-56):** A major peasant uprising against the British Raj, led by Sido and Kanhu, triggered by the Permanent Land Settlement of 1793.

Conclusion

The Santhal community, with its rich cultural heritage and historical importance, continues to be a vital part of India's tribal landscape.

Their contributions and resilience, especially during the Santhal Rebellion, are a testament to their enduring spirit and significance in Indian history.

4. LEANG KARAMPUANG CAVE

SOURCE: INDIAN EXPRESS

Leang Karampuang Cave in Sulawesi, Indonesia, houses one of the oldest known paintings, dating back at least 51,200 years. This discovery highlights early human artistic and storytelling capabilities.

- About Leang Karampuang Cave
- **Location:** Sulawesi island, Indonesia.
- **Type:** Limestone cave.

Painting Description:

- A scene featuring humans and a pig.
- Painted in a single dark red pigment.
- The pig is depicted upright, with three smaller human-like figures around it.

Details of the Figures:

- One figure holds an object near the pig's throat.
- Another figure is upside-down above the pig's head, legs splayed.
- The third, larger figure holds an unidentified object and possibly wears a headdress.

Significance:

- Predates European cave paintings (e.g., El Castillo, Spain, 40,800 years old).
- **Considered the oldest-known evidence of storytelling in art.**
- Demonstrates the advanced mental capacity of early humans in Sulawesi.

Conclusion

The painting in Leang Karampuang Cave not only predates European rock art but also showcases the complexity and narrative ability of early human societies, emphasizing their advanced cognitive and artistic skills.

5. AHOM MOIDAMS

SOURCE: THE HINDU

Ahom Moidams Recommended for UNESCO World Heritage Status

The Ahom Moidams, burial mounds for Assamese royalty, have received a significant boost towards becoming a UNESCO World Heritage Site.

The International Council on Monuments and Sites (ICOMOS) recommends their inclusion.

About ICOMOS:
- Established in 1965 to advise UNESCO on World Heritage Sites.
- Non-governmental organization dedicated to heritage preservation.
- Composed of professionals, experts, and local representatives.

Moidams:
- Mound-burial system of the Ahom dynasty (13th-19th centuries).
- **Similar to royal tombs of ancient China and Egyptian pyramids.**
- Enshrine the remains of Ahom royalty (highly venerated).
- **Located in Charaideo, the first Ahom capital (founded 1253).**
- Reflect the spread of Tai-Ahom culture across Southeast Asia.

Shift in Burial Practices:
- After the 18th century, Ahoms adopted cremation.
- Cremated remains were entombed within the Moidams.

6. SHREE JAGANNATH TEMPLE

SOURCE: THE HINDU

The high-level committee led by an Orissa High Court judge has expedited the process of opening the Ratna Bandar, the treasury of Shree Jagannath Temple, after 46 years.
This initiative aims to inventory the temple's valuables.

About Shree Jagannath Temple
- **Location:** Puri, Odisha.

- **Dedication:** Lord Jagannath, a form of Lord Vishnu.
- **Construction: Believed** to be built during the reign of King Anantavarman Chodaganga Deva of the Eastern Ganga dynasty in the 12th century.

Architecture
- **Style:** Kalinga architecture, unique to the Odisha region.
- **Complex:** Includes shrines, gardens, and sacred tanks.
- **Sanctum Sanctorum (Garbhagriha):** Houses the idols of Lord Jagannath, Balabhadra, and Subhadra.
- **Chakra:** A 20-foot-high wheel at the temple's pinnacle, visible from anywhere in the city.

Ratha Yatra Festival
- **Significance:** Annual festival associated with Lord Jagannath's visit to Gundicha Temple via Mausi Maa Temple.
- **Timing:** Begins on the second day of the bright half of Ashadha (June–July) and lasts nine days.
- **Chariots:** Deities are placed on three massive chariots during the festival.

Religious and Cultural Importance
- **Chaar Daham:** One of the four sacred pilgrimage sites for Hindus.
- **UNESCO World Heritage Site:** Recognized for its cultural and historical significance.

Conclusion
The recent efforts to open the Ratna Bhandar highlight the ongoing significance and reverence of Shree Jagannath Temple, emphasizing its architectural, cultural, and religious importance in India.

7. DENISOVANS

SOURCE: DOWN TO EARTH

Denisovans, an extinct hominid species closely related to modern humans, have intrigued scientists since their discovery in 2010.
They lived across diverse environments, from Siberian mountains to Southeast Asian jungles, during the last Ice Age.

Key Points

- **Discovery and Identification:** Discovered in 2010 from a Siberian cave, Denisovans are a recent addition to the human evolutionary tree.
- **Geographical Range:** They inhabited regions spanning from Siberia to Southeast Asia.
- **Genetic Relationships:** DNA evidence reveals Denisovans interbred with both Neanderthals and modern humans, sharing a common ancestor with both.
- **Physical Characteristics:** Likely had dark skin, hair, and eyes, adapted to their environments.
- **Genetic Diversity:** Their genome suggests low genetic diversity, indicating a potentially small population size.

Conclusion

Denisovans represent an important chapter in human evolution, offering insights into ancient human migrations, adaptations to diverse environments, and genetic intermixing among early hominids.

Their genetic legacy continues to be a subject of ongoing research, shedding light on the complexity of human ancestry and evolution.

8. VISHALGAD FORT

SOURCE: THE HINDU

The anti-encroachment drive at Vishalgad Fort turned violent, with miscreants attacking local shopkeepers and police.

About Vishalgad Fort

- **Location**: Ancient fort in Vishalgad village, Kolhapur district, Maharashtra.
- **Other Names**: Known locally as Khelna or Khilna.
- **Significance**: An important fort of the Maratha Empire.

History

- **Built in 1058**: Constructed by Shilahara king Marsinh, initially named Khilgil.
- **1209 Capture**: Seuna Yadavas of Devagiri defeated Shilaharas and took the fort.

- **1309 Khilji Rule**: Allauddin Khilji defeated Seuna Yadavas, incorporating the fort into the Khilji dynasty.
- **Subsequent Rule**: Controlled by the Vijayanagar Empire, then the Adilshahi dynasty.
- **1659 Shivaji's Capture**: Shivaji captured and renamed it 'Vishalgad,' meaning grand fort.
- **Maratha Empire**: Capital of a large region with 90 towns and villages in Kolhapur and Ratnagiri districts.

Features

Size and Location: Covers 1130 m, built on a hilltop in the Sahyadri mountain ranges at 3500 feet above sea level.

Notable Sites:

- **Dargah of Hazrat Sayed Malik Rehan Meera Saheb**: A popular tourist attraction.
- **Temples**: Includes Amruteshwar Temple, Shri Nrusinha Temple, and Sati's Vrindavan.
- **Tombs**: Dedicated to Phulaji Prabhu Deshpande and Baji Prabhu Deshpande, loyalists of Shivaji.
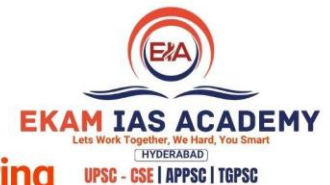
ENVIRONMENT

I. BIODIVERSITY AND CONSERVATION

1. RAIMONA NATIONAL PARK

SOURCE: DOWN TO EARTH

Raimona National Park is situated in Assam along the Indo-Bhutan border, known for its diverse flora and fauna.

Recently, scientists recorded a lone mainland serow within this park at an elevation of 96 meters above sea level.

About Raimona National Park:

- Located along the Indo-Bhutan border in Assam.
- Northern boundary shares with Phibsoo Wildlife Sanctuary in Bhutan.
- Western boundary marked by the Sankosh River and the inter-state boundary of West Bengal and Assam.
- Eastern part is defined by the Saralbhanga River flowing southward from Bhutan's Sarphang district.

Vegetation and Flora:

- Encompasses twelve types of forests including moist sal forests, semi-evergreen forests, savannah forests, and more.
- Rich in orchid species, tropical rainforest flora, and riverine grasslands.

Fauna:

- Home to diverse wildlife including the Golden Langur, Asian Elephant, Royal Bengal Tiger, Clouded Leopard, and Indian Gaur.

Key Facts about Mainland Serow:

- Resembles a hybrid between a goat and an antelope.
- Typically found at altitudes ranging from 200 to 3,000 meters.

Distribution:

- Habitat spans across the India-Bhutan border, including areas like Phibsoo Wildlife Sanctuary in Bhutan and Royal Manas National Park.
- Other species include the Japanese serow, red serow (found in eastern India, Bangladesh, Myanmar), and Taiwan or Formosan serow.

Conservation Status:

- **IUCN**: Classified as Vulnerable due to habitat loss and hunting.
- **CITES**: Listed under Appendix I, highlighting its endangered status and the need for international protection.

2. RHISOTOPE PROJECT

SOURCE: SCIENCE DAILY

The Rhisotope Project, initiated in 2021 in South Africa, aims to combat rhinoceros poaching by injecting low-dose radioactive material into live rhinoceros horns.

This innovative approach seeks to enhance detection at border posts and render rhino horns useless for human consumption.

About the Rhisotope Project:
Objective:
Developed to deter poaching of rhinos by making their horns easier to detect and less valuable in illegal markets.
Implementation:

- The project includes implanting two small radioactive chips into the horns of 20 rhinos.
- **This radioactive material emits detectable signals using radiation sensors at international borders, ensuring it does not harm the rhinos or their surroundings.**

Duration and Effectiveness:

- The radioactive material is expected to remain effective for five years on the horn, providing a

longer-term solution compared to frequent dehorning every 18 months.

- Each treated horn is also sprayed with 11,000 microdots for additional identification purposes.

Monitoring and Follow-up:

- Scientists will conduct follow-up blood samples to ensure the effectiveness of the radioactive treatment in protecting the rhinoceroses from poaching attempts.

Context in South Africa:

- South Africa hosts the majority of the world's rhino population and faces a severe poaching crisis fuelled by demand primarily from Asian countries, where rhino horns are used in traditional medicine.

3. BILIGIRI RANGANATHASWAMY TEMPLE TIGER RESERVE

SOURCE: DOWN TO EARTH

BRT Tiger Reserve is situated in Karnataka's Chamarajanagar district.

It serves as a unique biogeographical bridge between the Western and Eastern Ghats.

- Named after 'BILIGIRI', a white rocky cliff with a temple of Lord 'VISHNU', known locally as 'Rangaswamy'.
- Declared a Tiger Reserve in 2011.

Key Points:
Location and Area:

- Situated in Karnataka's Chamarajanagar district.
- Covers a total area of 574.82 square kilometers.

Vegetation:

- Dominated by dry deciduous forests.
- Includes patches of moist deciduous, semi-evergreen, evergreen, and shola forests.

Flora:

- **Key plant species:** Anogeissus latifolia, Dalbergia paniculata, Grewia teliaefolia, Terminalia alata, Terminalia bellirica, Terminalia paniculata.

Fauna:

- Home to various animals including tigers, elephants, leopards, wild dogs, bison, sambar, spotted deer, barking deer, four-horned antelope, sloth bears, wild boars, common langurs, bonnet macaques.
- Rich in reptile and bird species.

What is a Tiger Reserve?

- A Tiger Reserve is a legally declared protected area aimed at conserving tigers.
- Can be a national park or wildlife sanctuary.
- **Example:** Sariska Tiger Reserve, which is also a national park.

Tiger reserves are crucial for protecting India's tiger population and preserving biodiversity. **They provide a safe habitat for tigers and other wildlife, helping maintain ecological balance.**

4. VEERANGANA DURGAVATI TIGER RESERVE

SOURCE: INDIAN EXPRESS

The Madhya Pradesh government has initiated an inquiry into allegations of tiger poaching and irregularities in the newly established Veerangana Durgavati Tiger Reserve.

About Veerangana Durgavati Tiger Reserve

- **Location:** Spread across Sagar, Damoh, and Narsinghpur districts of Madhya Pradesh.
- **Area:** Encompasses 2,339 square kilometres, including Nauradehi Wildlife Sanctuary and Durgavati Wildlife Sanctuary.
- **Establishment:** Seventh tiger reserve in Madhya Pradesh, named after Rani Durgavati, the queen of the Gondi people.
- **Landscape:** Features a diverse terrain with hills, valleys, rivers, streams, waterfalls, and grasslands.
- **Rivers:** Encompasses parts of the Narmada and Yamuna River basins.
- **Singorgarh Fort:** Located within the reserve.

Vegetation and Flora

- **Vegetation:** Predominantly dry deciduous forest.

- **Floral Elements**: Teak, Saja, Dhaora, Ber, Amla, among others.

Fauna

- **Wildlife:** Hosts a variety of species including tigers, leopards, wolves, jackals, Indian foxes, striped hyenas, Nilgai, Chinkara, Chital, Sambhar, Black Buck, Barking deer, Common Langur, and Rhesus Macaque.
- **Critically Endangered Raptors**: One of the few remaining strongholds for the White-Rumped and Indian Vultures.

Conservation Efforts

- **Green Corridor:** A green corridor linking Panna Tiger Reserve (PTR) with Durgavati will be developed to facilitate the natural movement of tigers to the new reserve.

Conclusion

The Veerangana Durgavati Tiger Reserve is a significant conservation area in Madhya Pradesh, boasting rich biodiversity and critical habitats. **The recent inquiry underscores the need for stringent measures to protect this vital ecosystem and ensure its sustainable management.**

5. OVER 800 ELEPHANTS DIED IN KERALA IN 8 YEARS

SOURCE: THE HINDU

Between 2015 and 2023, Kerala's forests saw 845 elephant deaths, showing an increasing trend over time.

This alarming data is from an elephant population estimation in the state's four elephant reserves.

Key Findings

- **Increase in Mortality Rates:** Younger elephants, especially those under 10 years, have a high mortality rate of approximately 40%.
- **Cause of Death:** A significant cause of these deaths is Elephant Endotheliotropic Herpesviruses - Haemorrhagic Disease (EEHV-HD).

Immunity in Herds

- **Survival Rates:** Calves in larger herds show better survival due to shared immunity. Exposure to various virus strains helps develop antibodies, enhancing their survival chances.

Current Threats

- **Habitat Shrinkage:** Shrinking habitats and rising fragmentation, worsened by climate change, are major threats.

- **Contributing Factors:** Declining population sizes, sensitivity to high temperatures, competition for resources, and heightened disease sensitivity.

Critical Variables Influencing Distribution

- **Human Activities:** Land-use changes, climate fluctuations, and disturbances are significant factors.
- **Habitat Fragmentation:** Fodder availability in sub-optimal habitats is severely constrained.

Proposed Measures

- **Structured Protocol:** A recommendation for a protocol similar to Tamil Nadu's Elephant Death Audit Framework (EDAF).
- **Systematic Approach:** Comprehensive investigations to identify patterns, assess threats, and implement targeted conservation measures effectively.

ASIAN ELEPHANTS

- **IUCN Red List:** (Endangered)
- **Wildlife (Protection) Act, 1972:** Schedule I
- **CITES:** Appendix I
- The elephant holds the title of Natural Heritage Animal in India.
- Recognized as a "Keystone Species," elephants are crucial for maintaining forest ecosystem balance and health.
- **India boasts the largest population of wild Asian elephants, with an estimated 29,964 individuals according to the 2017 Project Elephant census.**
- This figure represents around 60% of the world's total population of Asian elephants.
- Karnataka has the highest number of elephants in India, followed by Assam and Kerala.

Conservational efforts

Project Elephant

- **Year of Formation:** 1992
- **Nodal Agency:** Ministry of Environment, Forest and Climate Change, Government of India

Objectives of Project Elephant

- **Combat Illegal Trade:** Halt the illegal trade of elephant tusks and protect elephants from poaching.
- **Prevent Deaths:** Implement measures to prevent unnatural elephant deaths in India.
- **Restore Habitats:** Restore natural habitats and migratory routes of elephants.
- **Reduce Conflict:** Mitigate human-elephant conflicts in shared regions.

- **Limit Human Activities:** Restrict human encroachment and livestock grazing in elephant habitats.

Monitoring the Illegal Killing of Elephants (MIKE)

- **Year of Formation:** 1997
- **Nodal Agency:** Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

Objectives:

- Monitor trends in the illegal killing of elephants and assess the effectiveness of field conservation efforts.
- Provide information needed to make appropriate management and enforcement decisions.
- Strengthen elephant range states' capacity to manage and conserve their elephant populations.

Conclusion

To combat rising elephant mortality, restoring natural habitats and preventing herd fragmentation are crucial. The study underscores the need for a systematic approach to mitigate elephant deaths and enhance survival rates.

II. CLIMATE CHANGE

6. HEAT DOME

SOURCE: INDIAN EXPRESS

A heat dome is a weather phenomenon characterized by a high-pressure system that traps warm air, causing extreme temperatures over a region.

How a Heat Dome Works

- **Warm Air Rises:** In still summer conditions, warm air rises from the Earth's surface.
- **High Pressure:** This warm air is pushed down by high pressure in the atmosphere, preventing it from rising.
- **Trapped Heat:** The air gets trapped near the surface, becomes compressed, and heats up further.
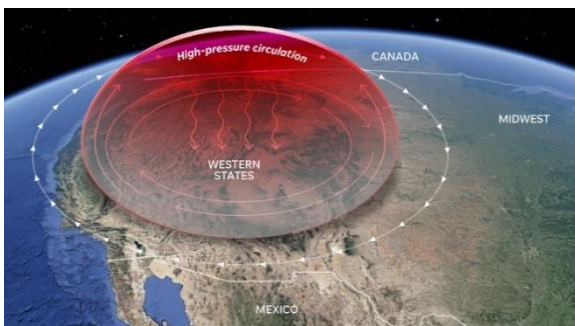
Impact of Heat Domes

- **Extreme Temperatures:** Record high temperatures, such as 48.33°C in Redding, Northern California.
- **Prolonged Heat:** Extended periods of hot weather leading to severe heatwaves.

Formation of Heat Domes

- **Jet Stream Behaviour:** Wave-like patterns in jet streams can cause high-pressure systems to become stationary, forming heat domes.
- **Climate Change:** Rising global temperatures may increase the intensity and frequency of heat domes.

Measures to Protect People from Heat Domes

Public Awareness and Education

- **Heatwave Alerts:** Issue timely warnings and advisories to inform the public about impending heatwaves.
- **Education Campaigns:** Educate the public on the dangers of heatwaves and how to stay safe, such as staying hydrated and avoiding outdoor activities during peak heat hours.

Infrastructure and Urban Planning

- **Cooling Centres:** Establish air-conditioned public spaces where people can seek refuge during extreme heat.
- **Green Spaces:** Increase the number of parks and green areas to provide natural cooling and reduce urban heat islands.
- **Heat-Resilient Buildings:** Promote the construction of buildings designed to remain cool, using materials that reflect heat and incorporating better insulation.

Government Interventions in India

National Action Plan on Climate Change (NAPCC)

- **Mission on Sustainable Habitat:** Focuses on promoting energy efficiency in buildings and urban planning to mitigate heat effects.
- **National Mission on Strategic Knowledge for Climate Change:** Enhances understanding of climate change impacts, including heatwaves, and develops strategies for adaptation and mitigation.

Ahmedabad Heat Action Plan

- **Early Warning System:** Provides timely heatwave alerts to residents.
- **Capacity Building:** Trains healthcare professionals to recognize and treat heat-related illnesses.
- **Public Awareness Campaigns:** Disseminates information on how to stay cool and hydrated through various media channels.
- **Urban Greening:** Increases tree plantation and green cover to reduce urban temperatures.

Best Practices from Other Countries

- **France: Heatwave Plans (Plan Canicule):** Includes public awareness campaigns, activation of a helpline, and opening of air-conditioned spaces for vulnerable populations.
- **United States:** Heat Island Reduction Programs: Implement measures to reduce urban heat islands, such as green roofs, cool roofs, and reflective pavements.
- **Cooling Centres:** Establish networks of cooling centers in cities like Los Angeles and New York.

Conclusion

Heat domes, driven by high-pressure systems and potentially exacerbated by climate change, lead to significant heatwaves and extreme temperatures, posing challenges for affected regions.

III. POLLUTION

7. AMBIENT AIR POLLUTION AND DAILY MORTALITY IN TEN CITIES OF INDIA: A CAUSAL MODELLING STUDY

SOURCE: LANCET REPORT

Air quality is a critical aspect of public health, directly affecting the well-being of populations worldwide.

Recognizing the need for more stringent guidelines to protect human health, the World Health Organization (WHO) updated its air quality guidelines in 2021.

These guidelines aim to reduce exposure to key pollutants that contribute to various health issues, including respiratory and cardiovascular diseases.

The updated guidelines are particularly relevant for countries like India, where air pollution is a significant public health challenge.

WHO's 2021 Revised Air Quality Guidelines

Overview:

- The World Health Organization (WHO) revised its air quality guidelines in September 2021, strengthening the recommendations for six key pollutants.
- These pollutants include particulate matter (PM10 and PM2.5), ozone (O_3), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and carbon monoxide (CO).

Focus on Particulate Matter:

- **PM10 and PM2.5**: Particulate matter, particularly PM2.5 (particles smaller than 2.5 microns), poses a significant risk to human health. The guidelines recommend stricter limits for these pollutants.
- **Impact**: These tiny particles can penetrate deep into the lungs and even enter the bloodstream, causing severe health problems.

Other Pollutants:

- **Ozone (O_3)**: The guidelines also propose lower thresholds for ozone, which is a major component of smog and can cause respiratory issues.
- **Nitrogen Dioxide (NO_2) and Sulfur Dioxide (SO_2)**: These gases are mainly produced from industrial processes and vehicle emissions, contributing to respiratory and cardiovascular diseases.
- **Carbon Monoxide (CO)**: Exposure to high levels of CO, often resulting from vehicle emissions and industrial activities, can be lethal.

Non-binding Nature:

- The WHO guidelines are advisory and
- non-binding, meaning countries are not legally required to adhere to them. However, they serve as an important benchmark for safe air quality levels.

Findings from The Lancet Planetary Health Journal Study
Air Pollution in Indian Cities:

- A study by The Lancet Planetary Health journal highlighted the severe impact of air pollution in Indian cities.
- **Delhi**: The study found that around 11.5% of annual deaths in Delhi, or approximately 12,000 deaths, are linked to air pollution, the highest percentage among Indian cities.

Impact on Mortality:

- **Overall Statistics**: Across ten major cities in India—Ahmedabad, Bengaluru, Chennai, Delhi, Hyderabad, Kolkata, Mumbai, Pune, Shimla, and Varanasi—more than 33,000 deaths annually are attributed to air pollution.
- **PM2.5 Levels**: PM2.5 levels in these cities exceed WHO's safe limit 99.8% of the days, highlighting the pervasive nature of air pollution.

Regional Variations:

- **Shimla**: Shimla recorded the lowest pollution-related mortality, with 59 deaths annually, accounting for 3.7% of total deaths.
- **Varying Impacts**: Cities with lower baseline pollution levels, like Bengaluru and Shimla, show a higher relative risk of mortality with increases in pollution levels.

Government Initiatives in India
National Clean Air Programme (NCAP):

- Launched in January 2019, NCAP aims to reduce PM2.5 and PM10 levels by 20-30% by 2024, based on 2017 levels.
- **City-Specific Plans**: NCAP includes specific action plans tailored to the needs of different cities to improve air quality.

PRANA Portal:
- This portal was introduced to monitor the implementation of NCAP and track the progress of air quality improvement efforts.

National Air Quality Index (AQI):
- Established in October 2014, the AQI provides the public with information on air quality in an easily understandable format.
- **Pollutants Monitored**: The AQI measures eight pollutants, including PM10, PM2.5, NO_2, SO_2, CO, O_3, ammonia (NH_3), and lead (Pb).

Regulatory Framework:
- Under the Air (Prevention and Control of Pollution) Act of 1981, India's Central Pollution Control Board sets national ambient air quality standards to protect public health.

Conclusion

The WHO's revised air quality guidelines emphasize the need for stricter controls on pollutants to safeguard public health. **In India, where air pollution is a major concern, these guidelines, along with government initiatives like NCAP and AQI, are crucial for improving air quality and reducing pollution-related mortality.** However, the effectiveness of these efforts depends on their rigorous implementation and public awareness.

IV. PRELIMS POINTERS IN NEWS

8. BIOMASS BRIQUETTES

SOURCE: THE HINDU

Biomass briquettes have emerged as a viable fuel alternative in the power and electricity generation sector. These eco-friendly briquettes are increasingly being utilized, particularly in developing countries with limited access to traditional fuel sources.

About Biomass Briquettes
- **Composition:** Made from compact blocks of organic materials such as agricultural residues, forestry wastes, and industrial by-products.
- **Applications:** Used for heating, cooking fuel, and electricity generation.

Advantages of Biomass Briquettes
- **Environment Friendly:** Created from easily available biomass waste, often found in rural areas.Utilizes organic matter like invasive species and agro-waste.
- **Affordability:** Can be produced by hand from freely available materials.
- **Carbon Neutrality:** Release no additional carbon dioxide into the atmosphere when burned.Mitigates greenhouse gas emissions by reducing reliance on fossil fuels.

About Carbon Neutrality
- **Definition:** Achieving a balance between emitting carbon and absorbing it from the atmosphere.
- **Carbon Sequestration**: The process of removing carbon dioxide from the atmosphere and storing it in carbon sinks.

Conclusion

Biomass briquettes offer a sustainable and cost-effective fuel alternative. Their use not only supports waste management and reduces greenhouse gas emissions but also contributes significantly to achieving carbon neutrality. **This makes them an essential component in the global effort to mitigate climate change.**

9. SENNA SPECTABILIS

SOURCE: THE HINDU

Kerala Forest Department and Kerala Paper Products Limited (KPPL) are working together to eradicate the invasive plant Senna Spectabilis.

Threat to Wildlife
- **Impact:** Poses a threat to wildlife habitats in the Nilgiri biosphere, including the Wayanad Wildlife Sanctuary (WWS) and other sanctuaries.

Origin and Uses

- **Native Region:** Originates from Tropical America.
- **Uses:** Grown as an ornamental plant and used in traditional medicine.

Characteristics

- **Soil Preference**: Thrives in deep, moist, sandy, or loamy soils but can also grow in poor soils.

Tree Type:

- **Evergreen**: In climates with rainfall throughout the year.
- **Deciduous**: In areas with dry seasons.

10. SYNTRICHIA CANINERVIS

SOURCE: HINDUSTHAN TIMES

Scientists have identified the desert moss species Syntrichia caninervis as a potential game-changer for future space exploration and colonization efforts.

About Syntrichia caninervis

Abundance:

- One of the most abundant desert mosses globally.

Environmental Tolerance:

- **Remarkable tolerance to drought, cold, and radiation.**
- Can recover within seconds after losing more than 98% of its water.
- **Withstands ultra-low temperatures down to −196°C.**
- Highly resistant to gamma radiation, with a half-lethal dose of about 5,000 Gy.

Distribution:

- **Found in dryland regions like the Gurbantunggut and Tengger Deserts in China and the Mojave Desert in the USA.**
- Also present in mountainous regions such as the Pamir, Tibet, the Middle East, Antarctica, and circumpolar regions.

Unique Adaptation:

- Uses a tiny hair (awn) on the end of each leaf to collect water, supplementing the water collected by the leaves themselves.

What is a Moss?

Characteristics:

- Flowerless, spore-producing plants with spores produced in small capsules.
- Distributed worldwide except in salt water, commonly found in moist shady locations.

Ecological Role:

- They are renowned for covering the floors of woodlands and forests.
- They decompose exposed substrates, releasing nutrients for more advanced plants.
- They assist in controlling soil erosion by offering ground cover and soaking up water.
- They play a crucial role in the nutrient and water cycles of certain types of vegetation.

Economic Importance:

- Species in the genus Sphagnum are important for forming peat.

11. BROWN PALM CIVET

SOURCE: THE HINDU

The Discover Koyna group, known for its observations of rare species, recently spotted a rare brown palm civet in the Koyna Wildlife Sanctuary.

About Brown Palm Civet

- Also known as Jerdon's palm civets, they are endemic to the Western Ghats.
- **Play a vital role in seed dispersal.**
- Solitary, nocturnal, and thrive in high-altitude tropical rainforests.

Distribution

- **Found from Castle Rock in Goa to Kalakkad Mundanthurai Tiger Reserve in the south**.
- Inhabits rainforests at 500–1,300 m elevation.

Diet

- Predominantly frugivorous with a limited diet range among South Asia's small carnivores.
- Conservation Status
- **IUCN:** Least Concern.

- **CITES:** Appendix III.

Koyna Wildlife Sanctuary

- **Location:** Situated in the Western Ghats of Maharashtra, part of the UNESCO World Heritage Site.
- **Features:** Associated with the Koyna Dam, a crucial water reservoir.
- **Flora:** Includes evergreen, semi-evergreen, and deciduous forests with valuable tree species like teak, shisham, and ain.
- **Fauna:** Home to Indian bison, elephants, leopards, sloth bears, and sambar deer.

Conclusion

The sighting of the brown palm civet highlights the rich biodiversity of the Koyna Wildlife Sanctuary and the importance of conservation efforts in the Western Ghats.

12. INDIAN FLAPSHELL TURTLE

SOURCE: THE HINDU

The Indian flapshell turtle is a freshwater species found across South Asia.

Known for its unique femoral flaps on the plastron, it serves as an evolutionary link between softshell and hard-shell turtles.

Habitat and Distribution:

- **Habitat:** Prefers shallow, quiet waters like rivers, streams, and marshes with sandy or muddy bottoms.
- **Distribution:** Mainly found in India, Pakistan, Sri Lanka, Nepal, Bangladesh, and Myanmar.

Lifestyle and Adaptations:

- Omnivorous diet and primarily solitary in behaviour.
- Active during the day and well-adapted to drought conditions.

Conservation Status and Threats:

- **IUCN Red List:** Classified as Vulnerable due to habitat loss and illegal wildlife trade.
- **CITES:** Listed under Appendix I for strict international trade regulations.

- **Wildlife (Protection) Act, 1972:** Protected under Schedule I in India to curb exploitation.

Conservation Efforts:

- Initiatives by institutions like the Indian Veterinary Research Institute (IVRI) to rehabilitate injured turtles.
- **Community awareness programs to reduce habitat destruction and poaching.**

13. FishMIP INITIATIVE

SOURCE: INDIAN EXPRESS

The Ecosystem Model Intercomparison Project (FishMIP) reported that exploitable fish biomass could decline by more than 10% by mid-century, especially under high-emission scenarios, affecting many regions worldwide.

About FishMIP Initiative

- **Launched in 2013**: Fisheries and Marine Ecosystem Model Intercomparison Project (FishMIP) started in 2013.
- **Purpose**: Provides knowledge to industry and governments to support adaptive and resilient seafood sectors under climate change.
- **Global Network**: Includes over 100 marine ecosystem modellers and researchers from around the world.
- **Collaboration with FAO**: FishMIP works with the Food and Agriculture Organization (FAO) to understand long-term climate change impacts on marine ecosystems and fisheries using advanced numerical models.
- **FishMIP2.0**: Established in 2024 to improve the reliability of modeling projections and address broader policy-related questions relevant to food

security and marine resource management, with a focus on climate change.

Key Facts about Food and Agriculture Organization (FAO)

- **Specialized UN Agency**: FAO is a specialized agency of the United Nations that leads efforts to defeat hunger and improve nutrition and food security globally.
- **Goal**: Achieve food security for all, ensuring people have regular access to high-quality food for healthy, active lives.
- **Membership**: 195 members, including 194 countries and the European Union.
- **Sister Bodies**: Works alongside the World Food Programme (WFP) and the International Fund for Agricultural Development (IFAD).
- **Reports Published**: Includes The State of the World's Forests (SOFO), The State of World Fisheries and Aquaculture (SOFIA), The State of Agricultural Commodity Markets (SOCO), and The State of Food Security and Nutrition in the World (SOFI).
- **Headquarters**: Located in Rome, Italy.

14. STEEL SLAG

SOURCE: THE HINDU

The Central Road Research Institute (CRRI) has released new guidelines for using steel slag in road construction.

About Steel Slag

Definition:

- Steel slag is a solid waste from steel production.
- Composed of oxides like calcium, iron, silicon, and magnesium.

Key Applications:

- Used as road base material (Steel Slag Road Technology or SSRT).
- Blended with Portland cement.
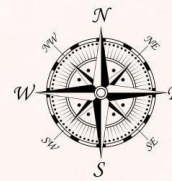- Applied in fertilizers and soil improvement.

Benefits of SSRT

Technical:

- Enhances road durability.
- Improves skid resistance.
- More cost-effective than traditional bituminous materials.

Environmental:

- Utilizes 19 million tons of steel slag waste produced annually.
- Reduces carbon footprint in road construction.

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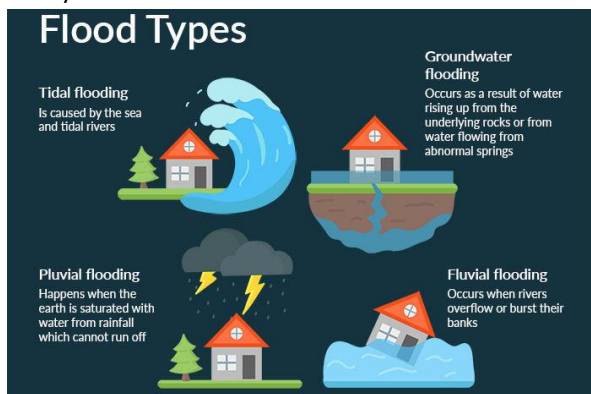(HYDERABAD)
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FLOODS IN INDIA: CAUSES, IMPLICATIONS, AND MANAGEMENT

Floods are natural disasters characterized by the overflow of water onto land that is normally dry.

- They are one of the most common natural disasters worldwide, affecting millions of people and causing significant damage.

Causes of Floods:

- **Heavy Rainfall:** Intense and prolonged rainfall can overwhelm rivers and drainage systems.
- **Snowmelt:** Rapid melting of snow due to warmer temperatures can lead to increased water flow in rivers.
- **Storm Surges:** Coastal areas are susceptible to flooding from storm surges caused by tropical cyclones or tsunamis.

Flood Types

Tidal flooding Is caused by the sea and tidal rivers

Groundwater flooding Occurs as a result of water rising up from the underlying rocks or from water flowing from abnormal springs

Pluvial flooding Happens when the earth is saturated with water from rainfall which cannot run off

Fluvial flooding Occurs when rivers overflow or burst their banks

Types of Floods:

- **Flash Floods:** Sudden and intense rainfall causes water levels to rise rapidly, overtaking rivers, streams, and roads.
- **River Floods:** Persistent rain or snowmelt causes rivers to exceed their capacity, leading to widespread flooding.
- **Coastal Floods:** Storm surges associated with cyclones or tsunamis inundate coastal areas.

State of Floods in India:

- India has a vast flood-prone area, with over 40 million hectares susceptible to flooding.
- Flood damages have shown an increasing trend, with significant economic losses reported annually.

Causes of Regular Floods in Assam:

- **Large Number of Rivers:** Assam has over 120 rivers originating from high rainfall areas in Arunachal Pradesh, Meghalaya, and neighboring countries.
- **Monsoon Intensity:** The Northeast experiences heavy monsoon rainfall, with up to 85% of annual rainfall occurring during monsoon months.

- **Climate Change:** Melting glaciers and snow caps in the Tibetan Plateau contribute to increased water flow in rivers like the Brahmaputra, exacerbating flooding.
- **Human Intervention:** Factors include poorly maintained embankments, population growth leading to encroachment in flood-prone areas, and traditional farming practices that contribute to soil erosion.

Implications of Floods in Assam:

- **Loss of Wildlife:** Floods in Kaziranga National Park have led to the death of numerous wild animals, including endangered one-horned rhinos.
- **Damage to Infrastructure:** Roads and other infrastructure suffer extensive damage during floods, hindering relief efforts.
- **Displacement of People:** Millions are displaced, seeking shelter in relief camps, placing strain on resources and management.

Steps Taken to Manage Floods in India:

- **National Flood Management Programme (NFMP):** Launched in 1954, emphasizes both structural (dams, embankments) and non-structural (floodplain zoning) measures.
- **Rashtriya Barh Ayog:** Established in 1976, introduced comprehensive flood management strategies grounded in scientific assessment and coordinated national planning.
- **National Water Policy (2012):** Advocates reservoir operations for flood management and floodplain zoning for regulated development.
- **National Hydrology Project (2016):** Enhances flood forecasting through real-time hydro-meteorological data.
- **Flood Management and Border Areas Programme (FMBAP):** Focuses on catchment area treatment to reduce sediment load and enhance river carrying capacity.
- **Flood Plain Zoning:** Regulates land use in flood-prone areas to prevent encroachment and minimize damage.
- **Flood Proofing:** Elevating vulnerable settlements and infrastructure above flood levels to mitigate losses.
- **National Disaster Response Force (NDRF):** Specialized force for disaster response and relief operations.

Way Forward:

- **Early Warning Systems:** Implement advanced warning systems for better preparedness and response to floods.
- **Improved Infrastructure:** Invest in resilient infrastructure and drainage systems to manage excess water during floods.
- **Collaborative Efforts:** Strengthen cooperation between state and central governments and enhance data sharing with neighboring countries.
- **Sustainable Land Management:** Promote sustainable practices to reduce soil erosion and increase water absorption capacity.
- **Task Force Recommendations:** Implement recommendations for flood management and erosion control effectively.
- **Financial Support:** Increase funding for flood control projects and ensure equitable distribution between central and state governments.

UPSC MAINS QUESTION

Q. "Discuss the causes and implications of frequent floods in Assam, and critically evaluate the effectiveness of flood management strategies implemented in India." (150 WORDS)

SCIENCE AND TECHNOLOGY

I. MEDICAL HEALTH/VACCINES/DISEASES

1. GESTATIONAL DIABETES

Gestational diabetes is a significant concern, especially in low- and middle-income countries like India.

Researchers from India, London, and Africa have proposed a shift from the oral glucose tolerance test (OGTT) to an HbA1c test for early detection of gestational diabetes

This approach, published in The Lancet Diabetes and Endocrinology, could offer a more practical and accessible solution for pregnant women, particularly in rural areas.

Current Practice: OGTT

- The OGTT involves consuming a 75 g glucose solution after fasting.
- Requires a follow-up test 2-3 hours later.
- Typically administered between 24 to 28 weeks of pregnancy.
- Challenges include accessibility, especially for women in remote areas.

Proposed Alternative: HbA1c Test

- Suggested to be used in the first trimester.
- Simplifies the screening process by using a single blood sample.
- Can be administered at the point of care, even in rural settings.
- Provides early identification of high-risk pregnancies.

Advantages of HbA1c Testing

- **Accessibility:** Easier for rural healthcare workers to perform.
- **Early Detection:** Allows for intervention with diet and exercise.
- **Reduced Need for OGTT:** Only 25% of pregnant women would require further testing.
- **Cost-Effectiveness:** Although initially more expensive, increased usage could lower costs.

Economic Impact

- Direct cost of HbA1c testing is higher, but total costs may be neutral due to reduced travel and lost wages.

- Wider use may lead to decreased costs over time.

Public Health Implications

- Could prevent 50% to 64% of OGTTs currently performed.
- Enhances reach and coverage in public health settings.
- Early intervention potential to prevent the development of gestational diabetes.

DIABETES

Diabetes is a chronic condition that affects how your body regulates blood sugar. Blood sugar is the main source of energy for your body's cells. With diabetes, your body either doesn't produce enough insulin or can't use the insulin it produces effectively.

The two main types of diabetes are:

- **Type 1 diabetes:** An autoimmune disease that destroys the insulin-producing cells in the pancreas. The body needs insulin to absorb glucose from the blood into the cells.
- **Type 2 diabetes:** The most common type of diabetes. In type 2 diabetes, your body either doesn't produce enough insulin or your cells become resistant to insulin.

Symptoms of diabetes

- Increased thirst
- Frequent urination
- Unexplained weight loss
- Extreme hunger
- Blurred vision

Gestational Diabetes

Gestational diabetes is a type of diabetes that develops during pregnancy. It usually develops in the second or third trimester. If you have gestational diabetes, your body can't make enough insulin to keep your blood sugar levels in the normal range during pregnancy.

Risk factors for gestational diabetes

- Family history of diabetes
- Being overweight or obese before pregnancy
- Having had gestational diabetes in a previous pregnancy
- Age 35 or older
- History of polycystic ovary syndrome (PCOS)

Symptoms of gestational diabetes

- There are usually no symptoms of gestational diabetes. It's typically found during a routine prenatal screening test.

Government offers several programs to support pregnant women.

- **Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA):** This program guarantees free, high-quality prenatal checkups on a designated day each month by a specialist or medical officer.
- **Janani Suraksha Yojana (JSY):** This scheme aims to promote institutional deliveries by providing financial assistance to pregnant women choosing to deliver in a government or accredited healthcare facility.
- **Pradhan Mantri Matru Vandana Yojana (PMMVY):** This maternity benefit program offers cash incentives to pregnant women, particularly those belonging to disadvantaged sections of society, to help meet nutritional needs and improve pregnancy outcomes.
- **State-specific programs:** Some states, like Telangana, have additional programs like Arogya Lakshmi, which provides nutritious meals, eggs, and milk to pregnant and lactating women to combat malnutrition and improve child health.

Conclusion

The transition from OGTT to HbA1c testing could significantly improve the management of gestational diabetes, particularly in resource-limited settings.

By facilitating early detection and intervention, this approach may enhance maternal and foetal health outcomes.

The study underscores the potential benefits of adopting the HbA1c test as a routine screening tool, thereby reducing the burden on healthcare systems and improving access for pregnant women in rural areas.

2. MOTOR NEURON DISEASES

SOURCE: INDIAN EXPRESS

Motor Neuron Diseases (MNDs) are a group of progressive neurological disorders that affect motor neurons, which are cells in the brain and spinal cord responsible for controlling muscles.
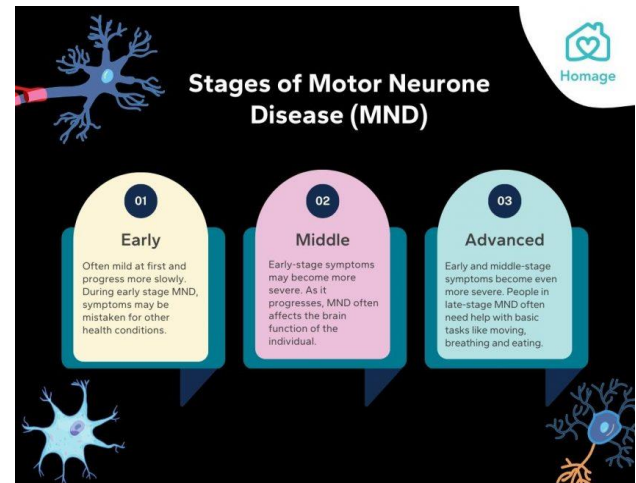
These diseases gradually damage these neurons, leading to problems with movements like walking, speaking, and breathing.

Characteristics and causes of MNDs:

Progressive Nature:

- MNDs are characterized by a progressive loss of motor neurons over time, causing muscles to weaken and eventually leading to paralysis.

- Symptoms typically appear after the age of 50, with early signs including muscle weakness and slurred speech.

Stages of Motor Neurone Disease (MND)

01 Early	02 Middle	03 Advanced
Often mild at first and progress more slowly. During early stage MND, symptoms may be mistaken for other health conditions.	Early-stage symptoms may become more severe. As it progresses, MND often affects the brain function of the individual.	Early and middle-stage symptoms become even more severe. People in late-stage MND often need help with basic tasks like moving, breathing and eating.

Gender and Genetics:

- MNDs affect more males than females, and while most cases develop sporadically without a known cause, about 1 in 10 cases are familial, meaning they are inherited due to genetic mutations.

Types of MNDs:

- Examples of MNDs include amyotrophic lateral sclerosis (ALS), progressive bulbar palsy, and spinal muscular atrophy.
- ALS is the most common type, affecting both upper and lower motor neurons and impacting muscles throughout the body.

Management and Treatment of MNDs:

Treatment Challenges:

- Currently, there is no cure or standard treatment for MNDs due to their complex nature and unknown causes.

Symptomatic and Supportive Care:

- Treatment focuses on managing symptoms and providing supportive care to improve quality of life.
- **This includes medications to alleviate symptoms like muscle cramps and difficulty swallowing, as well as physical therapy and respiratory support to maintain muscle function and mobility.**

Prognosis:

- The prognosis for individuals with MNDs varies, with average survival rates ranging from 3 to 5 years after diagnosis for ALS.

However, with comprehensive supportive care, some people can live longer, highlighting the importance of early detection and ongoing management.

3. AFRICAN SWINE FEVER

The African Swine Fever (ASF) outbreak in Mizoram since February has led to the death of over 3,350 pigs, as reported by officials.

ASF is a highly contagious viral disease affecting pigs with a potential mortality rate of 100%, posing severe threats to pig populations and the farming economy.
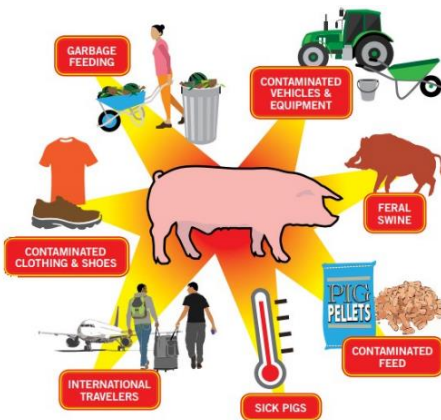
About African Swine Fever (ASF)

- **Virus Characteristics:** ASF is caused by a large, enveloped, double-stranded DNA virus, the sole member of the genus Asfivirus within the family Asfarviridae.
- **Symptoms:** Clinical symptoms resemble those of classical swine fever, including fever, weakness, lack of appetite, inflamed eye mucous membranes, red skin, (bloody) diarrhea, and vomiting.

Transmission

- **Direct Contact:** Infected animals can spread ASF through direct contact.
- **Indirect Contact:** Transmission can occur through the ingestion of products from infected animals or contact with contaminated clothing, vehicles, or equipment.
- **Vector:** Bites by infectious soft ticks can also spread the virus.
- **Survival:** The ASF virus can survive for long periods in pork and pork meat products.

Geographical Spread

- **Endemic Regions:** ASF is endemic to sub-Saharan Africa.
- **Global Spread:** The disease has spread to regions including Asia and Europe.
- **In India, ASF was first detected in Arunachal Pradesh and Assam during February and March of 2020.**

Impact

- **Human Health:** ASF is not a danger to human health. Meat and other products derived from pigs do not pose any food safety risks for humans.
- **Economic Impact:** The disease has devastating effects on pig populations and the farming economy.

Control Measures

- **No Cure or Vaccine:** There is no cure or approved vaccine for ASF.
- **Prevention:** The only way to prevent the spread of ASF is by culling infected animals.

Conclusion

The outbreak of African Swine Fever in Mizoram underscores the critical need for stringent biosecurity measures and effective disease management practices to protect pig populations and mitigate economic losses.

4. OROPOUCHE FEVER

Oropouche Fever is caused by the Oropouche Virus (OROV), belonging to the orthobunya virus family.

Incubation Period: 4 to 8 days.

About Oropouche Fever:

Symptoms

- **Common Symptoms**: Include fever, headache, muscle pain, joint pain, and nausea.
- **Severe Cases**: Can lead to meningitis or encephalitis, which are serious conditions affecting the brain and spinal cord.
- **Duration:** Most patients recover in about a week, but some may experience lingering symptoms for several weeks.

Transmission

- **Vectors:** The disease is transmitted to humans through the bite of an infected midge (small fly) or mosquito.
- **Risk Factors:** Urbanization, deforestation, and climate change contribute to the spread of the

disease by increasing the habitats and populations of the vectors.

Treatment

- **Vaccination:** Currently, there are no vaccines available to prevent Oropouche fever.
- **Medical Care:** There is no specific antiviral treatment for Oropouche fever. Medical care focuses on managing and alleviating the symptoms, such as pain and fever, to support recovery.

Prevention

- **Vector Control:** Efforts to reduce the population of midges and mosquitoes, such as using insect repellent, installing screens on windows, and eliminating standing water where these insects breed, can help reduce the risk of transmission.
- **Public Health Measures:** Monitoring and responding to outbreaks, educating the public on preventive measures, and conducting research on the disease and its vectors are important steps in controlling the spread of Oropouche fever.

5. INDIGENOUS HPV VACCINE, THE RHETORIC AND THE REALITY

SOURCE: THE HINDU

India's public health has recently focused on HPV vaccination to prevent cervical cancer.

Concerns arise over the lack of competing vaccines, high costs, and overall affordability.

Lack of Competing Vaccines

- The absence of other domestic HPV vaccines affects Cervavac's pricing.
- At least four Indian vaccine candidates have been in development since 2010.
- **Shantha Biotechnics, known for a low-cost Hepatitis-B vaccine, aimed for an affordable HPV vaccine by 2015.**
- Acquisition by Sanofi Pasteur, linked to Gardasil, may have halted progress.
- **Other companies like Indian Immunologicals, Bharat Biotech, and Zydus Cadila also announced HPV vaccines.**
- Despite patent expirations, these vaccines are not yet available, raising concerns.

Universal Vaccination Programme

- Cervavac is recommended universally for girls aged 9 to 26 in India.

- **Government price:** ₹500 for two doses, considered expensive.
- Many outside government coverage face a retail price of ₹2,000.
- **India's low insurance coverage and high out-of-pocket health costs exacerbate the issue.**

Pricing and Affordability Concerns

- The high price of Cervavac does not reflect true production costs.
- **Indian infrastructure supports large-scale, low-cost vaccine production.**
- Development of Cervavac received significant funding from the Bill & Melinda Gates Foundation.
- **Shared production facilities with Covishield, supported by the Indian government, should lower costs.**
- High-margin pricing strategy over low-margin, high-volume approach limits affordability.

HUMAN PAPILLOMAVIRUS

HPV stands for Human Papillomavirus. It's a very common virus that can infect anyone. In fact, nearly all sexually active people will get HPV at some point in their lives

There are over 200 different types of HPV, and some can cause:

Genital warts

- HPV is spread through skin-to-skin contact during sexual activity, including vaginal, anal, and oral sex. You can also get it from touching warts on someone's skin.
- Most HPV infections go away on their own within a few years. However, some types of HPV can linger and cause health problems later in life.

The HPV vaccine:

- There is a safe and effective vaccine that protects against certain types of HPV.
- The Centers for Disease Control and Prevention (CDC) recommends that all girls and boys get vaccinated at ages 11 or 12.
- Vaccination is most effective if given before someone becomes sexually

Protect yourself:

There is no foolproof way to prevent HPV, but you can lower your risk by:

- Getting the HPV vaccine
- Limiting your number of sexual partners
- Using contraceptives

Conclusion

- Universal HPV vaccination's necessity is still debated.
- The lack of competition and opaque pricing strategy of Cervavac demands investigation.
- Ensuring affordable and accessible HPV vaccines is crucial for public health in India.

6. MITOCHONDRIAL DISEASES

Mitochondrial diseases (or Mito) are a group of conditions that affect the mitochondria's ability to produce energy needed by organs to function properly.
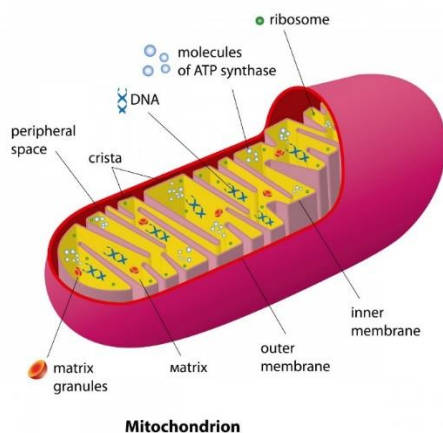
Mitochondrion

Key Points:
Mitochondria:
- Mitochondria are membrane-bound cell organelles responsible for generating most of the chemical energy required for the cell's biochemical reactions.
- **They create energy by combining oxygen with fuel molecules (sugars and fats) from food**.
- This chemical energy is stored in a molecule called adenosine triphosphate (ATP).
- **Mitochondria and mitochondrial DNA are generally inherited from the mother.**

Function and Defects:
- When mitochondria are defective, cells lack sufficient energy.
- Unused oxygen and fuel molecules build up, causing cellular damage.
- Mitochondrial diseases can impact nearly any part of the body, including the brain, nerves, muscles, kidneys, heart, liver, eyes, ears, and pancreas.

Causes:

- **Primary mitochondrial diseases are caused by genetic mutations**, typically appearing before age 20, often in infants.
- **Secondary mitochondrial diseases occur when mitochondrial dysfunction results from another disease or condition.**

Symptoms:
- Symptoms vary depending on the number and location of defective mitochondria in the body.
- Issues can be localized to one organ, tissue, or cell type, but often affect multiple areas.
- Muscle and nerve cells, which have high energy needs, commonly exhibit muscular and neurological problems.

Treatment:
- There are no cures for mitochondrial diseases, but treatments can alleviate symptoms and slow disease progression.
- **Treatment options include physical therapy, vitamins and supplements, special diets, and medications.**

7. SYPHILIS

Syphilis: A sexually transmitted infection caused by the bacteria Treponema pallidum, capable of causing severe health issues if untreated.

Causes and Transmission:
- **Cause:** Spread primarily through sexual contact with an infected person.
- **Transmission:** Can also pass from mother to baby during pregnancy, childbirth, or breastfeeding.

Symptoms and Progression:
- **Stages:** Develops in stages, often starting with painless sores on genitals, rectum, or mouth.
- **Subsequent Symptoms:** May include swollen lymph nodes and a non-itchy skin rash on hands and feet.
- **Latency:** Can remain asymptomatic for years before recurring symptoms if untreated.

- **Complications:** Without treatment, syphilis can damage the heart, brain, muscles, bones, and eyes.

Treatment:

- **Curability:** Syphilis is treatable and curable with antibiotics, especially in early stages.
- **Common Treatment:** Penicillin is the preferred medication for curing syphilis effectively.

II. SPACE TECHNOLOGY

8. THE SPACE MAITRI MISSION

SOURCE: THE HINDU

The Australian government recently entered into an $18 million memorandum of understanding (MoU) with NewSpace India Limited (NSIL), the commercial arm of the Indian Space Research Organisation (ISRO), under the Space MAITRI mission.

This initiative marks a significant advancement in the strategic partnership between India and Australia in the space sector.

About Space MAITRI Mission

Space MAITRI (Mission for Australia-India's Technology, Research, and Innovation) aims to strengthen the collaboration between commercial, institutional, and governmental space organizations from both nations.

Focus Areas:

- Debris Management and Sustainability: Promotes responsible space operations and addresses the threat of space debris.

Key Agreement:

- **NewSpace India Limited** will launch Australia's Space Machines Company's second Optimus spacecraft in 2026.
- **The 450kg Optimus spacecraft**, the largest Australian-designed and built spacecraft, will be launched on ISRO's Small Satellite Launch Vehicle (SSLV).

About NewSpace India Limited (NSIL)

- **Establishment:** Incorporated in March 2019 as a commercial arm under the Department of Space (DoS), Government of India.

- **Purpose:** Set up to undertake high-technology space-related activities in India.
- **Space Policy Reforms:** Under the 2020 space policy reforms, NSIL is to undertake operational satellite missions on a "demand-driven" model, building, launching, owning, and operating satellites to provide services to customers.
- **Headquarters:** Located in Bengaluru.

Conclusion

The Space MAITRI mission signifies a pivotal collaboration between India and Australia, emphasizing responsible space operations and sustainability.

With the involvement of NewSpace India Limited, this partnership is poised to foster significant advancements in space technology and innovation, reinforcing the strategic ties between the two nations.

9. NASA'S CUBESAT RADIO INTERFEROMETRY EXPERIMENT (CURIE) MISSION

SOURCE: TIMES OF INDIA

NASA is poised to launch the CubeSat Radio Interferometry Experiment (CURIE) mission, aiming to investigate the origins of solar radio waves using innovative space-based technology.

- **Mission Objective:** CURIE seeks to unravel the mysteries surrounding solar radio emissions, a phenomenon observed decades ago.
- **Technological Innovation:** It employs low frequency radio interferometry, a pioneering technique never before used in space missions.
- **Spacecraft Configuration:** CURIE comprises two small spacecraft, each no larger than a shoebox, orbiting approximately two miles apart around Earth.
- **Radio Wave Detection:** The spacecraft will detect radio waves in the frequency range of 0.1 to 19 megahertz, which are typically inaccessible from

Earth's surface due to atmospheric interference, making space-based observations essential.

- **Orbit and Operations:** Positioned 360 miles above Earth, CURIE will achieve an unobstructed view of the Sun to precisely locate the origins of radio emissions.
- **Data Collection:** Upon deployment, each spacecraft will deploy eight-foot antennas to commence data collection and analysis.
- **Significance:** This mission not only enhances our understanding of solar phenomena but also pioneers future space-based radio astronomy endeavors.

Conclusion

The CURIE mission, supported by NASA's Heliophysics Flight Opportunities for Research and Technology (H-FORT) Program, represents a significant leap in space-based radio astronomy.

By leveraging miniaturized spacecraft and advanced interferometry techniques, CURIE aims to uncover fundamental insights into solar radio emissions, paving the way for enhanced space weather forecasting and deeper understanding of our Sun's behavior.

10. RAMSES MISSION

The European Space Agency (ESA) is launching a planetary defense mission called RAMSES to study the asteroid 99942 Apophis.

This mission aims to accompany Apophis during its close approach to Earth in 2029.

Key Points:

- **Mission Purpose:** RAMSES is designed to intercept and study Apophis during its close flyby of Earth.
- **Asteroid Details:** Apophis is approximately 375 meters in diameter and will pass within 32,000 km of Earth on April 13, 2029.

- **Visibility:** For a brief period, Apophis will be visible to the naked eye from Europe, Africa, and parts of Asia.
- **Safety:** The asteroid poses no collision threat to Earth for at least the next 100 years.
- **Scientific Goals:** Researchers will observe how Earth's gravity affects Apophis and improve planetary defense strategies.
- **Synergy with NASA:** RAMSES will collaborate with NASA's OSIRIS-APEX mission, which will arrive at Apophis shortly after the flyby for comparative studies.

III. EMERGING TECHNOLOGIES

11. CARBON DERIVED FROM COCONUT HUSKS CAN POWER SUPERCAPACITORS

Researchers at the Government College for Women, Thiruvananthapuram, have developed a method to produce activated carbon from coconut husks, an abundant agricultural residue in Kerala.

This material shows great promise for high-performance supercapacitors.

Material Source:

- Coconut husks, an eco-friendly and low-cost resource.
- Potential for sustainable energy solutions.

Innovative Method:

- Microwave-assisted method developed at the Centralised Common Instrumentation Facility (CCIF).

Advantages of Coconut Husk-Derived Activated Carbon Efficiency:

- Prototype supercapacitors are four times more efficient than existing ones.
- Findings published in the American Sustainable Resource Management Journal.

About Supercapacitor

Supercapacitors, also known as ultracapacitors, bridge the gap between batteries and regular capacitors.

They hold much more energy than regular capacitors (10-100x more) but less than batteries. However, they shine in two key areas:

- Higher capacitance and energy storage compared to conventional capacitors.
- Essential for sustainable energy storage solutions.
- **Rapid Charge & Discharge:** Supercapacitors can absorb and release energy extremely quickly, making them ideal for short bursts of power.
- **High Cycle Life:** They can withstand many more charge/discharge cycles compared to batteries.

Applications:

- **Regenerative Braking:** Capturing energy during braking in electric vehicles, buses, and trains.
- **Power Backup:** Providing short-term power for static memory (SRAM) in computers.
- **Peak Power Assist:** Delivering extra power during peak loads in wind turbines or industrial motors.

Materials:

- **Electrodes:** Primarily activated carbon, with high surface area to store energy.
- **Electrolyte:** Conducts ions between electrodes, often organic or ionic liquids.

India's Role:

- India has a strong position in some raw materials for supercapacitors:
- **Activated Carbon:** India is a significant producer of coconut shells, a good source material.
- **Electrolyte Solvents:** The country has a growing chemical industry that can potentially contribute to electrolyte production.

12. HOW THE WORLD'S FIRST BRAIN IMPLANT TO CONTROL EPILEPTIC SEIZURES WORKS

SOURCE: INDIAN EXPRESS

Oran Knowlson, a UK-based teenager, is the first person globally to receive a brain implant to manage epileptic seizures. This deep brain stimulation (DBS) device has significantly reduced his daytime seizures by 80%.

What is Epilepsy?

- **Definition:** A condition causing recurring seizures.
- **Symptoms:** Jerking of limbs, confusion, staring spells, stiff muscles.
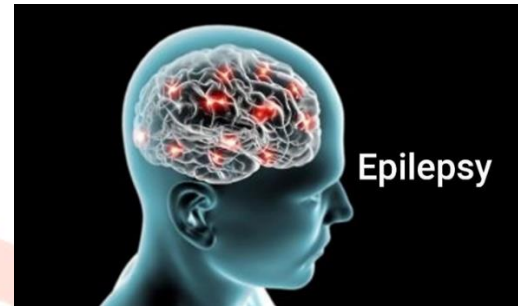
Causes:

- Unknown in 50% of cases.
- **Possible factors**: head trauma, brain tumors, infections (e.g., meningitis), genetics.
- **Risks:** Increased accidents, drownings, and falls.
- **Prevalence in India:** 3 to 11.9 per 1,000 people.
- **Treatment Resistance:** 30% of patients are resistant to available anti-seizure medications.

How Does the Device Work?

- **Function:** The neurostimulator delivers electrical impulses to block seizure-causing signals.
- **Specifications**: Size: 3.5 cm square, 0.6 cm thick.
- **Implantation:** In the skull, connected to electrodes in the thalamus.
- **Operation:** Activated post-surgery and rechargeable wirelessly.

What is DBS?

- **Usage:** For epilepsy, Parkinson's, and other neurological conditions.
- **Previous Applications**: Neurostimulators placed in the chest for childhood epilepsy.

Expert Opinion:

- Dr. Manjari Tripathi, AIIMS: Emphasizes that DBS is not a miracle cure and not the first line of treatment.
- Alternatives: Anti-seizure medicines, ketogenic diet, brain surgery, corpus callosotomy.

Cost of DBS

- **Neurostimulators:** Approximately Rs 12 lakh.

- **Total Surgical Costs:** Up to Rs 17 lakh in private hospitals.
- **Comparison:** Brain surgery costs Rs 20,000 to Rs 30,000.

Conclusion

DBS devices, though not a cure, offer a significant reduction in seizures for those with epilepsy resistant to conventional treatments. **They should be considered when seizures originate from multiple brain regions or when other treatments fail.**

IV. PRELIMS POINTERS IN NEWS

13. SNOWBLIND MALWARE

SOURCE: INDIAN EXPRESS

A new malware named 'Snowblind' is currently targeting Android phones.

About Snowblind Malware

- **Purpose**: Designed to steal banking and other sensitive information from Android devices.
- **Nature**: Snowblind is malicious software, or malware, which is harmful to computers, networks, or servers.

Infection Method:

- Typically spreads through malicious apps that appear legitimate.
- It repackages these apps to avoid detection.

Functionality:

- Misuses accessibility features to gain control and steal sensitive information.
- Can control the infected app remotely to gather data.

14. ZINC IN FARMING

SOURCE: THE HINDU

Researchers have found that legumes use zinc as a secondary signal to improve nitrogen fixation efficiency.

Role of Zinc in Farming

Function of Nitrogen Fixation:

- Converts atmospheric nitrogen into usable nitrogen compounds for plants.

Zinc as a Micronutrient:

- Naturally present in rocks, zinc is essential for plant growth.

New Discovery:

- Zinc acts as a signal for regulating nitrogen fixation in legumes.

Impact on Farming:

- **The discovery of Fixation Under Nitrate (FUN), a zinc sensor, can enhance crop efficiency.**
- It helps legumes adapt to environmental and soil conditions, reducing the need for synthetic fertilizers.

MARS ODYSSEY

SOURCE: TIMES OF INDIA

NASA's Mars Odyssey Orbiter recently captured an image of Olympus Mons, the largest volcano in our solar system, located on Mars.

About Mars Odyssey

Launch and Longevity:

- Launched in 2001, Mars Odyssey is the longest-running active orbital mission.

Achievements:

- First spacecraft to create a global map of Mars's chemical elements and minerals.

Objectives

- **Hydrogen Detection**: Determine the abundance of hydrogen in the Martian shallow subsurface.
- **Surface Imaging**: Obtain high-resolution images to study surface mineralogy.
- **Radiation Analysis**: Characterize the Martian near-space radiation environment to assess risks for future human explorers.

GLOBAL INDIA AI SUMMIT

The Global INDIAai Summit recently concluded at Bharat Mandapam in New Delhi, serving as a significant gathering for experts, policymakers, and AI enthusiasts worldwide. This summit focused on discussing the future trajectory of Artificial Intelligence (AI) both in India and globally, highlighting key initiatives and strategies.

The Global INDIAai Summit 2024

Key Highlights and Outcomes

- **Global AI Discourse**: India emphasized making AI accessible across all socio-economic backgrounds, addressing unique domestic needs while aiming for global leadership.
- **INDIAai Mission Focus**: Discussions centered on building a robust AI ecosystem under the INDIAai Mission, covering compute capacity, foundational models, datasets, application development, skills enhancement, startup support, and ethical AI.
- **Global Partnerships**: The Collaborative AI on Global Partnership (CAIGP) and India's leadership in GPAI (Global Partnership on Artificial Intelligence) showcased efforts to bridge global AI disparities and promote trustworthy AI development.
- **Startup Ecosystem Support**: Significant funding and infrastructure support from the INDIAai Mission were earmarked for Indian startups focusing on AI solutions.
- **AI Education**: Emphasis was placed on creating age-appropriate AI learning environments to enhance AI literacy nationwide.
- **Sector-Specific Insights**: AI applications in agriculture, data-driven credit disbursement, and governance efficiency were discussed, highlighting sector-specific AI integration and challenges.
- **Ethical and Human-Centric AI**: Commitments were reaffirmed towards developing AI systems that are ethical, transparent, and human-centric, aligned with international frameworks like OECD and UNESCO recommendations.

Artificial Intelligence Preparedness Index (AIPI)
About AIPI:

- The Artificial Intelligence Preparedness Index (AIPI) launched by the International Monetary Fund (IMF) evaluates 174 economies globally based on their readiness for AI adoption.
- It assesses digital infrastructure, human capital, labor policies, innovation ecosystem, integration of AI, and regulatory frameworks.

Key Components of AIPI

- **Digital Infrastructure**: Advanced digital infrastructure enhances AI readiness, supporting high scores on the AIPI.
- **Human Capital**: Availability of skilled workforce and educational systems supporting AI skills are critical for higher AIPI ratings.
- **Labor Policies**: Favorable labor policies that encourage innovation and AI adoption contribute positively to AIPI scores.
- **Innovation Ecosystem**: Robust innovation ecosystems foster AI development, influencing countries' AIPI standings.
- **Integration and Regulation**: Effective integration of AI technologies and supportive regulatory frameworks are pivotal for enhancing AIPI scores.

AIPI Dashboard Categories

- Countries are categorized into Advanced Economy (AE), Emerging Market Economy (EM), and Low-Income Country (LIC) based on their AIPI scores.
- Examples of high-ranking countries include Singapore, Denmark, and the United States among Advanced Economies, while India is categorized as an Emerging Market with a score indicating moderate AI readiness.

India's Position and Performance

- India ranks 72nd on the AIPI with a score of 0.49, reflecting its position as an Emerging Market Economy in AI readiness.
- While India performs relatively well among its regional peers, it trails behind countries like China in the AIPI rankings, indicating areas for improvement in AI infrastructure and capabilities.

Conclusion

- The Global INDIAai Summit and the launch of the AIPI by the IMF underscore India's commitment to fostering AI innovation and readiness on a global scale.

- These initiatives not only highlight India's strategic efforts in AI development but also emphasize the importance of ethical AI frameworks and international collaborations in shaping the future of AI governance and deployment globally.

UPSC MAINS QUESTION

Q. Discuss the significance of the Global INDIAai Summit and the Artificial Intelligence Preparedness Index (AIPI) in shaping India's strategic approach towards AI development and its global implications. (150 WORDS)

SECURITY

I. PRELIMS POINTERS IN NEWS

1. ABHYAS

ABHYAS is a High-Speed Expendable Aerial Target (HEAT) developed by the Defence Research and Development Organisation (DRDO) in India. Recently, DRDO successfully conducted six consecutive developmental trials of ABHYAS at Chandipur, Odisha.

About ABHYAS:

- **ABHYAS serves as an expendable aerial target designed to simulate realistic threat scenarios for testing weapon systems.**
- It was developed by DRDO's Aeronautical Development Establishment in Bengaluru, with production support from Hindustan Aeronautics Limited (HAL) and Larsen & Toubro.

Features:

- **Autonomous Flying:** ABHYAS operates autonomously using an autopilot system, facilitating pre-flight checks and autonomous flight.
- **Data Recording:** It includes features to record flight data for detailed analysis after missions.
- **Components:** The booster system was designed by the Advanced Systems Laboratory, while the navigation system was developed by the Research Centre Imarat.

About DRDO

DRDO is India's premier agency dedicated to defense research and development.

It operates under the Ministry of Defence, Government of India.

Establishment

Founded in 1958 by merging the Technical Development Establishment and the Directorate of Technical Development and Production with the Defence Science Organisation.

Objectives

- Develop state-of-the-art weapon systems and technologies.
- Enhance self-reliance in defense technologies.
- Promote innovation and research in defense and security sectors.

Key Areas of Research

- **Missile Systems:** Development of various missile systems like Agni, Prithvi, BrahMos, and Akash.
- **Aeronautics**: Design and development of aircraft like Tejas Light Combat Aircraft (LCA).
- **Armament and Combat Engineering:** Development of advanced weaponry and support systems.
- **Naval Systems:** Research in sonar systems, torpedoes, and underwater weapons.
- **Electronics and Communication Systems:** Advancements in radar, communication systems, and electronic warfare.
- **Life Sciences:** Development of life support systems, NBC (Nuclear, Biological, Chemical) protection, and medical research.

2. INDIAN ARMY'S SKIN BANK

The Indian Army recently launched a skin bank facility to treat severe burns and other skin conditions for service members and their families.

This pioneering initiative within the Armed Forces Medical Services marks a significant advancement in military healthcare.

About Indian Army's Skin Bank

- **Purpose:** To treat severe skin burns and other skin-related conditions for service personnel and their families.
- **Staff:** Includes trained medical professionals such as plastic surgeons, tissue engineers, and specialised technicians.
- **Function:** A centralized hub for collecting, processing, storing, and distributing skin grafts to military medical centers across the nation.

What is a Skin Bank?

- **Function:** A facility where skin is taken from eligible donors, processed, and stored for up to five years.
- **Donation:** Skin can be donated within six hours after death, irrespective of sex and blood group, with a minimum donor age of 18 years.
- **Exclusions:** Persons with AIDS, Hepatitis B & C, STDs, skin cancer, active skin disease, and septicemia are unfit for donation.
- **Preservation:** Donated skin is processed over five to six weeks, preserved in 85% glycerol solution, and stored at 4-5°C.

Skin Grafting

Procedure: Healthy skin is transplanted to an area where the skin is damaged or missing.

Types:

- **Autograft:** Skin taken from the patient's own body.
- **Allograft:** Skin from a donor, often sourced from a skin bank.
- **Outcome:** Doctors can determine acceptance of the graft within two to three weeks post-grafting.

Conclusion

The Indian Army's skin bank facility represents a critical resource in enhancing the treatment of severe skin injuries, improving the quality of care for military personnel and their families.

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3. PROJECT-76

SOURCE: MINT

The Defence Research and Development Organisation (DRDO) has launched an initial study for the design and development of a homegrown conventional submarine as part of Project-76.

This initiative represents a major advancement in boosting India's maritime capabilities and achieving self-reliance in defense technology.

About Project-76

- **Objective:** Develop India's first indigenously designed conventional diesel-electric submarine.
- **Leadership:** Undertaken by the Warship Design Bureau of the Indian Navy.
- **Scope:** The Indian Navy aims to construct 12 submarines under this project.

Features and Specifications

- Envisioned as air-independent propulsion (AIP)-equipped diesel-electric attack submarines.
- Expected to have a submerged displacement of 3,000 tons.

Advanced Features:

- Indigenous Weapon Control system.
- Lithium-ion batteries for enhanced performance.

Significance

- **Comparison:** Represents an advancement beyond previous foreign-designed submarines like Project-751 (India) and Project-75.
- **Legacy:** Designed to succeed the renowned Sindhughosh (Kilo) class, ensuring the Navy maintains a robust fleet of 3,000-ton class submarines.

Technological Collaboration:

- Incorporates top-tier French technology from Project 75.
- Leverages expertise from German/Spanish collaboration from Project-751 (India).
- Timeline and Future Prospects
- Prototype Construction: Aimed to commence by 2028.

Strategic Importance:

- Enhances India's submarine-building capabilities.
- Reduces reliance on foreign Original Equipment Manufacturers (OEMs) for submarine design.

Conclusion

Project-76 is a pivotal initiative in India's pursuit of maritime supremacy and technological self-reliance. **By integrating advanced features and leveraging international expertise, this project aims to significantly boost the Indian Navy's operational capabilities and indigenous defense manufacturing.**

4. TYPHON WEAPONS SYSTEM

SOURCE: TIMES OF INDIA

The Typhon Weapons System, used in joint military exercises between the United States and the Philippines, is set to be withdrawn.

This system showcases advanced missile technology developed by the U.S. Navy.

About Typhon Weapons System

- **Name:** Also known as Strategic Mid-Range Fires (SMRF) System.
- **Capability:** Fires Standard Missile 6 (SM-6) and Tomahawk Land Attack Missile.
- **Components:** Four launchers, command post, reload, and support vehicles.
- **Targeting:** Uses offboard sources for targeting information.
- **Launchers:** Derived from the Mk 41 Vertical Launch System (VLS).

Key Facts about Tomahawk Missile

- Type: Long-range cruise missile.
- Launch Platforms: Ship or submarine.
- Purpose: Deep-land attack warfare, targeting fixed sites in high-risk environments.

Features:

- Subsonic speed and low altitude flight.
- Uses satellite navigation and TERCOM radar.
- Range: Up to 2,400 km (1,500 miles).
- Propulsion: Solid propellant for launch, turbofan engine for flight.
- Difficult to detect on radar and infrared.
- Can carry conventional or nuclear payloads.

Conclusion

The Typhon Weapons System, with its advanced missile capabilities, exemplifies cutting-edge military technology, enhancing strategic operations and defense readiness.

5. LGM-35A SENTINEL NUCLEAR MISSILE

SOURCE: THE HINDU

The LGM-35A Sentinel is a new intercontinental ballistic missile (ICBM) being developed for the U.S. Air Force (USAF).

Key Points:

Development and Purpose:

- Developed by Northrop Grumman in cooperation with Air Force Global Strike Command.
- Intended to replace the aging LGM-30 Minuteman III ICBMs, which have been in service since the 1970s.

Technological Advancements:

- **Incorporates digital engineering technologies.**
- Employs a modular open system architecture for better interoperability and reduced life-cycle costs.

Warhead and Capabilities:

- Equipped with a W87-1 thermonuclear missile warhead.
- **Features fully integrated launch, flight, and infrastructure systems.**
- Includes modern command and control technology and ground equipment.

Operational Enhancements:

- Missiles will be launched from silos, with doors remaining closed during warhead maintenance to enhance security.
- **Expected to have a range exceeding 5,500 km.**
- Can reach any target across the world within 30 minutes post-launch, following a parabolic trajectory toward its target.

Cost and Management:

- The program's costs have been rising, prompting the U.S. Air Force to restructure the program to control expenses.

SOCIETY

I. VULNERABLE SECTIONS OF THE SOCIETY

1. GEOSPATIAL VIEW ON MATERNAL HEALTHCARE FOR THE TRIBAL POPULATION IN GUJARAT

SOURCE: THE HINDU

Maternal healthcare access in tribal regions of Gujarat is significantly influenced by geographical location, time, and distance.

This spatial analysis examines the distribution of healthcare facilities and their accessibility for the tribal population in Gujarat, highlighting distinct pregnancy care patterns.

Geospatial Analysis of Maternal Healthcare

- **Study Focus:** The study by Kumar and Tripathi focuses on Gujarat's tribal population (14.8% of the total population) across 14 districts using GIS data and the National Family Health Survey.
- **Healthcare Accessibility:** The analysis uses different modes of transportation (car, motorcycle, walking) to evaluate access to tertiary, secondary, and primary health centres.
- **Distribution of Facilities:** The distribution of public health centres often neglects geographical factors, resulting in concentrated resources in urban areas and inadequate access in rural and tribal regions.

Healthcare Disparities

- **Pregnancy Care Coverage:** Average coverage in tribal districts is 88% with 80% receiving antenatal care (ANC), 90% delivering at healthcare facilities, and 92% receiving postnatal care (PNC).
- **Geographical Variations:** ANC coverage is lower in Banaskantha, Mahisagar, Sabarkantha, Dahod, and Bharuch. Better outcomes are seen in Surat, Tapi, Dang, Navsari, and Valsad.

Transportation Constraints

- **Distance to Facilities:** Over 50% of households are more than 25 km from tertiary care facilities, and 30% are far from community and primary healthcare centres.
- **Limited Access:** Social norms and limited resources prevent women from using available transportation, impacting timely access to healthcare.

Conclusion

This geospatial analysis underscores the need for targeted interventions to improve maternal healthcare in Gujarat's tribal districts. Policies must prioritize establishing accessible public healthcare centres to address geographical barriers and achieve sustainable development goals (SDGs).

Enhancing healthcare access for disadvantaged communities is crucial for improving maternal and infant health outcomes in India.

II. EDUCATION SECTOR

2. THE ULLAS-NAV BHARAT SAAKSHARTA KARYAKRAM

SOURCE: INDIAN EXPRESS

Ladakh has recently become the first administrative unit in India to achieve full functional literacy under the ULLAS-Nav Bharat Saaksharta Karyakram (New India Literacy Program).

This significant milestone underscores the effectiveness of the ULLAS initiative, which is designed to promote literacy and lifelong learning across the nation.

About ULLAS-Nav Bharat Saaksharta Karyakram

- **Overview:** ULLAS (Understanding Lifelong Learning for All in Society) is a centrally sponsored scheme implemented from 2022-2027.
- **Alignment:** The scheme aligns with the recommendations of the National Education Policy (NEP) 2020.
- **Aim:** To empower adults aged 15 and above who missed formal schooling and mainstream them into society to contribute to the nation's growth.

Components of ULLAS

- Foundational Literacy and Numeracy
- Critical Life Skills
- Basic Education
- Vocational Skills
- Continuing Education

ULLAS App: Facilitates registration of learners and volunteers through self-registration or surveys. It serves as a digital gateway to diverse learning resources via the DIKSHA portal.

DIKSHA Portal

A national platform for school education, initiated by NCERT under the Ministry of Education.

Features:

- Provides e-content for schools through an online portal and mobile app.
- Developed on principles of open architecture, open access, open licensing, choice, and autonomy.
- Built on open-source technology to support various teaching and learning solutions.
- **Core Building Blocks:** Encompasses National Digital Education Architecture (NDEAR) components, including energized textbooks, online courses, content authoring, interactive quizzes, question banks, chatbot, analytics, and dashboard.
- **Support for CWSN:** Offers audiobooks, ISL (Indian Sign Language) videos, and a dictionary to aid Children With Special Needs.

Conclusion

The successful implementation of ULLAS in Ladakh highlights the program's potential to transform education and literacy across India. **By integrating advanced digital tools and inclusive educational practices, initiatives like ULLAS and DIKSHA are paving the way for a more literate and empowered society.**

III. HEALTH SECTOR

3. PROLONGED EXPOSURE TO COAL MINING CAUSES RESPIRATORY, SKIN DISEASES IN WORKERS: STUDY

SOURCE: THE HINDU

Prolonged exposure to pollutants from coal mining has severely impacted the health of mine workers and residents in six major coal mining districts in India.

A survey by the National Foundation for India highlights widespread respiratory and skin diseases among affected populations.

Key Findings

- **Affected Districts:** Koriya and Raigarh (Chhattisgarh), Dhanbad and Ramgarh (Jharkhand), Angul and Jajpur (Odisha).

- **Health Issues:** 65% of surveyed households reported chronic bronchitis, asthma, eczema, dermatitis, and fungal infections.
- **Monthly medical expenses** ranged from ₹300 to ₹1,000 per household.
- **Highest average annual** hospitalisation expenses in Dhanbad at ₹28,461 per household.
- **Vulnerability:** Higher incidence of lung and skin diseases among those living closer to mines, especially in Dhanbad and Ramgarh.

Economic Impact

- **Income Disparities:** Significant social and economic disparities were noted, with irregular wage patterns and lower incomes in coal-dependent districts like Dhanbad and Koriya compared to diversified industrial districts like Angul.
- **Job Losses:** The global shift away from coal could result in job losses and economic downturns in coal-dependent regions.

Renewable Energy Shift

- **India's Commitment:** India aims to source nearly 500 GW of electricity from renewable energy by 2030.
- **Current Status:** Coal remains a primary power source, with 205 GW from coal-powered thermal plants.
- **Recent Changes:** Renewable energy accounted for 71.5% of the 13.6 GW power capacity added in the first quarter of this year, reducing coal's share to below 50% for the first time since the 1960s.

Critical Terms

- **Just Transition:** Transitioning workers from coal mining to other sustainable jobs.
- **Respiratory Diseases:** Chronic bronchitis, asthma.
- **Skin Diseases: Eczema**, dermatitis, fungal infections.

Measures and Way Forward

- **Health Interventions:** Regular medical camps, improved healthcare facilities.
- **Economic Diversification:** Developing alternative industries and job opportunities.
- **Environmental Policies:** Strengthening pollution control measures.
- **Renewable Energy Projects:** Investing in solar, wind, and other renewable energy sources.

Best Practices and Examples

- **Germany's Coal Phase-Out:** Germany's structured phase-out plan for coal mining includes retraining

programs and financial support for affected workers.

- **China's Transition to Renewables:** Significant investments in renewable energy and job creation in the green energy sector.

Conclusion

Prolonged coal exposure has critical health and economic consequences. **Transitioning to renewable energy and implementing effective health and economic policies can mitigate these impacts, ensuring a just and sustainable future for affected communities.**

EDUCATION SYSTEM IN INDIA

The education system in India has evolved over centuries, reflecting the country's rich cultural and historical legacy. In recent times, debates about the structure and governance of education, particularly whether it should be under state or central control, have gained prominence.

A REPORT ON
THE STATE OF EDUCATION
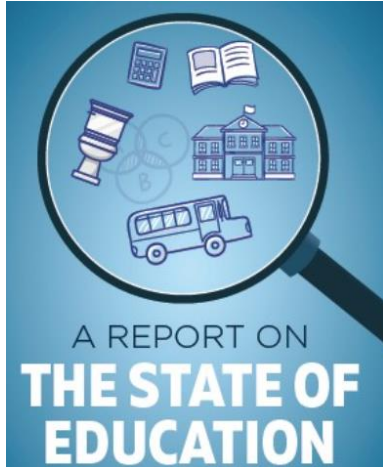
History of Education in India
Ancient Period:

- **Gurukul System:** Students (shishyas) lived with their teacher (guru) in the same house, learning through close interaction and practical experience.
- **Nalanda University:** One of the world's oldest universities, attracting students globally and emphasizing Indian knowledge traditions.

British Era:

- **Macaulay Committee (1835):** Introduced English education and aimed to create a class of anglicized Indians.
- **Wood's Despatch (1854):** Laid the foundation for the modern education system, promoting the establishment of universities.
- **Hunter Commission (1882):** Focused on primary education improvement.
- **Indian University Act (1904):** Regulated and improved university education.

Current Status of Education in India
Literacy Rates:

- **Gender Gap:** Narrowing since 1991, but female literacy (65.46% as per Census 2011) still below the global average of 87%.
- **Overall Literacy:** India's literacy rate is 74.04%, lower than the global average of 86.3%.

Legal and Constitutional Provisions
Legal Provisions:

- **Right to Education (RTE) Act, 2009:** Guarantees free and compulsory education for children aged 6-14.
- **Sarva Shiksha Abhiyan (SSA):** Focuses on universalizing elementary education.
- **Rashtriya Madhyamik Shiksha Abhiyan:** Aims to enhance access to secondary education.
- **Rashtriya Uchhattar Shiksha Abhiyan (RUSA):** Targets higher education quality and access.
- **Samagra Shiksha Abhiyan:** Integrates SSA, RMSA, and other schemes for a holistic educational approach.

Constitutional Provisions:

- **Article 45 (DPSP):** Initially aimed for free education for children up to 14 years, now includes early childhood care.
- **Article 21A:** Makes education a fundamental right for children aged 6-14.
- **Union List Entries 64 and 65:** Include institutions for scientific, technical education, and vocational training.

Education as a 'State' Subject
Historical Context:

- **Government of India Act, 1935:** Placed education under provincial control.
- **Post-Independence:** Education remained a state subject initially.
- **42nd Amendment (1976):** Moved education to the Concurrent List during the Emergency.

Government Initiatives Related to Educational Reforms

- **National Education Policy, 2020:** Comprehensive framework for transforming education in India.
- **National Programme on Technology Enhanced Learning:** Utilizes technology to improve learning.
- **Sarva Shiksha Abhiyan:** Ensures universal elementary education.
- **PRAGYATA:** Digital education guidelines.
- **Mid-Day Meal Scheme:** Provides nutritious meals to school children.
- **Beti Bachao Beti Padhao:** Promotes education and empowerment of girls.
- **PM SHRI Schools:** Aims to upgrade schools to showcase quality education.

International Practices in Education

- **United States:** Education standards set by state and local governments; federal government focuses on financial aid and access.

- **Canada:** Education managed by provincial governments.
- **Germany:** Legislative powers rest with the Länder (states).
- **South Africa:** Two national departments govern education; provincial departments handle local implementation.
- **Finland:** Emphasizes collaboration among schools, teachers, and students; minimal reliance on standardized tests.

Arguments for Education on the State List

- **Original Constitution Design:** Framers placed education on the State List, recognizing local governments' ability to address educational needs.
- **State-Specific Policies:** Tailoring education to cultural, linguistic, and socio-economic contexts ensures relevance and effectiveness.
- **Resource Allocation:** States invest significantly in education and should regulate their systems without central interference.
- **Merit Determination:** Centralized exams like NEET may not accurately reflect student potential; states should set admission criteria.
- **Accountability:** State control can lead to better accountability and quality education.

Arguments Against Education on the State List

- **Primary Education Quality:** Reports indicate poor primary education governance in many states.
- **National Integration:** A common framework across states fosters national unity and cultural exchange.
- **Minimum Standards and Equity:** Central oversight ensures disadvantaged sections receive quality education.
- **Standardization of Skills:** A national curriculum ensures uniform skills for a pan-India job market.
- **Regulation of National Institutions:** Central oversight maintains quality standards in national institutions.
- **Addressing National Concerns:** A unified approach is needed for national issues like digital literacy and climate change.

Way Forward

- **Collaborative Federalism:** Combining national standards with state flexibility.
- **Outcome-based Funding:** Allocating resources based on learning outcomes to incentivize quality improvement.

- **Decentralized School Management:** Empowering local communities and school management committees.
- **Teacher Training & Transfer Policy Reforms:** Enhancing teacher training and implementing transparent policies.
- **Standardized National Assessment:** Developing national assessments with state-specific benchmarks.
- **Leveraging Technology:** Utilizing technology to ensure equitable access to quality education.
- **National Curriculum Framework:** Creating a flexible curriculum framework that accommodates regional diversities.

Conclusion

The education system in India requires a balanced approach that respects both national standards and state-specific needs.

While there are strong arguments for returning education to the state list, ensuring minimum quality standards and fostering national integration are equally important.

Collaborative federalism, with an emphasis on local relevance and accountability, appears to be the most effective path forward for Indian education.

UPSC MAINS QUESTION

Q. "Discuss the advantages and disadvantages of transferring education back to the state list in India. How can a balance be achieved between national standards and state-specific needs?" (150 WORDS)

I. TELANGANA

NATIONAL PARKS AND WILDLIFE SANCTUARIES OF TELANGANA

National Parks and Wildlife Sanctuaries are protected areas designated for the conservation of wildlife and natural habitats.

These areas are crucial for preserving biodiversity, maintaining ecological balance, and providing a safe haven for endangered species.

NATIONAL PARKS

National Parks are areas set aside by the government for the conservation of wildlife and the environment.

They are protected from human activities such as hunting, logging, and agriculture.

Characteristics:

- No human activities like grazing or cultivation are allowed.
- Focus is on the conservation of ecosystems and native species.
- **Examples in India:** Jim Corbett National Park, Kaziranga National Park.

WILDLIFE SANCTUARIES

Wildlife Sanctuaries are areas where wildlife is protected, but some human activities are permitted, such as grazing or tourism.

Characteristics:

- Less restrictive compared to National Parks.
- Activities like collecting forest products may be allowed under regulations.
- **Examples in India:** Bharatpur Bird Sanctuary, Ranthambore Wildlife Sanctuary.

NATIONAL PARKS IN TELANGANA

In Telangana, according to ENVIS Centre on Wildlife Protected Areas, there are 3 National Parks and 9 Wildlife Sanctuaries.

Apart from these, there are Tiger Reserves, Zoological Parks and Deer Parks in Telangana.

KASU BRAHMANANDA REDDY NATIONAL PARK

It is **located in Jubilee hills and Banjara hills** in Hyderabad city of Telangana.

- It was earlier a part of palace complex that was **given to Prince Mukarram Jah on his coronation by his father Prince Azam Jah in 1967.**
- It was created as a **national park in the year 1994.** The total area of this national park is 1.425 sq km.

- The national park is named after Kasu Brahmananda Reddy, the former Chief Minister of Andhra Pradesh.
- **Flora -** The natural vegetation of this national park is tropical dry deciduous. The significant floral species of this national park includes teak, sandalwood, neem, babul, palash, ficus, etc.
- **Fauna -** The faunal species found in this national park include porcupines, jungle cat, small Indian civet, pangolin, mongoose, wildboar, etc.

Vibrant Fauna of Kasu Brahmananda Reddy National Park

MRUGAVANI NATIONAL PARK

It is **located at Chilkur near Moinabad** mandal in Rangareddy district of Telangana.

- **It was created in the year 1994.** The total area of this park is 3.60 sq km.
- The topography of this park is undulating with rocky exposures of the deccan trap formation.
- **Flora -** The floral species of this park include tropical waterless deciduous forests such as bryophytes, pteridophytes, herbs, shrubs, climbers, etc. The tree species include teak, bamboo, sandal, palash and rela.
- **Fauna -** The faunal species of this national park include panther, cheetah, sambar, wild boar, jungle cat, civet cat, mongoose, monitor lizard, python, russell's viper, cobra, etc.

MAHAVEER HARINA VANASTHALI NATIONAL PARK

It is located in Hyderabad. It was **established in the year 1994 and is named after the great Jain Lord Mahaveera.**

- It has total area of 14.59 sq km.
- **Flora -** The vegetation inside this national park is dry deciduous forest mixed with scrub and grasslands. The main floral species of this national park include sandalwood, rosewood, palash, amaltas, siris, teak, etc.
- **Fauna -** The faunal species of this park include panther, blackbuck, cheetal, wild boar, civet, porcupines, peacock, etc.

NATIONAL PARKS	YEAR	AREA (SQ KM)
Kasu Brahmananda Reddy National Park	1994	1.425
Mrugavani National Park	1994	3.60
Mahaveer Harina Vanasthali National Park	1994	14.59

WILDLIFE SANCTUARIES OF TELANGANA

The largest Wildlife Sanctuary in Telangana is Amrabad Wildlife Sanctuary with an area of 2166.37 sq km and the smallest wildlife sanctuary is Manjira-Crocodile Wildlife Sanctuary with an area of 20 sq km.

PAKHAL WILDLIFE SANCTUARY

It is located in the Warangal district and has an area of 860.00 sq km.

- It was notified as a wildlife sanctuary in the year 1952 under the Wildlife Protection Act, 1972.
- **Flora -** The vegetation of this sanctuary is dry deciduous with mixed forests. The floral species of this sanctuary includes bamboo, mohua (butter tree), tropical almond, pitalsai, etc.

- **Fauna -** The main faunal species found in this sanctuary are marsh crocodile, Indian gaur and tiger. This sanctuary is also home for mammals such as panther, sloth bear, hyena, jackal, fox, etc. and migratory birds like duck, teal, ibis, etc.

POCHARAM WILDLIFE SANCTUARY

It is located in the Medak and Sangareddy districts of Telangana.

- It was **created in the year 1952.** The total area of this sanctuary is 129.84 sq km.
- This sanctuary gets its name from the Pocharam lake **formed after the construction of Pocharam dam on Allair river between 1916 to 1922.**
- **Flora -** The vegetation of this sanctuary is mainly mixed dry deciduous forest with patches of scrub and grassy plains. The floral species of this sanctuary include water thyme, water hyacinths, tape grass or eelgrass, water lettuce, etc.
- **Fauna -** The faunal species of this sanctuary include sloth bear, wild boar, cheetal, sambar, nilgai, chowsingha, chinkara, storks, partridges, quails, etc.
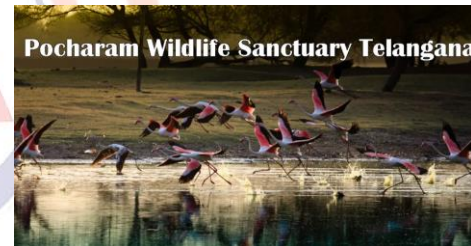
ETURNAGARAM WILDLIFE SANCTUARY

It is located near Eturnagaram village in Mulugu district of Telangana. **This sanctuary is situated on the banks of Godavari River.**

- It **was created in the year 1953.** The total area of the sanctuary is 803 sq km.
- The festival Sammakka Saralamma Jatara is held annually in this sanctuary.
- **Flora -**The vegetation found here is mainly deccan dry deciduous forest, plain forest with open grasslands and riverine forest. The flora of this sanctuary includes bamboo, pitsal, axlewood, charoli nut, etc.
- **Fauna -** The main species of this sanctuary are tiger and gaur. This sanctuary is also home for mammals like leopard, mouse, deer, sloth bear, flying squirrel, giant squirrel, etc. **It also include birds like open billed stock, grey horn bill, etc. and reptiles like marsh crocodile, star backed tortoise, etc.**

KAWAL WILDLIFE SANCTUARY

It is **located at Jannaram mandal in Mancherial district** of Telangana.

Kawal wild life sanctuary

- It **was created as a sanctuary in the year 1965.** It constitutes the core area of the Kawal Tiger Reserve, which has an area of 892.23 sq km.
- The river Kadem flows through this wildlife sanctuary.
- **Flora -** It has one of the richest teak forests in the state, with dense pristine areas free of human disturbance.
- The vegetation inside this sanctuary is dry deciduous reak forests mixed with bamboo, terminalia, axlewood, pitsal, golden shower, etc.
- **Fauna -** The main species found in this sanctuary is tiger and other fauna includes panther, gaur, cheetal, sambar, nilgai, barking deer, etc. and a variety of birds and reptiles.

KINNERASANI WIDLIFE SANCTUARY

It is **located in the Bhadradri Kothagudem district.**

- It was **created as a sanctuary in the year 1977**. It has an area of 635.41 sq km.
- **This sanctuary is named after the river Kinnerasani**.
- This river divides the sanctuary and meets Godavari.
- Kinnerasani lake with densely forested islands is located in the middle of this sanctuary.
- **Flora -** The natural vegetation found in this sanctuary is dry deciduous with teak forest. **The**

floral species of this sanctuary includes bamboo, tropical almond, axlewood, golden shower, etc.

- **Fauna -** The main faunal species in this sanctuary are tiger, panther, gaur, cheetah, chinkara, chowsingha, sambar, etc. and a variety of ground nesting and aquatic birds.

MANJIRA CROCODILE WILDLIFE SANCTUARY

It is **located in the Sangareddy district**. It was created as a sanctuary in the year 1978. It has an area of 20 sq km.

MANJIRA WILDLIFE SANCTUARY

- **There is a man-made reservoir inside this sanctuary**, which is home to aquatic birds and marsh crocodiles.
- **There are 9 small, beautiful islands such as Bapangadda, Sangamadda, Puttigadda, Karnamgadda, etc. together form the Manjira wildlife and bird sanctuary.**
- **Flora -** The floral species of this sanctuary include morning glory, babool, wattle, seawrack, water hyacinths, reeds, etc.
- **Fauna -** The faunal species of this sanctuary include marsh crocodile, fresh water turtles and a variety of aquatic birds like herons, storks, teals, ducks, geese, kingfishers, etc.

AMRABAD WILDLIFE SANCTUARY

It is **located in the Nagarkurnool and Nalgonda districts** in the state of Telangana.

- It **was created in the year 1978**.
- It constitutes the core area of the amrabad tiger reserve and has an area of 2,166.37 sq km.
- **Flora –** the vegetation found here is mainly dry deciduous forests mixed with teak forests and grasslands.
- **The floral species of this sanctuary includes bamboo, teak, rosewood, Indian kino, etc.**
- **Fauna -** The main species of this sanctuary include tiger, wild boar, sloth bear, Indian fox, mouse deer indian wolf, leopard, etc.

LANJA MADUGU SIWARAM WILDLIFE SANCTUARY

It is **located in the Mancherial and Peddapalli districts in** the state of Telangana with an area of 29.81 sq kms.

- It was **originally notified for the conservation of marsh crocodiles under Hyderabad Fasli Act, 1952.**
- It was later declared as Wildlife Sanctuary on 20th May, 1978, under the Wildlife Protection Act, 1972.
- **Flora -** Tropical dry mixed deciduous forests with thorny shrubs is the natural vegetation of this wildlife sanctuary. **The flora of this sanctuary includes tropical almond, teak, bamboo, etc.**
- **Fauna -** The faunal species of this sanctuary include Indian leopards, sloth bears, nilgai, blackbucks, South African cheetahs, pythons, langurs, etc.

PRANHITA WILDLIFE SANCTUARY

It is located in Adilabad district. It was created in the year 1980. The total area of this sanctuary is 136.03 sq km.

Animals of Pranahita Wildlife Sanctuary

- The Pranhita River flows through this sanctuary on its East direction.
- **Flora -**This sanctuary is rich in natural vegetation and different types of plant and trees can be found here including shisham, beete or sitsal, fig trees, venkai, etc.
- **Fauna -** The faunal species in this sanctuary include leopards, rhesus, tigers, langurs, hyenas, sloth bear, wild dogs, forest cat, etc.

TIGER RESERVES OF TELANGANA

The state Telangana has two tiger reserves namely Kawal Tiger Reserve and Amrabad Tiger Reserve.

KAWAL TIGER RESERVE

It is located at **Jannaram mandal of Mancherial district** in the state.

- It was **created in the year 2012.**
- The **total area of this reserve is 2015.44 sq km.**
- This reserve has forest areas, which are **closest to Tadoba Andheri Tiger Reserve in Maharashtra and Indravati Tiger Reserve in Chhattisgarh.**

AMRABAD TIGER RESERVE

The Amrabad Tiger Reserve is **spread over Nagarkunool and Nalgonda districts** with a total area of 2611.39 sq km.

- This reserve was **earlier a part of Nagarjuna Sagar**
- Srisailam Tiger Reserve (NSRT), but after bifurcation, the Northern part of the reserve is vested with Telangana and renamed as Amrabad Tiger Reserve.
- **It was declared as a tiger reserve in the year 2015.**
- This forest tract is **home to the largest number of tigers in the state of Telangana.**
- This reserve is a part of the Nallamala forests tract, has rich biological diversity with several endemic species of flora and fauna.

ANDHRA PRADESH

NATURAL VEGETATION IN ANDHRA PRADESH

Forests in Andhra Pradesh are crucial for the state's economic development and ecological stability.

The state is considered one of the richest in biodiversity in India, with forests covering a significant portion of its mountainous regions.

GEOGRAPHICAL ZONES

- Andhra Pradesh is located in East Central Peninsular India and comprises three main geographical zones: **the Coastal Plains, the Eastern Ghats, and the Deccan Plateau.**
- Forests in the state are predominantly located in mountainous areas, stretching from **Simhachalam in the north to the Sheshachalam, Palakonda, Nallamala hills in the south, and the Balaghat hills in the west.**

Biodiversity:

- The state is endowed with a rich variety of ecosystems, habitats, and a wealth of biodiversity, making it a storehouse of unique flora and fauna.
- Mangrove forests are a significant component of the state's vegetation, especially in coastal areas.

Tribal Communities:

- Tribal communities in Andhra Pradesh have historically relied on forests for their livelihoods, engaging in activities such as shifting cultivation (podu) and forest product collection.
- The majority of forest areas are located in the northern part of the state, predominantly in tribal districts.

FOREST COVER

According to the India State of Forest Report, 2021, Andhra Pradesh has a **total geographical area of 1,62,970 sq km**, with 29,784.30 sq km (18.28%) covered by forests.

The Recorded Forest Area (RFA) in the state is 37,258 sq km, **ranking it 8th in India.**

Districts with Maximum Forest Cover:

- **East Godavari:** 5,121 sq km
- **YSR Kadapa:** 4,376 sq km
- **Visakhapatnam:** 3,773 sq km
- **Prakasam:** 3,333 sq km
- **West Godavari:** 3,273 sq km

District with Minimum Forest Cover:

- **Krishna district:** 663.76 sq km

FOREST COVER OF ANDHRA PRADESH (in sq km)		
Class	Area	% of GA
Very Dense Forest (VDF)	1,994.28	1.22
Moderately Dense Forest (MDF)	13,928.75	8.55
Open Forest (OF)	13,861.27	8.51
Total	29,784.30	18.28
Scrub	8,276.09	5.08

INDIA
Natural Vegetation

Tropical Evergreen Forest
Tropical Deciduous Forest
Montane Forests
Mangrove Forest
Tropical Thom Forest
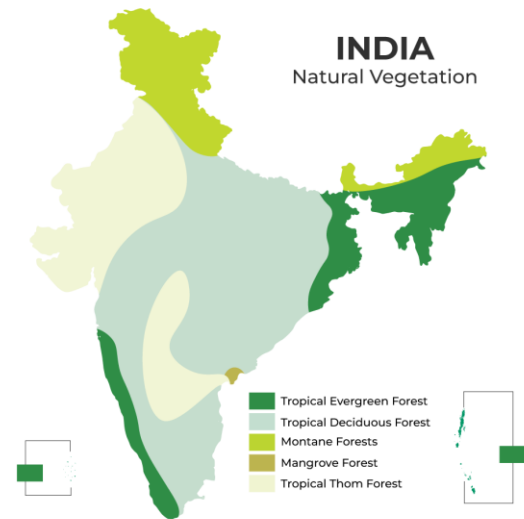
CLASSIFICATION OF FORESTS IN ANDHRA PRADESH

Forests are classified into two categories in the state, which are as follows

ON THE BASIS OF ADMINISTRATION

Forests are classified into three groups on the basis of administration, which are as follows

1. Reserved Forests

- These forests are **completely controlled by the State Government.**
- Cutting of trees and grazing of animals is completely prohibited in these forests.
- The **reserved forests constitute 85.78%** of the total area of Andhra Pradesh.

2. Preserved Forests

- These forests are also controlled by the government but unlike reserved forest, the local **people are allowed to collect fuel-wood, timber and graze their cattle in the forest.**
- The preserved forests **constitute 13.60%** of the total area of Andhra Pradesh.

3. Unclassed Forests

- These forests are not yet classified.

- There are no restrictions on the cutting of trees and grazing of cattle in these forests.
- The **unclassed forests make up 0.62%** of the total area of Andhra Pradesh.

ON THE BASIS OF SPECIFIC CHARACTERISTICS

Generally, the forests found in the state on the basis of some characteristics are divided into seven types, which are as follows

1. Moist Deciduous Forests

- Moist Deciduous forests are the most prevalent in Andhra Pradesh, **making up over 40% of the state's total forest area.**

- These trees are located in the Eastern and Central parts of the state, which **receive an average rainfall between 125 cm to 200 cm annually.**
- The important trees that grow in these forests are teak, vegi, madhi, jittegi, bandaru, sal, billu, karaka, chirumanu, etc.
- These forests spread mostly in **Srikakulam, Visakhapatnam, and areas of Alluri Sitharama Raju and East Godavari districts.**

2. Dry Deciduous Forests

- Dry Deciduous forests are the second largest forest type in Andhra Pradesh, **making over 34% of the state's total forest area.**

- Most of these trees are found in the South and West regions of Andhra Pradesh, which **receive an average of 70 cm to 100 cm of rain annually.**
- The important trees that grow in these forests are velaga, chiguru, dirisena, neem, egisa, maddi, boorugu, teak, timber, etc.

- These **forests spread mostly in YSR Kadapa and Kurnool districts.**

3. Tropical Thorn Forests

- Tropical Thorn forests may be found in Northern and Western regions of Andhra Pradesh, **making up about 15% of the state's total forested area.**

- **Thorny bushes and trees are the predominant species in these forests, with 40 cm to 70 cm annual rainfall.**
- The important trees that grow in these forests are thumma, balusuregu and chandra, etc.
- These forests spread mostly in YSR Kadapa, Kurnool, Chittoor, Annamayya and Ananthapur districts.

4. Moist Mixed Deciduous Forests

- Moist Mixed Deciduous Forests, making up about **2% of the state's total forest area.**

- These forests are located in the regions of Eastern Ghats of Andhra Pradesh, which **receives an average of 90 cm to 120 cm annual rainfall.**
- The predominant vegetation in these forests includes species including teak, terminalia and bamboo.
- These forests **spread mostly in Papikonda hills and Nallamala hills of Eastern ghats.**

5. Dry Mixed Deciduous Forests

- These **forests comprise around 4% of the Andhra Pradesh's total forest area.**
- These forests are found in Southern and South-East region of Andhra Pradesh, which **receives an average of 90 cm to 110 cm annual rainfall.**

- These forests spread mostly in Prakasam and YSR Kadapa districts.

6. Sea Coast Forests

- These forests are located in the sea coastal region of the state.

- The important trees that grow in these forests are evergreen small bushes, chamanthi, balabandi theega, sarugudu trees, mogali, etc.
- These forests spread mostly in **Srikakulam, Visakhapatnam, Kakinada, West Godavari and SPS Nellore districts.**

7. Tidal Forests

- These forests are located in the sea coastal region of the state, in the areas that **consist salt layer, alluvium clay and mud at the merging places of river into sea.**

- These forests are continuously affected by tides hence these are known as tidal forests.
- The important trees that grow in these forests are salt ponna, boddu ponna, urada, mada, gundumada, etc.
- These forests spread mostly in **Srikakulam, Visakhapatnam, Konaseema, West Godavari, Krishna and SPS Nellore districts.**

ANDHRA PRADESH FOREST DEPARTMENT

The Andra Pradesh Forest Department (APFD) came into existence on 1st November 1956 with the formation of a separate state of Andhra Pradesh.

- Earlier, it was part of Madras state during the British era as well as post-independence.

- The **APFD was headed by Sri Daulat Rai (1956-60), who was the first Chief Conservator of Forests.**
- On 2nd June 2014, after the bifurcation of Andhra Pradesh. **The APFD also got divided with Sri AV Joseph IFS (2014-15) as the first Principal Chief Conservator of Forests and Head of Forest Force.**
- The department has taken initiatives to make use of modern tools of geomatics, as envisaged in the National Forest Policy, 1988.
- **There are 6 centers of Forest Research and Development in Andhra Pradesh under the control of 2 research divisions located at Rajahmundry and Tirupati districts**.

> **ANDHRA PRADESH FOREST DEVELOPMENT CORPORATION**

Andhra Pradesh Forest Development Corporation (APFDC) was formed in 1974, after the recommendations of the National Agricultural Commission.

It **regulates the sale of forest products in the state** include timber, bamboo, red sanders, firewood and charcoal, etc.

FOREST PROTECTION AND PRESERVATION BODIES IN ANDHRA PRADESH

> **CAMPA**

The Compensatory Afforestation Fund Management and Planning Authority **(CAMPA) has been constituted by the Ministry of Environment and Forests, Government of India through an order on 23rd April, 2004** in pursuance of the Supreme Court order on 30th October, 2002.

- The CAMPA has been constituted for the purpose of management of money collected towards
- Compensatory Afforestation, Net Present Value and any other money recoverable in pursuance of the Supreme **Court order in this regard.**
- **The Ministry of Environment and Forests, Government of India have issued guidelines for operating the funds under State CAMPA on 2nd July, 2009.**
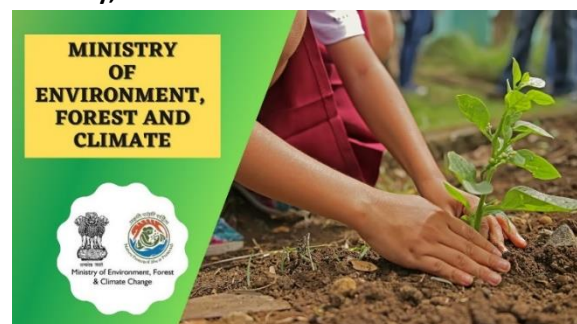
- The Government of **Andhra Pradesh in 2018 established AP State Compensatory Afforestation**

Fund and AP State CAMPA in pursuance of the Compensatory Afforestation Fund Act, 2016 and Compensatory Afforestation Fund Rules, 2018 to manage the affairs of AP State CAMPA.

- AP State CAMPA consists of a Governing Body and shall be assisted by the Steering Committee and an Executive Committee.

- The Governing body under the Chairmanship of the Chief Minister shall lay down the broad policy framework for the functioning of State level CAMPA and review its working from time to time.

- The **State Steering Committee under the Chairmanship of the Chief Secretary to Government shall approve the Annual Plan of Operations (APO)** and lay down the rules and procedures for the functioning of its Executive Committee.

- The State Executive Committee under the Chairmanship of the Principal Chief Conservator of Forests shall prepare the Annual Plan of Operations and oversee its implementation after its due approval.

STATE FOREST DEVELOPMENT AGENCY

The State Forest Development Agency (SFDA) is a registered society under the Andhra Pradesh Societies Registration Act, 2001 and functions as a federation of Forest Development Agencies (FDAs).

- The FDAs are constituted at Territorial/Wildlife Forest division level. **There are 22 FDAs in the state of Andhra Pradesh.**

- The SFDA undertakes all core and allied activities involving policy support, programme implementation, project execution, etc that are required for regeneration, development and/or management of notified forests.

- The major schemes implemented through SPDA are those under the **National Afforestation Programme (NAP), National Green India Mission (GIM) and National Medicinal Plants Board (NMPB).**

- In addition to forestry and allied activities, the SFDA also promotes development of forest-dependent or forest fringe village populations so as to secure their willing and proactive cooperation in enhancing the green cover in the state of Andhra Pradesh.

- **The proposals formulated by the FDAs are forwarded to the SFDA, which in turn, scrutinises and approves the proposals. The approved**

plans/schemes executed by the FDAs are monitored by the SFDA at the state level.

AFFORESTATION PROGRAMMES AND SCHEMES IN ANDHRA PRADESH

NATIONAL AFFORESTATION PROGRAMME

A National Afforestation Programme (NAP) was launched in 2002, involving plantation in the country's degraded forests.

- The Ministry of Environment, Forest and Climate Change **(MOEFCC), Government of India is implementing plantation/afforestation schemes** in the forest areas with participatory approach.

- The overall **objective of the National Afforestation Programme (NAP) scheme is ecological restoration of degraded forests and to develop the forest resources with peoples participation**, with focus on improvement in livelihoods of the forest-fringe communities, especially the poor.

- The scheme is implemented by three tier institutional setup through the **State Forest Development Agency (SFDA) at the state level, Forest Development Agency (FDA)** at the forest division level and Joint Forest Management Committees (JFMCs) at village level.

FOREST FIRE PREVENTION AND MANAGEMENT SCHEME

The Forest Fire Prevention and Management Scheme (FFPM) was launched by replacing the Intensification of Forest Management Scheme (IFMS) in 2017.

- The Forest Fire Prevention and Management Scheme (FPM) is the **only centrally funded program specifically dedicated to assist the states in dealing with forest fires.**

- **Funds allocated** under the FFPM are according to a center-state cost-sharing formula, with a **90:10 ratio of central to state funding in the North-East and Western Himalayan regions, and a 60:40 ratio for all other states.**

- The **most severely forest fire** affected areas in the state are **Tirupati, Visakhapatnam, Kurnool, Rajahmundry and parts of Srisailam forest area.**

- A state level "forest fire monitoring cell" is established at head office to monitor (24 × 7) forest fires during summer season.

UNION BUDGET 2024-2025

CONCEPT OF BUDGET

A budget is an annual financial plan detailing expected income and expenditures over a specific period, typically one year. It serves as a strategic tool for managing financial resources, guiding economic decisions, and setting financial goals.

OBJECTIVES OF A BUDGET

- **Resource Allocation:** Ensures efficient use of available resources to meet various financial needs and goals.
- **Fiscal Management:** Aids in controlling government spending and managing public funds responsibly.
- **Economic Planning:** Supports the implementation of economic and social policies by forecasting and planning expenditures and revenues.
- **Risk Assessment:** Identifies potential economic risks and opportunities, enabling informed decision-making.
- **Accountability:** Provides a framework for monitoring and evaluating financial performance and adherence to financial goals.

CONSTITUTIONAL PROVISIONS RELATED TO THE BUDGET

ARTICLE 112: Annual Financial Statement

- The President is required to present an annual financial statement to both Houses of Parliament. This statement outlines the estimated receipts and expenditures of the Government of India for the fiscal year.

ARTICLE 113: Demand for Grants

- No request for government grants can be made without the President's recommendation, ensuring that all expenditure proposals are officially endorsed before being considered.

ARTICLE 114: Consolidated Fund Authorization

- Withdrawal of funds from the Consolidated Fund of India (CFI) must have parliamentary authorization, ensuring that all financial outflows are legally sanctioned.

ARTICLE 266: Consolidated Fund and Public Account

- All government revenues are deposited into the Consolidated Fund of India. Other public funds, such as those from provident funds or postal insurance, are credited to the Public Account of India.

ARTICLE 267: Contingency Fund

- Parliament may establish a Contingency Fund of India to address unforeseen expenditures, providing a financial buffer for unexpected needs.

DIFFERENCE BETWEEN EXPENDITURE CHARGED UPON CFI AND EXPENDITURE MADE FROM CFI

Expenditure Charged Upon CFI

- Parliamentary Approval: Does not require prior parliamentary approval. However, Parliament can discuss the estimates of this expenditure.
- Purpose: Aims to protect the independence and functioning of specific institutions and bodies.
- Examples: Salaries and allowances of the President, Vice-President, Speaker, Comptroller and Auditor General (CAG), Supreme Court judges, and pensions of High Court judges.

Expenditure Made from CFI

- Parliamentary Approval: Requires parliamentary approval. Expenditure is made only after being voted on by Parliament through demand for grants.
- Purpose: Regular government spending that requires legislative scrutiny and approval.
- Examples: General government spending on various programs and services, as outlined in the budget and approved through parliamentary procedures.

COMPONENTS OF BUDGET:

It consists of two main components: **Revenue Budget and Capital Budget.**
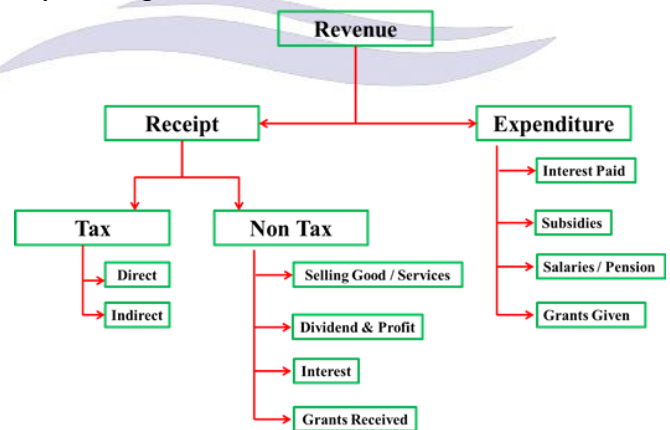
Revenue Budget:

- **Revenue Receipts:** Includes tax revenues (income tax, GST) and non-tax revenues (interest, dividends).
- **Revenue Expenditure:** Covers day-to-day operational expenses like salaries, subsidies, and interest payments.

Capital Budget:

- **Capital Receipts:** Comprises loans, disinvestment proceeds, and recoveries of loans.
- **Capital Expenditure:** Involves spending on assets like infrastructure, education, and health, which leads to long-term economic benefits.

SUMMARY OF THE UNION BUDGET 2024-25

The Interim Budget highlights four key groups: the poor (Garib), women (Mahilayen), youth (Yuva), and farmers (Annadata).

Budget Theme:

- The Union Budget 2024-25 focuses on promoting employment, skill development, support for Micro, Small, and Medium Enterprises (MSMEs), and strengthening the middle class.
- A notable allocation of ₹1.48 lakh crore is dedicated to education, employment, and skill enhancement.

BUDGET PRIORITIES:

The budget emphasizes nine critical areas: agriculture, employment, human resource development, manufacturing, services, urban development, energy security, infrastructure, and innovation, including research and next-generation reforms.

PRIORITY 1: PRODUCTIVITY AND RESILIENCE IN AGRICULTURE

- **Agricultural Research:** Comprehensive review to enhance productivity. Release of 109 new high-yielding, climate-resilient varieties of 32 field and horticulture crops.
- **Natural Farming:** Initiate 1 crore farmers into natural farming with certification and branding over the next two years.
- **Bio-Input Resource Centres:** Establish 10,000 need-based centres.
- **Self-Sufficiency in Pulses and Oilseeds:** Strengthen production, storage, and marketing for pulses and oilseeds (mustard, groundnut, sesame, soybean, sunflower).

- **Digital Public Infrastructure (DPI):** Facilitate DPI implementation for farmers and their lands within 3 years.
- **Budget Allocation:** ₹1.52 lakh crore allocated for the agriculture and allied sector.

PRIORITY 2: EMPLOYMENT & SKILLING

Employment Linked Incentive Schemes:

- Three schemes based on enrolment in the EPFO.
- Focus on recognizing first-time employees and supporting both employees and employers.

Higher Participation of Women in Workforce:

- Setting up working women hostels in collaboration with industry.
- Establishing creches to support working women.

Skilling Programme:

- New centrally sponsored scheme for skilling in collaboration with state governments and industry.
- Aims to skill 20 lakh youth over a 5-year period.
- Upgrading 1,000 Industrial Training Institutes in a hub and spoke arrangement with an outcome-oriented approach.

Model Skill Loan Scheme:

- Revision of the scheme to facilitate loans up to ₹7.5 lakh with a government-promoted Fund guarantee.
- Expected to help 25,000 students every year.

Financial Support for Higher Education:

- Loans up to ₹10 lakh for higher education in domestic institutions.
- E-vouchers for annual interest subvention of 3% of the loan amount to be given directly to 1 lakh students every year.
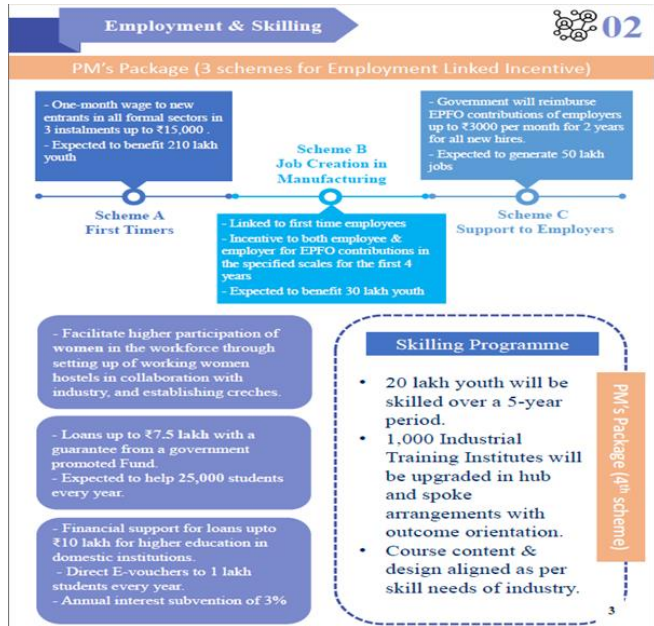
PRIORITY 3: INCLUSIVE HUMAN RESOURCE DEVELOPMENT AND SOCIAL JUSTICE

Saturation Approach:

- Enhance implementation of schemes supporting economic activities for craftsmen, artisans, self-help groups, SC/ST communities, women entrepreneurs, and street vendors, including PM Vishwakarma, PM SVANidhi, National Livelihood Missions, and Stand-Up India.

Purvodaya:

- Develop a plan for the eastern region (Bihar, Jharkhand, West Bengal, Odisha, Andhra Pradesh) focusing on human resource development, infrastructure, and economic opportunities to drive regional growth.
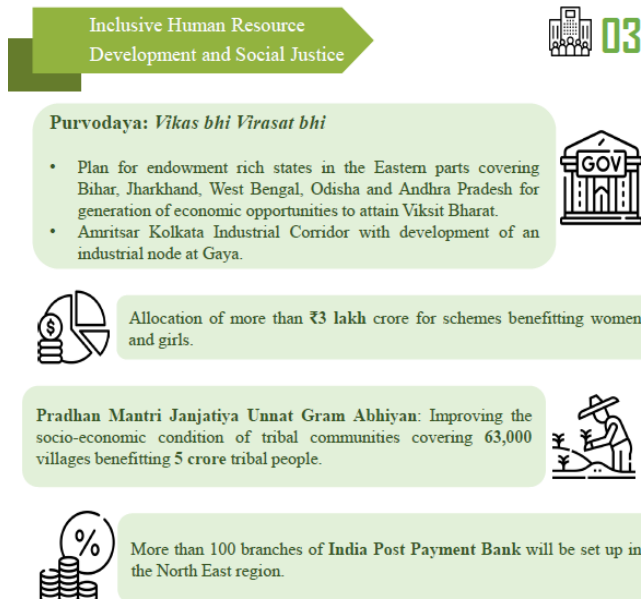
Pradhan Mantri Janjatiya Unnat Gram Abhiyan:

- Launch a scheme to improve socio-economic conditions of tribal communities with saturation coverage in 63,000 villages and benefit 5 crore tribal people.

Banking Expansion:

- Establish over 100 branches of India Post Payment Bank in the North East to enhance banking services.

Budget Allocation:

- ₹2.66 lakh crore allocated for rural development and infrastructure.

PRIORITY 4: MANUFACTURING & SERVICES:

Support for MSMEs:

- A self-financing guarantee fund will offer up to ₹100 crore guarantee cover to each applicant.
- Public sector banks will develop in-house capabilities to assess MSMEs for credit, bypassing external assessments.
- A new mechanism will support the continuation of bank credit to MSMEs during financial stress.

Mudra Loans:

- Loan limits will be increased to ₹20 lakh from ₹10 lakh for entrepreneurs who have successfully repaid previous loans under the 'Tarun' category.
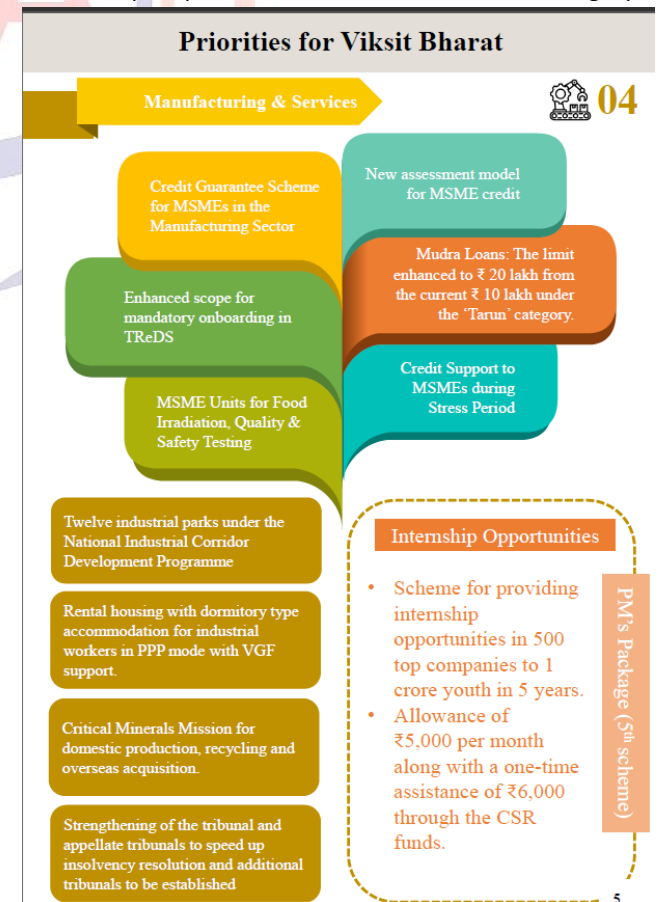
MSME Units for Food Irradiation and Testing:

- Financial support will be provided for 50 multi-product food irradiation units.
- 100 food quality and safety testing labs with NABL accreditation will be set up.
- E-Commerce Export Hubs will be established in PPP mode to help MSMEs and artisans access international markets.

Internship Opportunities:

- A scheme will be launched to provide internship opportunities in 500 top companies to 1 crore youth over 5 years.

PRIORITY 5: URBAN DEVELOPMENT: KEY INITIATIVES

- **Urban Housing:** PM Awas Yojana Urban 2.0 will address the housing needs of 1 crore urban poor and middle-class families with an investment of ₹10 lakh crore, including central assistance of ₹2.2 lakh crore over 5 years.
- **Water Supply and Sanitation:** The government will collaborate with State Governments and Multilateral Development Banks to promote water supply, sewage treatment, and solid waste management projects for 100 large cities through bankable projects.
- **PM SVANidhi:** The government plans to develop 100 weekly 'haats' or street food hubs in select cities each year over the next five years, building on the success of the PM SVANidhi Scheme for street vendors.

PRIORITY 6: ENERGY SECURITY

- **PM Surya Ghar Muft Bijli Yojana:** Launched to install rooftop solar plants for 1 crore households, providing free electricity up to 300 units per month. The scheme has seen over 1.28 crore registrations and 14 lakh applications.

- **Nuclear Energy:** Expected to play a significant role in the energy mix for Viksit Bharat.

PRIORITY 7: INFRASTRUCTURE

Investment in Infrastructure:

- The Central Government will maintain strong fiscal support for infrastructure over the next 5 years, with an allocation of ₹11,11,111 crore for capital expenditure, representing 3.4% of GDP.

Pradhan Mantri Gram Sadak Yojana (PMGSY):

- Phase IV will be launched to provide all-weather connectivity to 25,000 rural habitations with increased population.

**Irrigation and Flood Mitigation in Bihar:**

- Financial support of ₹11,500 crore will be provided for projects including the Kosi-Mechi intra-state link and other schemes for barrages, river pollution abatement, and irrigation.

Assistance to Other States:

- Support will be extended to Assam, Himachal Pradesh, Uttarakhand, and Sikkim for flood management, landslides, and related projects.

PRIORITY 8: INNOVATION, RESEARCH & DEVELOPMENT: KEY INITIATIVES
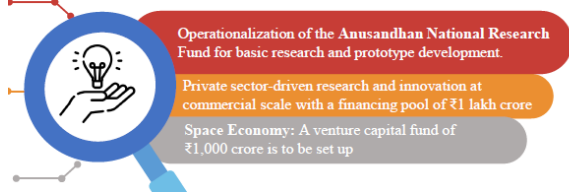
Anusandhan National Research Fund:

- Operationalization of the fund for basic research and prototype development.
- A ₹1 lakh crore financing pool will be established to support private sector-driven research and innovation.

Space Economy:

- A venture capital fund of ₹1,000 crore will be set up to expand the space economy fivefold over the next 10 years.

PRIORITY 9: NEXT GENERATION REFORMS:

Economic Policy Framework:

- An Economic Policy Framework will be developed to guide economic development and outline the next generation of reforms aimed at increasing employment opportunities and sustaining high growth.

Labour-Related Reforms:

- The government will enhance services for labour, including employment and skilling, through the integration of the e-shram portal with other platforms for a one-stop solution.
- Shram Suvidha and Samadhan portals will be revamped to improve ease of compliance for industry and trade.

TAX RELATED PROPOSALS

INDIRECT TAXES: GST

- Expansion to remaining sectors to simplify and rationalize tax structure.

SECTOR SPECIFIC CUSTOMS DUTY PROPOSALS

Medicines and Medical Equipment

- Full exemption on custom duty for three cancer drugs: TrastuzumabDeruxtecan, Osimertinib, and Durvalumab.

- Changes in Basic Customs Duty (BCD) for x-ray tubes & flat panel detectors used in medical x-ray machines.

Mobile Phones and Related Parts

- BCD on mobile phones, Printed Circuit Board Assembly (PCBA), and chargers reduced to 15%.

Precious Metals

- Customs duty on gold bars reduced from 15% to 6%.
- Gold dore reduced from 14.355% to 5.35%.
- Silver bars reduced from 14.35% to 6%.
- Silver dore reduced from 14.35% to 5.35%.
- **Platinum:** Customs duty reduced from 15.4% to 6.4%.
- **Impact:** Significant reduction in duty aims to reduce smuggling and support domestic value addition. Expected annual revenue loss of ₹28,000 crore based on FY24 import levels.

Other Metals

- BCD removed on ferro nickel, blister copper, ferrous scrap, and nickel cathode.
- Concessional BCD of 2.5% on copper scrap.

Electronics

- BCD removed on oxygen-free copper for resistor manufacturing.

Chemicals and Petrochemicals

- BCD on ammonium nitrate increased from 7.5% to 10%.

Plastics

- BCD on PVC flex banners increased from 10% to 25%.

Telecommunication Equipment

- BCD increased from 10% to 15% on PCBA of specified telecom equipment.

Trade Facilitation

- Time period for export of goods imported for repairs extended from six months to one year.
- Time-limit for re-import of goods for repairs under warranty extended from three to five years.

Critical Minerals

- 25 critical minerals fully exempted from customs duties.
- BCD on two critical minerals reduced.

Solar Energy

- Capital goods for solar cells and panels manufacturing exempted from customs duty.

Marine Products

- BCD on certain broodstock, polychaete worms, shrimp, and fish feed reduced to 5%.

- Various inputs for shrimp and fish feed manufacturing exempted from customs duty.

Leather and Textile

- BCD reduced on real down filling material from duck or goose.
- BCD reduced on methylene diphenyl diisocyanate (MDI) for spandex yarn manufacturing from 7.5% to 5%.

DIRECT TAXES

- Simplification and Revenue Enhancement
- Continued efforts to simplify taxes, improve taxpayer services, provide tax certainty, and reduce litigation.
- 58% of corporate tax revenue from simplified tax regime in FY23; over two-thirds of taxpayers used simplified personal income tax regime in FY24.

Simplification in Taxes: Review of Income Tax Act 1961 | Simplification of charities and TDS | Litigation and Appeal | Deepening the tax base

Simplification for Charities and TDS

- Merger of two tax exemption regimes for charities.
- Reduction of 5% TDS rate on many payments to 2%.
- Withdrawal of 20% TDS rate on repurchase of mutual fund or UTI units.
- Reduction of TDS rate on e-commerce operators from 1% to 0.1%.
- Decriminalization of delayed TDS payment up to the filing date.

Simplification of Reassessment

- Assessment reopening extended to five years if escaped income is ₹50 lakh or more.
- In search cases, time limit reduced from ten to six years.

Rationalisation of Capital Gains

- **Short-Term Gains:** Taxed at 20% for certain financial assets; other assets continue at 15%.
- **Long-Term Gains:** Taxed at 12.5% for all financial and non-financial assets. (Listed financial assets held over a year are classified as long-term)
- Unlisted financial assets and non-financial assets must be held for at least two years to qualify as long-term.
- **Exemption Limit:** Exemption limit for capital gains on certain financial assets increased to ₹1.25 lakh per year.

- **Unlisted Assets:** Unlisted bonds, debentures, debt mutual funds, and market-linked debentures will attract capital gains tax based on the holding period and applicable rates.
- **Impact:** Reduction in capital gains tax for Indian founders and promoters, while foreign investors face increased tax rates.
- Simplification expected to reduce volatility, raise tax revenue, and encourage long-term investment.

Angel Tax Abolished for Foreign Investments in Start-ups

- Central government scrapped the angel tax on foreign investments in start-ups.
- Purpose: To support the Indian start-up ecosystem, boost entrepreneurship, and foster innovation.

Reporting of Foreign Assets:

- No penalty for not reporting movable assets up to ₹20 lakh, addressing concerns for Indian professionals with foreign assets.

Tax Payer Services

- Digitalization of remaining Customs and Income Tax services over the next two years.

Litigation and Appeals

- Introduction of 'Vivad Se Vishwas Scheme, 2024' for income tax dispute resolution.
- Increased monetary limits for filing appeals in Tax Tribunals, High Courts, and Supreme Court.

Employment and Investment

- Simpler tax regime for foreign shipping companies to promote cruise tourism.

- Reduced corporate tax rate for foreign companies from 40% to 35%.
- Safe harbour rates for foreign mining companies selling raw diamonds.

Deepening Tax Base

- Increased Security Transactions Tax on futures and options to 0.02% and 0.1% respectively.
- Taxation of income received on buyback of shares.

Social Security Benefits

- Increased employer deduction for NPS contributions from 10% to 14% of employee's salary.
- Decriminalization for non-reporting of small movable foreign assets up to ₹20 lakh.

Other Major Proposals

- Withdrawal of 2% equalization levy.

Revised Personal Income Tax Slabs

- The income slab of ₹3-6 lakh is revised to ₹3-7 lakh, with the tax rate remaining at 5%.
- No changes for income below ₹3 lakh, between ₹12-15 lakh, or above ₹15 lakh.

Tax slabs: Old and new

Slab (₹)	Existing tax rates	New tax rates
0-2.5 lakh	Exempt	Exempt
2.5-5 lakh	5%	5%
5-7.5 lakh	20%	10%
7.5-10 lakh	20%	15%
10-12.5 lakh	30%	20%
12.5-15 lakh	30%	25%
Above 15 lakh	30%	30%

Savings and Deductions:

- Salaried individuals can save up to ₹17,500 in taxes.
- Standard deduction increased to ₹75,000 from ₹50,000.
- Deduction for family pension increased from ₹15,000 to ₹25,000.

New Tax Regime:

- Measures aim to benefit about 4 crore salaried individuals and pensioners and promote the new tax regime.

Diamond Industry:

- Safe-harbour rates proposed for foreign mining companies selling raw diamonds in India to support the diamond cutting and polishing sector.

Tax Relief and Revised Tax Slabs in New Tax Regime

0-3 lakh rupees	Nil
3-7 lakh rupees	5 per cent
7-10 lakh rupees	10 per cent
10-12 lakh rupees	15 per cent
12-15 lakh rupees	20 per cent
Above 15 lakh rupees	30 per cent

- Income tax saving of up to ₹ 17,500/- for salaried employee in new tax regime

Income Tax Relief for around Four Crore Salaried Individuals and Pensioners

- Standard deduction for salaried employees to be increased from ₹ 50,000/- to ₹75,000/-
- Deduction on family pension for pensioners to be increased from ₹ 15,000/- to ₹ 25,000/-

CREDIT SUPPORT FOR MSMES AND MUDRA LOAN LIMIT INCREASE

Credit Guarantee Scheme:

- A new scheme will provide credit guarantees up to ₹100 crore for MSMEs, facilitating term loans for equipment purchases without collateral.
- A self-financing guarantee fund will back these loans, requiring an upfront and annual guarantee fee.

Public Sector Banks:

- Banks will develop in-house credit assessment capabilities based on MSME digital footprints to include those without formal accounting systems.

Mudra Loans:

- Loan limit increased to ₹20 lakh from ₹10 lakh for borrowers who have repaid previous loans under the 'Tarun' category.

E-Commerce Export Hubs:

- Public-private-partnerships will establish export hubs to help MSMEs and traditional artisans sell products internationally.

Energy Audit and Support:

- Investment-grade energy audits will be conducted in 60 clusters, with financial support for transitioning to cleaner energy.

Rental Housing for Industrial Workers:

- Rental housing with dormitory-style accommodation for industrial workers will be facilitated through public-private partnerships.

HEALTH SECTOR ALLOCATION

Cancer Drugs:

- Customs duty exempted for Trastuzumab Deruxtecan, Osimertinib, and Durvalumab.

Medical Equipment:

- Changes in Basic Customs Duty (BCD) on X-ray tubes and flat panel detectors for medical X-ray machines.

Health Sector Budget:

- Total health sector outlay increased to ₹89,287 crore, up from ₹79,221 crore in the previous budget, but remains below the 2% mark of total expenditure.
- Allocation for the Health Ministry increased to ₹90,958.63 crore.
- Allocation for the Ayush Ministry increased from ₹3,000 crore to ₹3,712.49 crore.

Anusandhan National Research Fund:

- Operationalization planned with a ₹1 lakh crore financing pool to support basic research and prototype development.

Healthcare Sector Reaction:

- Calls for increasing GDP spend on healthcare to 2.5%, prioritizing healthcare as a national issue, and rationalizing GST among other long-standing demands.

FARMING BUDGET ALLOCATION AND SUBSIDY CUTS

Agriculture allocation stagnates

In FY25BE, allocation to agriculture remained stagnant at around 3.1% of the total budget. Allocation to the flagship schemes — PMFBY and PM-KISAN — declined in FY25BE

Year	Agriculture#	PMFBY^	PMKISAN*
FY17	2.54	0.56	
FY18	2.46	0.44	
FY19	2.73	0.52	0.05
FY20	4.19	0.47	1.81
FY21	3.83	0.40	1.74
FY22	3.78	0.36	1.76
FY23	3	0.25	1.39
FY24RE	3.13	0.33	1.34
FY25BE	3.15	0.3	1.24

^Scheme to stabilise farmers' incomes by providing comprehensive insurance cover against the failure of crops

*Aims to provide farmers from lower income groups with a payment of ₹6,000 in three quarterly instalments of ₹2,000

Overall Allocation:

- ₹1.52 lakh crore allocated for farming and allied sectors.
- Allocation for the Department of Agriculture and Farmers Welfare increased to ₹1,22,528.77 crore from ₹1,16,788.96 crore in the previous budget.

Fertilizer Subsidies:

- Allocation reduced to ₹1,64,150.81 crore from ₹1,88,947.29 crore, representing a 34.7% cut from the previous fiscal year.
- Actual expenditure in 2022-23 was ₹2,51,369.18 crore.

Food Subsidies:

- Allocation decreased to ₹2,13,019.75 crore from ₹2,21,924.64 crore, with actual expenditure in 2022-23 being ₹2,83,744.53 crore.

Major Announcements:

- Digital Public Infrastructure for Agriculture and a digital crop survey of kharif crops in 400 districts.
- Introduction of 109 new high-yielding and climate-resilient crop varieties.

- Certification and branding support for natural farming for one crore farmers over the next two years.
- Financial support for setting up Nucleus Breeding Centres for shrimp broodstocks through NABARD.

CUSTOMS DUTY REDUCTIONS AND ADJUSTMENTS

Duties Reduced:

- Basic customs duty on mobile phones, chargers, and printed circuit board assemblies (PCBAs) reduced from 20% to 15%.
- Duties on rare earth metals, lithium, copper, and cobalt reduced or eliminated.
- Duties on "oxygen free copper for manufacture of resistors" completely eliminated.
- **Duties Raised:** Duties on PCBAs intended for telecom equipment increased from 15% to 20% to encourage domestic manufacturing.
- **Exemptions:** Inputs for connectors used in transistors exempted from duties.
- **Industry Reaction:** Positive response from the India Cellular and Electronics Association, anticipating further tariff adjustments in the next six months.

SOCIAL SECTOR

Women-Friendly Schemes and Allocations

- **Total Allocation:** Over ₹3 lakh crore allocated for schemes benefiting women and girls.

Specific Initiatives:

- **New Pension Scheme: 'Vatsalya'**—contributory scheme with a seamless transition to a National Pension System (NPS) account upon reaching majority.
- **Special Hostels and Creches:** Set up to support working women.
- **Skilling Programs and Support:** Enhanced for women-specific skilling and self-help groups.

Budget Details:

- Ministry of Women and Child Development: Marginally increased allocation to ₹26,092 crore.
- Central Schemes: ₹25,848 crore allocated, covering flagship schemes like Saksham Anganwadi, POSHAN 2.0, Mission Vatsalya, and Mission Shakti.

Support for Women Entrepreneurs:

- Mudra loan limit doubled to ₹20 lakh.
- Credit guarantee scheme for MSMEs expected to aid women entrepreneurs.

Criticisms and Observations:

- Call for gender-aggregated data to assess the impact of gender-budgeting.

EDUCATION LOAN SCHEME

New Loan Scheme: E-vouchers for up to ₹10 lakh in education loans with a 3% annual interest subvention for one lakh students annually.

Impact:

Aims to reduce financial burden and promote enrollment in domestic higher education institutions.

Ministry of Education Allocation:

- Increased to ₹1.2 lakh crore, up by 7.14% from last year, but decreased by 6.97% compared to Revised Estimates for 2023-24.

Skill Loan Scheme:

- Revised to offer loans up to ₹7.5 lakh with government-backed guarantees, benefiting 25,000 students annually.

INFRASTRUCTURE

Housing Scheme Allocation

PM Awas Yojana-Urban 2.0:

- **Investment:** ₹10 lakh crore.
- **Central Assistance:** ₹2.2 lakh crore over five years.
- **Interest Subsidy:** Provision for affordable loan rates.

Rental Housing:

- Dormitory-style accommodations for industrial workers.
- Facilitated through public-private partnerships with viability gap funding.

Additional Houses:

- Three crore houses to be built under PMAY in rural and urban areas.

Reactions:

- Construction and housing finance companies welcomed the allocation.
- Credit-linked subsidy and lower stamp duty for women buyers expected to boost affordable housing.
- Digitisation of land records to improve transparency and credit flow.

PM Janjatiya Unnat Gram Abhiyaan

- **Objective:** Achieve full saturation of basic facilities for five crore Scheduled Tribe families across 63,000 villages in tribal-majority areas and aspirational districts.
- **Design:** Modeled after PM-JANMAN, targeting Scheduled Tribe populations nationwide.

BUDGET ALLOCATIONS FOR MINISTRY OF TRIBAL AFFAIRS

- Allocation: ₹13,000 crore for FY 2024-25.
- Increase: 4.31% from previous year.
- Major Allocation: ₹6,399 crore for Eklavya Model Residential Schools.

MINISTRY OF SOCIAL JUSTICE AND EMPOWERMENT

- **Allocation**: ₹14,225.47 crore for FY 2024-25, a 1.08% increase.
- National Fellowship for OBC Students: ₹55 crore, down from ₹57 crore.
- Interest Subsidy on Overseas Studies for OBC and EBC Students: Reduced from ₹29 crore to ₹25 crore.

BUDGET ALLOCATIONS FOR BORDER INFRASTRUCTURE AND HOME AFFAIRS

Border Infrastructure Maintenance and Capital Outlay:

- Allocation: ₹3,756 crore for FY 2024-25.
- Increase: ₹211 crore from ₹3,545 crore in FY 2023-24.

Rehabilitation and Relief for Migrants:

- Allocation: ₹539.72 crore for FY 2024-25.
- Increase: From ₹301 crore in FY 2023-24.

Language Platform:

- **Allocation:** ₹56 crore for the establishment of 'Bhartiya Bhasha Anubhag' (Indian Languages Department) for language translation.

Census and Statistics:

- Allocation: ₹1,309 crore for FY 2024-25.
- Decrease: From ₹1,564.65 crore in FY 2023-24.

Intelligence Bureau:

- Allocation: ₹3,823 crore for FY 2024-25.
- Increase: From ₹3,418 crore in FY 2023-24.

Special Protection Group (SPG):

- Allocation: ₹506.32 crore for FY 2024-25.
- Increase: From ₹433.59 crore in FY 2023-24.

Indian Cyber Crime Coordination Centre (I4C):

- No allocation due to scheme cessation from July 1, 2024.

Ministry of Home Affairs (MHA):

- Total Allocation: ₹2,19,643.31 crore for FY 2024-25.
- Increase: From ₹2,02,868.70 crore in the interim Budget.

RAILWAYS ALLOCATION AND PRIORITIES FOR FY 2024-25

Total Allocation:

- ₹2.55 lakh crore for FY 2024-25.

- Increase: 4.9% from ₹2.43 lakh crore in FY 2023-24.
- Breakdown: ₹2.52 lakh crore from general revenues, ₹200 crore from the Nirbhaya Fund, ₹3,000 crore from internal resources, and ₹10,000 crore from extra-budgetary resources.

Capital Expenditure Focus:

- Majority to be spent on safety works, assets, acquisitions, construction, and replacement.
- Record allocation compared to ₹35,000 crore spent in 2014.

Safety and Infrastructure:

- Priority on safety, comfort, and capacity.
- Rapid installation of the Kavach 4.0 automatic train protection system.
- Focus on connecting new projects, Kashmir, and northeastern states.

Employment:

- 38,000 to 40,000 new jobs to be created.
- Previous terms saw the creation of up to five lakh jobs.

New Initiatives:

- Development of Vande Bharat and Amrit Bharat trains, Vande Metro, and procuring new rolling stock.

FORENSIC INFRASTRUCTURE AND DEVELOPMENT ALLOCATIONS FOR FY 2024-25

Forensic Infrastructure:

- ₹700 crore allocated for 'Modernisation of Forensic Capacity'.
- ₹150 crore allocated for 'National Forensic Infrastructure Enhancement'.
- Total financial outlay for forensic scheme: ₹2,254.43 crore (2024-25 to 2028-29).

Crime and Criminal Tracking Network:

- Increased allocation from ₹264 crore to ₹520 crore for 2024-25.

Island Development:

- ₹88 crore allocated for the holistic development of islands in Union Territories.

Vibrant Villages Programme (VVP):

- ₹1,050 crore allocated for developing villages along the China border.
- Revised estimate for 2023-24: ₹300 crore.

PURVODAYA PLAN:

A plan named 'Purvodaya' will be developed for the overall growth of Bihar, Jharkhand, West Bengal, Odisha, and Andhra Pradesh.

ANDHRA PRADESH FINANCIAL SUPPORT

- **Capital Amaravati:** ₹15,000 crore will be allocated this financial year for developing Amaravati, with additional funds planned for future years.
- **Polavaram Irrigation Project:** Financial assistance will be provided for the Polavaram irrigation project.
- **Grants for Backward Regions:** Support will be given for the development of backward regions in the state.

DEVELOPMENT PROJECTS FOR BIHAR

- **Road Projects:** ₹26,000 crore allocated.
- **Power Plant:** A 2,400-MW power plant will be established in Pirpainti with an investment of ₹21,400 crore.
- **Flood Control:** ₹11,500 crore allocated for flood control measure

UPSC CSE 2025

GS-MENTORSHIP

- **STRATEGIC DAILY PLANNER (ACCORDING TO SYLLABUS)**
- **PERSONALISED INTERCATION**
- **SOURCE TRACKING IN PRECISE**
- **TIPS & TRICKS WITH MNEMONICS**
- **360 DEGREE APPROACH**
- **WEEKLY TESTS WITH EXPLANATION (PRELIMS & MAINS)**
- **ETHICS & ESSAY CLASSES (complimentary)**
- **MOTIVATIONAL SESSIONS**

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ANTHROPOLOGY
Anusha Mam
7 + years of Experience

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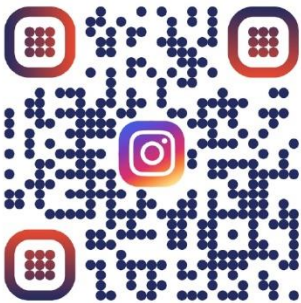
Regarding **Optionals**

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