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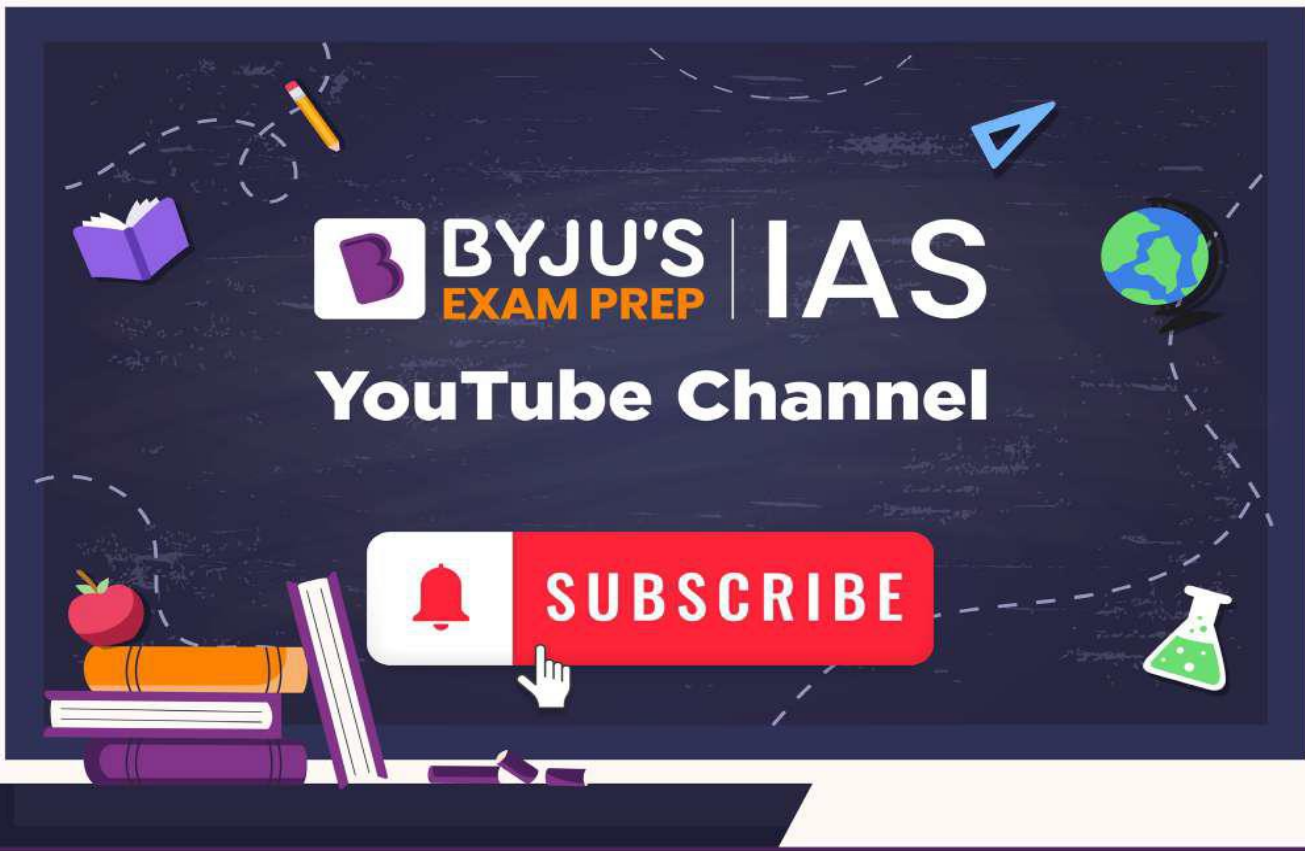
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POLITY

1. Deprivileging bribe

Syllabus: GS-2, Parliament and State Legislatures—Structure, Functioning, Conduct of Business, Powers & Privileges and Issues Arising out of these

Mains: Recent SC judgment on Parliamentary Privileges and its implications

Context:

- The Supreme Court of India, over 25 years ago, made a controversial distinction between ‘bribe-givers’ and ‘bribe-takers’ in the JMM bribery case.
- This case involved payments made to MPs for voting in favour of the P.V. Narasimha Rao government during a no-confidence motion.

Anomaly in Legal Treatment:

- The Court’s ruling provided immunity from prosecution to those who received bribes, citing constitutional privilege protecting parliamentary proceedings.
- However, individuals like Ajit Singh, accused of taking a payoff but absent during the vote, were exceptions and subjected to prosecution.

Correction by the Constitution Bench:

- Recently, a seven-member Constitution Bench revisited this issue and overturned the previous ruling.
- The Bench emphasized that parliamentary privilege does not extend to bribery, as it does not pertain to the essential functioning of the legislature.

Clarification of Parliamentary Privilege:

- Articles 105 and 194 of the Constitution, protecting the freedom of speech and independence of legislators, do not shield MPs or State legislators from bribery charges.
- The ruling underscores that such privileges are meant to facilitate effective participation and debate, not to condone corrupt practices.

Upholding Public Expectation:

- The verdict aligns with public expectations that elected representatives should not be influenced by monetary inducements in their parliamentary duties.
- It affirms the principle of probity as a central aspect of parliamentary functioning, ensuring the integrity of democratic processes.

Nut Graf: *The Supreme Court’s recent ruling clarifies that parliamentary privilege does not shield MPs from bribery charges, aligning with public expectations of integrity in legislative proceedings.*

2. SC ends immunity for legislators taking bribes

Syllabus: Parliament and State Legislatures—Structure, Functioning, Conduct of Business, Powers & Privileges and Issues Arising out of these

Mains: Parliamentary Privileges

Introduction:

- A seven-judge Bench of the Supreme Court has ruled that parliamentary privilege or immunity will not shield legislators who accept bribes for voting or speaking in Parliament or State Legislative Assemblies from criminal prosecution.
- The verdict overturns a 25-year-old judgment, known as the **JMM bribery case**, which previously granted immunity to lawmakers who accepted bribes.

Reasoning Behind the Verdict:

Rejection of Immunity Claims:

- The Supreme Court emphasized that privileges and immunities do not exempt legislators from the general law of the land.
- Corruption within the legislature undermines the foundation of Indian parliamentary democracy.

Completion of Bribery Offense:

- The court clarified that the offense of bribery is committed upon accepting or agreeing to accept money, regardless of subsequent actions such as making speeches or casting votes.

Protection of Representative Democracy:

- Chief Justice Chandrachud highlighted that bribery compromises the aspirational and deliberative ideals of the Constitution, leading to a non-responsive and irresponsible democracy.

Limitations of Parliamentary Immunity:

- The judgment delineated a twofold test for claiming parliamentary immunity, focusing on actions that enhance the dignity of the House and the exercise of the right to free speech.
- Immunity cannot be invoked if it undermines the rule of law and places legislators above accountability.

Parallel Jurisdiction of Criminal Courts and Legislature:

- The court affirmed that criminal courts and legislative bodies have distinct spheres of jurisdiction concerning allegations of bribery.
- Neither jurisdiction can nullify the authority of the other, ensuring accountability for corrupt acts.

Nut Graf: Supreme Court ends immunity for legislators taking bribes, overruling a 25-year-old judgment. Lawmakers accepting bribes face criminal prosecution regardless of parliamentary actions. The decision upholds the rule of law and accountability in Indian democracy.

3. Are legislators immune to bribery charges?

Syllabus: GS-2, Parliament and State Legislatures—Structure, Functioning, Conduct of Business, Powers & Privileges and Issues Arising out of these

Mains: Parliamentary privileges and bribery

Background:

- The recent ruling by a seven-judge Bench of the Supreme Court revolved around the immunity from prosecution claimed by Members of Parliament (MPs) and Members of Legislative Assemblies (MLAs) for accepting bribes in exchange for casting votes or making speeches in the House.

- Articles 105(2) and 194(2) of the Indian Constitution confer immunity to MPs and MLAs respectively in relation to anything said or any vote given in Parliament or Legislative Assemblies.

Case Overview:

- Sita Soren, a Jharkhand Mukti Morcha (JMM) member, faced accusations of accepting a bribe to cast her vote in the 2012 Rajya Sabha elections.
- The Jharkhand High Court dismissed her plea invoking Article 194(2) immunity, leading to an appeal in the Supreme Court.
- The Supreme Court, headed by Chief Justice Chandrachud, referred the matter to a seven-judge Bench, questioning the correctness of the previous P.V. Narasimha Rao judgment.

1998 Ruling Revisited:

- The P.V. Narasimha Rao ruling pertained to the 1993 JMM bribery case involving former Union Minister Shibu Soren and others.
- While some judges opined that legislative immunity couldn't extend to bribery cases, the majority upheld a narrow construction to protect parliamentary participation and debate.

Recent Supreme Court Decision:

- The Supreme Court emphasized the purpose of legislative privileges, highlighting the need for an environment conducive to debate and deliberation.
- It ruled that bribery compromises this purpose and doesn't enjoy immunity under Articles 105(2) and 194(2).
- The Court clarified that the offence of bribery is complete upon acceptance, regardless of subsequent actions such as voting or speaking.
- It rejected the argument that Parliament's power to punish its members for contempt negates the Court's jurisdiction to prosecute bribery offences.
- The verdict's principles extend to Rajya Sabha elections and appointments of the President and Vice-President, overruling previous observations.

Nut Graf: The recent Supreme Court ruling clarified that MPs and MLAs aren't immune from prosecution for accepting bribes. It revisited the P.V. Narasimha Rao judgment, asserting that bribery compromises legislative privileges and warrants legal action.

4. No positive result from talks with Shah: Ladakh leaders

Syllabus: Indian Constitution: Significant Provisions

Mains: Demand of Ladakh for inclusion in the 6th Schedule

Prelims: 6th Schedule

Introduction:

- Ladakh leaders met with Union Home Minister Amit Shah to demand constitutional safeguards for the region.
- This meeting marks the first interaction between Ladakh groups and the Home Minister since 2020.

Context and Aftermath:

- Former Member of Parliament Thupstan Chhewang, also the chief of the Ladakh Buddhist Association (LBA), led the talks.

- The region became a Union Territory without a Legislative Assembly following the abrogation of Article 370, which had granted special status to Jammu and Kashmir, on August 5, 2019.

Meeting Details:

- Civil society leaders from Leh Apex Body (LAB) and Kargil Democratic Alliance (KDA) had two rounds of meetings with Ministry of Home Affairs (MHA) officials.
- Despite discussions, no concrete outcomes were achieved.
- Subsequently, a meeting was held with Home Minister Amit Shah, which also did not yield positive results.

Issues and Demands:

- Ladakh's population of 2.74 lakh has expressed concerns over the protection of land, resources, and employment opportunities for locals.
- Previous protests have highlighted worries about bureaucratic overreach.
- **Specific demands include:**
 - Statehood for Ladakh.
 - Inclusion of Ladakh in the Sixth Schedule of the Constitution, granting tribal status.
 - Job reservation for local residents.
 - Allocation of parliamentary seats for Leh and Kargil.

Nut Graf: Ladakh leaders' talks with Union Home Minister Amit Shah fail to yield positive results in their demands for constitutional safeguards, including statehood and tribal status, amidst concerns over land, resources, and job reservation for locals.

5. Hundreds rally in Ladakh seeking Statehood, Sixth Schedule inclusion

Syllabus: GS-2, Indian Constitution: Significant Provisions

Mains: Inclusion of Ladakh under the 6th Schedule

Context:

- Ladakh witnessed a shutdown and protest rally demanding Statehood and Sixth Schedule inclusion for the newly created Union Territory.
- Talks between Ladakh groups and the Union Home Ministry were inconclusive, prompting the protest.

Protest Details:

- All religious organizations support Leh Bandh after failed discussions with the Ministry of Home Affairs on March 4.
- Hundreds gather peacefully at Leh's NDS Ground for the protest rally.
- Kargil district observes a shutdown in solidarity with the protest.
- The LAB (Leh Apex Body) and KDA (Kargil Democratic Alliance) jointly issue a call for a bandh and 'Leh Chalo.'

Demands and Negotiations:

- Ladakh groups negotiated with the Ministry on three key demands: Statehood, Sixth Schedule inclusion, and establishment of an exclusive Public Service Commission for Ladakh.
- Additionally, there is a demand to increase Lok Sabha seats from one to two.

Wangchuk's Announcement:

- Climate activist Sonam Wangchuk addressed the gathering in Leh and announced his intention to go on a fast to advocate for the region's demands.
- He expressed his desire to emulate Mahatma Gandhi's peaceful methods by inflicting pain on himself rather than taking anyone hostage.

Nut Graf: Ladakh experiences a shutdown and protest rally demanding Statehood and Sixth Schedule inclusion. Talks with the Union Home Ministry fail, prompting peaceful protests and announcements of fasting by activists like Sonam Wangchuk.

6. Sena row: SC asks if Maharashtra Speaker contradicted verdict

Syllabus: Powers, functions and responsibilities of various constitutional bodies

Mains: Issues with the powers of the Speaker

Context: The recent controversy surrounding Maharashtra Speaker Rahul Narwekar's decision to declare Chief Minister Eknath Shinde's faction as the "real" Shiv Sena has raised questions about the Speaker's adherence to judicial precedent.

- This issue pertains to the interpretation of the Constitution and the role of the Speaker in determining the authenticity of political factions within the legislative assembly.

Issues

- **Contradiction with Judicial Precedent:** The Supreme Court questions whether Speaker Narwekar contradicted a previous Constitution Bench judgment by considering the 'legislative majority' as a criterion for determining the authentic political party.
- **Interpretation of Speaker's Role:** The crux of the issue lies in the Speaker's discretion in discerning the genuine political party amidst factional disputes, particularly regarding the weightage given to the legislative majority versus other factors.

Significance

- **Constitutional Implications:** The case highlights the constitutional principles governing the role of the Speaker and the separation of powers within a democratic framework.
- **Political Stability:** The resolution of this dispute is crucial for maintaining political stability in Maharashtra and upholding the integrity of the democratic process.

Solutions

- **Adherence to Judicial Precedent:** Emphasize the importance of the Speaker's adherence to the principles laid down by previous judicial decisions, particularly the distinction between the legislative and political wings of a party.
- **Transparent Criteria:** Advocate for transparent and consistent criteria for determining the authenticity of political factions, ensuring that decisions are based on objective parameters rather than subjective considerations.

Nut Graf: The Sena row underscores the delicate balance between legislative authority and judicial oversight within the democratic system. The Supreme Court's scrutiny of Speaker Narwekar's decision serves as a reminder of the judiciary's role in upholding constitutional principles and safeguarding democratic norms.

7. 'Differences' with CEC may have led to Goel quitting

Syllabus: Appointment to various Constitutional Posts, Powers, Functions and Responsibilities of various Constitutional Bodies.

Mains: Resignation and appointment process of Election Commissioner

Background on Arun Goel's Resignation:

- Arun Goel, Election Commissioner, resigned abruptly a week before the Lok Sabha election announcement.
- Sources suggest differences emerged between Goel and Chief Election Commissioner (CEC) Rajiv Kumar during a visit to West Bengal.

Alleged Differences and Actions:

- Goel reportedly refused to attend a press conference in Kolkata with Kumar, indicating discord.
- CEC cited Goel's health concerns as the reason for his return to Delhi, which Goel's associates refute.

Resignation Process and Speculations:

- Goel left a meeting with Home Secretary Ajay Kumar Bhalla on election preparations and submitted his resignation to the President.
- Speculations arose regarding the reasons behind Goel's resignation: differences with CEC, government influence, personal reasons, or political ambitions.

Political Reactions and Concerns:

- Opposition parties questioned the timing and motives behind Goel's resignation, raising doubts about the independence of electoral institutions.
- The opposition expressed concerns over the politicization of the Election Commission.

Appointment Process for New ECs:

- A panel headed by Prime Minister Narendra Modi, including a Union Minister and the Leader of the Congress in the Lok Sabha, is set to meet by March 15 to fill the vacancies.
- The sudden resignation of Goel accelerated the appointment process, with efforts to advance the meeting date.
- A search committee under Law Minister Arjun Ram Meghwal will shortlist candidates before the final appointment by the President.
- The appointment process follows a new law passed in December, which faced opposition from parties fearing a loss of the poll panel's autonomy.

Nut Graf: Amidst speculations of internal strife, Election Commissioner Arun Goel's sudden resignation sparks questions about the independence of the Election Commission and the potential political ramifications, prompting swift efforts to fill the vacancies.

8. We need limits on election campaign spending

Syllabus: Salient Features of the Representation of People's Act

Mains: Need to regulate election campaign spending for a fair election process

Introduction:

- Government spending on election campaigns has become a contentious issue in India, particularly due to the dominance of ruling parties in advertisement campaigns.
- Despite Supreme Court guidelines, government advertisements tend to favour ruling parties, disrupting the electoral playing field.

Current Scenario:

- Between 2018-19 and 2022-23, the Central government spent ₹3,020 crore on advertisements, with a significant increase during election years.
- Election expenditure limits for candidates are frequently breached, with major parties spending far beyond the official limits.
- Political parties declare relatively low expenditures, while reports suggest actual spending during the 2019 elections was substantially higher, largely funded by corporate donations.

Challenges and Concerns:

- The opacity of political donations and the distribution of cash to voters weaken the electoral process.
- The Supreme Court's move to strike down the electoral bonds scheme addresses some transparency issues, but the majority of funding remains unaccounted for.
- The cost of elections is projected to escalate dramatically, posing a threat to the fairness of the electoral process.

Proposed Solutions:

- Ban government advertisements six months before any general election to prevent undue influence.
- Amend laws to limit parties' financial assistance to candidates within prescribed expenditure limits.
- Implement a ceiling on party expenditure, calculated based on the expenditure limit per candidate multiplied by the number of candidates.
- Increase the number of judges in High Courts to expedite election-related cases, acting as a deterrent against violations of electoral norms.
- These reforms require bipartisan political support to be effective in ensuring free and fair elections and alleviating the burden of extravagant election spending on the public.

Nut Graf: *The escalating costs of election campaigns in India, fueled by government spending and corporate donations, undermine fair elections. Proposed reforms aim to regulate expenditure and promote transparency, but bipartisan support is crucial for their implementation.*

9. SBI seeks time till June 30 to disclose details of poll bonds

Syllabus: Judiciary

Mains: Electoral bonds

Context:

- The State Bank of India (SBI) has petitioned the Supreme Court for an extension until June 30 to comply with a directive to disclose information on electoral bonds purchased since April 2019.
- The Supreme Court, led by Chief Justice of India D.Y. Chandrachud, invalidated the electoral bonds scheme on February 15, citing it as “unconstitutional and manifestly arbitrary.”

Court's Directive and Disclosure Timeline:

- The court mandated SBI to reveal details to the Election Commission (EC) of political parties receiving contributions and encashing electoral bonds since April 12, 2019, with a deadline of March 6.
- The EC was then required to publish this information on its website by March 13, ensuring transparency before the Lok Sabha election.

Practical Difficulties and Decoding Process:

- SBI cited practical challenges in the decoding process and the allotted timeline, attributing complexities to stringent measures ensuring donor anonymity.
- The decoding exercise involves matching donors with bond purchases, a process spanning multiple branches across India, each maintaining a designated set of donor information.

Storage and Retrieval Challenges:

- SBI outlined a detailed standard operating procedure (SoP) across its 29 authorized branches, with no centralized database, and donor details kept in sealed covers.
- Retrieving donor information requires cross-referencing issuance dates with purchase dates, and subsequent bond redemption details, stored digitally and physically to prevent easy access.

Nut Graf: The State Bank of India sought an extension till June 30 to comply with the Supreme Court's directive on disclosing electoral bond details. Practical challenges in decoding processes and storage complexities necessitate the delay.

10. Why did the top Court reject SBI's plea?

Syllabus: GS-2, Salient Features of the Representation of People's Act

Mains: Electoral Bond

Background and Court Decision:

- On March 11, the Supreme Court rejected SBI's plea to extend the deadline for providing details of electoral bonds, setting a new deadline of March 12.
- SBI was directed to furnish details to the Election Commission of India (ECI) by the close of business on March 12.
- The court was also hearing a contempt plea filed by NGOs against the SBI Chairman, alleging deliberate delay in disclosure.

SBI's Reasons for Seeking Extension:

- SBI argued that retrieving details scattered across branches was time-consuming.
- Information related to bond issuance and redemption was stored separately to maintain donor anonymity.
- Decoding 22,217 bonds issued between April 2019 and February 2024 involved matching 44,434 sets of data.
- SBI cited the need to ensure compliance with the scheme's objectives, which required physical documentation.

Challenges to the Extension Plea:

- Contempt plea alleged deliberate delay to withhold donor information before Lok Sabha elections.
- Petitioners cited contradicting government affidavits on data traceability and SBI's existing IT infrastructure.
- They argued that SBI's vast resources and previous data submissions to the government contradicted the claimed difficulty.

Court's Response and Observations:

- The Chief Justice questioned SBI's claims, noting that the judgment only sought plain disclosure, not complex matching.
- Justices emphasized SBI's lack of transparency in explaining its actions since the previous court order.
- While the court did not initiate contempt proceedings immediately, it warned of consequences for non-compliance.

Expert Opinions and Analysis:

- Experts criticized SBI's claim of data complexity, citing digital accessibility and previous prompt submissions to the government.
- Reports highlighted SBI's prior cooperation with the government and its ability to provide data within 48 hours.
- Previous requests from SBI to include serial numbers on bonds for audit trails underscored its capability to track donor information.

Nut Graf: *The Supreme Court rejected SBI's plea to extend electoral bond disclosure deadlines. SBI cited data complexities, but experts and petitioners criticised its delay tactics, alleging the bank's capacity to provide the required information promptly.*

11. Uttarakhand bill on UCC gets President's nod

Syllabus: Indian Constitution – Historical Underpinnings, Evolution, Features, Amendments, Significant Provisions and Basic Structure

Prelims: UCC

Mains: Important provisions of the Uttarakhand act on UCC

Context: Uttarakhand has made history by becoming the first state in Independent India to enact a Uniform Civil Code (UCC) after President Droupadi Murmu's approval of the UCC Bill, 2024. The bill, while excluding tribal communities, aims to abolish practices like halala, iddat, and talaq from Muslim Personal Law, and ensure gender equality in matters of property and inheritance rights.

Issues:

- **Diversity and tribal exclusion:** The exclusion of tribal communities from the UCC raises questions about inclusivity and the applicability of the code across diverse cultural and religious groups.
- **Controversy over Muslim Personal Law:** The ban on practices like halala, iddat, and talaq has stirred debate over the interference with Muslim Personal Law and its compatibility with constitutional principles.
- **Implementation challenges:** Enforcing a comprehensive UCC across a diverse population presents administrative and legal challenges, including reconciling conflicting laws and customs.
- **Political implications:** The enactment of the UCC may polarize opinions and lead to political repercussions.

Significance:

- **Promoting gender equality:** The UCC ensures equal rights for women in matters of marriage, divorce, property, and inheritance, thereby advancing gender equality and empowerment.
- **Legal uniformity:** The implementation of a UCC establishes legal uniformity and eliminates disparities arising from personal laws based on religion or community, fostering a more cohesive society.
- **Constitutional principles:** The enactment of the UCC aligns with the constitutional principles of equality, justice, and secularism, reinforcing India's commitment to a pluralistic society.

- **Setting a precedent:** Uttarakhand's pioneering move sets a precedent for other states and the central government to consider implementing a UCC, sparking nationwide discourse and potential legislative action.

Solutions:

- **Inclusive implementation:** Ensure that the UCC is implemented inclusively, taking into account the concerns and interests of all communities, including tribal groups.
- **Public awareness and education:** Conduct awareness campaigns and educational programs to inform citizens about the provisions and implications of the UCC, fostering understanding and acceptance.
- **Legal safeguards:** Establish mechanisms to address legal challenges and grievances arising from the implementation of the UCC, providing recourse for individuals and communities affected by the transition.
- **Dialogue and consultation:** Facilitate dialogue and consultation with stakeholders, including religious and community leaders, legal experts, and civil society organizations, to address concerns and build consensus on the UCC's implementation.

Nut Graf: Uttarakhand's enactment of a Uniform Civil Code marks a significant milestone in India's legal and social landscape, with implications for gender equality, legal uniformity, and constitutional principles.

12. SC to hear pleas seeking stay on CAA, its rules on March 19

Syllabus: Important Amendments of the Indian Constitution

Prelims: CAA provisions

Mains: Issues with CAA implementation

Context: The controversy surrounding the Citizenship (Amendment) Act (CAA) and its rules has prompted a series of petitions seeking a stay on its implementation. The Supreme Court of India has agreed to hear these petitions on March 19, 2024. The CAA, enacted in 2019, aims to fast-track Indian citizenship for non-Muslim migrants from Afghanistan, Bangladesh, and Pakistan. However, its legality has been challenged on grounds of discrimination based on religion.

Issues

- **Legal Challenge:** The primary contention is that the CAA discriminates in granting citizenship based on religion, which is a violation of constitutional principles.
- **Challenges to CAA:** The Indian Union Muslim League (IUML) is the primary petitioner challenging the legality of CAA, arguing that it discriminates in granting citizenship based on religion. The Democratic Youth Federation of India (DYFI) has also filed an application seeking an interim stay on the implementation of the law.
- **Timing of Implementation:** Concerns have been raised regarding the timing of notifying the rules just ahead of elections, raising suspicions about political motivations.
- **Irreversible Process:** Once the citizenship process under the CAA begins, it is argued that it cannot be reversed, potentially leading to long-term implications.

Significance

- **Constitutional Implications:** The outcome of these petitions holds significant constitutional implications regarding citizenship rights and equality before the law.
- **Political Ramifications:** The controversy surrounding the CAA has political ramifications, impacting public discourse and perceptions.
- **Human Rights Concerns:** There are broader concerns regarding the protection of minority rights and the principles of secularism enshrined in the Indian Constitution.

Solutions

- **Judicial Review:** The Supreme Court's review of the CAA petitions offers a legal avenue to address concerns regarding its constitutionality.
- **Legislative Amendments:** If deemed necessary, amendments to the CAA could be proposed to address the issues raised and ensure non-discriminatory citizenship criteria.
- **Public Discourse and Awareness:** Continued public discourse and awareness campaigns can foster understanding of the issues at stake and their implications for Indian society.

Nut Graf: *The Supreme Court's decision to hear petitions seeking a stay on the CAA and its rules reflects the significance of the legal and constitutional challenges posed by this legislation. The outcome of these proceedings will not only shape citizenship policies but also have broader implications for India's democratic values and commitment to inclusivity and equality.*

13. The CAA, Muslim exclusion and the lens of the right

Syllabus: Constitutional Amendments and Significant Provisions

Mains: Issues with CAA 2019

Context: Union Home Minister Amit Shah's recent remarks regarding the exclusion of Muslims from Pakistan, Afghanistan, and Bangladesh under the CAA 2019 have reignited debates surrounding the legislation.

Issues:

Partition and Its Complexity:

- The argument attributing responsibility for Partition to all Muslims is flawed, as the process was primarily driven by Muslim elites, influenced by various socio-political factors.
- Many Indian Muslims vehemently opposed Partition, opting to remain in India and contributing significantly to the nation's development.
- The Hindu Right's portrayal of Partition as the basis for Muslim exclusion overlooks the nuanced resistance against it and reflects a punitive approach towards Muslims.

Persecution and Religious Minorities:

- While religious minorities in Pakistan, Bangladesh, and Afghanistan face persecution, including Ahmadiyas and Shias, the argument that all Muslims are responsible for Partition is invalid.
- India's secular governments' failure to address religious persecution in neighbouring countries underscores the urgency of the issue.
- A comprehensive understanding of Partition's aftermath reveals ongoing communal tensions and challenges faced by religious minorities across borders.

Significance:

- According to the article, the CAA's exclusionary provisions and the broader Hindu Right's agenda signal a shift towards de-Islamization in India, posing significant challenges to secularism and religious pluralism.
- Political responses, both from within the government and opposition, are crucial in shaping the trajectory of religious minorities' rights and India's secular fabric.

Solutions:

- Addressing the complexities of Partition history requires acknowledging diverse perspectives and promoting inclusive narratives that recognize the contributions of all communities.
- Effective responses to religious persecution demand proactive measures from both domestic and international actors, emphasizing human rights and humanitarian assistance.

Nut Graf: *The discourse surrounding the CAA 2019 reflects broader socio-political tensions and ideological shifts in India. Upholding secular principles, safeguarding minority rights, and fostering inclusive dialogue are essential in navigating the complexities of religious identity and citizenship in a diverse society.*

14. 7-phased poll fest to kick off on April 19

Syllabus: Elections, Salient features of the People's Representation Act

Prelims: Salient features of the People's Representation Act

Mains: Elections in India procedure, challenges and opportunities

Context:

- The 18th Lok Sabha elections in India are scheduled to be conducted from April 19 to June 1, spanning over seven phases.
- This election will also witness simultaneous Assembly elections in Andhra Pradesh, Odisha, Sikkim, and Arunachal Pradesh.
- Chief Election Commissioner Rajiv Kumar announced the schedule, highlighting key aspects of the electoral process.

Phases and Schedule

- The polling exercise will be conducted in seven phases on April 19, April 26, May 7, May 13, May 20, May 25, and June 1.
- Notably, Bihar, West Bengal, and Uttar Pradesh will witness voting across all seven phases.
- The counting of votes is set to take place on June 4.

Simultaneous Assembly Polls

- Alongside the Lok Sabha elections, Assembly polls will be conducted in Andhra Pradesh, Odisha, Sikkim, and Arunachal Pradesh.
- Each state has its unique schedule for the Assembly elections, coinciding with different phases of the Lok Sabha polls.

Electoral Landscape

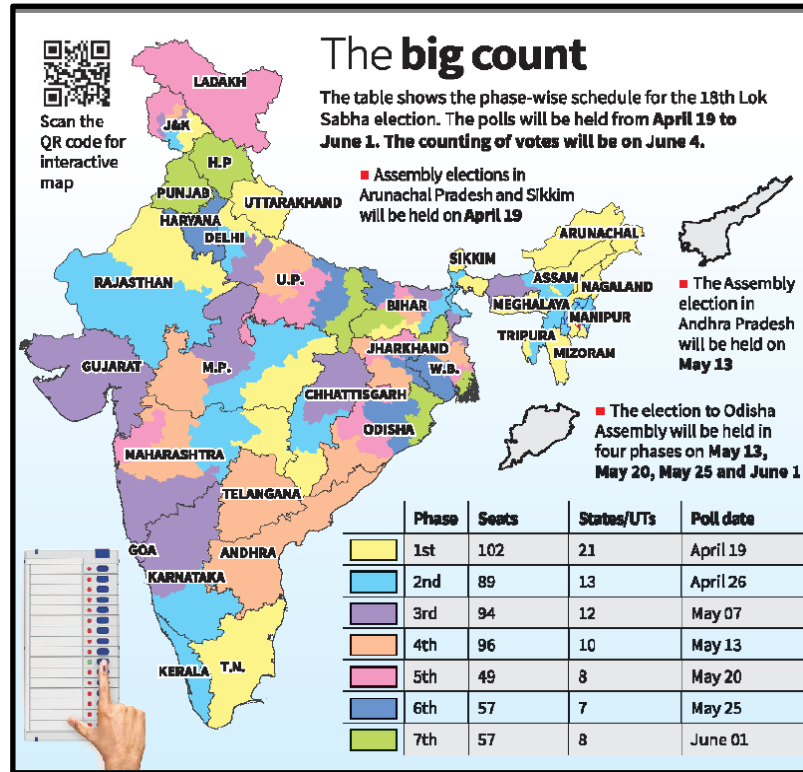
- India boasts a massive electorate of 96.8 crore of which 49.72 crore are men and 47.1 crore are women, with 1.82 crore being first-time voters.
- The gender ratio among electors has significantly improved, with more women voters, particularly evident in 12 states.
- Unique provisions have been made for elderly voters above 85 years and those with disabilities, facilitating voting from their homes.

Special Considerations

- Special polling stations will be established for displaced electors in Manipur, reflecting the Election Commission's responsiveness to unique challenges.
- Notably, the Outer Manipur constituency will have staggered voting days due to prevailing circumstances.

Model Code of Conduct (MCC)

- With the announcement of poll dates, the Model Code of Conduct immediately comes into effect, aiming to ensure fair conduct during the electoral process.
- Chief Election Commissioner Rajiv Kumar emphasized addressing challenges such as muscle power, money power, misinformation, and MCC violations.



Source: The Hindu

Issues

- Fair Conduct: Ensuring fair and transparent elections amid various challenges like electoral malpractices.
- **Inclusivity:** Facilitating voting for diverse segments, including first-time voters, women, elderly, and persons with disabilities.
- **Security and Stability:** Addressing security concerns, especially in regions marked by conflict or displacement.
- Model Code of Conduct Enforcement: Vigilance against violations of the MCC to uphold ethical campaign practices.

Significance

- The 18th Lok Sabha elections represent a crucial democratic exercise determining the leadership and governance of India.
- Simultaneous Assembly polls add complexity and significance to the electoral process, shaping regional political landscapes.

Solutions

- Implement stringent measures to curb electoral malpractices, ensuring a level playing field for all parties.
- Enhance inclusivity by expanding accessibility measures for vulnerable groups, promoting voter education, and awareness.
- Strengthen security arrangements in conflict-prone areas, ensuring the safety and participation of all eligible voters.
- Enforce the Model Code of Conduct rigorously, fostering ethical campaigning and upholding democratic values.

Nut Graf: The announcement of the seven-phased poll schedule marks the beginning of a significant democratic exercise in India. Despite challenges, the Election Commission's proactive measures aim to conduct free, fair, and inclusive elections, ensuring the integrity of India's democratic process.

15. Many elections, AI's dark dimension

Syllabus: Salient Features of the Representation of People's Act

Mains: AI as New Disruptive Technology in Democracy

Introduction:

- The evolution of AI from Generative AI to potentially Artificial General Intelligence (AGI) marks a significant juncture in human progress.
- AI advocates, like Sam Altman of OpenAI, hail it as a transformative technology with the potential to enhance living standards.
- However, concerns about AI's impact on human values and the potential for existential risks persist.
- The upcoming elections in various countries, including India, present a testing ground for AI's influence on electoral dynamics.

Challenges and Opportunities of AI in Elections:

- The rapid advancement of AI, particularly Generative AI, poses both opportunities and challenges for policymakers and the electorate.
- While AI has the potential to revolutionize electoral processes, it also raises concerns about misinformation, propaganda, and the manipulation of voters.
- The use of sophisticated AI tools, such as deep fakes and micro-targeting, could significantly impact the quality and integrity of elections.
- Efforts to counteract AI's negative influence on electoral behaviour are necessary to safeguard democratic principles and ensure informed decision-making.

Assessing AI's Role in Democracy:

- AI's ability to generate and disseminate misinformation threatens to undermine trust in democratic institutions and processes.
- While awareness of AI's disruptive potential is essential, proactive measures must be taken to prevent AI-driven manipulation of public opinion.
- The unreliability and inherent biases of AI models, coupled with the emergence of adversarial capabilities, highlight the need for caution in relying too heavily on AI solutions.
- India, as a leader in digital innovation, must approach AI with caution, recognizing both its potential benefits and risks to democratic governance.

Mitigating AI's Risks and Embracing Caution:

- Despite the promise of AI, concerns about its unreliability and potential for harm, including adversarial capabilities, necessitate careful consideration.
- Effective strategies to mitigate the risks associated with AI, such as poisoning, backdooring, and evasion, require further development.
- India's digital leadership underscores the importance of exercising caution in embracing AI, recognizing its dual potential as both a boon and a threat to societal well-being.

Nut Graf: The upcoming elections worldwide, particularly in India, serve as a crucial test for AI's influence. While AI offers transformative potential, concerns about misinformation and manipulation underscore the need for cautious navigation of its implications in democratic processes.

16. Bonds, big money and an imperfect democracy

Syllabus: GS-2, Indian Constitution and Elections

Mains: Issues with Electoral bonds

Context: The Electoral Bonds Scheme, purportedly aimed at curbing the influence of black money in Indian elections, has been deemed unconstitutional by the Supreme Court. Despite its intentions, the scheme failed to transform Indian politics and combat illegal financing effectively. The persistence of illegal funds in elections underscores deeper issues within Indian democracy, where the gap between professed ideals and actual practices undermines the democratic process.

Issues with the Electoral Bonds Scheme

- **Ineffectiveness:** Electoral bonds did not address the root cause of illegal financing in elections, leading to continued reliance on illicit funds by political parties.
- **Opacity and Influence:** Critics argued that the scheme lacked transparency, allowing for undisclosed financing by vested interests, thereby exacerbating their influence on political outcomes.
- **Loopholes and Abuse:** Removal of donation limits and provisions for trading bonds enabled circumvention of regulations, facilitating potential misuse by shell companies and foreign entities.
- **Continued Illicit Funding:** Despite the scheme, illegal financing remained a significant source of funds for political parties, highlighting its failure to deter black money in politics.

Significance of the Gap between Professed and Actual

- **Democratic Erosion:** The disparity between stated democratic principles and actual practices undermines the essence of democracy, as elected leaders prioritize the interests of financiers over constituents.
- **Hollow Politics:** Indian politics, hollowed out by the dominance of vested interests, reflects a disconnect between leaders' rhetoric and their actions, further eroding public trust in governance.
- **Feudal Mindset:** Weak accountability and a feudal mindset perpetuate undemocratic practices, impeding efforts to uphold democratic norms and transparency in governance.
- **Policy Distortions:** Policies skewed towards serving elite interests exacerbate socio-economic disparities, neglecting the needs of marginalized communities and perpetuating systemic inequalities.

Money and the Election Process

- **Influence Peddling:** Electoral campaigns driven by financial incentives rather than performance contribute to the commodification of votes, undermining the integrity of democratic processes.
- **Excessive Spending:** The exorbitant costs of elections exceed legal expenditure limits, necessitating illicit funds to finance campaigns, further entrenching the influence of money in politics.
- **Opaque Financing:** Lack of transparency in campaign financing enables vested interests to manipulate electoral outcomes through bribes, favours, and coercion.
- **Crony Capitalism:** The nexus between political donations and policy favours exposes the extent of cronyism in Indian politics, compromising governance and perpetuating systemic corruption.

Solutions

- **Strengthening Accountability:** Enforcing stringent accountability measures for political donations and expenditures to prevent the abuse of power and influence.
- **Enhancing Transparency:** Implementing comprehensive disclosure mechanisms to ensure public scrutiny of political financing and promote transparency in electoral processes.
- **Reforming Electoral Funding:** Introducing reforms to reduce the cost of elections and minimize reliance on private donations, such as state funding of political parties.
- **Empowering Citizens:** Promoting civic engagement and awareness to hold elected representatives accountable and demand integrity in governance.

Conclusion: Addressing these challenges requires concerted efforts to strengthen democratic institutions, enhance transparency and accountability, and empower citizens to demand integrity and fairness in governance. Only through comprehensive reforms can India realize the true ideals of democracy and ensure that the government truly serves the interests of the people.

Nut Graf: *The failure of the Electoral Bonds Scheme highlights the deeper structural challenges facing Indian democracy, characterized by the erosion of democratic norms, the pervasive influence of money in politics, and entrenched cronyism.*

17. CAA Rules silent on fate of rejected applicants

Syllabus: Indian Constitution, Amendments and Significant provisions

Mains: Issues with CAA

Context: The Citizenship (Amendment) Act (CAA) has raised concerns regarding the fate of rejected applicants, as the accompanying Rules lack provisions for review procedures. This absence of clarity has particularly alarmed potential applicants, such as the Matua community in West Bengal, who have been residing in India for decades but may face rejection due to document scrutiny or adverse security reports.

Issues

- **Silent CAA Rules:** The Rules under the CAA do not specify any review process for rejected applications by empowered committees, leaving applicants in uncertainty about their next steps.
- **Potential Rejections:** Applicants may face rejection if their documents fail scrutiny or if adverse security reports are issued against them, posing a significant risk, especially for communities like the Matuas who have migrated from Bangladesh and have been living in India for years.
- **Detention Concerns:** Rejected applicants fear the possibility of being sent to detention centers, exacerbating anxieties within affected communities and raising questions about the fairness of the citizenship process.

Significance

- **Legal Ambiguity:** The absence of review procedures in the Rules creates legal ambiguity and adds to the apprehensions of potential applicants, potentially undermining the objectives of the CAA.
- **Community Impact:** Communities like the Matuas, who stand to benefit from the CAA, are particularly concerned about the lack of clarity, as it directly affects their prospects of obtaining Indian citizenship.
- **Humanitarian Concerns:** The potential consequences of rejection, including detention, highlight the humanitarian aspect of the issue, necessitating a fair and transparent process for citizenship application and review.

Solutions

- **Clarification of Rules:** There is a pressing need for the government to clarify the Rules under the CAA to outline a transparent and fair review process for rejected applications, ensuring that due process is followed.
- **Review Mechanisms:** Establishing review mechanisms within the empowered committees or through an independent body can provide recourse for rejected applicants, safeguarding their rights and ensuring a just citizenship process.
- **Community Engagement:** Engaging with affected communities, such as the Matuas, and addressing their concerns through dialogue and proactive measures can foster trust in the citizenship process and alleviate fears of rejection and detention.

Nut Graf: The lack of clarity in the CAA Rules regarding the fate of rejected applicants raises significant concerns about the fairness and transparency of the citizenship process. Addressing these issues through clarification of rules, establishment of review mechanisms, and community engagement is crucial to uphold the principles of justice and inclusivity in the citizenship framework.





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ECONOMY

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

Syllabus: Energy, Infrastructure

Mains: Energy security, Renewable energy

Introduction:

The Union Cabinet recently approved a groundbreaking ₹75,021-crore package for the 'PM-Surya Ghar: Muft Bijli Yojana' (PM Free Electricity scheme), aimed at promoting rooftop solar (RTS) installations across India. This scheme heralds a significant step towards harnessing renewable energy sources and reducing dependency on conventional power grids.

Key Components of the Scheme:

- The scheme promises to provide 300 units of "free electricity" every month to one crore households across the nation. While the logistics of delivering this free electricity are yet to be fully disclosed, the initiative signifies a crucial stride towards sustainable energy solutions.
- Under the PM-Surya Ghar scheme, the Central government will fund 60% of the installation cost for 2 kW systems and 40% for systems ranging from 2-3 kW capacity. Eligible households can apply for subsidies through a centralized portal and select appropriate vendors for installation.
- To cover the remaining costs, households can access collateral-free loans at approximately 7% interest rates for RTS systems up to 3 kW capacity. Public sector units (PSUs) affiliated with the Ministry will oversee installation for eligible households, with loans repaid through surplus power sold back to the grid.

Nut graf: The PM-Surya Ghar scheme represents a pivotal initiative in India's journey towards sustainable energy development. By incentivizing rooftop solar installations and providing financial support, the government is empowering citizens to embrace clean energy solutions, thereby fostering a greener and more sustainable future for generations to come.

2. Facts and statistics

Syllabus: Indian Economy and issues relating to Planning, Mobilization of Resources, Growth, Development and Employment

Mains: The issue with the current GDP estimate

Introduction:

- The latest GDP figures released by the National Statistical Office (NSO) have stirred both excitement and confusion.
- While markets rejoice over the reported 8.4% year-on-year GDP growth in the October-December quarter, economists are puzzled by the significant disparities between official estimates and their projections.

GDP Growth Trends:

- The NSO's data suggests robust GDP growth rates, with 8.2% and 8.1% in the first and second quarters, respectively.
- This represents an increase of 40 to 50 basis points compared to earlier estimates.
- The full-year GDP growth forecast is now 7.6%, up from the previous estimate of 7.3%.

Factors Influencing Growth Revisions:

- The revisions in GDP estimates for the current fiscal year are influenced by adjustments made to the data for 2021-22 and 2022-23.
- Real GDP growth for 2021-22 has been raised to 9.7%, leading to a downward revision of 2022-23 GDP growth to 7%.
- These revisions impact year-on-year growth rates, highlighting the importance of considering the base effect.

Analysis of Sectoral Performance:

- Third-quarter Gross Value Added (GVA) growth slowed to 6.5%, primarily due to a contraction in the rural agriculture sector and slowing growth in other sectors.
- The disparity between GDP and GVA growth rates is explained by a surge in net indirect taxes, particularly due to lower subsidy payouts.
- GVA growth provides a more accurate reflection of economic health, indicating sluggish private and government consumption expenditure.

Election Implications and Call for Comprehensive Analysis:

- With the impending announcement of general elections, NSO data becomes a focal point for political discourse.
- However, there is a need for a nuanced analysis of the economy based on multiple statistical indicators, beyond headline GDP figures.

Nut Graf: *The latest NSO data reveals robust GDP growth, sparking market enthusiasm. However, disparities between official estimates and projections raise questions. Sectoral analysis shows slowed GVA growth, indicating a need for comprehensive economic assessment beyond headline figures, especially with elections approaching.*

3. The dynamics of household consumption

Syllabus: GS-3, Indian Economy and issues relating to Planning, Mobilization of Resources, Growth, Development and Employment

Mains: Household Consumption Expenditure Survey findings

Introduction to the Household Consumption Expenditure Survey (HCES) 2022-23:

- The National Sample Survey Office (NSSO) recently released the eagerly anticipated fact sheet of the Household Consumption Expenditure Survey (HCES) 2022-23.
- The survey provides detailed insights into how households across India spend on consumable items and collects auxiliary information on household characteristics and demographics.
- It plays a crucial role in constructing Consumer Price Indices and estimating the headcount ratio of those living below the national poverty line.

Methodology and Innovation in Data Collection:

- HCES 2022-23 adopted modern, computer-assisted personal interview methods using tablets, enhancing data collection and processing efficiency.
- A substantial sample size of 2,61,746 households was strategically selected, reflecting the consumption patterns of 'New India'.
- The questionnaire was enriched with contemporary items and divided into three parts, facilitating comprehensive coverage of consumption expenditure.

Insights and Trends Revealed:

- Average Monthly Per Capita Expenditure (MPCE) in rural and urban India is detailed, with notable increases when considering imputed values of free items.
- Trends from 1999-2000 to 2022-23 show shifts in expenditure composition, including a decline in the share spent on cereals and an increase in spending on fresh fruits and processed foods.
- Non-food expenditures, especially on durable goods, have surged, indicating an improved standard of living and evolving lifestyle preferences.

Significance of HCES and Conclusion:

- The survey, conducted amidst challenges including the COVID-19 pandemic, showcases resilience and adaptability.
- It is a vital resource for research in economics and sociology, contributing to understanding India's socio-economic landscape.
- Through innovation in data collection and retention of traditional practices, HCES remains a beacon of reliability and a tool for shaping economic policies in 'New India'.

Nut Graf: *The Household Consumption Expenditure Survey (HCES) 2022-23, recently released by the NSSO, offers insights into India's consumption patterns. Through modernized data collection methods and comprehensive analysis, it highlights shifts in expenditure trends, reflecting the evolving socio-economic landscape of the nation.*

4. Why did Google delist some Indian apps from Play Store?

Syllabus: GS-3, Effects of Liberalization on the Economy

Mains: Google monopoly and its implications for Indian App Businesses

Background:

- Google announced delisting almost a dozen Indian apps from its Play Store on March 1.
- This action followed years of disputes between Google and Indian companies, involving legal proceedings in courts.
- The Ministry of Electronics and Information Technology intervened, leading to the restoration of the apps, but the underlying issue persists.

Platform Fee Dispute:

- The core issue revolves around Google's platform fees, which range from 11% to 30% for in-app purchases of digital services.
- Google argues that these fees support the maintenance of Google Play and the development of the Android ecosystem.
- Indian developers, like many worldwide, perceive these fees as exorbitant. Some have contested them in court.

Comparative Analysis:

- Unlike Apple, which hasn't faced similar resistance in India due to its lower market penetration, Google dominates the smartphone market through Android.
- Apple and Google have encountered global pushback against their fees, with notable cases like Spotify's complaint to the European Commission and Epic Games' lawsuit.
- Google allows third-party app stores globally, but Google Play is pre-installed on most Android devices, limiting options for developers.

Regulatory Response:

- The Competition Commission of India (CCI) imposed a fine of ₹936.44 crore on Google in 2022 for its Play Store policies.
- Google is appealing this fine and CCI's orders regarding in-payment options for developers.
- A need has been felt for regulatory intervention to foster competition in the app store market, potentially through measures like facilitating alternative app stores and enabling sideloading.

Nut Graf: Google delisted Indian apps due to disputes over high platform fees. This reflects broader global tensions between tech giants and developers. Regulatory intervention is sought to address competition concerns in the app store market.

5. Central transfers and the issue of shares of some States

Syllabus: GS-3, Inclusive Growth and issues arising from it

Mains: 16th Finance Commission

Introduction:

- Southern States, particularly, have observed a consistent decrease in their share of resources from one Finance Commission to another.
- Comparison between the Twelfth and Fifteenth Finance Commissions reveals a decline from 19.785% to 15.800%.
- Northern and eastern States also experienced reductions while hilly, central, and western States, like Maharashtra, saw gains.

Role of Criteria in Distribution:

- Criteria such as the income distance criterion heavily influence individual States' tax devolution shares.
- Weightage of the distance criterion has decreased over Finance Commissions: from 62.5% in the Eleventh to 45% in the Fifteenth.
- Despite reductions, the distance criterion remains significant, impacting States' shares based on their income disparity with the highest-income State.

Impact of Population Criterion:

- Population data changes have led to some controversy, particularly transitioning from 1971 to 2011 data.
- Introduction of the demographic change criterion aimed to mitigate penalties for States showing improved fertility rates.
- Overall, the joint impact of these changes has been marginal for all States, with some, like Tamil Nadu, experiencing a marginal positive impact.

Proposed Steps for Resolution:

- **Addressing Criterion Weightage:**
 - While the income distance criterion is crucial for fair distribution, its weightage could be reconsidered by the Sixteenth Finance Commission.
 - A reduction in weightage by 5% to 10% points could be a viable solution to balance its impact against other criteria.
- **Limiting Cesses and Surcharges:**
 - The increase in cesses and surcharges by the Centre has reduced the divisible pool size, affecting States' shares.
 - Setting an upper limit, such as 10% of the Centre's gross tax revenues, on cesses and surcharges could help maintain a larger divisible pool, benefiting States.

- **Maintaining Fair Distribution:**

- Despite adjustments, ensuring a fair distribution of resources among States remains a fundamental principle.
- While addressing specific concerns, maintaining the essence of equitable distribution is essential for the stability and development of all States.

Nut Graf: *The Sixteenth Finance Commission must address declining state shares in resource transfers, primarily impacted by the income distance criterion. Proposed solutions include revising criterion weightage and limiting cesses and surcharges to maintain equitable distribution.*

6. Give Kerala one time package to tide over financial crisis, SC tells Centre

Syllabus: Indian Economy and issues relating to Planning, Mobilization of Resources, Growth, Development and Employment.

Mains: Financial tussle Between Centre and State

Context:

- The Supreme Court of India intervened in a case involving Kerala's financial crisis.
- Kerala alleged that the central government's limitations on its borrowing powers had severely damaged its economy.
- The central government, in response, criticized Kerala's financial management, labelling it as one of the most financially unhealthy states.

Court's Recommendations:

- A bench led by Justice Surya Kant urged the Centre to provide Kerala with a one-time financial package before March 31 to help it overcome its current crisis.
- The Court suggested that while the Centre could be more lenient now, it should impose stricter conditions in future budgets to make up for it.
- The Centre initially resisted the idea, claiming that a bailout package was not feasible. However, it agreed to discuss the matter further with the government and report back to the Court by March 13.

Discussion in Court:

- During the hearing, senior advocate Kapil Sibal, representing Kerala, raised the issue before the Court.
- Attorney General R. Venkataramani and Additional Solicitor General N. Venkataraman represented the Centre, stating that the Centre had declined to offer similar concessions to other states.
- Justice Kant suggested that the Centre should extend a special one-time package to Kerala before the deadline, with harsher conditions than those imposed on other states. He proposed adjusting these concessions in the first quarter of the next financial year.
- The Centre expressed a willingness to avoid conflict with Kerala but emphasized the need to inquire why the state was struggling financially.

Kerala's Allegations and Centre's Response:

- Kerala's original suit accused the central government of violating the federal structure of governance and causing severe damage to the state's economy.
- The central government countered by accusing Kerala of poor financial health and mismanagement of public finances, affecting the country's credit rating.

Nut Graf: The Supreme Court urged the Centre to provide Kerala with a one-time financial package to address its crisis. This comes amid Kerala's allegations of economic damage due to central limitations, countered by the centre's claims of financial mismanagement.

7. India woos Tesla by slashing import duty on EVs to 15% from 70-100%

Syllabus: Economic Development in India

Mains: Electric vehicles policy of India

Context: India's move to slash import duties on electric vehicles (EVs) from 70-100% to 15% is aimed at attracting global players like Tesla to establish manufacturing facilities within the country. The policy incentivizes EV makers to invest in local production, thereby promoting domestic manufacturing and technological advancement in the electric vehicle sector.

Issues

- **High Import Duties:** The previously high import duties on CBUs of electric vehicles posed a barrier to the entry of global players into the Indian market, hindering technological advancement and competition.
- **Need for Local Manufacturing:** India aims to boost domestic manufacturing capabilities in the electric vehicle sector to reduce dependency on imports and promote self-reliance.
- **Balancing Domestic Concerns:** The government faces the challenge of balancing the interests of domestic manufacturers to attract foreign investment and technology transfer.

Significance

- **Attracting Global Players:** Lowering import duties makes India a more attractive destination for global EV manufacturers, fostering competition and innovation in the domestic market.
- **Boost to Electric Vehicle Adoption:** The policy incentivizes the adoption of electric vehicles by facilitating the entry of technologically advanced and globally recognized brands like Tesla, thereby contributing to India's efforts to combat air pollution and reduce carbon emissions.
- **Economic Growth and Job Creation:** Establishing local manufacturing units by global players can stimulate economic growth, create employment opportunities, and enhance technological capabilities in the electric vehicle ecosystem.

Solutions

- **Conditional Duty Reduction:** Linking the import duty reduction to conditions such as minimum investment, local manufacturing, and domestic value addition ensures that the benefits are tied to the development of the domestic electric vehicle industry.
- **Promotion of R&D:** Encouraging research and development collaborations between foreign and domestic firms can facilitate knowledge transfer and technological innovation in the electric vehicle sector.
- **Support for Domestic Players:** While attracting global players is important, providing support and incentives for domestic manufacturers to upgrade technology and enhance competitiveness is crucial for a balanced growth trajectory.

Nut Graf: India's decision to slash import duties on electric vehicles demonstrates the government's commitment to promoting sustainable mobility and fostering a conducive environment for investment and innovation in the electric vehicle sector.

8. Food factor

Syllabus: GS-3, Economic Development in India

Mains: Issues with high retail inflation

Context: The recent retail inflation data highlights the persistent challenge posed by volatile food prices, not only affecting broader inflation but also undermining personal consumption, a key driver of economic growth.

Issues

- **Escalating Food Prices:** Food inflation, particularly in essential items like vegetables, remains a major concern, with significant year-on-year increases observed, posing challenges for households and the economy at large.
- **Supply-Side Constraints:** Despite government interventions such as export bans on certain food items, the impact on cooling prices has been limited, indicating underlying supply-side constraints and inefficiencies.
- **Agricultural Outlook:** Projections for the upcoming horticulture crop year indicate potential deficits in onion and potato production, exacerbated by factors like water scarcity, which could further exacerbate food price pressures.

Significance

- **Impact on Personal Consumption:** Persistently high food inflation constrains household budgets, particularly in rural areas, leading to subdued personal consumption, which in turn affects overall economic growth.
- **Economic Growth Concerns:** With private consumption accounting for a significant portion of GDP, the strain from elevated food inflation poses risks to inclusive and sustained economic growth, particularly in the context of upcoming elections.
- **Policy Imperatives:** Policymakers face the challenge of balancing inflation containment measures with the imperative of sustaining economic growth, necessitating targeted interventions to address food price volatility.

Solutions

- **Enhanced Supply Chain Management:** Improving agricultural supply chains, including storage facilities and distribution networks, can help mitigate price volatility by ensuring timely access to markets and reducing wastage.
- **Investment in Irrigation Infrastructure:** Addressing water scarcity through investments in irrigation infrastructure and sustainable water management practices is essential for bolstering agricultural productivity and resilience to climate variability.
- **Policy Coordination:** Coordinated efforts between monetary and fiscal authorities are required to effectively manage inflation while supporting growth, with a focus on targeted interventions to alleviate the impact of food price pressures on vulnerable segments of the population.

Nut Graf: The challenge of rising food inflation underscores the importance of proactive policy measures to address supply-side constraints and mitigate the impact on personal consumption and economic growth.

9. On FTAs with European countries

Syllabus: GS-3, Effects of Liberalization on the Economy

Mains: FTA with EFTA: Provision and impact

Prelims: European Free Trade Association (EFTA) countries

Introduction to TEPA:

- The India-EFTA Trade and Economic Partnership Agreement (TEPA) is India's latest Free Trade Agreement (FTA), marking deeper economic ties with the European Free Trade Association (EFTA) countries—Switzerland, Norway, Iceland, and Liechtenstein.
- It signifies India's pivot towards the Western world in its FTA engagements, being the first agreement with any European country.

Key Features of TEPA:

- **Investment:**
 - TEPA aims for a \$100 billion investment into India from EFTA countries over 15 years, leading to one million jobs.
 - India retains the option to withdraw tariff concessions if investment targets aren't met, contingent upon India's economic growth and returns on EFTA investments.
- **Trade in Goods:**
 - India commits to eliminating tariffs on most products within 7 to 10 years, granting EFTA countries greater market access.
 - Beneficial sectors for EFTA exports to India include seafood, fruits, coffee, oils, processed foods, smartphones, medical equipment, textiles, and machinery.
 - Tariffs on cut and polished diamonds will decrease from 5% to 2.5% in five years, and wine tariffs will also be reduced gradually.
- **Trade in Services:**
 - Both India and EFTA members agree to liberalize various service sectors.
 - Specific benefits for India include access to Norwegian markets for yoga instructors and traditional medicine practitioners and eased visa regulations for highly skilled Indian professionals in Norway and Switzerland.
 - Frameworks are established to ease the recognition of qualifications of service providers and to facilitate financial and telecom services.
- **Sustainable Development:**
 - TEPA includes a chapter on Trade and Sustainable Development (TSD), addressing environmental and labour concerns.
 - It references multilateral agreements and conventions but is not subject to dispute resolution.
- **Intellectual Property Rights (IPR):**
 - The agreement nods to the demands of pharmaceutical and high-tech multinational companies for enhanced protection of intellectual property rights.
 - Certain changes are required in Indian law, such as streamlining the patent opposition process and modifying the annual statement on patent working.

Implications of TEPA:

- The agreement's success depends on its implementation over time.
- TEPA signals India's commitment to trade liberalization amidst global protectionist trends.
- It facilitates increased trade and investment between India and EFTA countries, offering mutual benefits in the goods and services sectors.
- It introduces provisions for sustainable development and adjusts intellectual property regulations to meet the demands of multinational companies.

Conclusion:

- TEPA represents a significant step towards strengthening economic ties between India and the EFTA countries.
- Its provisions aim to boost trade, investment, and cooperation while addressing contemporary challenges such as sustainable development and intellectual property rights.

Nut Graf: The India-EFTA Trade and Economic Partnership Agreement (TEPA) signifies a pivotal shift in India's FTA strategy towards deeper engagement with European countries. Its key features encompass investment, trade liberalization, sustainable development, and intellectual property rights.

10. Guaranteed MSP is an ethical imperative

Syllabus: GS-3, Issues related to Direct and Indirect Farm Subsidies and Minimum Support Prices

Mains: Debate on giving legal backing to MSP

Introduction:

- As elections approach, agrarian issues gain prominence with farmers protesting for fair pricing of their produce.
- The ruling government's attempts to address concerns were rejected by farmers, emphasizing the need for a guaranteed Minimum Support Price (MSP).

Ethical Imperative of Guaranteed MSP:

- MSP plays a crucial role in ensuring food security in India, countering market failures that disadvantage farmers.
- Lack of influence in pricing leaves farmers economically vulnerable, necessitating legal guarantees for MSP.
- Despite annual MSP announcements, implementation remains poor, leaving many farmers economically strained and trapped in cycles of debt and despair.
- Legal recourse to MSP is supported by constitutional articles and international declarations, reflecting widespread public support.

Efforts and Solutions:

- Various states and organisations have proposed measures to ensure MSP, such as amendments to agricultural acts and the introduction of private member bills.
- Sugarcane growers already benefit from statutory MSP, while other states like Karnataka and Andhra Pradesh have proposed bills to guarantee MSP for other crops.
- Minor amendments to existing laws coupled with budget allocations can enforce MSP and establish essential backward and forward linkages to manage post-harvest surplus.
- Enhancing MSP to provide a 50% profit margin is feasible and necessary to address farmers' economic challenges.

Challenges and Opposition:

- Ensuring MSP may face opposition from intermediaries and those benefitting from current market dynamics.
- Adherence to free market principles often impedes necessary government interventions to address farmers' grievances.
- Government schemes like PM-AASHA, while possessing elements of MSP support, are sidelined due to political expediency, hindering effective solutions to farmer distress.

Conclusion:

- Guaranteed MSP is essential not only for farmers' economic well-being but also for ensuring food security and addressing hunger and malnutrition.
- While challenges and opposition exist, legal guarantees for MSP are imperative to rectify market failures and provide just solutions to the ongoing agrarian crisis.

Nut Graf: The demand for a guaranteed Minimum Support Price (MSP) in Indian agriculture reflects farmers' plight amid market failures. Legal assurances for MSP are essential to rectify economic vulnerabilities and ensure food security.

11. Employment scenario in India grim, says ILO report

Syllabus: Issues relating to Planning, Mobilization of Resources, Growth, Development and Employment.

Mains: Issue related to unemployment

Introduction: The latest India Employment Report 2024, a collaborative effort between the International Labour Organisation (ILO) and the Institute of Human Development (IHD), paints a concerning picture of the country's youth workforce.

Youth Unemployment: A Growing Concern

- One of the most alarming revelations is the nearly twofold increase in the proportion of unemployed youth with secondary or higher education, soaring from 35.2% in 2000 to a staggering 65.7% in 2022.
- The report underscores the pressing issue of youth unemployment, with young individuals constituting a significant 83% of the unemployed workforce.
- Despite a rise in employment and underemployment leading up to 2019, the onset of the pandemic witnessed a reversal in this trend.
- Even amidst economic distress, educated youth faced disproportionately high levels of joblessness.

Mixed Signals in Labour Market Indicators

While the report notes a temporary improvement in labour market indicators post-2019, coinciding with periods of economic slowdown, experts urge caution in interpreting these changes. The long-term scenario reflects insufficiencies in the growth of non-farm sectors, posing challenges in absorbing agricultural labourers.

Informal Employment and Diminished Regular Work

A concerning trend highlighted in the report is the prevalence of informal employment, with almost 90% of workers engaged in such precarious arrangements. Moreover, the share of regular employment, which had been steadily increasing since 2000, witnessed a decline post-2018. The struggle to secure long-term contracts exacerbates livelihood insecurities among workers.

Skills Gap and Gender Disparities

The report sheds light on the glaring skills gap among India's youth, with a significant percentage lacking basic digital proficiency. Moreover, gender disparities persist in the labour market, with low rates of female labour force participation exacerbating social inequalities.

Challenges for Marginalized Communities

Despite affirmative action initiatives, marginalized communities, including Scheduled Castes and Scheduled Tribes, continue to face barriers in accessing quality employment opportunities. The report underscores the urgent need for targeted policies to address these disparities and promote inclusive growth.

Looking Ahead: Addressing Structural Challenges

As India grapples with the ramifications of rising youth unemployment and widening social inequalities, policymakers face the daunting task of implementing measures to foster inclusive and sustainable economic growth. Bridging the skills gap, promoting formal employment, and ensuring equitable access to opportunities must remain central to these efforts. Only through concerted action can India harness its demographic dividend and build a more resilient and inclusive labour market for the future.

12. WTO's investment facilitation negotiations are not illegal

Syllabus: Effects of Liberalization on the Economy

Mains: Investment facilitation negotiations in WTO

Introduction: WTO's Investment Facilitation Negotiations

- The failure to adopt the Investment Facilitation for Development (IFD) agreement was a significant outcome of the 13th Ministerial Conference (MC13) of the World Trade Organization (WTO) in Abu Dhabi.
- Negotiations for the IFD agreement began in 2017 through the Joint Statement Initiative, involving 70 countries.
- Despite opposition, the IFD agreement was finalized in November 2023, with support from around 120 of the 166 WTO member countries.

India's Concerns and Arguments:

- India, along with South Africa, played a pivotal role in preventing the inclusion of the IFD agreement in the WTO rulebook.
- India's primary concerns revolve around the nature of investment within the WTO framework and the process followed for integrating the IFD agreement.
- India argues that investment is distinct from trade and questions whether it should be within the purview of the WTO.
- Additionally, India asserts that the process for negotiating the IFD agreement lacked the necessary mandates, as established in previous WTO decisions.

Investment vs. Trade and Process Concerns:

- India contends that investment should not fall under the WTO's domain, emphasizing the differences between investment and trade.
- Despite economic interlinkages between trade and investment, India questions the appropriateness of including investment within the WTO framework.
- Furthermore, India challenges the legitimacy of the process followed in negotiating the IFD agreement, citing previous WTO decisions that establish mandates for new negotiations.

Legal and Procedural Considerations:

- The legal basis for including investment agreements within the WTO framework is debated, particularly regarding the distinction between multilateral and plurilateral negotiations.
- While there is a negative mandate against launching multilateral negotiations on new issues, it is unclear whether this mandate extends to plurilateral negotiations.
- Plurilateral agreements like the IFD hold the potential for revitalising the WTO's legislative function, given the challenges in reaching a consensus on multilateral agreements.
- India is urged to reconsider its stance on plurilateral agreements, given their potential benefits for updating and enhancing the WTO's regulatory framework.

Nut Graf: *The failure to adopt the Investment Facilitation for Development (IFD) agreement at the WTO's 13th Ministerial Conference in Abu Dhabi highlights India's concerns over integrating investment into the WTO framework and the legitimacy of the negotiation process.*

13. 'GeM may offer works contracts'

Syllabus: Indian Economy – Issues related to planning, Mobilization of resources, Growth and development

Prelims: Government e-Marketplace (GeM)

Mains: Significance of Government e-Marketplace (GeM) for Indian markets

Context: The Government e-Marketplace (GeM), an online procurement platform, has become a cornerstone of public procurement in India, facilitating transactions worth over ₹4 lakh crore this year. GeM seeks to expand its scope by incorporating works contracts for construction projects, aiming to introduce transparency and efficiency into the bidding process.

Expanding GeM's Scope

- **Incorporating Works Contracts:** GeM aims to introduce works contracts for construction and building projects onto its platform, streamlining the bidding process and ensuring transparent monitoring mechanisms for contract execution.
- **Broader Reboot:** GeM's evolution extends beyond goods procurement to encompass critical defense purchases, services such as aircraft chartering, and election-related material printing, demonstrating its versatility and adaptability to diverse procurement needs.

Enhancing Transparency and Efficiency

- **Transparent Monitoring:** GeM's proposed mechanism will allow for transparent monitoring of works contracts, enabling stakeholders to assess progress and ensure adherence to timelines and quality standards.
- **Efficient Tendering Process:** GeM's streamlined tendering process will mitigate delays associated with traditional methods, allowing contractors from across regions to bid for projects and facilitating milestone-linked electronic payments.

Significance of GeM's Expansion

- **Scale of Procurement:** GeM's exponential growth, surpassing ₹4 lakh crore in procurement this year, underscores its significance as a central platform for government purchases, fostering efficiency, transparency, and cost-effectiveness.
- **Cross-Regional Bidding:** Allowing contractors from different regions to bid for projects enhances competition, potentially leading to cost savings and improved project quality.

Way Forward

- **Revamping Interface:** GeM plans to adopt an open Application Programming Interface (API) architecture, facilitating the creation of customized micro-procurement portals by departments, States, and local bodies, thus promoting inclusivity and adaptability.
- **Digital Payment Integration:** Milestone-linked electronic payments and post-contract management features will streamline financial transactions, reducing bureaucracy and enhancing contractor satisfaction.

Nut Graf: GeM's initiative to incorporate works contracts into its platform marks a significant step towards enhancing transparency, efficiency, and inclusivity in public procurement processes.

14. A balancing act

Syllabus: GS-3, Indian Economy and Budgeting

Prelims: Fiscal deficit

Context: The Centre's fiscal deficit has witnessed a notable increase, reaching ₹15 lakh crore by the end of February, representing 86.5% of the revised target of ₹17.3 lakh crore. Despite this spike, the fiscal deficit target for the year seems achievable, albeit with certain challenges and adjustments. Understanding the trajectory of fiscal deficit and its implications is crucial for assessing the government's fiscal management strategies.

Factors Influencing the Fiscal Deficit

- **Increased Transfers to States:** The Centre transferred around ₹2.15 lakh crore to States through tax devolution shares, compared to ₹1.4 lakh crore last year, contributing to the deficit surge in February.
- **Capital Expenditure Boost:** Capital expenditure witnessed a significant rise, from ₹47,600 crore to ₹84,400 crore, primarily aimed at fulfilling the government's ambitious ₹10 lakh crore target. However, further scaling up to ₹1.4 lakh crore in March may face challenges due to the mid-month implementation of the Model Code of Conduct for the Lok Sabha polls.

Targets and Recalibrations

- **GDP Proportion:** Last year's fiscal deficit stood at 6.4% of GDP, with the original target for this year set at 5.9% and revised to 5.8% by Finance Minister Nirmala Sitharaman. The government aims to narrow it to 4.5% by 2025-26, with a 5.1% target for 2024-25, subject to adjustments based on economic conditions and government priorities post the general election.
- **Economic Outlook:** The Centre anticipates a shift towards private investment driving growth, amidst challenges posed by high inflation, unpredictable monsoon patterns, and fluctuating consumption demand, necessitating flexibility in fiscal policies.

Spending and Revenue Management

- **Remaining Spending Room:** Despite the deficit, the government retains approximately ₹6 lakh crore of spending capacity for March, with critical ministries like Agriculture, Rural Development, and Consumer Affairs holding over ₹1.03 lakh crore, indicating potential for positive surprises in meeting targets.
- **Impact of Missed Targets:** Persistent deviations from spending goals undermine intended outcomes and highlight the need for better planning and reduced borrowing in subsequent years to ensure fiscal prudence.

Solutions

- **Strategic Planning:** Enhancing efficiency in expenditure planning and execution to align with fiscal targets, thereby optimizing resources and minimizing fiscal deficits.
- **Policy Adaptation:** Flexibility in fiscal policies to accommodate economic fluctuations and prioritize areas crucial for sustainable growth and welfare outcomes.
- **Transparency and Accountability:** Strengthening mechanisms for monitoring spending patterns and ensuring accountability in achieving fiscal objectives to maintain investor confidence and economic stability.

Nut Graf: The trajectory of the fiscal deficit presents a balancing act between meeting expenditure needs and adhering to fiscal targets, reflecting the government's efforts to navigate economic challenges while sustaining growth momentum.

15. Why is unemployment high among the youth?

Syllabus: Indian Economy, Mobilization of resources, Growth, Development and

Employment

Mains: Reasons for high unemployment among the youth

Context: High youth unemployment remains a pressing issue in India, exacerbated by factors such as lack of job opportunities, skills mismatch, and gender disparities in the labor force. The India Employment Report 2024, jointly prepared by the Institute of Human Development (IHD) and the International Labour Organization (ILO), sheds light on the complexities of youth employment, education, and skills in the country, emphasizing the need for targeted interventions to address the prevailing challenges.

Issues

- **Youth Unemployment:** Despite an increase in the proportion of young people receiving education, there has been a decline in the percentage of youth engaged in economic activities. Unemployment among educated youth, particularly those with secondary education or higher, has risen significantly over time, highlighting the magnitude of the crisis.
- **Quality of Education:** The report underscores the issue of unemployability among educated youth due to the poor quality of education. A significant portion of technically qualified youth lacks formal vocational training, hindering their prospects of securing gainful employment in various sectors.
- **Informal Sector Dominance:** The predominance of informal sector jobs further compounds the unemployment challenge, with a vast majority of youth finding themselves in low-productive and low-earning positions. The decline or stagnation of real wages adds to the plight of workers, perpetuating the cycle of poverty and underemployment.
- **Gender Disparities:** Women's participation in the labor force remains significantly lower than men, with persistent gender gaps observed across rural and urban areas. Despite some improvements post-2019, the report highlights the need for policies to enhance women's engagement in productive activities and address barriers to their participation.

Significance

- **Economic Growth Implications:** The inability to effectively integrate youth into the labor market poses significant challenges to India's economic growth and development trajectory. Addressing youth unemployment and enhancing labor market participation are critical for sustaining long-term growth and reducing income inequality.
- **Social Cohesion:** High levels of youth unemployment and underemployment can lead to social unrest and discontentment, undermining social cohesion and stability. Targeted interventions aimed at creating employment opportunities and improving job quality are essential for fostering inclusive growth and social harmony.

Solutions

- **Skill Development:** Separating skill development from formal education and investing in vocational training programs can enhance the employability of youth and bridge the skills gap in the labor market.
- **Formal Sector Promotion:** Policies aimed at creating more formal sector jobs and improving working conditions are imperative to provide youth with secure and decent employment opportunities. Supporting micro, small, and medium-sized enterprises (MSMEs) can also contribute to job creation and economic growth.
- **Gender Mainstreaming:** Implementing measures to promote gender equality in the labor force, such as providing access to education and skills training for women, addressing discriminatory practices, and offering support for women entrepreneurs, can help narrow the gender gap and enhance overall labor force participation.

Nut Graf: Addressing the multifaceted challenges of youth unemployment requires concerted efforts from policymakers, employers, civil society, and other stakeholders. By adopting a holistic approach that prioritizes skill development, formal sector promotion, and gender mainstreaming, India can unlock the potential of its youth population, foster inclusive growth, and build a more resilient and prosperous society.

INTERNATIONAL RELATIONS

1. Is NATO membership in the cards for Ukraine?

Syllabus: GS-2, Effect of policies and politics of developed and developing countries on India's interests.

Mains: Importance of NATO membership for Ukraine

Context: The question of whether Ukraine will join NATO has been a topic of ongoing debate, with significant implications for regional security and geopolitics. Despite expressions of support from NATO's leadership, there remain complexities and challenges surrounding Ukraine's potential membership.

Issues

- **Russian Invasion and Opposition:** The invasion of Ukraine by Russia, particularly the annexation of Crimea in 2014 and subsequent conflict, has intensified tensions. Russian President Vladimir Putin vehemently opposes NATO expansion, viewing it as a threat to Russian interests.
- **Article 5 Implications:** Admission of Ukraine to NATO would trigger Article 5 of the NATO treaty, obliging member states to come to Ukraine's defense in the event of an attack. This raises concerns about the potential for escalation and conflict with Russia.
- **Military Capability and Support:** Ukraine faces challenges in its military capabilities, including ammunition shortages, which undermine its ability to resist Russian aggression effectively.
- **Political Dynamics:** Political factors, both within NATO member states and within Ukraine itself, influence discussions on NATO membership. In the United States, partisan politics and shifting administrations impact decisions on support for Ukraine.
- **European Union's Role:** The EU's role in supporting Ukraine, both economically and militarily, adds another layer of complexity to the situation, with differing priorities and approaches among member states.

Significance

- **Regional Stability:** Ukraine's potential NATO membership has implications for regional stability in Eastern Europe, particularly in relation to Russia.
- **Security Guarantees:** For Ukraine, NATO membership represents a crucial security guarantee, particularly in light of past and ongoing conflicts with Russia.
- **Geopolitical Balance:** The question of NATO membership for Ukraine also reflects broader geopolitical dynamics, including the balance of power between Western and Eastern Europe.

Solutions

- **Enhanced Cooperation:** NATO can continue to strengthen its cooperation mechanisms with Ukraine, providing support and reassurance without immediate full membership.
- **Diplomatic Engagement:** Diplomatic efforts should be intensified to address concerns and mitigate tensions between NATO, Ukraine, and Russia.
- **Military Support:** Continued military support for Ukraine, both from NATO and individual member states, is essential to bolstering Ukraine's defense capabilities.
- **Political Support:** Diplomatic and political support for Ukraine's sovereignty and territorial integrity should remain a priority for the international community.

Nut Graf: While Ukraine's NATO membership remains uncertain, ongoing cooperation and support are essential for addressing security challenges in the region. The complexities of the situation require careful diplomatic navigation and a commitment to upholding international law and principles of sovereignty.

2. Sweden Joins Nato

- Sweden on March 7 formally joined NATO as the 32nd member of the transatlantic military alliance, ending decades of post-World War II neutrality.
- Swedish Prime Minister Ulf Kristersson and U.S. Secretary of State Antony Blinken presided at a ceremony in which Sweden's "instrument of accession" to the alliance was officially deposited at the State Department.
- Sweden, along with Finland, which joined NATO last year, both abandoned long-standing military neutrality that was a hallmark of the Nordic states' Cold War foreign policy after Russia invaded Ukraine in early 2022.

What is the procedure to join NATO?

- There are some minimum requirements for a country to be eligible to join NATO, such as upholding democracy, tolerating diversity, respecting the sovereignty of other countries and so on.
- Once a country applies for NATO membership, they are signed on to a Membership Action Plan (MAP), a mechanism used by every new member that joined between 1999 and 2020. Sweden and Finland, the most recent applicants, however, did not use this procedure.
- Once a country has met the requirements and expressed its intention to join NATO, it is invited to do so if all member countries agree. This marks the beginning of accession talks, which end with the signing of the Accession Protocol.
- All member countries have to sign the Protocol and then get it ratified by their national legislatures, subsequently submitting the ratified instrument to the United States government, which is the depositary of the Treaty

Implications of Sweden Joining NATO

- It helps consolidate NATO's security efforts and defence integration in the Nordic, Baltic region, and Arctic regions. Sweden has a sophisticated army and defence technology, which could benefit NATO.
- Sweden will get protection of Article 5 of NATO.
- Joe Biden is expected to cite Sweden's accession to NATO as evidence that Russian President Vladimir Putin's intent to divide and weaken the alliance has failed as a direct result of the Ukraine invasion. And, he is expected to use Sweden's decision to join to step up calls for reluctant Republicans to approved stalled military assistance to Ukraine as the war enters its third year.
- More instability in Europe is expected along the Russian border.

Why Sweden's membership was stalled by Türkiye and Hungary?

- Turkey says Sweden and Finland have ties with "terrorist" groups — a reference to the Kurdistan Workers Party (PKK) and the People's Protection Units (YPG)
- Hungary says Sweden has had a hostile attitude to Budapest for years. It is angry about Swedish criticism of Prime Minister Viktor Orban over the perceived erosion of rule of law. Orban denies such erosion.

Why Türkiye softened its stand?

- The following steps were able to placate Türkiye
- Sweden has amended its constitution, changed its laws, significantly expanded its counter- terrorism cooperation against the PKK, and resumed arms exports to Türkiye.
- The two countries also agreed to create a new bilateral Security Compact that will meet annually at ministerial level for countering terrorism.
- Sweden promised that it would support some of Turkey's bids to join and some of its demands at the EU.

- US announced to transfer F-16 fighter jets to Türkiye which earlier were restricted as Türkiye purchased S-400 defence system from Russia.

What's Russia's position?

- Mr. Putin has sought to play down the development saying the Nordic countries joining NATO does not pose any immediate threat to his nation, but warned against NATO moving weapons to these countries. While it's not clear what Russia would do in the long term, its immediate response was to cut electricity exports and gas supplies to Finland

3. With China out, Indian firm to build Sri Lanka power project

Syllabus: Bilateral, regional and global groupings and agreements involving India and/or affecting India's Interests

Mains: India- Sri Lanka relations

Context: India, in collaboration with a Bengaluru-based company, has signed a pact with Sri Lanka's energy authority to construct a hybrid power project on three islands off the Jaffna peninsula. This development comes after India objected to a Chinese energy project in the region, showcasing India's strategic interest in the area.

Issues

- **Strategic Concerns:** India expressed objections to a Chinese energy project near its southern coastline, citing strategic implications. The move underscores the geopolitical competition between India and China in the region.
- **Energy Needs:** The energy needs of the three islands off the Jaffna peninsula in Sri Lanka have been a concern, necessitating the implementation of sustainable energy projects to address local demand.

Significance

- **Strategic Partnership:** India's involvement in the energy project strengthens bilateral ties with Sri Lanka and demonstrates India's commitment to regional stability and development.
- **Sustainable Energy:** The hybrid renewable energy project combines solar and wind power to optimize energy capacities, contributing to sustainable development goals and reducing reliance on traditional fossil fuels.
- **Economic Opportunities:** Collaboration with Indian firms presents economic opportunities for local companies and fosters technology transfer, contributing to job creation and skill development.

Solutions

- **Project Implementation:** Ensure timely and efficient implementation of the hybrid renewable energy project in coordination with Sri Lankan authorities and the Bengaluru-based company.
- **Community Engagement:** Involve local communities in the planning and execution phases of the project, promoting ownership and awareness about the benefits of sustainable energy.
- **Capacity Building:** Provide training and capacity-building programs for local technicians and workers to enable them to maintain and operate renewable energy systems effectively.

Nut Graf: The collaboration between India and Sri Lanka to establish a hybrid power project reflects the shared commitment towards sustainable development and energy security in the region. By leveraging Indian expertise and technology, the project aims to address local energy needs while fostering economic growth and enhancing bilateral ties.

4. Change and Continuity in India's Palestine Policy

Syllabus: GS-2, Effect of policies and politics of developed and developing countries on India's interests.

Mains: India's Palestine policy

Context: India's stance on the Palestine-Israel conflict has historically been supportive of the Palestinian cause, maintaining a delicate balance between its relationship with Israel and its commitment to Palestine. However, recent events have sparked discussions regarding a potential shift in India's policy towards Palestine, raising questions about continuity and change.

Historical Perspective

- India initially opposed the partition of Palestine in 1947, aligning with the Arab bloc's stance.
- Despite recognizing Israel in 1950, India refrained from establishing full diplomatic relations, maintaining support for the Palestinian cause during the Cold War era.
- Full diplomatic relations with Israel were established in 1992, leading to deepening bilateral ties while publicly advocating for a two-state solution with East Jerusalem as the capital of Palestine.

Recent Developments

- Prime Minister Modi's visit to Israel in 2017 marked a significant milestone in bilateral relations, emphasizing personal rapport with Israeli counterparts.
- Following the October 7 Hamas attack in Israel, Modi expressed solidarity with Israel, indicating potential shifts in India's stance.
- India's abstention from a UN General Assembly vote on a humanitarian truce in Gaza raised further concerns about policy realignment.

Evolving Approach

- India's Palestine policy has evolved under different leaderships, emphasizing pragmatism and realpolitik.
- While continuing to support the two-state solution, India has refrained from commenting on contentious issues such as Jerusalem's status and borders, focusing on dialogue and diplomacy.

Post-October 7 Analysis

- Despite expressions of solidarity with Israel, India's voting record at the UN and statements by the Ministry of External Affairs demonstrate a commitment to a sovereign Palestinian state and condemnation of Israeli settlements.
- India's engagement with the Palestine-Israel conflict reflects a nuanced approach, neither fully endorsing Israeli actions nor being a staunch critic.

India's Interests

- India's support for the Palestinian cause aligns with its aspirations to lead the Global South and uphold humanitarian principles.
- Concerns about civilian casualties in Gaza and the broader regional implications of the conflict highlight India's strategic interests in promoting stability and resolving the Palestine question.

Nut Graf: India's policy towards Palestine exhibits a balance between continuity and change, reflecting evolving geopolitical dynamics and national interests. While deepening ties with Israel, India maintains support for the Palestinian cause, emphasizing diplomacy and a two-state solution.

5. The resolutions against Centre's border plan

Syllabus: Bilateral, regional and global groupings and agreements involving India and/or affecting India's Interests

Mains: India-Myanmar border issues

Context: The recent resolutions passed by the Mizoram and Nagaland Assemblies opposing the Centre's decision to fence the India-Myanmar border and scrap the Free Movement Regime (FMR) agreement have brought attention to the complex issues surrounding this border.

Issues:

- **Ethnic Composition and Historical Links:** The border regions have a complex ethnic composition with deep-rooted social, cultural, and trade ties. The imposition of borders by colonial powers divided people of the same ethnicity and culture without their consent.
- **Security Concerns:** The decision to fence the border and scrap the FMR is ostensibly aimed at addressing issues like illegal migration, smuggling of drugs, arms, and ammunition, and cross-border movement of extremists. However, the effectiveness of these measures in addressing security concerns remains debatable.
- **Geopolitical Dynamics:** India's relationship with Myanmar has been characterized by diplomatic fluctuations. The presence of ethnic militias and extremist groups along the border adds complexity to the geopolitical landscape.

Significance:

- **Cultural and Social Impact:** The resolutions signify the concerns of border communities about the potential disruption of age-old ties and the division of ancestral lands. They highlight the importance of considering the cultural and social implications of border policies.
- **Political Expression:** The resolutions serve as a platform for State Assemblies to express their opinions and concerns regarding central policies. They reflect the diverse political landscape and sentiments of the people in the region.

Solutions:

- **Consultative Approach:** Addressing the concerns raised by the border States requires a consultative approach involving stakeholders from both the Centre and the States. Dialogue and consensus-building are essential for formulating effective border policies.
- **Balanced Approach to Security:** While addressing security concerns is crucial, it is imperative to adopt a balanced approach that takes into account the socio-cultural dynamics of the border regions. This may involve implementing alternative measures alongside border fencing.

Nut Graf: The resolutions passed by the Mizoram and Nagaland Assemblies against the Centre's border plan underscore the complex interplay of historical, cultural, and security factors shaping India's border policies.

6. The Myanmar conflict is a regional problem

Syllabus: India and its Neighborhood- Relations

Mains: India-Myanmar relation in the backdrop of the coup

Background:

- **Coup aftermath:** In February 2021, Myanmar experienced a coup overturning the results of the November 2020 general election.
- **Media crackdown:** The junta targeted independent media, exemplified by the raid on Mizzima's headquarters in Yangon in March 2021.
- **Population displacement:** Over two million citizens fled their homes, with 1.5 million seeking refuge in neighbouring countries.
- **Poverty and instability:** Approximately half of Myanmar's population, around 25 million people, faces poverty, contributing to regional destabilization.

Regional Impact of the Conflict:

- **Cross-border effects:** Conflict spillage into neighbouring countries like Bangladesh, China, India, and Thailand poses security risks and humanitarian challenges.
- **Economic disruptions:** Trade and economic corridors envisioned for the region face setbacks due to hostilities in Myanmar.
- **Rise in criminal activity:** The collapse of the rule of law in Myanmar fosters criminal networks that extend their reach across regional borders, impacting neighbouring countries.

ASEAN's Role and Challenges:

- **International expectations:** ASEAN was looked upon to play a pivotal role in resolving the conflict following the coup.
- **Ineffectiveness of efforts:** Despite numerous meetings and a five-point consensus, ASEAN's actions haven't yielded substantive results in stabilizing Myanmar.
- **Escalating conflict:** The situation worsened with increased armed hostilities and the emergence of hundreds of resistance groups opposing the junta.

Resilience of Independent Media:

- **Continuation of truth-telling:** Despite persecution, Myanmar's independent media persists in reporting facts and safeguarding press freedom.
- **Formation of alternative structures:** Independent Press Councils are emerging to counter state-controlled media bodies.

Path Forward:

- **Comprehensive regional approach:** Policymakers are urged to view Myanmar's situation holistically, considering its impact on regional stability and growth.
- **Support for democracy:** The resolution of the Myanmar conflict hinges on achieving a democratic post-junta Myanmar, aligning with the interests of all regional stakeholders.
- **Support for journalists and citizens:** Stakeholders, including ASEAN, are called upon to support Burmese journalists and the people of Myanmar in their quest for peace, stability, prosperity, and democracy.

Nut Graf: The Myanmar conflict, escalating since the 2021 coup, extends beyond national borders, affecting neighbouring countries. Despite regional efforts, ASEAN's role remains limited. Supporting independent media and prioritising democratic solutions are crucial for regional stability.

7. Shehbaz Sharif becomes Pakistan PM for second time

Syllabus: Effect of Policies and Politics of Developed and Developing Countries on India's interests, Indian Diaspora.

Mains: International events

Introduction: In a defining moment for Pakistan's political landscape, Shehbaz Sharif assumes office as the country's 24th Prime Minister, marking his second tenure since 2022. His victory speech in the National Assembly resonated with pledges to rejuvenate Pakistan's economy, combat terrorism, and foster equitable relations with neighboring nations.

Gratitude and Trust:

- The coalition government, formed after a hung parliament emerged from the recent election, represents a collaborative effort to navigate Pakistan through challenging times.
- However, amidst the celebrations, opposition members accused Shehbaz's party of electoral malpractice, alleging the theft of mandates, reflecting the polarized political climate.

- He warned of an alarming debt crisis, where even the expenditures of the National Assembly rely on borrowed funds. Shehbaz emphasized the need for economic revival and pledged to steer Pakistan away from becoming a pawn in any geopolitical “great game.”

Diplomatic Ties: Shehbaz Sharif underscored the importance of expanding Pakistan’s diplomatic relations while upholding principles of equality. He committed to strengthening ties with neighboring countries and emphasized the significance of maintaining cordial relations based on mutual respect and understanding.

Nut graf: *Introduction: In a defining moment for Pakistan’s political landscape, Shehbaz Sharif assumes office as the country’s 24th Prime Minister. His victory speech in the National Assembly resonated with pledges to rejuvenate Pakistan’s economy, combat terrorism, and foster equitable relations with neighboring nations.*

8. Pakistan to mull revival of trade ties with India

Syllabus: GS-2, India and its Neighborhood- Relations

Mains: Resuming trade ties with Pakistan amid Terrorism

Context: Pakistan’s Consideration of Reviving Trade with India

- Pakistan’s Foreign Minister, Mohammad Ishaq Dar, stated during a press conference in London that Pakistan is considering the revival of trade ties with India.
- Dar mentioned that Pakistani businessmen had approached him on the matter, prompting a serious examination of the issue.
- He emphasized the need for thorough discussions with all stakeholders before making any decision regarding trade with India.

India’s Response and Stance on Terrorism:

- India’s External Affairs Minister, S. Jaishankar, criticized Pakistan for its perceived support of terrorism, describing it as “industry-level.”
- Jaishankar emphasized that any future talks with Pakistan must address this pressing issue of terrorism.
- He highlighted India’s commitment to not overlook terrorism and stressed the necessity of confronting this challenge honestly, regardless of its difficulty.

Background on Trade Relations Between India and Pakistan:

- Trade between India and Pakistan faced disruptions in 2019 following significant events such as the Pulwama bombing and India’s constitutional amendments regarding Jammu and Kashmir.
- India had withdrawn the Most Favoured Nation (MFN) status to Pakistan and increased tariffs on trade following the Pulwama attack.
- Pakistan had suspended direct trade ties with India in response to India’s changes in Jammu and Kashmir.

Hope for Trade Resumption and Call for Positive Response:

- The closure of trade had particularly impacted businessmen and transporters at the Attari-Wagah land border.
- The Amritsar-based Chamber of Commerce expressed hope for a reconsideration of trade ties following Dar’s remarks.
- Businessman Ashok Sethi urged the Indian government to respond positively, emphasizing the mutual benefits of normalizing economic activity between the two nations.

Nut Graf: Pakistan's Foreign Minister considers reviving trade with India, prompting debate. India emphasizes terrorism concerns. Trade disrupted since 2019 due to bilateral tensions.

9. Seizure of cargo by India unjustified: Pakistan

Syllabus: Bilateral, Regional and Global Groupings and Agreements involving India and/or affecting India's interests

Prelims: About Wassenaar Arrangement

Introduction:

- Pakistan has condemned India's actions regarding the seizure of dual-use items intended for Karachi from China.
- Two advanced computer numerical control machines were confiscated by Indian Customs at Mumbai Port on January 23.

Pakistan's Response:

- Pakistan's Ministry of Foreign Affairs criticized India's actions as "high-handedness" and emphasized that the seized equipment was for purely commercial purposes.
- The equipment, described as commercial lathe machines, was meant for a Karachi-based entity supplying parts to the automobile industry.
- The transaction was conducted transparently through legitimate banking channels with all required documentation.

Condemnation of Indian Actions:

- Pakistan's spokesperson denounced India's interference in free trade, labelling it as a dangerous precedent.
- The statement criticized India's assumption of policing roles and questioned its credentials in doing so.
- The spokesperson highlighted the arbitrary nature of India's actions and its disregard for international norms and laws.

Media Representation and Implications:

- Pakistan criticized Indian media for misrepresenting facts and portraying the incident inaccurately.
- The incident, according to Pakistan, reflects a growing trend of certain states acting with impunity, violating international norms, and taking arbitrary measures against others.

About Wassenaar Arrangement:**Establishment and Objective:**

- Formed in 1996, the Wassenaar Arrangement aims to enhance global security by promoting transparency and accountability in the transfer of conventional arms and dual-use goods and technologies.

Membership and Decision-making:

- Comprising 42 participating states, including major arms exporters and industrialized nations.
- Operates through consensus-based decision-making, emphasizing non-proliferation, national security, and regional stability.

Control Lists:

- Defines control lists categorizing conventional arms and dual-use items with civilian and military applications.
- Member states commit to implementing effective export controls on listed items to prevent proliferation and misuse.

Export Controls and Guidelines:

- Member states regulate the transfer of listed items to prevent unauthorized transfers to prohibited end-users or destinations.
- Guidelines and best practices aid member states in implementing export controls, including risk assessment methodologies and transparency measures.

Contributions to Non-Proliferation:

- Reinforces other non-proliferation regimes like the Nuclear Non-Proliferation Treaty (NPT) and the Missile Technology Control Regime (MTCR).
- Promotes responsible export practices and cooperation among member states to prevent the spread of conventional arms and dual-use technologies.

Adaptation and Expansion:

- Periodically reviews and updates control lists to reflect technological advancements and changes in security dynamics.
- Seeks to expand membership to include countries committed to upholding its objectives, and adapting to evolving security challenges.

Nut Graf: *Pakistan condemns India's seizure of dual-use items bound for Karachi from China, citing purely commercial use. Describes it as high-handedness and a disruption of free trade, pursuing action against what it sees as unjustified action by Indian authorities.*

10. The quick transformation of Russia-North Korea ties

Syllabus: GS-2, Bilateral, Regional and Global Groupings and Agreements involving India and/or affecting India's interests

Mains: Deepening Russia-North Korea ties and its impact on Geopolitics

Introduction: Rapid Transformation of Russia-North Korea Relations

- Recent events indicate a swift deepening of ties between Russia and North Korea, particularly since Russia's invasion of Ukraine in 2022.
- Notable events include high-level visits between the two countries' leaders and increased diplomatic engagement.
- Anticipation is high for further developments, including an upcoming summit between Vladimir Putin and Kim Jong-un in 2024.

Historical Context and Recent Developments:

- Historically, Russia and North Korea maintained diplomatic ties during the Cold War due to shared communist ideologies.
- Relations fluctuated over time but have recently warmed, marked by increased diplomatic exchanges and strategic collaboration.
- North Korea has emerged as a significant supplier of arms and munitions to Russia during the Ukraine crisis.

Areas of Collaboration and Cooperation:

- Both countries are exploring cooperation in sensitive areas, including technical support for North Korea's satellite development.
- Discussions include potential trilateral naval exercises with Beijing, though unconfirmed.
- Recent initiatives include the resumption of tourism from Russia to North Korea in February 2024.

Economic Partnerships and Energy Collaboration:

- Russia offers economic support to North Korea, particularly in the energy and transportation sectors.
- Infrastructure projects like the Rajin-Khasan railway demonstrate tangible efforts to enhance economic cooperation.
- Energy collaboration is significant, with Russia being a key fuel supplier to North Korea.

Strategic Implications and Shared Challenges:

- Russia and North Korea view each other as valuable partners amid strained relations with the West.
- Both countries seek to shape regional security independently, potentially offsetting U.S.-led efforts in the region.
- Solidification of bilateral ties holds significant implications for regional stability and global geopolitics.

Nut Graf: Recent years have witnessed a rapid deepening of ties between Russia and North Korea, driven by shared challenges and strategic objectives. This partnership holds significant implications for regional stability and global geopolitics.

11. 'India, four-nation EFTA bloc likely to ink FTA on March 10'

Syllabus: Bilateral, regional and global groupings and agreements involving India and/or affecting India's Interests

Prelims: EFTA

Mains: Significance of 'India and the four-nation EFTA bloc

Context: India and the European Free Trade Association (EFTA), comprising Switzerland, Finland, Norway, and Liechtenstein, are poised to sign a long-awaited Free Trade Agreement (FTA) on March 10. The agreement, named the India-EFTA Trade and Economic Partnership Agreement (TEPA), aims to bolster trade and investment ties between the two parties, fostering job creation and economic growth.

Agreement Details

- **Investment Commitments:** The TEPA is expected to attract investments worth \$100 billion from the EFTA countries into India over the next 15 years, potentially generating one million jobs.
- **Participating Nations:** Representatives from both India and the EFTA countries, including trade ministers, are anticipated to attend the signing ceremony, underscoring the significance of the agreement.
- **Addressing Trade Deficit:** The FTA is viewed as a means to mitigate the significant trade deficit India currently holds with the EFTA bloc, indicating a strategic move towards achieving more balanced trade relations.

Importance of the Agreement

- **Economic Growth:** The TEPA is poised to contribute to economic growth by fostering increased trade and investment flows between India and the EFTA nations, leveraging the strengths of both parties.
- **Job Creation:** The projected investment influx has the potential to create a substantial number of jobs, providing opportunities for employment and contributing to livelihood enhancement.
- **Diversification of Trade Partnerships:** By forging stronger ties with the EFTA bloc, India aims to diversify its trade partnerships, reducing dependence on any single market and enhancing resilience in the face of global economic uncertainties.

Issues

- **Implementation Challenges:** Despite the potential benefits, the successful implementation of the TEPA may face hurdles related to regulatory harmonization, market access barriers, and compliance with international standards.
- **Safeguarding Domestic Industries:** Ensuring that domestic industries are adequately protected and able to compete in the face of increased foreign competition will be a critical consideration in the agreement's implementation.

Solutions

- **Capacity Building:** Strengthening institutional capacities and regulatory frameworks to facilitate trade and investment flows will be essential for maximizing the benefits of the TEPA.
- **Sector-specific Policies:** Tailoring policies to support vulnerable sectors and enhance their competitiveness in the wake of increased international competition can help safeguard domestic industries.
- **Continuous Monitoring:** Regular monitoring and review mechanisms should be established to assess the agreement's impact on various sectors and make necessary adjustments to optimize outcomes.

Nut Graf: *The imminent signing of the India-EFTA TEPA marks a significant milestone in India's trade relations, offering substantial opportunities for economic growth and job creation.*

12. How did Indians end up in the Russia-Ukraine war

Syllabus: Bilateral, regional and global groupings and agreements involving India and/or affecting India's Interests

Mains: Indians in the Russia-Ukraine war

Context: The recent deaths of two Indian nationals in the Russia-Ukraine conflict have brought attention to the involvement of Indians in combat roles on the Russian side. The Central Bureau of Investigation (CBI) has uncovered a human trafficking network involved in illegally recruiting Indians as "security helpers" and personnel for the Russian military. This has raised significant concerns about the exploitation and endangerment of Indian citizens in foreign conflicts.

Issues:

- **Deception and coercion:** Indian nationals were deceived by recruitment agents who promised lucrative jobs in Russia but coerced them into combat roles in the Russian military.
- **Violation of human rights:** The recruitment process involved confiscating passports and forcing individuals to sign contracts binding them to military service, violating their rights and autonomy.
- **Lack of government intervention:** Despite pleas for help from affected individuals, the Indian government's response has been limited, leaving many stranded in dangerous situations.
- **Exploitation of vulnerabilities:** The traffickers targeted vulnerable individuals, including students seeking education abroad, by offering false promises of employment and educational opportunities.

Significance:

- **Humanitarian concern:** The plight of Indian nationals trapped in combat roles highlights the need for urgent humanitarian intervention to ensure their safety and repatriation.
- **Diplomatic implications:** The involvement of Indian citizens in foreign conflicts could strain diplomatic relations between India and affected countries, necessitating diplomatic efforts for resolution.
- **Legal ramifications:** The illegal recruitment and coercion of Indian citizens into combat roles raise legal questions regarding accountability and justice for the perpetrators.
- **Protection of Indian citizens abroad:** The case underscores the importance of strengthening mechanisms to protect Indian citizens from exploitation and trafficking while traveling or working abroad.

Solutions:

- **Diplomatic negotiations:** The Indian government should engage in diplomatic negotiations with Russian authorities to secure the release and repatriation of Indian citizens involved in the conflict.
- **Legal action:** The CBI's investigation should lead to legal action against the perpetrators of human trafficking and illegal recruitment, ensuring justice for the victims.
- **Awareness campaigns:** Raise awareness among Indian citizens about the risks of falling prey to fraudulent recruitment schemes and provide guidance on seeking legitimate employment opportunities abroad.
- **Consular assistance:** Strengthen consular services to provide timely assistance and support to Indian citizens facing difficulties abroad, including those trapped in conflict zones.

Nut Graf: The revelations about Indian involvement in the Russia-Ukraine conflict through illegal recruitment highlight the urgent need for coordinated efforts to ensure the safety and repatriation of affected individuals.

13. Bhutan's opening move, its Gelephu gambit

Syllabus: GS-2, India and its Neighbourhood – Relations

Mains: India-Bhutan relations

Prelims: Gelephu on Map

Introduction: Bhutan's Gelephu Gambit

- **Strategic Move amidst Global Connectivity:** Bhutan, under Prime Minister Tshering Tobgay's leadership, is spearheading the development of a regional economic hub in Gelephu, a town bordering Assam in India. This initiative, endorsed by King Jigme Khesar Namgyel Wangchuck in December 2023, aims to establish a "Gelephu Mindfulness City" (GMC) over 1,000 square kilometres.

- **Unique Vision for Sustainable Growth:** Gelephu Mindfulness City distinguishes itself from conventional financial hubs by prioritizing sustainable, non-polluting industries such as IT, education, hospitality, and healthcare. Emphasising a carbon-neutral approach, the city aims to attract investments while promoting health and wellness.

Challenges and Opportunities:

- **Geographical and Environmental Hurdles:** Gelephu's flat terrain contrasts with Bhutan's mountainous landscape, presenting challenges such as seasonal flooding and wildlife conservation concerns. Moreover, its proximity to insurgency-prone regions demands careful security considerations.
- **Dependency on India:** As a landlocked nation, Bhutan relies on India for crucial infrastructure and trade routes. Gelephu's success hinges on India's support for enhancing transportation links and bolstering trade cooperation.

Motivations for Bhutan

- **Economic Imperatives:** Bhutan seeks to diversify its economy beyond hydropower and niche tourism. Gelephu's development is seen as crucial for generating employment, retaining youth talent, and enhancing revenue streams.
- **Geopolitical Strategy:** Amidst pressure from China to resolve border disputes, Bhutan aims to balance its international relations by engaging with India while pursuing negotiations with Beijing. Gelephu offers a controlled avenue for Bhutan to expand its global presence.

India's Response and Stakes:

- **Ensuring Regional Influence:** India views Bhutan's alignment with China cautiously and recognizes the importance of bolstering bilateral ties. Gelephu's development aligns with India's broader connectivity plans, reinforcing its regional influence and countering external pressures.
- **Investment and Connectivity:** Gelephu's infrastructure needs dovetail with India's initiatives for regional connectivity, including railway networks, road improvements, and energy projects. Collaboration with Bhutan in areas like renewable energy and cross-border trade enhances India's strategic interests.

Prime Ministerial Visits and Implications:

- **Bilateral Engagement:** Prime Minister Narendra Modi's upcoming visit to Bhutan symbolizes the deepening ties between the two nations. This exchange of visits underscores the significance of bilateral cooperation and reaffirms India's commitment to supporting Bhutan's development initiatives.
- **Strategic Timing:** The timing of PM Modi's visit amidst discussions on Gelephu's development underscores India's active involvement in shaping the region's economic landscape. It also highlights the diplomatic synergy between the two nations in navigating geopolitical challenges.

Conclusion: Despite immediate hurdles, Gelephu represents a transformative opportunity for both Bhutan and the region. By fostering sustainable growth and strengthening bilateral ties, the project could redefine regional dynamics and foster greater cooperation amidst global uncertainties.

Nut Graf: Bhutan's ambitious Gelephu Mindfulness City project, supported by India, seeks to redefine regional development with sustainable industries. Prime Minister Modi's forthcoming visit underscores bilateral ties and strategic cooperation amid geopolitical challenges.

14. Ties that epitomise India's Neighbourhood First policy

Syllabus: GS-2, India and its Neighbourhood – Relations

Mains: India – Bhutan Relations

Introduction:

- Despite vast differences in size and population, India and Bhutan have fostered a unique partnership based on mutual respect and equality.
- India's respect for Bhutanese identity and sovereignty, coupled with Bhutan's trust in India's support for its development, has led to a strong bond between the two nations.
- This relationship, built on trust and understanding, has been evidenced through recent high-level visits and discussions between the leadership of both countries.

Hydropower Cooperation: A Cornerstone of Bilateral Relations

- Hydropower cooperation serves as the bedrock of India-Bhutan relations, with several successful projects supplying clean electricity to India and generating revenue for Bhutan.
- While some joint venture models for hydroprojects have faced challenges, the government-to-government cooperation model has yielded significant successes.
- India's assistance in Bhutan's development, including substantial contributions to its Five Year Plans, reflects a commitment to projects aligned with Bhutanese priorities, ensuring mutual benefit.

Future Prospects: Enhancing Bilateral Cooperation

- The development of the Gelephu Mindfulness City presents an opportunity for India to further contribute to Bhutan's prosperity.
- Proposed measures include initiating direct flights, providing technology and infrastructure expertise, and encouraging Indian businesses and tourists to engage with Gelephu.
- The success of the Mindfulness City is not only beneficial for Bhutan but also holds potential socio-economic advantages for neighbouring regions in India, demonstrating the mutually beneficial nature of India-Bhutan cooperation.

Conclusion: Sustaining a Prosperous Partnership

- India's commitment to Bhutan's development, manifested through ongoing cooperation and prospects like the Gelephu Mindfulness City, underscores the effectiveness of India's Neighbourhood First policy.
- By prioritizing mutual respect, understanding, and cooperation, India and Bhutan continue to set an example of successful bilateral relations in the South Asian region.

Nut Graf: India and Bhutan's close relationship, founded on mutual respect and cooperation, embodies India's Neighbourhood First policy. Through hydropower cooperation and plans for the Gelephu Mindfulness City, they showcase a model of successful regional partnership.

15. What are the causes of the flare-up in eastern Congo?

Syllabus: GS-2, India and its Neighbourhood – Relations, Effect of Policies and Politics of Developed and Developing Countries on India's Interests

Mains: Conflict in Democratic Republic of Congo: Reasons, Impact and Solution

Prelims: Map work of countries surrounding the Democratic Republic of Congo

Context: Renewed clashes in eastern Congo escalate, with accusations of Rwandan support to M23 rebels exacerbating humanitarian crisis concerns.

Causes of the Flare-Up in Eastern Congo:

- **Historical Context:** The conflict in the eastern Democratic Republic of Congo (DRC) has roots in the aftermath of the Rwandan genocide in 1994, which led to the mass displacement of refugees into eastern DRC.
- **Civil Wars and Ethnic Tensions:** Two civil wars ensued, with ethnic tensions escalating between Tutsi militias and local Congolese, exacerbated by the presence of Rwandan refugees and troops.
- **Formation of Rebel Groups:** Rebel groups such as the Alliance of Democratic Forces for the Liberation of Congo (AFDL) and later the March 23 Movement (M23) emerged, fueled by grievances over ethnic representation and political integration.

Underlying Reasons for Renewed Clashes:

- **M23 Resurgence:** The M23, formed in 2012, claims to protect Tutsi interests but broke away from the Congolese army due to perceived failures in integration. Recent clashes stem from M23 accusations of attacks by Hutu militias and dissatisfaction with government actions.
- **Allegations of External Support:** The DRC accuses Rwanda of backing M23 rebels, further escalating tensions. Rwanda denies these claims, attributing the conflict to Congo's decision to repatriate regional peacekeepers.
- **Humanitarian Crisis Worsening:** The recent escalation in violence has intensified the humanitarian crisis, leading to deaths, displacements, and food security risks. Attacks on civilian settlements have forced health and aid workers to withdraw, exacerbating the situation.

International Concerns and Regional Implications:

- **Global Calls for Restraint:** The United States, United Nations, and several Western countries have urged both DRC and Rwanda to avoid war, calling for de-escalation and withdrawal of support to rebel groups.
- **Risk of Regional Escalation:** The conflict raises concerns about regional tensions and the involvement of more countries, potentially destabilizing the region further.
- **Humanitarian Attention Amid Global Crises:** Despite the severity of the situation, there are concerns that the conflict in eastern Congo may be overshadowed by other global crises, such as the war in Gaza and Russia's invasion of Ukraine, risking inadequate attention and support for affected populations.

Nut Graf: Renewed clashes in eastern Congo, fueled by historical ethnic tensions and allegations of external support to rebel groups, exacerbate the humanitarian crisis, raising global concerns over regional stability.

16. Looking to the future on St. Patrick's Day

Syllabus: GS-2 Effect of policies and politics of developed and developing countries on India's interests.

Mains: Diplomatic relations between Ireland and India

Context: St. Patrick's Day 2024 holds special significance in India as it marks 75 years of diplomatic relations between Ireland and India. This occasion prompts reflection on the historical partnership between the two nations during their struggles for independence and the subsequent growth of ties in trade, education, and people-to-people connections.

Issues

- **Global Conflicts:** Despite the celebratory spirit of St. Patrick's Day, contemporary global conflicts, such as Russia's actions in Ukraine and Hamas's attacks on Israel, cast a shadow over festivities, prompting reflection on Ireland's stance on these issues.
- **Humanitarian Concerns:** Ireland's advocacy for upholding international humanitarian law and providing assistance to civilians affected by conflicts, such as those in Gaza, underscores its commitment to protecting vulnerable populations.

- **Youth Engagement:** Recognizing the pivotal role of young people in addressing global challenges, Ireland emphasizes the importance of their activism in areas such as climate change mitigation and advocacy for human rights and sustainable development.

Significance

- **Diplomatic Engagement:** The milestone of 75 years of diplomatic relations between Ireland and India highlights the enduring partnership between the two nations and underscores the significance of bilateral cooperation in various fields.
- **Global Citizenship:** Ireland's commitment to advocating for progress, peace, and equality reflects its role as a responsible global citizen and underscores the importance of collaborative efforts in addressing pressing global issues.

Solutions

- **Youth Empowerment:** Fostering youth engagement and empowering young people to contribute to societal change through education, entrepreneurship, and activism.
- **Diplomatic Advocacy:** Continuing to advocate for humanitarian principles, international law, and multilateral cooperation to address global conflicts and humanitarian crises.
- **Bilateral Collaboration:** Strengthening bilateral ties between Ireland and India through educational exchanges, cultural partnerships, and economic cooperation to foster mutual understanding and prosperity.

Nut Graf: *St. Patrick's Day 2024 serves as an occasion for Ireland to reflect on its historical ties with India and reaffirm its commitment to global solidarity, humanitarian principles, and youth empowerment.*

17. All eyes are now on the Indian Ocean region

Syllabus: GS-2, India and its Neighbourhood – Relations

Mains: Geopolitics of the Indian Ocean region

Context:

- The Indian government shifted its policy focus back to the Indian Ocean region since October 2023.
- While the Indo-Pacific strategy covers both the Pacific and Indian Oceans, immediate neighbourhood concerns gained prominence.

Current Developments:

- **Maldives and China:** President Mohamed Muizzu's administration in the Maldives is increasingly aligning with China, causing concerns for India.
- **Sri Lanka's Response:** Sri Lanka imposed a year-long moratorium on foreign research ships, including Chinese vessels, demonstrating sensitivity to India's security concerns.
- **India-Mauritius Cooperation:** India's SAGAR policy yielded positive outcomes, with India and Mauritius inaugurating infrastructure to enhance maritime security in the Agaléga Islands.

Geopolitical Dynamics:

- **Western and Northern Indian Ocean:** Both regions, including island nations and key waterways, have witnessed increased activity.
- **Israel-Hamas Conflict Impact:** Escalation of the Israel-Hamas conflict has resulted in attacks on international shipping, reducing traffic through the Suez Canal.

- **Chinese Navy Expansion:** China aims to expand its naval presence in the Indian Ocean region, with agreements with nations like the Maldives.

Strategic Contention:

- **China-India Rivalry:** Strategic competition between China and India is intensifying, exacerbated by China's efforts to diminish India's regional influence.
- **India's Response:** India is facing this challenge with determination, emphasizing collaboration with allies like the U.S. in the Indo-Pacific region.

International Engagement:

- **Involvement of Other Nations:** Countries like the U.K., EU, France, and Germany show concern over China's activities but exhibit ambiguity in their response.
- **Need for Reevaluation:** Geographic distance from China may influence EU security perceptions, necessitating a reexamination of their Asia strategy.

India's Strategies:

- **Prioritization of the Indian Ocean:** India is emphasizing its commitment to the Indian Ocean region while acknowledging its Indo-Pacific responsibilities.
- **Reassessment of Regional Mechanisms:** There's a call for evaluating the effectiveness of organizations like IORA and CSC and considering the creation of a new mechanism for enhanced maritime security.
- **Strengthening Naval Power:** India aims to allocate more resources to its navy to bolster its position as a significant maritime power.

Nut Graf: *The Indian government's renewed focus on the Indian Ocean region underscores escalating geopolitical tensions, particularly concerning China's expanding influence, prompting calls for strategic reassessment and enhanced maritime security measures.*

18. On the mass kidnappings in Nigeria

Syllabus: GS-2, Effect of Policies and Politics of Developed and Developing Countries on India's Interests

Prelims: Map work of countries around Nigeria

Context:

- The surge in mass kidnappings in Nigeria, particularly targeting schoolchildren, has occurred amid the country's severe economic crisis and escalating security challenges.
- Since the end of February, over 600 people, including at least 300 schoolchildren, have been abducted in the northeastern and northwestern regions.

Perpetrators and Motivations:

- Boko Haram, known for its history of violence in Nigeria, initially emerged as the prime suspect. However, no organization has claimed responsibility for the recent abductions.
- Suspicions point towards local armed groups referred to as Bandits, who engage in kidnapping for ransom. These Bandits have evolved from disputes over land and water into organised armed factions.

Factors Fueling the Surge:

- Economic, security, and political issues contribute to the rise in kidnapping incidents. These include Nigeria's struggling economy, high unemployment rates, surging inflation, and instability in the Niger Delta.

- Ransom payments have become a primary motivation behind the kidnappings, with armed gangs controlling territories and amassing weapons. Economic desperation drives youths to join these criminal groups.

Government Response and Challenges:

- President Bola Tinubu has rejected the idea of paying ransom for the nearly 600 abducted individuals, citing a law enacted in 2022 that penalizes ransom payments with at least 15 years in jail.
- Security forces are conducting operations to secure the release of the victims, but the process is expected to be prolonged due to the remote locations where hostages are held. There are calls for dialogue with the bandits to resolve the conflict peacefully.

Nut Graf: Amid Nigeria's economic crisis and security challenges, a surge in mass kidnappings, particularly targeting schoolchildren, has occurred. Perpetrators, suspected to be local armed groups, operate for ransom. The government faces pressure to respond effectively.

19. Why did Pakistan carry out airstrikes in Afghanistan?

Syllabus: Effect of Policies and Politics of Developed and Developing Countries on India's Interests

Mains: Pakistan and Afghanistan's rising tension and its regional impact

Background and Context:

- **Recent escalation:** Pakistani airstrikes in Afghanistan's Paktika and Khost provinces resulted in civilian casualties, leading to retaliatory attacks by the Taliban on Pakistani military posts along the border.
- **Disputed border:** The Durand Line, marking the Pakistan-Afghanistan border, has long been contested by Afghanistan, particularly regarding Pashtun territories in Pakistan.
- **Tensions with the Taliban:** The Afghan Taliban's rejection of the Durand Line as a permanent border and subsequent skirmishes exacerbated tensions, especially after the Tehreek-e-Taliban Pakistan (TTP) ended a ceasefire in 2022.

Reasons for Airstrikes:

- **Terrorist activities:** Following a suicide bombing in North Waziristan that killed seven Pakistani soldiers, President Asif Ali Zardari vowed a strong response.
- **Alleged TTP involvement:** The TTP's Hafiz Gul Bahadur Group claimed responsibility for the March 16 attack, prompting Pakistan to conduct airstrikes targeting TTP militants in Afghanistan.
- **Past precedents:** Pakistan previously carried out airstrikes against Afghanistan in April 2022, targeting similar militant groups.

Reactions and Responses:

- **Taliban warnings:** The Taliban warned of dire consequences if Pakistan continues attacks on Afghan territory, citing civilian casualties and denying allegations of harbouring TTP militants.
- **Pakistani concerns:** Pakistan's Foreign Office expressed grave concerns over TTP presence in Afghanistan, accusing Afghan territory of being used to launch attacks into Pakistan.
- **Diplomatic tensions:** Despite assurances from the Taliban regarding preventing attacks from Afghan soil, distrust between Pakistan and the Taliban persists due to continued violence and militant activities.

Nut Graf: Escalating tensions between Pakistan and Afghanistan led to Pakistani airstrikes in response to a suicide bombing. This highlights the strained relationship, fueled by the Taliban's presence in Afghanistan and its alleged support for attacks in Pakistan.

20. Russia, China veto U.S. bid on Gaza 'ceasefire' at UN Security Council

Syllabus: Bilateral, regional and global groupings and agreements involving India and/or affecting India's Interests

Mains: Russia, China and U.S relations

Context: Russia and China vetoed a U.S.-led draft resolution at the UN Security Council regarding a ceasefire in Gaza.

- The resolution, while condemning Hamas's attack, did not explicitly demand an immediate end to Israel's campaign in Gaza.

Issues

- **Veto by Russia and China:** Moscow and Beijing's veto reflects their dissatisfaction with the draft resolution's language and lack of pressure on Israel.
- **U.S. Position:** The U.S. proposed the resolution, seeking to address the conflict but faced opposition due to perceived bias towards Israel.
- **Delicate Diplomacy:** The draft resolution's wording, aiming to balance interests, failed to garner consensus due to its ambiguity.

Significance

- **International Stalemate:** The vetoing of the resolution highlights the deadlock within the Security Council regarding the Gaza conflict.
- **Diplomatic Fallout:** The veto exacerbates tensions between major powers and complicates efforts to broker a ceasefire.
- **Humanitarian Impact:** Continued conflict in Gaza exacerbates the humanitarian crisis, with civilian casualties and infrastructure damage mounting.

Solutions

- **Revised Resolution:** Consideration of an alternative resolution with clearer language demanding an immediate ceasefire.
- **Broader Diplomatic Engagement:** Encourage multilateral efforts involving regional stakeholders to facilitate dialogue and de-escalation.
- **Humanitarian Assistance:** Prioritize humanitarian aid delivery to Gaza to alleviate suffering amidst the conflict.

Nut Graf: *The vetoed resolution underscores the challenges of navigating diplomatic waters in addressing the Gaza conflict. Efforts must continue to bridge divides and pursue avenues for peaceful resolution, prioritizing the well-being of civilians caught in the crossfire. The international community's response will shape the trajectory of the conflict and its implications for regional stability*

21. Two wars, the consequences for America's standing

Syllabus: Effect of policies and politics of developed and developing countries on India's interests.

Mains: Effect of U.S. foreign policy on world relations

Context: Recent events, including statements from prominent figures like Chuck Schumer and interactions with former President Donald Trump, underscore the complex dynamics shaping U.S. foreign policy.

- The intertwining of global crises such as the Israel-Hamas conflict and the Ukraine war with domestic politics raises concerns about the future trajectory of U.S. involvement in these issues.

Issues:**U.S. and the Ukraine War:**

- The U.S. has been a significant provider of military and civil aid to Ukraine, totalling \$75 billion since February 2022.
- However, additional assistance worth \$60 billion has been delayed in Congress, leaving Ukraine in a precarious position.
- Despite the U.S. desire to prevent a Russian victory, it faces challenges in providing further military support while navigating internal political divisions.
- The situation on the ground in Ukraine remains dire, with strategic setbacks and shortages exacerbating the conflict.

Israel and its Gaza Actions:

- The U.S. traditionally supports Israel, but recent criticisms from President Biden and others reflect shifting sentiments.
- Israeli actions in Gaza have drawn international condemnation, leading to concerns about the humanitarian impact and the lack of a sustainable political solution.
- Prime Minister Netanyahu's motivations seem driven by political survival rather than a strategic vision for peace.

Significance:

- The outcomes of these conflicts hold implications for U.S. standing on the global stage, regardless of the winner of the upcoming presidential election.
- Changes in U.S. foreign policy could impact alliances and regional dynamics, with potential repercussions in Europe, the Indo-Pacific and beyond.

Solutions:

- Addressing the Ukraine war requires concerted international efforts to provide military and humanitarian support while seeking diplomatic solutions.
- In the Israel-Palestine conflict, promoting dialogue and advocating for a viable two-state solution is essential for long-term stability.

Nut Graf: *The complex interplay between global crises and domestic politics underscores the challenges facing U.S. foreign policy. Regardless of electoral outcomes, addressing these issues requires strategic engagement, diplomatic efforts, and a commitment to upholding international norms and values.*

22. Sensing threat from China, India joins the race to mine sea patch

Syllabus: Bilateral, Regional and Global Groupings and Agreements involving India and/or affecting India's interests.

Mains: Regional Grouping

Introduction:

India submitted an application to the International Seabed Authority (ISBA) in Jamaica, seeking rights to explore two expansive areas in the Indian Ocean seabed beyond its jurisdiction.

One of these regions, known as the Afanasy Nikitin Seamount (AN Seamount), boasts cobalt-rich crusts and has already been claimed by Sri Lanka under separate laws. India's application is prompted in part by reports of Chinese vessels conducting reconnaissance in the area.

Strategic Significance

The AN Seamount, situated about 3,000 km off India's coast, spans approximately 400 km in length and 150 km in width, with significant deposits of cobalt, nickel, manganese, and copper. India's interest in the region reflects its strategic concerns and the imperative to secure its maritime interests in the face of regional competition.

UNCLOS Regulations

To commence extraction activities, interested parties must obtain exploration licenses from the ISBA, established under the United Nations Convention on the Law of the Sea (UNCLOS). While the open ocean holds vast mineral resources, the costs and logistical challenges of extraction remain prohibitive.

Potential Obstacles

India's exploration efforts could face obstacles from the Commission on the Limits of the Continental Shelf, which determines the extent of a country's continental shelf. Ocean-bound states may claim extended rights beyond the standard 200-nautical-mile limit, subject to scientific validation.

Regional Dynamics

Amid growing geopolitical interests in the Indian Ocean, India's application underscores its strategic concerns. The region's significance as a maritime thoroughfare and repository of valuable resources has led to heightened competition among regional powers.

Conclusion

India's bid for exploration rights in the Indian Ocean signifies its proactive approach to safeguarding its maritime interests in a geopolitically dynamic region. As regional competition intensifies, securing access to vital resources becomes increasingly paramount for countries seeking to assert their influence in the maritime domain.

23. China to develop Sri Lanka's deep sea port and airport

Syllabus: Bilateral, Regional and Global Groupings and Agreements involving India and/or affecting India's interests.

Mains: Recent developments in neighborhood

Introduction: In recent diplomatic engagements between Sri Lanka and China, significant pledges have been made toward enhancing Sri Lanka's infrastructure and economy.

Strategic Support for Infrastructure Projects

- Prime Minister Dinesh Gunawardena announced that China, being Sri Lanka's largest bilateral creditor, has promised to support the development of crucial infrastructure projects.
- This commitment includes assistance in restructuring Sri Lanka's external debt, a vital step to secure a \$2.9 billion IMF bailout.
- While China's stance on debt restructuring remains undisclosed, Sri Lankan officials suggest that China may opt for extending loan tenures and adjusting interest rates instead of outright debt forgiveness.
- This strategic move aims to alleviate Sri Lanka's financial burden while maintaining China's interests in the region.

Economic Revitalization Efforts

Sri Lanka faced a sovereign debt default in 2022 due to a shortage of foreign exchange for essential imports. This crisis led to months of protests and political turmoil, resulting in the ousting of then-President Gotabaya Rajapaksa. In response, China has expressed its commitment to assist Sri Lanka in its debt restructuring process and contribute to its economic development.

Infrastructure Development Plans

China has offered support for the development of key infrastructure projects, including the Colombo International Airport and the Hambantota port. However, specific details regarding the extent of China's involvement are yet to be disclosed. These projects hold significant strategic and economic importance for Sri Lanka's growth and connectivity.

Concerns and Geopolitical Implications

The Hambantota port, previously leased to a Chinese state-owned company for 99 years, has raised concerns among neighboring countries like India and the U.S. about China's expanding naval influence in the Indian Ocean. The involvement of foreign powers in Sri Lanka's infrastructure projects underscores the geopolitical dynamics at play in the region.

Conclusion:

China's commitment to supporting Sri Lanka's infrastructure development and debt restructuring reflects the deepening ties between the two nations. However, the implications of China's involvement in Sri Lanka's strategic projects warrant careful observation amid regional geopolitical tensions.

24. Preventing a China-Taiwan conflict

Syllabus: Effect of Policies and Politics of Developed and Developing Countries on India's Interests

Mains: Possible India's stance on China-Taiwan conflict

Context: With the passage of time, China's annexation of Taiwan seems inevitable. If the process is coercive, it can have Economic and security ramifications over India and the Globe.

Need to maintain the Status Quo:

- **Economic Interests:** India has a vested interest in preserving the current status quo between China and Taiwan, particularly due to burgeoning trade relations and strategic partnerships.
- **Avoiding Catastrophic Costs:** Any conflict between China and Taiwan would have severe repercussions for India's economy, given the interconnectedness of global trade and the potential disruption it could cause.
- **Avoiding Regional Escalation:** A conflict could escalate beyond Taiwan, potentially affecting India-China relations and global industrial capacities, with dire consequences for stability and security.

India's Strategic Imperatives:

- **Long-term International Position:** India recognizes the potential ramifications of a conflict over Taiwan on its own international standing. Depending on the outcome, India's strategic interests could be significantly impacted, necessitating a proactive approach to prevent such a scenario.
- **Dependency on the U.S.:** While India is not a formal ally of the U.S., it relies on American support for military modernization and a conducive strategic environment. A conflict over Taiwan could disrupt this dependency and alter the regional power dynamics.

Policy Options for India:

- **Utilizing International Law:** India can leverage international legal frameworks to advocate for a peaceful resolution of the China-Taiwan dispute, emphasizing adherence to existing agreements and norms.
- **Narrative Building and Diplomacy:** Through coordinated diplomatic efforts and narrative building, India can actively oppose any aggressive actions by China towards Taiwan, reinforcing the importance of stability in the region.
- **Economic De-risking:** India can take steps to minimize economic risks associated with a potential conflict, safeguarding its own interests and contributing to regional stability.

- **Military Support to Allies:** While not directly involved in the conflict, India can provide support to U.S. forces in the Indian Ocean, signalling its commitment to regional security and deterrence against Chinese aggression.

Conclusion: India's approach towards preventing a China-Taiwan conflict is guided by its strategic imperatives and economic interests. By maintaining the status quo, pursuing diplomatic initiatives, and leveraging its international influence, India seeks to mitigate the risks associated with a potential conflict while advancing its own strategic objectives.

Nut Graf: India aims to prevent a China-Taiwan conflict, prioritizing economic interests, avoiding regional escalation, and safeguarding its strategic position. Through diplomatic efforts and policy options, India seeks to maintain stability and advance its own strategic imperatives.

25. Raisina Dialogue

- The Raisina Dialogue is an annual conference on geopolitics and geoeconomics, which aims to address the most challenging issues faced by the world.
- Delhi-based think tank Observer Research Foundation, in partnership with the Ministry of External Affairs, hosts the conference.
- The theme of the 2024 edition is "Chaturanga: Conflict, Contest, Cooperate, Create."
- More than 2,500 participants from around 115 countries joined the conference in person.
- The participants include ministers, former prime ministers and presidents, military commanders, technology leaders, academics, journalists, scholars on strategic affairs, and experts from leading think tanks.

Thematic Pillars

- **Tech Frontiers:** Regulations and Realities
- **Peace with the Planet:** Invest and Innovate
- **War and Peace:** Armouries and Asymmetries
- **Decolonising Multilateralism:** Institutions and Inclusion
- **The post 2030 Agenda:** People and Progress
- **Defending Democracy:** Society and Sovereignty

Key Takeaways of Raisina Dialogue 2024

- India a Bridging Power
- India's External Affairs Minister called India a "bridging power", a country seeking common ground through a "multi-vector" policy, and playing the role of a "Vishwamitra" or friend of the world.
- Ground-breaking projects like IMEC hold great promise to supercharge connectivity between India, the growth economies of the Middle East and Europe. To India I say, Greece is your natural doorstep to Europe and beyond," he said.

Global Conflicts

- Panels on military and naval strategy concentrated on the need to handle an aggressive China, including discussions on "grey warfare."
- European Ministers urged India to reconsider trade and ties with Russia. They urged India to join a "Peace Conference" in Switzerland, set to be held shortly, at the request of Ukraine President Volodymyr Zelensky.
- Albania is at the crossroads between the European Union and East. Albania is a part of many corridors that link India with the European Union. With Albania becoming one of the fastest growing European economies, we are rapidly moving to foster stronger economic ties with India," said Mr. Hasani, presenting Albania's tourism sector as one of the strong points of the country's economy.

26. Military Exercises

MILITARY EXERCISES: DHARMA GUARDIAN

- The exercise 'Dharma Guardian' between the Indian Army and the Japan Ground Self Defence Force is being conducted under the broad framework of India-Japan strategic cooperation.
- It is an annual exercise and conducted alternatively in India and Japan
- The exercise will facilitate developing interoperability, bonhomie and camaraderie between troops of both the sides. This will enhance the level of defence cooperation, further fostering bilateral relations between the two friendly nations.

MILITARY EXERCISES: SEA DEFENDER

- A maritime security exercise 'Sea Defenders-2024' was held between the Indian Coast Guard (ICG) and the United States Coast Guard (USCG) at Port Blair, Andaman and Nicobar Islands.

MILITARY EXERCISES: Samudra Lakshman

- Samudra Lakshman Maritime Exercise was conducted between India and Malaysia from 28 February to 2 March 2024 at Visakhapatnam.
- Indian Naval Ship "Kiltan" and Royal Malaysian Ship "KD Lakir" are participating in the exercise.
- The main aim of the Samudra Lakshman maritime exercise is to strengthen relations between the Indian and Royal Malaysian Navies.

27. Discussed 'peace formula' with India, says Ukraine Foreign Minister

Syllabus: Bilateral, regional and global groupings and agreements involving India and/or affecting India's Interests

Prelims: Peace formula

Mains: India-Ukraine relations

Context: Ukraine's Foreign Minister, Dmytro Kuleba, during his recent visit to India, revealed discussions regarding a potential 'peace formula' for resolving the conflict between Russia and Ukraine. The bilateral discussions between India and Ukraine emphasized the importance of energizing their relations amidst the ongoing crisis.

Key Discussions and Diplomatic Engagements

- **Bilateral Talks:** Dmytro Kuleba engaged in discussions with Indian External Affairs Minister S. Jaishankar regarding bilateral relations, regional situations, and global security issues. The talks underscored the significance of the proposed 'peace formula' and outlined potential steps towards its implementation.
- **Diplomatic Outreach:** India maintained communication with both Ukraine and Russia, as well as other stakeholders, showcasing its proactive engagement in the conflict resolution process. Notable interactions included National Security Adviser Ajit Doval's conversation with Andriy Yermak and Prime Minister Narendra Modi's discussions with Presidents Vladimir Putin and Volodymyr Zelenskyy.

Significance of the Peace Formula

- **Global Peace Summit:** The mention of the 'peace formula' gains significance amid preparations for a 'Global Peace Summit' in Switzerland aimed at resolving the conflict. Mr. Kuleba's call for India's participation in the summit highlights the importance of multilateral efforts in achieving peace.

- **Challenges and Prospects:** The rejection of previous peace initiatives by Russia underscores the challenges in finding a mutually acceptable solution. However, the Swiss-backed peace process offers prospects for bridging the gap between opposing positions and facilitating dialogue.

Issues and Efforts Towards Peace

- **Contentious Peace Plan:** Ukraine's President presented a 10-point peace plan in 2022, which was rejected by Russia, reflecting divergent perspectives on key issues such as the withdrawal of Russian forces.
- **Diplomatic Engagement:** Intensive diplomatic efforts are underway to convene the Switzerland-led peace talks, although the precise timeline remains uncertain. The discussions between India and Ukraine focused on exploring avenues for a peaceful settlement amidst the ongoing conflict.

Solutions and Future Directions

- **Active Participation:** India's active participation in multilateral peace initiatives, including the upcoming Global Peace Summit, can contribute to fostering dialogue and facilitating a peaceful resolution.
- **Diplomatic Mediation:** Leveraging its diplomatic relations with both Ukraine and Russia, India can play a constructive role in bridging differences and facilitating dialogue towards a lasting solution.

Nut Graf: *The discussions between India and Ukraine regarding the 'peace formula' signify a concerted effort to address the conflict between Russia and Ukraine through diplomatic channels.*

SCIENCE AND TECHNOLOGY

1. Despite policy backing and funding, care for rare diseases not optimal

Syllabus: Developments & their Applications & Effects in Everyday Life

Mains: Diseases

Introduction:

In recent years, India has witnessed significant strides in addressing rare diseases, marked by the introduction of the inaugural National Policy on Rare Diseases in March 2021. This policy represents a pivotal moment for patients and families grappling with the challenges posed by rare diseases.

Policy Overview:

- The National Policy on Rare Diseases outlines a comprehensive framework aimed at reducing the exorbitant costs associated with treatment while fostering indigenous research initiatives.
- Central to the policy's objectives is the establishment of a national hospital-based registry dedicated to tracking rare diseases.
- This registry is envisioned to provide crucial epidemiological data, informing research funding priorities and enhancing treatment strategies.

Implications and Challenges:

- Despite the optimism surrounding the policy, the reality on the ground reveals persistent challenges.
- Rare diseases, estimated to affect nearly 1/5th of India's population, continue to lack adequate treatment options, with less than 5% having accessible therapies.
- Moreover, the absence of a standardized definition for rare diseases in India complicates policy formulation and resource allocation efforts.

Gaps in Fund Utilization:

- One glaring issue is the underutilization of funds allocated for rare disease treatment.
- Despite substantial financial allocations, a significant portion of funds remains unutilized, leaving many patients without access to life-saving treatments.
- The gap between fund allocation and utilization underscores the urgent need for enhanced accountability and transparency in healthcare resource management.

Way forward: Patient advocacy groups have emerged as powerful agents for change, advocating for expedited treatment and sustainable funding solutions. Efforts to bolster awareness, early detection mechanisms, and robust registry systems are crucial steps towards strengthening India's response to rare diseases.

Nut graf: As India commemorates World Rare Diseases Day, it is imperative to acknowledge the progress made while acknowledging the challenges that persist. Moving forward, sustained efforts are needed to bridge the gap between policy formulation and implementation, ensuring that all individuals affected by rare diseases have access to timely and affordable treatments.

2. Decoding the script

Syllabus: GS-3, Developments in Science and Technology and Applications of scientific developments in everyday life

Mains: Importance of Genome sequencing and Genome India Project

Context: Genome sequencing, particularly through projects like the Genome India Project, has immense potential in understanding human genetics and combating diseases. The recent completion of sequencing 10,000 Indian genomes marks a significant milestone in this endeavour.

Issues

- **Representativeness of Sample Size:** While sequencing 10,000 genomes is a commendable feat, it may not fully represent India's diverse population of over a billion. However, it serves as a vital template for further insights into genetic variations.
- **Genetic Diversity:** India's history of population groups and caste-based endogamy has led to the persistence of rare genetic variants, some of which may be harmful. Understanding these variations is crucial for personalized medicine and disease prevention.
- **Complexity of Disease:** The initial optimism surrounding genome sequencing, promising personalized medicine based on genetic profiles, has been tempered by the realization that most diseases are not solely determined by a single gene. This complexity presents challenges in translating genetic insights into effective treatments.

Significance

- **Combating Disease:** Genome sequencing enables the identification of genetic factors contributing to diseases, allowing for targeted interventions and personalized treatment plans.
- **Understanding Genetic Diversity:** By analyzing a diverse range of genomes, researchers can gain insights into the genetic makeup of different population groups, aiding in understanding evolutionary history and disease susceptibility.
- **Democratization of Knowledge:** Findings from genome sequencing projects must be shared widely and not confined to academic circles. Collaboration with various stakeholders, including scientists, students, technology companies, ethicists, and social scientists, ensures a comprehensive understanding of genetic data and its implications for society.

Solutions

- **Expansion of Genome Sequencing:** The Genome India Project should aim to expand beyond the initial 10,000 genomes to capture greater diversity within India's population.
- **Transparency and Collaboration:** Encourage open sharing of findings and foster collaborations across disciplines to harness the full potential of genome sequencing data.
- **Accessibility of Healthcare:** Efforts should be made to ensure that any medical advancements resulting from genome research are accessible and affordable to all segments of society.

Nut Graf: Genome sequencing offers a promising avenue for understanding human genetics and addressing health challenges. The completion of sequencing 10,000 Indian genomes by the Genome India Project marks a significant step forward.

3. What will Gaganyaan change for India?

Syllabus: Developments in Science and Technology, Applications of scientific developments in everyday life

Prelims: Gaganyaan Mission

Mains: Significance of Gaganyaan

Context: The Gaganyaan mission marks a significant leap in India's space exploration endeavours, as it aims to send Indian astronauts to low-earth orbit onboard an indigenous launch vehicle. This mission, undertaken by the Indian Space Research Organisation (ISRO), is a testament to India's growing capabilities in space technology and its aspirations to explore new frontiers.

Goals of Gaganyaan and ISRO:

- **Demonstration Mission:** Gaganyaan is a demonstration mission aimed at testing various technologies required for human spaceflight. It aims to showcase India's proficiency in producing, qualifying, and utilizing these technologies, paving the way for future ambitious space missions.
- **Long-term Objectives:** Prime Minister Narendra Modi's directive for ISRO to establish an indigenous space station by 2035 and land an Indian on the moon by 2040 highlights India's ambitious goals in space exploration. These objectives require significant advancements in technology and infrastructure.
- **Technological Innovation:** ISRO's overarching goals include technological innovation, national development through space applications, and international collaboration. Gaganyaan serves as a stepping stone towards achieving these objectives, enhancing India's position in the global space community.

Technological Ambition of Crewed Flight:

- **Safety and Reliability:** Crewed spaceflight poses unique challenges in ensuring the safety and well-being of astronauts amidst the harsh conditions of space. Developing reliable life support systems, launch, re-entry, and landing mechanisms are crucial for mission success.
- **Human-rated Technologies:** ISRO has human-rated many technologies to meet stringent safety standards for crewed missions. Rigorous testing and validation are essential to ensure the reliability of spacecraft and systems.
- **Testing Procedures:** Before the crewed mission, ISRO conducts multiple test flights to validate spacecraft performance and safety features. These test flights simulate various mission scenarios, including launch, orbit insertion, re-entry, and landing.

Components of Gaganyaan:

- **Launch Vehicle Mark-3 (LVM-3):** The LVM-3 is a three-stage rocket capable of launching the orbital module into low-earth orbit. It is equipped with indigenous cryogenic engines for efficient propulsion.
- **Orbital Module:** Comprising the crew module and service module, the orbital module houses astronauts and essential systems for life support and propulsion. It includes parachutes for descent and a crew escape system for emergencies.
- **Crew:** The crew for Gaganyaan includes Indian Air Force personnel who undergo rigorous training to prepare for spaceflight. Additionally, a gynoid named 'Vyommitra' is equipped with sensors to monitor conditions onboard the spacecraft.

Achievements and Future Prospects:

- **Space Reforms:** The establishment of New Space India Ltd. (NSIL) and the Indian National Space Promotion and Authorization Centre (IN-SPACe) reflects India's commitment to space reforms and commercialization. These initiatives aim to streamline space activities and foster innovation.
- **Geopolitical Significance:** Gaganyaan enhances India's self-sufficiency in human spaceflight and positions it as a key player in the global space arena. It aligns with India's efforts to assert its presence in space exploration and scientific endeavours.

Nut Graf: The Gaganyaan mission represents a significant milestone for India's space program, demonstrating its technological prowess and ambition in crewed spaceflight. As ISRO progresses towards achieving this mission, it underscores India's emergence as a formidable player in the global space community, with the potential to contribute significantly to scientific research, national development, and international collaboration in space exploration.

4. A vaccine that prevents six cancers

Syllabus: GS-3, Science and Technology – Developments and their Applications and Effects in Everyday Life

Mains: HPV Vaccination

Introduction to Cervical Cancer Awareness and HPV Vaccination:

- January marks Cervical Cancer Awareness Month, while March 4 is International HPV Awareness Day.
- Cervical cancer ranks as the fourth most common cancer among women globally, with over 300,000 deaths annually, disproportionately affecting lower- and middle-income countries.
- In India, cervical cancer is the second most common cancer among women, posing a significant health risk to around 500 million women above the age of 15.

Strategies for Prevention:

- Scientist Harald Zur Hausen's 1983 discovery linking cervical cancer to certain types of papillomaviruses (HPV) paved the way for prevention strategies.
- Prevention methods include HPV vaccination and screening for precancerous lesions.
- The World Health Organization has outlined a triple-pillar intervention targeting 90% HPV vaccination coverage for girls by age 15, 70% screening for women by ages 35 and 45, and 90% treatment coverage for detected cervical pre-cancer and cancer lesions by 2030.

Status and Challenges in India:

- India introduced the HPV vaccine in 2008, with plans for inclusion in the Universal Immunization Programme announced in 2023.
- However, accessibility remains an issue, with the vaccine primarily available in the private market at a significant cost.
- Lack of awareness among physicians about the incidence and risks of cervical cancer and HPV infection, as well as concerns about vaccine safety and effectiveness, contribute to hesitancy in recommending the HPV vaccine to eligible adolescents.

Efforts and Recommendations for Improvement:

- The Federation of Obstetric and Gynaecological Societies of India (FOGSI) and the Indian Academy of Pediatrics (IAP) are collaborating to educate member physicians on HPV vaccination and effective communication with parents.
- Both organizations recommend HPV vaccination starting at age 9 and regular screening for women above 30.
- FOGSI and IAP aim to train 20,000 HPV physician champions by mid-2024 to promote vaccination and screening within their communities.

The Role of Physicians in Eliminating Cervical Cancer:

- Physicians are regarded as leaders in society and trusted sources of health information.
- Their leadership is crucial in eliminating cervical cancer in India through advocating for HPV vaccination and regular screening.

Nut Graf: Cervical cancer is a significant global health concern, especially in lower-income countries like India. Despite preventive measures like HPV vaccination, accessibility and awareness remain challenges. Efforts by medical organizations aim to educate physicians and increase vaccination rates, crucial for combating this disease.

5. Changing cancer nomenclature can improve treatment outcomes: doctors

Syllabus: Biotechnology

Prelims: Basis for Cancer Classification

Introduction: The Need for Cancer Nomenclature Change

- Traditional classification of cancers based on organs of origin is being challenged by advancements in precision oncology.
- Genetic mutations responsible for tumours vary, and targeting them with drugs has become possible.
- Metastatic cancers, which are responsible for most cancer deaths, often require systemic drug treatments.
- As a result, there is a growing push to reclassify cancers based on their molecular and genetic characteristics rather than their tissue of origin.

Impact of Sequential Testing on Treatment Delays:

- Sequential testing of drugs in clinical trials, based on organ-specific classifications, leads to delays in treatment access.
- Trials conducted separately for different types of cancer prevent patients with similar genetic mutations from accessing potentially effective drugs.
- This delay is evident in cases like the drug nivolumab, which targets specific proteins found in tumours but was tested separately for different cancer types.

Benefits of Molecular-Based Classification:

- Reclassifying cancers based on molecular characteristics could streamline clinical trials, reducing the time needed to bring drugs to market.
- Patients would have a clearer understanding of their treatment rationale, as therapy would be based on biological mechanisms rather than organ location.
- Physicians could better educate patients about their cancer's molecular profile and tailor treatment accordingly, moving towards a more personalized approach.

Challenges and Hurdles in Implementation:

- Regulatory agencies need to update guidelines to reflect the importance of molecular targets in drug approvals.
- Institutions must establish teams to analyze patients' molecular profiles, and medical education should emphasize understanding cancer at the molecular level.
- Access to genetic testing is a significant barrier, particularly in countries like India where costs are high and availability limited.
- While the proposed classification system offers potential benefits, it must be implemented carefully to avoid overlooking the impact of disease location on outcomes and to ensure equitable access to treatment.

Nut Graf: *Advancements in precision oncology challenge traditional cancer classification based on organ of origin. Reclassifying cancers by molecular features promises streamlined treatment but faces hurdles like access to genetic testing and updating regulatory guidelines.*

6. The tale of 'have money, buy miracle drug'

Syllabus: GS-3, Bio-technology and issues relating to Intellectual Property Rights

Mains: Unauthorized use of drugs and Regulatory Oversight

Introduction to the Issue:

- Recent media coverage has highlighted the unauthorized use of Semaglutide, a weight loss drug, in India.
- Despite lacking approval for sale in India, affluent individuals are obtaining the drug through doctors.
- Media fails to disclose the drug's unapproved status and potential side effects, reminiscent of past weight loss drug scandals.

Regulatory Framework and Exceptions:

- Typically, drugs in India undergo clinical trials and approval processes before sale.
- Limited exceptions allow for importation with a doctor's prescription or by hospitals.
- The absence of clinical trials in India poses unknown risks, especially concerning potential interactions with common medications.

Responsibilities and Questions for Doctors:

- Doctors face ethical dilemmas regarding prescribing unapproved drugs.
- Unclear whether doctors are recommending the drug or responding to patient demand.
- Questions arise about doctors' knowledge of the drug's effects and their ability to manage adverse events.

Concerns about Drug Safety and Regulatory Oversight:

- Recent scandals, such as the distribution of spurious drugs like Adcetris, raise concerns.
- Delayed regulatory alerts and arrests suggest inadequate oversight.
- The lack of assurance regarding drug authenticity raises doubts about safety.

Societal Implications and Government Priorities:

- The issue raises questions about societal attitudes towards the health risks faced by the affluent.
- Government priorities may overlook such concerns in favour of more pressing issues.
- Analogies to past instances of public apathy towards health crises underscore broader societal indifference.

Nut Graf: *Despite lacking approval in India, Semaglutide, a weight loss drug, is being administered to affluent individuals by doctors. This raises concerns about safety, regulatory oversight, and societal attitudes toward health risks.*

7. Remembering the forgotten women of science in India

Syllabus: GS-3, Achievements of Indians in Science & Technology

Mains: Underrepresentation of women in science and the way to reverse this trend

Underrepresentation in Indian Science:

- The Indian Academy of Sciences, founded by C.V. Raman in 1934, has never had a woman scientist leading it.
- Only 14% of working scientists and 15% of faculty members in research institutes across India are women.
- The Shanti Swarup Bhatnagar Prize, India's top science award, has been awarded to only 20 women scientists out of 571 recipients since 1958.

Biases Against Women in Science:

- Explicit and implicit biases persist, with perceptions that men are more suited to science and women are inherently less interested.
- The Matilda effect contributes to the exodus of women from science, as they face under-appreciation and discrimination in opportunities and promotions.

- Figures like Rosalind Franklin and Jocelyn Bell went unrecognized for their contributions, reflecting a broader trend of women being overlooked in science.

Challenges Faced by Women Scientists:

- Women scientists face psychological pressures and systemic challenges in their careers.
- Societal expectations regarding family and childcare often hinder their progress in science.
- The authors of “Lab Hopping: Women Scientists in India” highlight the mediocrity in Indian science due to the lack of diversity and call for breaking stereotypes and addressing sexism.

Celebrating Women Scientists:

- Recognizing and celebrating the achievements of women scientists is crucial to inspiring future generations.
- Initiatives like publications profiling Indian women scientists and anthologies such as “Lilavati’s Daughters” and “Gutsy Girls of Science” aim to highlight the struggles and triumphs of women in STEM fields.
- Biographies like “Janaki Ammal: Life and Scientific Contributions” and “Chromosome Woman, Nomad Scientist, a Life” shed light on the extraordinary lives and contributions of pioneering women scientists in India.

Addressing the Gender Gap in Science:

- Despite efforts to encourage girls and women in science, the gender gap persists, weakening the overall contribution of science to national development.
- Initiatives are needed to address the visible and invisible barriers hindering Indian women’s scientific careers and promote diversity in the field.

Nut Graf: *Despite strides in science, women in India face significant barriers, with underrepresentation in top positions and prestigious awards. Biases persist, hindering their progress. Efforts to celebrate and support women scientists are crucial for a more equitable future.*

8. A bold step towards a cervical cancer-free future

Syllabus: GS-3, Developments in Science and Technology

Mains: New steps towards a cervical cancer-free future

Context: India’s interim Union Budget 2024-25 has garnered attention for its significant focus on women’s health, particularly through the introduction of measures to encourage HPV vaccination among girls. This bold step aligns with the global efforts to combat cervical cancer, marking a pivotal moment in prioritizing women’s well-being.

Issues

- **Cervical Cancer Burden:** Despite advancements in healthcare, cervical cancer remains a major health concern for women in India, with high incidence and mortality rates.
- **Global Targets and Programmes:** The World Health Organization has set ambitious targets, including HPV vaccination for girls and cervical cancer screening for women, to combat cervical cancer by 2030.

Significance

- **Global Success Stories:** International examples, such as Scotland, Australia, and Rwanda, highlight the effectiveness of HPV vaccination in reducing cervical cancer incidence.
- **Regional Progress:** Countries like Bhutan and Sikkim within the Southeast Asia Region have demonstrated success in implementing HPV vaccination programmes, showcasing the potential for broader impact in the region.

- **India's Indigenous Vaccine:** The development of Cervavac offers accessibility and affordability, further enhancing India's capability to combat HPV infections and cervical cancer.

Solutions

- **Communication Strategy:** Effective communication, as exemplified by Sikkim's vaccination campaign, is crucial in dispelling myths and building trust among communities.
- **Inclusive Vaccination:** Including adolescent boys in vaccination programmes can maximize the impact on HPV transmission.
- **Adapting to Evidence:** Recognizing the effectiveness of single-dose HPV vaccination can inform policy decisions and optimize resources.
- **Addressing Challenges:** Overcoming vaccine hesitancy and ensuring equitable access require community engagement, awareness campaigns, and leveraging technological tools like the U-WIN portal.

Nut Graf: India's commitment to HPV vaccination in the interim Union Budget heralds a significant advancement in women's health. By drawing inspiration from global successes and leveraging its vaccination infrastructure, India is poised to make substantial progress in combatting cervical cancer.

9. Why India urgently needs a legal framework for genomics

Syllabus: Developments in Science and Technology, Applications of scientific developments in everyday life

Prelims: Genomics

Mains: Importance of legal framework for genomics in India

Context: Despite significant advancements in genomics, India lacks a comprehensive legal framework to regulate the sequencing, analysis, and interpretation of genomes.

- The absence of regulations has led to the sequencing and analysis of Indian genome samples by foreign companies with little oversight.

Need for Legal Framework:

- As genomics becomes more prevalent in clinical settings, there is an urgent need for a legal framework to govern its use in India.
- Other countries have proactively formulated legal and policy frameworks to ensure equitable access to genomic technology while accelerating research and development.

Data Protection and Equity:

- The lack of regulations has resulted in the exploitation of Indian samples by foreign companies for commercial purposes.
- Fragmentation of genetic data among various organizations hinders public health decision-making and exacerbates discrimination based on genetic information.
- Discrimination in insurance and healthcare access could occur due to genetic testing results, highlighting the need for legal protection.

Ethical Use and Quality Assurance:

- Ensuring ethical use of genomic technology is crucial to prevent misuse and protect individuals from discrimination.
- Professional bodies and legal provisions are needed to establish guidelines and ensure the quality and validity of genomic tests.

Significance

- A robust legal framework is essential to ensure equitable access to genomic technology, protect individuals from discrimination, and foster trust among stakeholders.
- Effective regulations will encourage collaboration and innovation in genomics, ultimately advancing healthcare and improving outcomes for the population.

Nut Graf: A legal framework for genomics is essential to realize the full potential of genomic technology in advancing healthcare and improving outcomes for the Indian population. By prioritizing ethical principles, data protection, and equity, India can become a leader in genomic research, paving the way for a healthier future for its people.

10. Why has government issued an AI advisory?

Syllabus: Developments in Science and Technology, Applications of scientific developments in everyday life

Prelims: AI advisory

Mains: Government regulations on AI

Context: The Ministry of Electronics and Information Technology (MeitY) issued an advisory to the Artificial Intelligence (AI) industry on March 1.

- This advisory pertains to the release of generative AI products and their compliance with government regulations.

Government's Stand on AI Regulation:

- The advisory reflects a shift in the government's approach to AI research and policy, particularly regarding AI models' responses and compliance with IT laws.
- The advisory followed concerns raised by the Minister of State for Electronics and Information Technology, Rajeev Chandrasekhar, regarding Google's Gemini chatbot's response to certain queries.

Reception and Interpretation of the Advisory:

- Industry and observers are divided on whether the advisory is a recommendation or a mandate.
- Legal experts and industry professionals have raised concerns about the advisory's legality and its potential impact on innovation and experimentation in AI development.

Significance

- The advisory raises questions about the government's approach to regulating AI and its implications for tech firms.
- It highlights the tension between regulating AI to ensure compliance with legal and ethical standards and fostering innovation and experimentation in the AI industry.

Way forward:

Clarity and Consultation:

- The government should provide clarity on the scope and applicability of the advisory to AI firms.
- Stakeholders, including tech firms and legal experts, should be consulted to ensure that regulatory measures are effective and balanced.

Promoting Innovation:

- Measures should be taken to encourage innovation and experimentation in the AI industry while ensuring compliance with legal and ethical standards.
- Support for local AI developers and startups should be prioritized to foster a competitive and diverse AI ecosystem.

Nut Graf: *The government's issuance of an AI advisory signals a shift in its approach to regulating AI in India. While compliance with legal obligations is essential, measures should be taken to ensure that regulatory efforts do not stifle innovation and experimentation in the AI industry.*

11. How is nuclear waste generated?

Syllabus: GS-3, Science and Technology – Developments and their Applications and Effects in Everyday Life

Mains: Disposal issues of Nuclear Waste

Introduction: Generation of Nuclear Waste

- Nuclear waste is generated primarily in fission reactors when neutrons bombard the nuclei of certain atoms, leading to their destabilization and break-up, resulting in the production of radioactive fission products and heavier elements.
- Spent fuel from nuclear reactors contains radioactive fission products and transuranic elements, posing significant challenges to safe disposal and storage.

Handling and Storage of Nuclear Waste:

- Spent fuel, being highly radioactive, is initially kept underwater for cooling purposes before being transferred to dry cask storage for longer-term containment.
- Liquid waste treatment facilities in nuclear power plants manage aqueous wastes containing short-lived radionuclides, which may be discharged into the environment after treatment.
- High-level liquid waste, containing fission products, is vitrified to form a stable glass for storage.
- Dry cask storage and geological disposal in specially designed containers buried underground are common methods for long-term storage away from human activity.

Reprocessing and Its Challenges:

- Reprocessing involves separating fissile material from non-fissile material in spent fuel, which can increase fuel efficiency but also yield weapons-usable plutonium.
- Reprocessing facilities require specialized protection and personnel due to the hazardous nature of spent fuel.
- The International Atomic Energy Agency (IAEA) tightly regulates reprocessing facilities to prevent proliferation risks associated with the production of plutonium.

Issues and Costs Associated with Nuclear Waste Management:

- Nuclear waste management poses various challenges, including uncertainties in treatment processes and the risk of accidents like the one at the Waste Isolation Pilot Plant (WIPP) in 2014.
- The cost of waste management adds to the overall expenses of nuclear power generation, with estimates ranging from \$1.6 to \$7.1 per megawatt-hour (MWh) of energy produced.
- Countries face normative problems with exporting nuclear waste, including environmental injustice and ethical concerns about sharing the costs of waste disposal.

Nuclear Waste Management in India:

- India has reprocessing plants in Trombay, Tarapur, and Kalpakkam to manage spent fuel from research reactors and power plants.
- Waste generated at Indian nuclear power stations is of low and intermediate activity levels and is managed on-site through treatment and storage facilities.
- The delay in the commissioning of the Prototype Fast Breeder Reactor (PFBR) raises concerns about the operational efficiency of existing reprocessing facilities and the potential complications in managing spent fuel with different distributions of radioactive elements.

Nut Graf: Nuclear waste, generated from fission reactors, poses significant challenges for safe disposal. Handling involves cooling, dry cask storage, and reprocessing, with concerns about proliferation risks and environmental impact, including high costs and operational inefficiencies.

12. Nuclear energy: fixing the finance

Syllabus: Science and Technology- Developments and their Applications and Effects in Everyday Life

Mains: Challenges in adopting Nuclear energy

Introduction: Urgent Need for Reassessment of Nuclear Financing Policies

- Multilateral Development Banks (MDBs) need to reassess their financing policies to accommodate private capital or blended financing models for nuclear energy generation.
- Despite the indispensable role of nuclear energy in meeting climate goals, MDBs and private investors have not significantly contributed to the industry's financing.
- The lack of financial support from institutions like the World Bank reflects outdated financing policies that hinder the growth of nuclear energy.

Successful Financial Models and Cooperative Funding Practices:

- Countries like France, South Korea, Russia, and the U.K. have implemented successful cooperative funding models for nuclear projects.
- Cooperative finance models such as 'Mankala' in Finland, where multiple private companies jointly own and fund energy producers, offer a replicable example of successful financing.
- Financial creativity, coupled with market support and low interest rates, can unlock the potential of nuclear energy at scale.

Discrepancy Between Nuclear Infrastructure Development and Financing:

- Despite the increasing number of nuclear reactors worldwide, the state of nuclear infrastructure development and finance mobilization is not proportional.
- Examples like NuScale Power's terminated project in Utah and bankruptcy filings of nuclear powerhouses Westinghouse and Areva highlight the challenges faced in nuclear project financing and implementation.
- China's ambitious targets for nuclear energy production underscore the urgency to address the gap between infrastructure development and financing.

India's Position and Efforts in Nuclear Energy:

- India's nuclear industry faces challenges such as stigma, weaponization risk, and regulatory hurdles, limiting its adoption rate despite offering reliable and cost-effective energy.
- Recent initiatives in India, including inviting private investments, tripling nuclear capacity, and advancements like the Prototype Fast Breeder Reactor (PFBR), indicate a positive trajectory for the industry.

- The PFBR's innovative capabilities signify India's commitment to advancing its nuclear industry and achieving self-reliance in nuclear energy production.

Nut Graf: Urgent reassessment of nuclear financing needed due to disproportionate infrastructure development and financing. Successful models like cooperative funding exist. India's nuclear industry is evolving despite challenges, signalling positive growth prospects.

13. With Agni V test, India makes the MIRV leap

Syllabus: Developments in Science and Technology, Applications of scientific developments in everyday life

Prelims: Agni V

Mains: Agni V test importance

Context:

- India's recent test of the Agni V ballistic missile equipped with Multiple Independently Targetable Re-entry Vehicle (MIRV) technology marks a significant leap in its strategic capabilities.
- This development places India in a select group of nations possessing MIRV technology, enabling a single missile to deliver multiple nuclear warheads to different targets.

Understanding MIRVs

- MIRVs are advanced missile systems capable of delivering multiple nuclear warheads to separate targets, effectively multiplying the destructive potential of a single missile.
- Developed initially by the U.S. and later adopted by other major nuclear powers like the Soviet Union, the U.K., France, and China, MIRVs offer strategic advantages in terms of target flexibility and penetration of ballistic missile defenses.

Significance of MIRVs

- MIRVs serve as a force multiplier, allowing a single missile to strike multiple targets, thereby enhancing operational efficiency and cost-effectiveness.
- Particularly crucial for submarine-launched ballistic missiles (SLBMs), MIRVs enable submarines to carry fewer missiles while maintaining the same level of deterrence, reducing the cost of maintaining a robust nuclear arsenal.

Mission Divyastra: Technical Details

- The successful test of MIRV technology under 'Mission Divyastra' demonstrates India's growing technological prowess in missile development and strategic deterrence.
- Equipped with indigenous avionics systems and high-accuracy sensor packages, the MIRV system ensures precise targeting of re-entry vehicles, bolstering India's strategic capabilities.

Implications and Challenges

- India's adoption of MIRV technology enhances its nuclear deterrence posture, providing greater flexibility in responding to potential threats.
- However, the development of MIRV-ed missiles necessitates careful consideration of strategic stability and arms control measures, particularly in the context of regional security dynamics.

International Context

- India's acquisition of MIRV technology underscores its commitment to maintaining a credible nuclear deterrent, amidst evolving geopolitical dynamics and strategic competition.

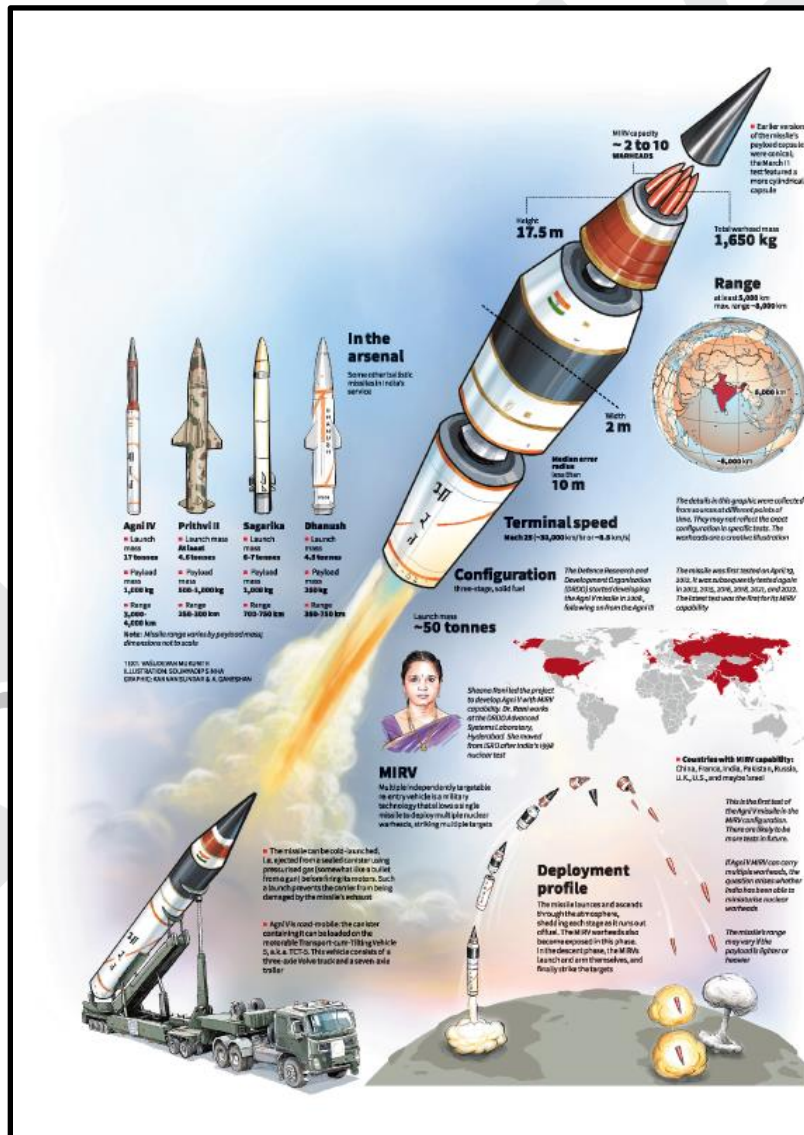
- The reactions of neighboring countries, particularly China and Pakistan, will be closely monitored, reflecting the complex triangular dynamics in the region.

Issues

- **Strategic Stability:** The proliferation of MIRV technology raises concerns about its impact on strategic stability and arms race dynamics in South Asia.
- **Arms Control:** The development of MIRV-ed missiles underscores the importance of strengthening arms control measures and promoting transparency in nuclear arsenals to mitigate risks of escalation.
- **Regional Security:** India's acquisition of advanced missile technologies necessitates a nuanced approach to regional security management, fostering dialogue and confidence-building measures among neighboring states.

Significance

- India's successful test of MIRV technology signifies a significant milestone in its indigenous missile development program, showcasing technological sophistication and strategic prowess on the global stage.
- This achievement underscores India's determination to safeguard its national security interests and maintain a credible deterrent posture in the face of evolving security challenges.



Source: The Hindu

Solutions

- **Diplomatic Engagement:** India should engage in proactive diplomacy to communicate the defensive nature of its missile capabilities and promote transparency in its strategic intentions.
- **Strategic Restraint:** Emphasizing the importance of responsible nuclear behaviour, India should advocate for measures to prevent the proliferation of advanced missile technologies and enhance regional stability.
- **Arms Control Initiatives:** India can explore opportunities for arms control agreements and confidence-building measures with neighboring countries to mitigate risks of arms race escalation and promote mutual security interests.

Nut Graf: India's successful test of the Agni V missile with MIRV technology represents a significant milestone in its pursuit of strategic autonomy and national security objectives

14. Activists write to PM highlighting shortage of vital anti-TB drugs

Syllabus: Developments in Science and Technology, Applications of scientific developments in everyday life

Prelims: Anti-TB drugs

Mains: Shortage of vital anti-TB drugs in India

Context:

- Activists and public health experts highlight the shortage of vital anti-TB drugs in a letter to the Prime Minister.
- Urgent intervention is sought ahead of World Tuberculosis Day, observed annually on March 24.
- Shortage specifically affects drugs essential for treating drug-sensitive TB (DS-TB).

Issues

Shortage of Essential Drugs

- Shortage of 4FDC and 3FDC drugs critical for DS-TB treatment.
- Limited information indicates widespread stockouts beyond reported cases.

Impact on TB Elimination Programme

- Uninterrupted drug supply is crucial for National TB Elimination Programme's (NTEP) DOTS strategy.
- Inadequate treatment regimens fuel drug-resistant TB strains.

Effects on Patients

- Treatment interruption for patients undergoing therapy.
- Increased risk of developing drug resistance.
- Compromised treatment outcomes and additional burden on TB program.

Tuberculosis (TB)

- Tuberculosis (TB) is a potentially serious infectious disease that primarily affects the lungs but can also impact other parts of the body.
- Caused by the bacterium *Mycobacterium tuberculosis*, TB is one of the top 10 causes of death worldwide, posing a significant public health challenge, especially in low- and middle-income countries.

Solutions

Immediate Intervention

- Address reported shortages promptly to ensure uninterrupted drug supply.
- Allocate resources and coordinate efforts to mitigate stockouts.

Enhanced Monitoring and Reporting

- Improve mechanisms for monitoring drug availability and stock levels.
- Encourage community involvement in reporting shortages for timely action.

Long-term Strategy

- Strengthen drug procurement and distribution systems.
- Implement robust inventory management practices to prevent future shortages.
- Invest in local manufacturing capabilities to reduce dependence on imports.

Nut Graf: Shortage of essential anti-TB drugs poses a significant challenge to India's TB control efforts. Collective action is required to mitigate risks of treatment interruption and drug resistance, safeguarding public health and advancing TB elimination goals.

15. The right diagnosis for tuberculosis

Syllabus: GS-3, Biotechnology

Mains: Need to explore new diagnosis techniques for TB

Introduction:

- Tuberculosis (TB) remains a global health concern, with the goal of eradicating it by 2030 under the United Nations' Sustainable Development Goals.
- India aims to eliminate TB five years ahead of the global target, with significant progress noted.

Challenges in TB Diagnosis:

- Diagnosis is identified as the weakest link in TB care globally.
- Despite 7.5 million TB cases diagnosed in 2022, approximately 3.1 million cases went undiagnosed.
- Effective TB treatment is dependent on accurate diagnosis. Thus, improving diagnosis is pivotal in ending the TB epidemic.

Improving TB Diagnosis:

- Utilising existing systems and optimizing processes while integrating newer, proven technologies can enhance TB diagnosis.
- Enhancing screening procedures is essential. Recent studies emphasize the limitations of symptom-based screening.
- Advanced X-ray imaging, including portable devices and AI-driven software, offers efficient TB detection.
- Molecular tests, such as nucleic acid amplification tests (NAAT), provide rapid and accurate diagnosis, but accessibility and cost remain concerns.
- Exploring alternative sample collection techniques like tongue swabs can improve point-of-care testing and reduce diagnostic costs.
- Leveraging PCR machines, widely available post-COVID-19, can aid in expanding diagnostic reach.

- Rapid tests like the urine LAM test offer the potential for effective screening, including pulmonary and extra-pulmonary TB cases.

Fostering Innovation and Implementation:

- The TB diagnostics pipeline offers promising innovative tests, necessitating rapid validation and adoption.
- Point-of-care testing is crucial for reaching underserved populations. Thus, streamlining implementation and capacity building at the sub-district level are imperative.
- Proactive deployment of new technologies and minor adjustments in the diagnostic framework can significantly contribute to India's TB elimination efforts.

Nut Graf: India aims to eliminate TB ahead of the global target. While progress is commendable, diagnosis remains a challenge. Improving screening procedures and leveraging advanced technologies are pivotal steps toward achieving this ambitious goal.

16. Can AI help in navigating mental health?

Syllabus: GS-3, Science and Technology – Developments and their Applications and Effects in Everyday Life

Mains: Feasibility of using AI for mental health

Context: AI is in the development stage and has shown very promising results in aiding the mental health cure and support.

Use of AI Mental Health Supports:

- **Enhanced Help-Seeking Behaviour:** NLP (Natural language processing) programs offer privacy and anonymity, reducing stigma and encouraging individuals to seek help.
- **Personalized Care:** Chatbots provide support by reframing thoughts, validating emotions, and offering personalized care, especially when access to human support is limited.
- **Continuity of Care:** Digital therapy assistants offer continuous support, directing users to resources for coping with distress, grief, and anxiety, thus improving health outcomes.

Benefits for Clinicians:

- **Efficient Data Utilization:** AI tools summarize vast datasets including clinical notes, patient conversations, and neuroimages, helping clinicians understand patient history quickly.
- **Treatment Decision Support:** Advanced NLP programs can forecast responses to medications by analyzing brain activity and clinical surveys, streamlining treatment decisions and minimizing ineffective interventions.
- **E-Triage Systems:** Some chatbots create electronic triage systems, reducing wait times and allowing clinicians to focus more on severe mental illnesses.






Future Directions and Challenges:

- **Reducing Bias:** Refinement of applications is necessary using diverse datasets to minimize bias, ensuring equitable care provision across populations.
- **Comprehensive Patient Care:** Programs should incorporate a wider range of health indicators for a more comprehensive patient care experience.
- **Safety and Compliance:** Governments and institutions must prioritize user safety and adhere to global compliance standards as these applications evolve.
- **Continuous Improvement:** Rigorous testing and adherence to a conceptual framework for improving health outcomes are essential for the continued success of these programs.

Nut Graf: AI-driven NLP programs revolutionize mental health care by providing personalized support for individuals and aiding clinicians in efficient diagnosis and treatment decisions. However, challenges such as bias mitigation and regulatory compliance must be addressed for widespread adoption.

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DEFENCE AND INTERNAL SECURITY

1. Technology combined with behavioural analysis can prevent financial frauds: Das

Syllabus: Internal Security Challenges in India

Mains: Steps to prevent financial fraud

Context: Reserve Bank of India (RBI) Governor Shaktikanta Das highlighted the potential of technology combined with behavioural analysis in preventing financial fraud during his address at the annual conference of RBI Ombudsman in Mumbai. While acknowledging the effectiveness of such technologies in detecting suspicious consumer behaviour, he also cautioned against the risks of compromising customer data and privacy.

Issues

- **Detection of Anomalies:** Identifying irregularities in consumer behaviour, such as transactions during odd hours or deviations from usual patterns, is crucial in preventing financial frauds.
- **Risk of Data Compromise:** The utilization of technology for behavioural analysis raises concerns about the invasion of privacy and potential manipulation of consumer data, necessitating appropriate safeguards.
- **Nascent Stage of AI Deployment:** While Artificial Intelligence (AI) holds promise in fraud prevention, identity verification, and data protection, its current deployment in these areas remains at a nascent stage, posing challenges in effective implementation.

Significance

- **Enhanced Fraud Prevention:** Leveraging technology for behavioural analysis can significantly enhance fraud detection capabilities, thereby safeguarding financial institutions and consumers against fraudulent activities.
- **Customer Experience:** Personalized interaction through AI-driven chatbots and virtual assistants enhances customer service experience, improving overall satisfaction and loyalty.
- **Trust in Financial Institutions:** Upholding trust and confidence in the banking sector is essential for maintaining stability and fostering economic growth, highlighting the importance of effective grievance redressal mechanisms like the Ombudsman framework.

Solutions

- **Data Protection Measures:** Implementing robust data protection measures and privacy safeguards are essential to mitigate the risks associated with the utilization of technology in behavioural analysis.
- **Ethical Use of AI:** Ensuring the ethical use of AI technologies involves transparent practices, responsible data handling, and adherence to regulatory guidelines to prevent misuse and manipulation.
- **Continuous Monitoring and Improvement:** Regular monitoring and continuous improvement of AI capabilities are necessary to address emerging threats and enhance the effectiveness of fraud prevention measures.

Nut Graf: Shaktikanta Das's emphasis on the potential of technology combined with behavioural analysis in preventing financial fraud underscores the importance of innovation and adaptation in the banking sector.

2. Rajnath inaugurates Navy's state-of-the-art headquarters in Delhi

Context: The inauguration of the Nausena Bhawan, the Indian Navy's dedicated headquarters in Delhi Cantonment, marks a significant milestone for the Navy, consolidating its operations from 13 different locations into a purpose-built facility.

Issues

- **Fragmented Operations:** Before the establishment of Nausena Bhawan, the Indian Navy operated from multiple locations, leading to logistical challenges and inefficiencies.
- **Need for Consolidation:** The construction of a dedicated headquarters was necessitated by the Navy's growing operational requirements and the need for a centralized command and control structure.
- **Modern Infrastructure:** The design and construction of Nausena Bhawan aimed to incorporate innovative technologies and sustainable practices to ensure operational efficiency and environmental sustainability.

Significance

- **Operational Efficiency:** The consolidation of Navy operations into a single headquarters is expected to enhance coordination, communication, and decision-making, thereby improving overall operational efficiency.
- **Sustainability:** The emphasis on energy and water conservation, as well as the integration of green technologies, reflects the Navy's commitment to environmental stewardship and sustainable practices.
- **Security Enhancement:** The state-of-the-art security features and comprehensive three-tier security system at Nausena Bhawan enhance the security posture of the Navy's headquarters, ensuring the protection of sensitive assets and information.



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ENVIRONMENT

1. Unrestrained poaching plays big role in decline of Odisha's leopards

Syllabus: Conservation, Environmental pollution and degradation

Prelims: Leopards

Mains: Reasons for the decline of Odisha's leopards

Context: Unrestrained poaching poses a significant threat to the leopard population in Odisha, leading to a drastic decline in numbers. Between 2018 and 2022, approximately one-fourth of Odisha's leopards were lost primarily due to poaching activities.

Issues

- **Decline in Leopard Population:** The 'Status of Leopards India' report highlighted a sharp decline in Odisha's leopard population, estimating a loss of around 25.26%.
- **Distribution:** Leopard occupancy is now confined to Protected Areas such as Similipal and Satkosia tiger reserves, Hiraikud and Kotagarh wildlife sanctuaries, with absence in previously occupied regions like Nayagarh and Ghumsur forest divisions.
- **Threats to Leopard Population:** Poaching remains a significant threat, along with habitat loss due to human activities such as mining and road accidents.
- **Extent of Poaching:** The report indicates widespread poaching activities targeting leopards for their skins and body parts, with a substantial number of skins seized by authorities over the years.

Significance

- **Ecological Balance:** Leopards play a crucial role in maintaining the ecological balance by controlling prey populations.
- **Biodiversity:** The decline in the leopard population signifies a loss of biodiversity and indicates environmental degradation.
- **Economic Impact:** Effective conservation measures can boost eco-tourism and contribute to the economy through wildlife tourism.

About Leopards:

- The Indian leopard (*Panthera pardus fusca*) is distributed across India, Nepal, Bhutan, and parts of Pakistan, excluding mangrove forests and desert habitats.
- Listed in Schedule I of the Wildlife (Protection) Act, 1972 and classified as "Vulnerable" by the IUCN Red List.

Solutions

- **Enhanced Patrolling:** Strengthening patrolling efforts and law enforcement to curb poaching activities, especially outside protected areas where a significant leopard population resides.
- **Prey Recovery and Habitat Management:** Implementing measures for prey recovery and habitat management to ensure adequate food sources and suitable habitats for leopards.

- **Awareness Campaigns:** Conducting awareness campaigns to educate locals about the importance of leopard conservation and the consequences of poaching.

Nut Graf: The decline in Odisha's leopard population due to rampant poaching calls for immediate action from the state authorities. Effective enforcement of laws, habitat conservation, and community involvement are essential to safeguarding the future of leopards in the region and preserving biodiversity.

2. India to establish international alliance to protect big cats

Syllabus: Conservation, Environmental pollution and degradation

Prelims: Big Cats International Alliance

Context: India's Union Environment Ministry has proposed the establishment of an International Big Cat Alliance (IBCA) akin to the International Solar Alliance, to promote global conservation efforts for big cats. This initiative reflects India's commitment to leveraging its expertise in tiger conservation for the benefit of all 'big cat' species.

Issues

- **Lack of International Coordination:** Currently, there is no international body dedicated to addressing conservation challenges faced by big cats across their habitats, leading to a gap in resource allocation and best practices dissemination.
- **Need for Conservation Efforts:** Big cat populations worldwide are under threat due to habitat loss, poaching, and human-wildlife conflict, necessitating coordinated conservation initiatives.

Significance

- **Conservation Leadership:** India's leadership in tiger conservation has been globally recognized, making it well-positioned to spearhead efforts for the protection of all 'big cat' species.
- **Global Collaboration:** The establishment of the IBCA will facilitate collaboration among countries, conservation organizations, scientific institutions, businesses, and corporates interested in big cat conservation.
- **Capacity Building:** Membership in the alliance will provide access to technical expertise, funding, and training opportunities for frontline staff and local communities, enhancing their capacity for wildlife conservation.

Big Cats:

- Lion
- Tiger
- Leopard
- Jaguar
- Snow Leopard
- Cheetah
- Cougar
- Clouded Leopard

Solutions

- **Establishment of IBCA:** Formalize the establishment of the International Big Cat Alliance, headquartered in India, with a commitment of ₹150 crore over five years.

- **Membership Expansion:** Encourage more countries to join the alliance, leveraging India's diplomatic channels to garner support and participation from nations harbouring 'big cats.'
- **Capacity Building Initiatives:** Develop training programs for frontline staff in member countries, focusing on wildlife monitoring, community engagement, and eco-tourism development.
- **Knowledge Sharing:** Create a central repository for technical know-how and best practices in big cat conservation, facilitating information exchange among member countries.

Nut Graf: *The establishment of the International Big Cat Alliance underscores India's commitment to global wildlife conservation efforts. By leveraging its expertise and resources, India aims to address the conservation challenges faced by 'big cat' species worldwide.*

3. Trees in Corbett fell prey to nexus, says SC

Syllabus: GS-3, Conservation

Prelims: Jim Corbett National Park

Mains: Issues of conservation, deforestation, etc.

Introduction:

In a landmark ruling, the Supreme Court has vehemently criticized the illegal felling of over 6,000 trees within the premises of the Jim Corbett National Park in Uttarakhand.

Background: The court, led by a three-judge Bench headed by Justice B.R. Gavai, has labelled this incident as a glaring example of the collusion between politicians and officials for short-term commercial interests, at the expense of environmental conservation.

Environmental Devastation vs Eco-Tourism:

The court's condemnation comes as a response to the alarming deforestation carried out ostensibly for the construction of buildings aimed at promoting "eco-tourism" within the national park. This wanton destruction, described by the court as a "classic case" of human greed, has resulted in irreparable damage to one of India's most cherished tiger habitats, the Corbett Tiger Reserve.

Protecting Tigers and Ecosystems:

- Highlighting the critical role of tigers in maintaining ecological balance, Justice Gavai stressed that the relentless pursuit of profit should not come at the cost of jeopardizing delicate ecosystems. The court has directed the Ministry of Environment, Forest and Climate Change to form a specialized committee to assess whether tiger safaris should be permitted in the buffer zones of tiger reserves.
- Former Uttarakhand Forest Minister and former Divisional Forest Officer have faced severe rebuke for their roles in permitting illegal tree felling, despite the existence of stringent forest and wildlife conservation laws. The court has sanctioned a Central Bureau of Investigation probe into the matter and has demanded a report within three months.

Curbing Resort Growth and Noise Pollution:

The court has also expressed concern over the unchecked proliferation of resorts in the vicinity of tiger reserves, citing the adverse impact on wildlife habitats and the surrounding environment. It has mandated the Environment Ministry to establish an expert committee to regulate resort construction and noise levels near protected areas.

Conclusion:

In a resounding affirmation of the public trust doctrine, the court has underscored the government's obligation to safeguard natural resources from exploitation for private gain. It has emphasized that the integrity of India's ecosystems should not be compromised for commercial interests and has reiterated the judiciary's commitment to upholding environmental conservation.

Nut graf: *The Supreme Court's proactive stance on environmental protection sets a significant precedent, emphasizing the paramount importance of responsible stewardship in preserving India's rich natural heritage for future generations.*

4. A possible solution for Bengaluru's water crisis

Syllabus: Conservation, Environmental Pollution and Degradation

Mains: Reason and solutions of Bengaluru's water crisis

Introduction:

- Bengaluru's population surge from 8.7 million in 2011 to a projected 12.6 million in 2021 has strained water resources, particularly in the expanding periphery.
- Total freshwater demand stands at approximately 2,632 MLD, surpassing the official supply from the Cauvery and groundwater sources combined.
- Cauvery water usage has risen to 1,460 million litres per day (MLD), meeting only half the demand after losses, with an additional 1,392 MLD extracted from groundwater, leading to concerning recharge-extraction imbalances.

Impact of Changing Rainfall Patterns and Urbanization:

- Varied rainfall patterns, with above-average levels in 2022 followed by deficits in 2023, have exacerbated groundwater depletion, particularly affecting the peripheral areas.
- Dropping water tables has led to borewell failures, while many peripheral regions still lack access to piped water supply.
- Historical reliance on lakes and tanks for water supply has diminished due to urbanization, resulting in encroachments, drying lakes, and disrupted connections between them, aggravating both water scarcity and flood risks.

Reevaluating Traditional Water Sources and Infrastructure:

- Bengaluru's once plentiful lakes and tanks served as critical water sources, but their significance diminished with the advent of piped water supply, leading to neglect and encroachments.
- Efforts to harness rainwater through harvesting have been overshadowed by sewage pollution, rendering many lakes unsuitable for water storage or supply.
- The city's lake system, once primarily seasonal, now consists mostly of perennial lakes filled with sewage, highlighting the urgent need for rehabilitation and restoration efforts.

Leveraging Wastewater as an Untapped Resource:

- Despite wastewater being a significant resource, only one-third of Bengaluru's wastewater undergoes treatment for external reuse, while the rest contributes to pollution or runoff.
- Redirecting treated wastewater to replenish groundwater and surface water sources in neighbouring regions like Kolar, Chikkaballapur, and Devanahalli can alleviate freshwater consumption and enhance water resilience, especially during low rainfall periods.

Conclusion: By addressing these interconnected issues and prioritizing sustainable water management strategies such as wastewater reuse and lake restoration, Bengaluru can mitigate its water crisis and build a more resilient water infrastructure for the future.

Nut Graf: Bengaluru faces a water crisis due to rapid urbanization and changing rainfall patterns. Despite increased demand, traditional water sources are diminishing. Harnessing wastewater and restoring lakes are crucial for sustainable water management and resilience.

5. The problem of equity in IPCC reports

Syllabus: Environmental Pollution and Degradation

Mains: Environmental Justice & Equity

Prelims: IPCC report

Context: IPCC Assessment Reports and Future Scenarios

- IPCC assessment reports consist of Working Group reports on physical science, climate adaptation, and mitigation action, along with a synthesis report. These reports compile scientific literature on climate change.
- Future scenarios are assessed using Integrated Assessment Models (IAMs), which integrate human and earth systems to provide policy-relevant guidelines on climate action.
- IAMs consider factors such as GDP growth, energy consumption, land-use changes, and climate evolution to estimate pathways for limiting global warming.

Findings of the Study on Equity in IPCC Reports:

- Researchers analyzed over 500 future emissions scenarios from the IPCC's latest report and found persistent disparities between developed and developing countries in terms of income, energy use, and emissions up to 2050.
- The study, conducted by researchers from various institutions, identified inequities in per-capita GDP, consumption patterns, and energy/fossil fuel consumption between regions like Sub-Saharan Africa, South Asia, and the Global North.
- Developing countries were projected to bear a disproportionate burden of both mitigation actions and carbon dioxide removal technologies, such as carbon sequestration and carbon capture and storage (CCS).

Importance of Equity in Climate Action:

- Equity principles, including common but differentiated responsibilities, are enshrined in the UN Framework Convention on Climate Change (UNFCCC), emphasizing the need for global climate action based on fairness and respective capabilities.
- Viewing climate action solely through technical and economic feasibility, as often done in IAMs, may overlook equity considerations. Developed countries, with greater historical responsibility and capabilities, should take the lead in climate action.
- The study highlights the necessity of integrating equity and climate justice considerations into emissions modelling and scenario-building processes to ensure environmentally sound and equitable outcomes.

Implications and Recommendations for Future Scenario Construction:

- The study underscores the need to bridge the gap between emissions modelling and equity considerations in constructing IPCC scenarios.
- Future model and scenario-building techniques should prioritize questions of equity and climate justice to ensure fair distribution of responsibilities and resources among nations.

- Constructing equitable and environmentally sound scenarios is essential for effective global climate action and achieving the goals outlined in international agreements like the UNFCCC.

Nut Graf: Researchers find IPCC reports' future scenarios lack equity, burdening developing countries disproportionately. Integrated Assessment Models (IAMs) prioritize technical feasibility over fairness, contradicting principles of global climate action. Integration of equity is crucial for effective climate mitigation

6. Water, an instrument to build world peace

Syllabus: Conservation

Mains: Water crisis in India and possible solutions

Introduction:

- World Water Day has been observed annually on 22nd March since 1993 to raise awareness about freshwater issues.
- This year's theme, "Water for Peace," highlights the importance of addressing water scarcity for global stability.
- Factors contributing to the water crisis include rapid urbanization, industrialization, climate change, and unsustainable agricultural practices.

Water Crisis in India:

- India faces significant water challenges, including the depletion of groundwater tables, especially in states like Punjab, Rajasthan, Delhi, and Haryana.
- Groundwater consumption surpasses recharge rates in many areas, leading to severe shortages.
- Perennial rivers and streams are drying up, exacerbating water scarcity issues across the country.

Importance of Rainwater Harvesting and Government Initiatives:

- Rainwater harvesting is crucial for enhancing water availability and quality, particularly in rainfed regions.
- Government initiatives such as "per drop more crop" and "Jal Shakti Abhiyan" emphasize water conservation and rainwater harvesting.
- Promoting sustainable agricultural practices and efficient water use is essential for maintaining food security and environmental integrity.

Additional Steps for Ensuring Water for Peace:

- Monitoring groundwater levels and reclaiming water quality are necessary steps to address water scarcity.
- Implementing circular water economy principles and efficient irrigation techniques can optimize water usage.
- Community awareness campaigns, integrated farming systems, and climate resilience strategies are vital for long-term water security.
- Collaboration between research, industry, and academia is essential for implementing innovative water management technologies.

Nut Graf: World Water Day highlights the global water crisis, with a focus on "Water for Peace." India, facing severe challenges like groundwater depletion, emphasizes rainwater harvesting and government initiatives to ensure water security and promote peace.

7. Navigating the global waterscape, its challenges

Syllabus: Conservation

Mains: Diplomatic solution to water crisis

Introduction: Challenges in Access to Clean Water

- **Global Water Scarcity:** Approximately two billion people worldwide lack access to clean water, and the demand for it continues to rise.
- **Historical Context:** Throughout history, water has been central to the rise and fall of civilizations, often leading to conflicts over resources.
- **Modern Context:** Climate change exacerbates water insecurity, with extreme weather events like heat waves and floods affecting water availability and quality.

Water Diplomacy for Peace:

- **Historical Precedent:** Historical conflicts over water have also led to peace treaties, showcasing the potential for water diplomacy in resolving disputes.
- **International Cooperation:** To address modern challenges, nations must cooperate on water-sharing and adhere to universal principles of International Water Law.
- **Inclusive Approaches:** Water diplomacy should involve indigenous and local communities, civil society, and academic networks to prevent and resolve water-related disputes.

Addressing Water Quality Disparities:

- **Global Water Quality Data:** There's a shortage of water quality data globally, with a significant urban-rural divide in access to basic drinking water services.
- **Rural Water Accessibility:** In India, 70% of the rural population relies on water for household needs, with agriculture being the primary source of livelihood.
- **Potential Solutions:** Increased water investments and the use of AI technology in agriculture can improve water accessibility and promote sustainable practices.

Transboundary Water Governance:

- **Scope of the Issue:** A large proportion of the world's freshwater resources are in transboundary waters, including major rivers in India.
- **Worsening Pollution:** Water pollution in South Asia, particularly in rivers like the Meghna, Brahmaputra, Ganga, and Indus, has worsened in recent years.
- **Need for Cooperation:** Effective cross-border water governance is necessary to promote equitable water allocation and sustainable management of shared water resources.

Nut Graf: *Water scarcity challenges two billion people globally. Leveraging water for peace requires international cooperation, inclusive approaches, and addressing disparities in water quality. Effective transboundary water governance is essential for sustainable management and peace.*

8. The need to curb black carbon emissions

Syllabus: GS-3, Environmental Pollution and Degradation

Mains: Black Carbon: Impact and solution to remove it

Prelims: Black Carbon

Introduction: Understanding Black Carbon and Its Environmental Impact

- Black carbon is a dark, sooty material emitted alongside other pollutants during incomplete combustion of biomass and fossil fuels.
- It contributes to global warming and poses severe health risks, including heart disease, birth complications, and premature death.
- In India, the largest contributor to black carbon emissions is the residential sector, primarily due to the burning of biomass in traditional cookstoves.

Pradhan Mantri Ujjwala Yojana (PMUY) and Its Impact:

- PMUY, initiated in May 2016, aimed to provide free LPG connections to households below the poverty line, reducing reliance on traditional cooking fuels.
- By offering clean alternatives, PMUY has played a significant role in reducing black carbon emissions.
- Despite its success, RTI data reveals that a considerable percentage of beneficiaries still rely on traditional biomass for cooking, affecting health and contributing to black carbon emissions.

Challenges and Government Initiatives:

- High LPG prices and availability issues hinder the success of PMUY, with many beneficiaries finding alternatives more financially viable.
- Government initiatives such as increased subsidies and plans for local production of cleaner fuels like coal-bed methane (CBM) aim to address these challenges.
- However, last-mile connectivity issues in the LPG distribution network remain a significant hurdle, particularly in remote rural areas.

Global Implications and Future Prospects:

- Mitigating black carbon emissions, particularly from the residential sector, can lead to substantial health benefits and contribute to global climate mitigation efforts.
- As India aims for long-term decarbonization and fulfils its global climate commitments, prioritizing initiatives like PMUY can position the country as a leader in addressing regional health concerns and promoting sustainable development goals.

Nut Graf: India aims to combat black carbon emissions, chiefly from the residential sector, through initiatives like PMUY. Despite successes, challenges like high LPG prices persist. Prioritizing black carbon reduction can yield significant health and climate benefits.

9. Is Australia's carbon credit scheme a 'catastrophe'?

Syllabus: Conservation, Environmental Pollution and Degradation, Environmental Impact Assessment.

Mains: Carbon credit scheme

Introduction: Australia's carbon credit scheme faced criticism following damning new research that exposed shortcomings in a world-leading reforestation project. The project aimed to regenerate native forests across vast stretches of the country's desert Outback to offset carbon emissions, but findings revealed significant issues.

Underperforming Reforestation:

Researchers discovered that nearly 80% of the designated plantation areas showed stagnant forest growth or even shrinking woodlands, challenging the effectiveness of the initiative. Despite this, Australia had accumulated millions of tonnes in carbon credits from these projects, which are intended to offset emissions from polluting industries.

Gross Failure:

Experts have described the situation as a “gross failure,” highlighting the discrepancy between claimed carbon sequestration and actual forest growth. Australia allocated approximately 42 million hectares for the scheme, presenting it as one of the world’s largest natural carbon offset projects.

Questionable Carbon Credits:

- The study, based on satellite imagery, raised doubts about the validity of carbon credits associated with the project. Each tonne of carbon sequestered translates into a carbon credit sold to industries to offset their emissions, but Macintosh suggested that Australia was essentially selling credits based on non-existent carbon sequestration.
- Australia’s climate policy has faced significant challenges amid political conflicts dubbed the “climate wars.” Despite committing to emission reduction targets, Australia remains a major exporter of gas and thermal coal, exacerbating its carbon footprint.
- Despite the setbacks, Australia aims to reduce carbon emissions by 43% by 2030 from 2005 levels, with a long-term goal of achieving net-zero emissions by 2050. However, the recent revelations underscore the need for robust climate policies and effective implementation to address Australia’s high carbon emissions.

10. RAMSAR WETLANDS - INDIA

Ramsar Convention on Wetlands

- **Ankasamudra Bird Conservation Reserve:** Humanmade Painted Stork (*Mycteria leucocephala*) and Black-headed Ibis (*Threskiornis melanocephalus*).
- Aghanashini Estuary- Confluence of Aghanashini River with the Arabian sea.
- **Magadi Kere Conservation Reserve - Humanmade:** The wetland harbours two vulnerable species, namely Common pochard (*Aythya ferina*) and River tern (*Sterna aurantia*) . Four near-threatened species, namely Oriental Darter (*Anhinga melanogaster*), Black-headed Ibis (*Threskiornis melanocephalus*), Woolly-necked Stork (*Ciconia episcopus*) and Painted Stork (*Mycteria leucocephala*). The wetland is a designated Important Bird Area (IBA) and also listed as a priority area for conservation in India.
- **Karaivetti Bird Sanctuary:** Largest inland wetlands of Tamil Nadu, and is a significant source of groundwater recharge for the area. Important visitors being the Bar headed Goose, Pin-tailed duck, Garganey, Northern Shoveler, Common Pochard, Eurasian Wigeon, Common teal and Cotton teal.
- **The Longwood Shola Reserve Forest**
These forested wetlands serve as habitats for the globally endangered Black-chinned Nilgiri Laughing thrush (*Strophocincla cachinnans*), Nilgiri Blue Robin (*Myiomela major*), and vulnerable Nilgiri Wood-pigeon (*Columba elphinstonii*). As many as 14 out of 26 endemic birds species of the Western Ghats are found in these wetlands.

Significance of Wetlands

- Kidneys of Earth.
- Socio-economic functions.
- Ecological functions.
- Environment functions.
- Main component of Watershed management.

Threat to wetland

- Pollution
- Illegal Encroachment.
- Dumping solid waste.
- Siltation.
- Climate change.
- Agriculture.

Programmes & Schemes

- For conservation of lakes & wetlands MoEFCC implemented two CSS:
 - a) National wetland conservation Programme (NWCP).
 - b) National lake conservation Programme (NLCP)
- “National Plan for conservation of Aquatic Ecosystem” (NPCA)
- Wetland (Conservation & Management) Rules 2017.
- Amrit Dharohar - Focuses on the conservation of existing Ramsar sites in India through active public participation.
- PMKSY, Atal Bhujal Yojana, Jal Shakti Abhiyan.

11. Kerala comes up with long, short-term measures to prevent man-animal conflict

Context: The Kerala government has unveiled a comprehensive set of both long-term and short-term measures to mitigate the increasing instances of **man-animal conflict**, particularly with wild elephants, in the Wayanad district. These measures aim to protect human habitations, enhance wildlife habitats, and reduce confrontations between humans and animals.

Long-Term Measures

- **Smart Elephant Fence:** Implementation of a smart elephant fence to prevent wild elephants from encroaching into human settlements.
- **Undergrowth Removal:** Utilization of workers from the employment guarantee scheme to clear undergrowth in private estates, reducing potential hiding spots for wild animals.
- **Eradication of Invasive Plants:** Eradication of invasive plant species like senna and removal of eucalyptus and acacia plantations to support the regeneration of natural vegetation.
- **Wildlife Habitat Improvement:** Activities aimed at improving wildlife habitats to minimize conflicts between humans and animals.
- **Fencing to Prevent Animal Entry:** Installation of fences to deter wild animals from entering human habitats, thus safeguarding lives and property.

Short-Term Measures

- **Inter-State Coordination Committee Meetings:** Regular meetings of the inter-State coordination committee to address immediate issues related to man-animal conflict.
- **Command Control Centre:** Establishment of a Command Control Centre in Wayanad to monitor and respond to incidents of wild animal intrusions.
- **Strengthening Early Warning System:** Enhancement of the early warning system to alert people about the presence of wild animals in their vicinity.
- **Drone Surveillance:** Deployment of drones for surveillance to track the movement of wild animals and prevent potential conflicts.
- **Compensation to Victims:** Prompt clearance of compensation to victims affected by wild animal attacks to provide financial relief.
- **New Forest Station:** Setting up of a new forest station to enhance monitoring and management of wildlife.

- **Closure of Ecotourism Destinations:** Temporarily closing ecotourism destinations in forest areas until the man-animal conflict issue is mitigated.

Issues

- **Human-Wildlife Conflict:** Increasing instances of conflict between humans and wild animals pose threats to both human lives and wildlife conservation efforts.
- **Habitat Fragmentation:** Human encroachment into wildlife habitats and habitat fragmentation exacerbate conflicts between humans and animals.
- **Loss of Biodiversity:** Man-animal conflicts may lead to the loss of biodiversity and disrupt ecosystems, affecting both wildlife and humans.

12. Man Animal Conflict

- Three elephants killed at Panichanda in Rani Tea Estate on the outskirts of Guwahati in August 2023 after they came in contact with high-voltage electric wire hanging low.
- Sagging power lines also claimed the lives of three elephants near eastern Assam's Dihing-Patkai National Park in October 2021.
- Three elephants were killed by a train at Bansapani Behera Hatting, Joda Forest Section, Champua Forest Range, Keonjhar. The iron ore laden goods train travelling between Banspani and Jurudi hit a 22-member herd at about 7.25 PM.(May 2023)
- Infection claimed lives of seven elephants in Karlapat Wildlife Sanctuary in Kalahandi district.(Feb 2021)
- Twelve people have died in Hassan, Kodagu and Chikkamagaluru districts in elephant attacks.
- "Human-wildlife conflict is when encounters between humans and wildlife lead to negative impacts, such as wildlife raiding crops, attacking livestock, injuring people, or damaging property, often leading to the loss of livelihoods and exacerbation of poverty. It can occur in and around protected areas or along migratory corridors where agricultural landscapes overlap with wildlife habitat."
- Government data for 2022-23 recorded 8,873 wild animal attacks, of which, 4,193 were by wild elephants, 1,524 by wild boars, 193 by tigers, 244 by leopards, and 32 by bison. Of 98 reported deaths, 27 were due to elephant attacks. Moreover, from 2017 to 2023, there were 20,957 incidents of crop loss due to wild animal raids, which also killed 1,559 domestic animals, mainly cattle.

Human-Wildlife Conflict: Global Policy and Perception Insights

- Conducted by the Global Wildlife Program, funded by the Global Environment Facility, and led by the World Bank.
- Human-wildlife conflict is increasing globally, but especially in low-income countries.
- Smallholder, subsistence farmers, and pastoralists are the stakeholders most concerned with human-wildlife conflict.
- Types of wildlife-related impacts of most concern

Reasons

- Fragmentation of habitat.
- Habitat destruction.
- Natural factors.
- Increase in species population.
- Invasive species.
- Climate change.
- Collection of forest resources.
- Unregulated tourism.

- “Chief Wildlife Warden (CWLW) of a state may — if satisfied that a wild animal specified in Schedule I (mammals) has become dangerous to human life or disabled or diseased beyond recovery — permit hunting or killing of such animal. The section gives powers to the CWLW to order killing of such a wild animal, if it cannot be tranquillised or relocated after capturing.”
- Chief wildlife wardens, under the Wildlife Protection Act, 1972, Section 11, can issue orders to either capture or shoot an animal to combat conflict. Section 11 of the 1972 Act regulates hunting of wild animals.

Kerala Demands

- Amend the Section 11 (1) (A) so as to devolve the above-mentioned powers of the CWLW to Chief Conservators of Forests (CCF) instead. Such an amendment, the state feels, would simplify procedures for dealing with wild animals posing a threat to human life, by enabling speedy and timely decisions to be taken at a more localised level.
- Wants the Centre to declare wild boar as vermin, as per section 62 of the Wildlife Protection Act. According to this section, the Union Government can notify any wild animal in Schedule II of the Act (which protects it from hunting), as vermin for a period of time in an area/state.

Probable Solutions

- National Biodiversity Strategies and Action Plans (NBSAPs).
- Centre has increased compensation for the victims of animal attack, as well as increased funding under various schemes.
- Site specific elephant proof fences/walls.
- Deploying remote cameras with artificial intelligence capabilities to reduce conflicts between tigers and livestock.
- Identify hotspots to track man-animal conflicts.
- Early warning system and geo-tagging (also known as geographic metadata, is the process of adding geographical information to various forms of media, such as photographs, videos, or audio files. provides accurate and real-time data about their habitats, movements, and interactions) of animals.
- Creating common interstate wildlife corridor
- Controlling the population of animals in conflict (immuno-contraception).

13. World's first Black Tiger Safari.

- The safari is set to be located near Baripada in the Mayurbhanj district of the state.
- Covering an expansive 200-hectare area adjacent to National Highway 18, the chosen site is approximately 15 km away from the Similipal Tiger Reserve.

'Pseudo-melanistic' Tiger

- Melanism is a genetic condition in which an increased production of melanin, a substance in the skin that produces hair, eye, and skin pigmentation, results in black (or nearly black) skin, feathers, or hair in an animal.
- A unique lineage with higher-than-normal levels of melanin, which gives them black and yellow interspersed stripes on their coats.
- The mutation in the gene Transmembrane Aminopeptidase Q (Taqpep) led to the broadening and spreading of black stripes against a tawny background, creating a pattern known as pseudo-melanism.
- The STR cats live isolated from other tigers, because of which they breed among themselves.
- Officially recorded for the first time in the forests of Similipal during 1975-76.
- “As per the 2022 cycle of the All India Tiger Estimation, 16 individuals were recorded at STR, of which 10 were melanistic,”

14. Invasive Species – Altered Habitats in Western Ghats

- The Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) Assessment Report on Invasive Alien Species and their Control (known as the “Invasive Alien Species Report”) finds that more than 37,000 alien species have been introduced by many human activities to regions and biomes around the world.
- It also reveals that alongside dramatic changes to biodiversity and ecosystems, the global economic cost of invasive alien species exceeded \$423 billion annually in 2019, with costs having at least quadrupled every decade since 1970.
- Invasive alien species are one of the five major direct drivers of biodiversity loss globally.
- Target 6 of the recently adopted Kunming-Montreal Global Biodiversity Framework is to “eliminate, minimize, reduce and or mitigate the impacts of invasive alien species on biodiversity and ecosystem services”.
- While 80 per cent of countries have targets related to managing invasive alien species in their national biodiversity plans, only 17 per cent have national laws or regulations specifically addressing these issues.
- 45 per cent of all countries do not invest in the management of biological invasions.
- As many as 200 new IAS are reported each year and awareness can help identify and control them quickly.
- About 60% of species extinctions are attributable to invasive alien species either solely, or in combination with other drivers.
- A conservative estimate from India suggests that over the last 60 years, invasive species have cost the Indian economy \$127 billion.
- Invasive species such as Lantana, Eupatorium and Parthenium are causing additional ecological disruption. These aggressive invaders are decimating traditional forest fruit-bearing trees such as wild mango, wild jack, wild plantains, forest jack, and various berries, which are critical sources of food for animals, rodents and simians.
- Lantana has invaded 87,224 hectares (863.62 square kilometres) of Bandipur National Park (BNP), accounting for approximately 75 per cent of the park’s total area. The dense growth of the invader ranges from 20 per cent to 80 per cent in different pockets, restricting the movement of animals.
- Over 40 per cent of the land area in Biligiri Rangaswamy Temple Tiger Reserve, Karnataka is also overtaken by Lantana.
- Lack of food and restricted movement has resulted in wild animals entering human settlements.
- Several rainforest complexes, including Nagarahole, Anshi National Park, Kudremukh National Park and Bhimgad Wildlife Sanctuary, are suffering from invasive species.

15. What are the new rules for elephant transfers?

Context: The recently notified Captive Elephant (Transfer or Transport) Rules, 2024, have stirred debate over their implications on the transfer and ownership of elephants in India.

About:

- Under these rules, relaxations have been introduced, allowing for the transfer of captive elephants under various circumstances.
- While captive elephants have historically been used for forest management, religious purposes, and by erstwhile royal families, strict regulations governed their ownership and transfer.
- The updated rules provide more flexibility, allowing for transfers when the current owner is unable to maintain the elephant or when deemed necessary by the Chief Wildlife Warden.
- However, concerns have been raised regarding the potential for exploitation and illegal trafficking.
- Critics argue that the amendments could facilitate the commercialization of elephant ownership and endanger wild populations.
- The establishment of large private zoos, like the one affiliated with the Reliance Foundation in Gujarat, has intensified scrutiny.

- Reports suggest that these facilities house a significant number of elephants, raising questions about their origins and welfare. Allegations of sourcing elephants from the wild further complicate the situation.

Significance: It's crucial to balance the welfare of captive elephants with conservation efforts to protect wild populations and prevent exploitation. Transparency and accountability in elephant ownership and management are essential to ensure the ethical treatment of these majestic animals.

16. Will global forest expansion hit tribals?

Syllabus: Conservation, Environmental pollution and degradation, Environmental Impact Assessment

Mains: Impact of global forest expansion on tribals

Context: The Kunming-Montreal Global Biodiversity Framework (GBF) aims to significantly increase the areas under forest cover, inland water, coastal, and marine areas globally to at least 30% of the world's terrestrial area. While this initiative holds promises for biodiversity conservation, it also raises concerns, particularly regarding its potential impact on indigenous communities, such as tribes in India.

Issues

- **Impact on Indigenous Communities:** The GBF's target to expand protected areas (PAs) raises concerns about its adverse effects on indigenous communities residing in these areas. Many tribal villages in India are located within or near national parks and wildlife sanctuaries, making them vulnerable to displacement and loss of livelihoods.
- **Denial of Rights:** Indigenous peoples often face violations of their rights, including denial of housing, healthcare, education, and security, when PAs are established or expanded. Instances from countries like Indonesia and Cambodia highlight the marginalization and mistreatment of indigenous communities in the name of conservation efforts.
- **Role of Private Sector:** The involvement of the private sector in forest conservation, as facilitated by legislation such as the Forest (Conservation) Amendment Act of 2023 in India, raises concerns about commercial interests taking precedence over indigenous rights and environmental conservation.

Significance

- **Threat to Tribal Existence:** The expansion of PAs under the GBF could jeopardize the existence and livelihoods of indigenous communities who have historically lived in harmony with nature. Protecting tribal lands is crucial not only for biodiversity conservation but also for safeguarding the cultural heritage and rights of indigenous peoples.
- **Environmental Justice:** Ensuring the rights of indigenous communities in conservation efforts is essential for promoting environmental justice and equitable development. Excluding indigenous voices and perpetuating injustices in the name of conservation undermines the principles of sustainability and human rights.

Solutions






- **Recognition of Indigenous Rights:** Governments, including India, must recognize and uphold the rights of indigenous communities, including the right to free, prior, and informed consent (FPIC) as guaranteed under relevant laws. Indigenous peoples should be made custodians of protected areas, acknowledging their traditional knowledge and stewardship of the environment.
- **Inclusive Policy Formulation:** Policy interventions should prioritize the inclusion of indigenous perspectives in conservation planning and decision-making processes. Amendments to existing laws should ensure that tribal lands are not targeted disproportionately and that tribal communities have a say in the management of protected areas.

- **Addressing Human Rights Violations:** Governments must take concrete steps to address human rights violations in protected areas, including access to essential services like education, healthcare, and housing. Indigenous peoples should be respected and recognized for their role in biodiversity conservation, rather than being subjected to punitive measures.

Nut Graf: The Kunming-Montreal Global Biodiversity Framework presents an opportunity to enhance conservation efforts worldwide. However, it is imperative to address the concerns regarding its potential impact on indigenous communities, particularly in countries like India with significant tribal populations.

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HISTORY, ART AND CULTURE

1. Majuli mask

Context: Majuli masks of Assam and Majuli manuscript get GI tag on March 4, 2024.

- Majuli, the largest river island in the world and the seat of Assam's neo-Vaishnavite tradition, has been home to the art of mask-making since the 16th century.

What are Majuli masks?

- They are handmade masks traditionally used to depict characters in bhaonas, (theatrical performances) with devotional messages under the neo-Vaishnavite tradition. It was introduced by the 15th-16th century reformer saint Srimanta Sankardeva.
- The masks can depict gods, goddesses, demons, animals and birds — Ravana, Garuda, Narasimha, Hanuman, Varaha, Surpanakha etc.
- They can range in size from those covering just the face (mukh mukha), which take around 5 days to make, to those covering the whole head and body of the performer (cho mukha), which can take up to 1 ½ months to make.
- The masks are made of bamboo, wood, clay, dung, cloth, cotton and other materials available in the riverine surroundings of their makers.

Why is the art practised in monasteries?

- Sattras are monastic institutions established by Srimanta Sankardev and his disciples as centres of religious, social and cultural reform. Today, they are also centres of traditional performing arts such as borgeet (songs), satriya (dance) and bhaona (theatre), which are an integral part of the Sankardev tradition.
- **Majuli has 22 sattras. While masks had historically been made in all sattras earlier, now the mask-making tradition is by and large concentrated in 4 of them, namely:**
 - Samaguri Sattra
 - Natun Samaguri Sattra
 - Bihimpur Sattra and
 - Alengi Narasimha Sattra.

Historical background of mask-making:

- The art of song, dance and musical instruments are closely tied to the sattras established by Assam's guru Srimanta Sankardev in the 16th century.
- He established the art of masks through a play called Chinha Jatra which means 'explaining through images'.
- At that time, to attract ordinary people to Krishna bhakti, he had presented the play in his birthplace Batadrava. There, he presented 2 masks, which were worn to express what a person's face could not. One was the 4-headed Brahma and the other was Garuda

Making the mask contemporary

- While the masks were traditionally made only for the purpose of bhaonas, over the past couple of decades, the Samaguri sattra has been trying to promote mask-making as an art form in its own right.
- To make mask-making economically viable for artists, an effort is being made to increase the mask's uses beyond its traditional one. Among these have been:
- The introduction of gifting small masks along with the traditional gamosas (stole/scarf) while felicitating guests at events,
- Promoting the sale of masks to tourists at Majuli, and

- Increasing their display at exhibitions and galleries.
- Due to these efforts, Majuli masks have found a place in the British museum now.

What is Majuli manuscript painting?

- It is a form of painting — also originating in the 16th century — done on sanchi pat, or manuscripts made of the bark of the sanchi or agar tree, using homemade ink.
- The earliest example of an illustrated manuscript is said to be a rendering of the Adya Dasama of the Bhagwat Purana in Assamese by Srimanta Sankardev.
- This art was patronised by the Ahom kings.
- It continues to be practised in every sattra in Majuli.

What is a GI tag?

- A GI tag is conferred upon products originating from a specific geographical region, signifying unique characteristics and qualities. Essentially, it serves as a trademark in the international market.

2. Rupa Tarakasi

Context:

- The famous Rupa Tarakasi, or silver filigree work of Odisha's Cuttack, recently received the geographical indication (GI) tag.
- The Odisha State Cooperative Handicrafts Corporation Limited (Utkalika) had applied for the tag.

Rupa Tarakasi

- Odisha's Cuttack is known for its silver filigree work, of intricate design and fine craftsmanship.
- In Odia, "tara" means wire and "kasi" means to design. Thus, as part of Rupa Tarakasi, silver bricks are transformed into thin fine wires or foils and used to create jewellery or showpieces.
- In Cuttack the work is generally done by boys, whose sensitive fingers, and keener sight enable them to put the fine silver threads together with the necessary rapidity and accuracy. The filigree work is quite distinct in character from the indigenous silver jewellery of the country.

Origin

- While the exact origin of the filigree art in Cuttack is not clear, it is known to have existed as far back as the 12th century. The art form received considerable patronage under the Mughals.
- Over the years, as Cuttack transitioned through the hands of different rulers, the silver filigree took on a new form with each.

History

- Document submitted by the Odisha government before the GI registry said: "The silver filigree work in which the people of Cuttack have attained such surprising skill and delicacy is identical in character with that of Arabia, Malta, Genoa, Norway, Sweden and Denmark, and with the filigree work of ancient Greece, Byzantium, and Etruria, and was probably carried into the West by the Phoenicians and Arabs, and into Scandinavia by the Normans and in the course also of the medieval trade between Turkestan and Russia."

Popular product categories

- The popular product categories now found in Cuttack are jewellery, decorative artifacts, accessories, home décor and religious/cultural pieces.
- The iconic items found only in Cuttack are the Durga Puja Medha (silver decorations for the Durga idol and pandal), Odissi jewellery, religious/cultural pieces linked directly to the customs of Odisha, and the Dama chain.

Evolution and growth

- While silver filigree as a craft has transitioned over time, its core process has stayed the same over the centuries, with only a few changes in tools and components. The majority of the change has come on the design and product fronts.
- While different grades of silver are used in the main metal alloy, the craftsmen also use other metals like copper, zinc, cadmium and tin.

3. Narasapur crochet lace craft

Context: The famed Narasapur crochet lace craft has got the Geographical Indications (GI) tag on March 1, 2024, giving a new lease of life to the dying craft in the Godavari region of Andhra Pradesh.

Details:

- The craft is geographically limited to 19 mandals in West Godavari and Dr. B.R.Ambedkar Konaseema districts in the Godavari region. An estimated 60% of the artisans involved in the craft are women.
- Nearly 15,000 women are directly involved in the craft, producing 3 categories of products made of lace-garments, home furnishings and accessories.
- The crochet lace craft market here has remained paralysed since COVID-19 pandemic due to a lack of new orders. China's machine-made lace products are dictating the terms in the market, giving a death blow to the Narasapur lace products.
- It is expected that the GI tag will help revive the craft and foreign trade.

Origin:

- In 1844, Macrae and his wife from Scotland taught the lace craft to the local women when the duo was associated with a Christian missionary at Dummugudem (presently in Telangana). They had sold the products through their friends in India and abroad.
- The craft has survived the Indian famine (1899) and the Great Depression (1929). By the early 1900s, above 2,000 women were involved in the craft in the Godavari region.

4. Ayya Vaikundar

Context: On March 3, 2024 Prime Minister Narendra Modi had paid tributes to Ayya Vaikundar on his birth anniversary. Tamil Nadu Governor R. N Ravi's recent remarks about the 19th century social reformer Ayya Vaikundar that he was Lord Vishnu incarnated to prevent the destruction of Sanatan Dharma evoked sharp reactions in the state, from politicians as well as Vaikundar's followers.

- The Governor made the statements on March 4, 2024 at an event to mark the 192nd birth anniversary (Ayya Vaikundar Avathara Dina Vizha).

Vaikundar, the social reformer:

- Ayya Vaikundar, born in 1809, is revered as a social reformer and the founder of the Ayyavazhi sect, primarily in southern Tamil Nadu.
- His teachings focused on equality, fraternity, and the eradication of caste-based discrimination, challenging the established religious and social hierarchies of the time.
- At a time when rigid casteism and caste-based atrocities were the norm, Vaikundar introduced the following measures to challenge these divisions.
- He organised Samapanthi-bhojana or community eateries for people from all backgrounds. He would send his disciples to the homes of lower castes to eat with them.

- When lower castes were not allowed to fetch water from wells used by upper caste Hindus, Vaikundar initiated the digging of common wells, called Muthirikinarus.
- At a time when priests threw vibhuti and sandal paste at devotees from a distance to avoid touching them — a practice that still exists — and lower castes were not allowed to enter temples at all, Vaikundar introduced Thottu Namam, in which he inspired priests to apply the sacred paste on devotees' forehead, irrespective of their caste. The paste would be applied in the form of a lamp, indicating the soul and God, representing the form of God inside every life.
- Vaikundar also encouraged all devotees to wear turbans and dhotis, promoting equality.
- He initiated the Thuvayal Panthy programme, teaching vegetarianism and discipline to followers, who spread these teachings across Tamil Nadu.
- He established Nizhal Thangals as community worship spaces, which did not have any idol or deity, and only Tamil was used for worship. These community worship centers also had community kitchens and even basic schools.
- He pioneered education for the lower castes and opposed discriminatory taxes.
- He introduced simplified, inclusive marriage customs without a Brahmin priest or Sanskrit mantras.

5. Nana Jagannath Shankarseth

Context: The Maharashtra cabinet on Wednesday (March 13, 2024) decided to ask the Ministry of Railways to rename Mumbai Central station after Nana Jagannath Shankarseth.

Who was Nana Jagannath Shankarseth?

- Nana Jagannath Shankarseth (February 10, 1803-July 31, 1865) was a social reformer, educationist and philanthropist.
- He is often described as the “architect” of Mumbai (then Bombay).
- He made extremely valuable contributions in terms of both ideas and money to multiple sectors, to lay a strong foundation for the city.
- Born in a wealthy Brahmin family in Murbad in Thane district, Shankarseth took the responsibility of running the family business at an early age after his father passed away in 1822.
- Shankarseth was greatly inspired by the legendary merchant and philanthropist Sir Jamsetjee Jeejeebhoy.
- As a social reformer and community leader, Shankarseth earned the goodwill of both Indians and the British.
- He became the first Indian to be nominated to the Legislative Council of Bombay.
- To spread education in Bombay, he donated land owned by his family for educational institutions. He also worked for the education of girls and women.
- Shankarseth founded the Native School of Bombay, which was renamed first as the Bombay Native Institution, and then as the Board of Education. Finally, this institution evolved into the prestigious Elphinstone College.
- Shankarseth was the inspiration behind the foundation of medical education in Bombay. The Grant Medical College in Mumbai, one of the oldest medical institutions in South Asia was named after the then Governor of Bombay, Sir Robert Grant on the suggestion of Shankarseth.
- Shankarseth was among the wealthy donors who helped promote Dr. Bhaui Daji Lad Museum in Byculla. He built the Bhawani Shankar Temple near Nana Chowk (as a tribute to his late mother Bhawanibai Murkute). He also built a Ram temple.
- The first train in India ran between Boribunder and Thane on April 16, 1853. The 34-km project was undertaken by the Great Indian Peninsular Railway Company. The committee that gave the project impetus included Sir Jamsetjee Jeejeebhoy and Nana Shankarseth.

6. Bhojshala Temple-Kamal Maula Mosque complex

Context:

- The Indore Bench of the Madhya Pradesh High Court on Monday directed the ASI to conduct a scientific investigation, survey and excavation, through adoption of latest methods, techniques including GPR-GPS survey of the Bhojshala Temple-Kamal Maula Mosque complex situated in the State's Dhar district. The court said a study is necessary to "demystify" the nature of the complex.
- The court was hearing a writ petition that seeks the Bhojshala complex to be handed over to the Hindus and demands that Muslims be stopped from offering namaz on its premises.

Details:

- The site is an ASI-protected, 11th Century CE monument.
- Under an agreement with the ASI in April 2003, puja is performed in the temple by Hindus every Tuesday and Namaz offered every Friday.
- Bhojshala, Hindus believe is a temple of Goddess Vagdevi (Saraswati), while the Muslim community believe is the Kamal Maula Mosque.
- According to a ASI report, the originally constructed Bhojshala and Vagdevi temple was destroyed/dismantled to install and construct a mosque at the instance of Islamist rulers and forces.

History of the temple:

- Raja Bhoja, considered to be the greatest of the Paramaras of Malwa (CE 900-1400) built a new city called Bhojapur (in Bihar), excavated the Bhojpur lake and built a Sanskrit college inside a Saraswati temple called Bhojashala or Saraswatikanthabharana Vidyalaya.
- He worshipped Goddess Saraswati as Vagdevi. (A bronze replica of Vagdevi is presented to the recipients of Jnanpith Award)
- Raja Bhoja is said to have built 104 temples.
- Popular tradition associates poet Kalidasa with Bhoja.

7. Badami Chalukya Temples and inscriptions discovered along Krishna river

Context: Archaeological marvels: Badami Chalukya Temples and inscriptions discovered along Krishna river

Details:

- Archaeologists recently unearthed two temples dating back to the Badami Chalukya era and are estimated to date from 543 to 750 AD.
- These nearly intact, 1,300-year-old temples are situated along the banks of the Krishna River near the village of Mudimanikyam in Telangana's Nalgonda district.
- These temples are Badami Chalukya temples that adopted the Kadamba nagara style (with pyramid-shaped shikaras crowned by pinnacle kalashas) integrated with the Rekha nagara architectural style (characterized by slightly curved towers with 4 sides of equal length like in North Indian shikaras).
- This is the only example of its kind found in Telangana.

Temple Grants and Hero Worship

- One temple revealed a panavattam (a sacred metal base) still intact within the sanctum sanctorum, although the lingam was absent. In the other temple, a Vishnu idol was discovered.
- The inscription bearing the text 'Gandaloranru' was discovered on a pillar within one of the five temples located in the village. The initial two letters 'Ganda' in Kannada commonly denote "hero." This suggests that 'Gandaloranru' could potentially be a title bestowed upon a revered or significant figure from the era.

- Another inscription approximately 350 years old was found engraved on two sides of a pillar within the Rama temple of Mudimanikyam. However, only one side of the inscription remains legible. The inscription provides detailed information about donations made to the Rama temple.

Chalukyas of Badami (CE 543-755)

- The Chalukyas of Badami or Vātapi ruled over the Deccan for about 200 years with their capital at Badami in the Bagalkot district of Karnataka. Vātapi was the ancient name of Badami.
- The Chalukyan artisans carved out impressive rock-cut cave temples as at Badami. They also built structural temples in the 'Vesara style' (a blend of Nagara and Dravida) using stone and brick with distinct architectural elements such as shikharas (towering spires), mandapas (pillared halls), and intricate sculptures adorning the exterior and interior walls.
- Example, the Virupaksha temple at Pattadakal, and the Mallikarjuna temple at Badami.

Tribal bodies hold mega rally for 'Sarna' code in J'khand

- Thousands of tribals from Jharkhand and other parts of the country held a mega rally here under the banner of 'Rashtriya Adivasi Samaj Sarna Dharm Raksha Abhiyan' (RASSDRA), on March 12, 2024 to press for their demand to include 'Sarna' as a separate religion for indigenous people in the next census.
- Donning their traditional attire, men and women, belonging to various tribal communities, held placards and banners and raised slogans for implementation of the 'Sarna' code, threatening to boycott the 2024 Lok Sabha polls if the demand was not met before the general elections.
- A separate 'Sarna' code in the census is the key to a distinct identity for tribals as without it, they are classified as Hindus or Muslims or Christians
- 'Sarna' followers are nature worshippers and they have been fighting for a separate religious identity for decades.
- According to 'Sarna' dharma religious leader Bandhan Tigga, who led the rally, the tribal organisations chose Jharkhand for the programme as the state is the "epicentre of this tribal movement" in the country.
- More than 100 tribal people from neighbouring Nepal also participated in the rally here to extend their support to the Rashtirya Adivasi Samaj Sarna Dharm Raksha Abhiyan's demand.

8. Ram temple at Ayodhya built in Nagara style

Details:

- Ram temple at Ayodhya built in Nagara style
- PM Narendra Modi performed the 'Pran Pratishtha' ceremony at the Ram Mandir, in Ayodhya on Jan 22, 2024.
- The temple complex, built in the traditional Nagara style, will be 380 feet long from the east to the west, 250 feet wide and 161 feet high.
- Each floor of the temple will be 20 feet high and have a total 392 pillars and 44 gates.
- Visitors will climb 32 steps from the eastern side to reach the main temple.
- No iron or steel has been used in the construction of the grand structure.
- Sandstones have been sourced from Rajasthan's Bansi Paharpur area.
- Around the grand temple is a rectangular periphery called percota, a feature found in temples in south India, but not generally in north India.
- The percota will be 14 feet wide and the periphery span 732 metres. The temple will be nestled within the percota periphery.

9. Rhythmic Rituals

Context: Recently, Theyyam performers showcased their artistry at the Chala Kadankottu Makkam Bhagavathi temple in the Kannur district.

About:

- Theyyam, a traditional ritual art form of Kerala, combines dance, music, and drama, embodying spiritual and cultural elements.
- Performances often take place in temples, with elaborate costumes and makeup. Theyyam portrays deities, ancestors, and legendary characters, serving as a significant cultural expression and religious offering in Kerala's vibrant heritage.

10. President Droupadi Murmu conferred the Sangeet Natak Akademi Awards

Context: President Droupadi Murmu conferred the Sangeet Natak Akademi Awards for 2022 and 2023 upon distinguished artists in the performing arts domain. She bestowed the prestigious Sangeet Natak Akademi Fellowship, known as Akademi Ratna, upon seven eminent artists, recognizing their outstanding contributions to the field.

About:

- The awardees encompass twelve musicians, twelve dancers, eleven folk and tribal artists, and nine theatre practitioners for 2023.
- Noteworthy recipients include Carnatic vocalist Bombay Jayashri Ramnath, Neyveli Narayanan for Carnatic instrumental (mridangam), Urmila Sathyanarayanan for Bharatanatyam, and Pallavi Krishnan for Mohiniyattam.
- Established in 1952, the Akademi Awards recognize artistic excellence. The fellowship includes a cash prize of ₹3 lakh, while the award carries ₹1 lakh.

Significance: President Murmu emphasized the societal role of art, citing its historical contributions to social welfare and underscoring Indian art as a manifestation of the nation's soft power.

SOCIAL JUSTICE & SOCIAL ISSUES

1. Lancet study shows obesity rates going up across world

Syllabus: Issues Relating to Development & Management of Social Sector/Services

Mains: Health-related issues

Introduction:

The Lancet's latest study has sounded the alarm on the soaring rates of obesity worldwide, with children, adolescents, and adults all affected at alarming levels. The findings, published in collaboration with the NCD Risk Factor Collaboration and the World Health Organization, shed light on a concerning trend that demands urgent attention.

Trends in Obesity Rates:

- From 1990 to 2022, obesity rates among children and adolescents have surged fourfold, while rates among adults have more than doubled. This dramatic escalation underscores the pervasive nature of the obesity epidemic and its far-reaching consequences on global health.
- The study reveals that over one billion individuals worldwide are grappling with obesity, with 159 million children and adolescents, along with 879 million adults, falling victim to this health crisis. These staggering figures paint a grim picture of the scale and severity of the obesity epidemic on a global scale.

Shift in Malnutrition Patterns:

Traditionally associated with undernutrition, malnutrition's landscape has undergone a profound transformation, with obesity now emerging as the most prevalent form in many countries. This shift underscores the need for comprehensive strategies to combat the obesity epidemic effectively.

Insights from India:

In India, the coexistence of obesity and underweight remains a pressing issue, with both conditions posing significant public health challenges. The findings from the Lancet study echo similar concerns, highlighting the rise in obesity rates among Indian children, adolescents, and adults alike.

Way forward:

The Lancet study serves as a clarion call for governments, healthcare providers, and policymakers to prioritize interventions aimed at curbing the obesity epidemic. Targeted measures focusing on prevention, education, and access to healthy lifestyles are imperative to mitigate the far-reaching impacts of obesity on individual health and well-being.

Nut graf: *As the global obesity epidemic continues to escalate, concerted efforts are needed to address this multifaceted challenge. By raising awareness, promoting healthy habits, and fostering supportive environments, we can strive towards a healthier future for generations to come. The Lancet's findings underscore the urgency of action in confronting one of the most pressing public health crises of our time.*

2. Why did the Court penalise Patanjali?

Syllabus: Issues related to the development and management of the social sector/Services relating to Health, Education, Human Resources

Mains: Issue of misleading advertising campaigns

Context: The recent penalization of Patanjali Ayurved by the Supreme Court has brought to light the issue of misleading advertising campaigns on medicines, particularly those claiming to offer miracle cures for chronic conditions. This development underscores the importance of stringent regulations to ensure the accuracy and reliability of medical advertisements, safeguarding public health and consumer rights.

Issues:

- **Misleading Advertising Practices:** Patanjali's advertisements have been accused of denigrating allopathy and making exaggerated claims about the efficacy of its products. These misleading campaigns violate the Drugs and Magic Remedies (Objectionable Advertisements) Act, 1954 (DMR&OA) and the Consumer Protection Act, 2019 (CPA), posing a risk to public health.
- **Violation of Regulatory Framework:** Despite warnings and directives from the court, Patanjali continued to release advertisements that promise permanent cures for chronic conditions, in defiance of regulations outlined by the DMR&OA. The lack of strict enforcement mechanisms has allowed such violations to persist.

Significance:

- **Public Health Concerns:** Misleading advertisements for medicinal products not only deceive consumers but also pose serious health risks by promoting false 'miracle cures'. Patients may delay seeking appropriate medical care or abandon conventional treatments in favour of unproven remedies, exacerbating their conditions.
- **Consumer Rights:** The penalization of Patanjali highlights the importance of protecting consumer rights and ensuring transparency and accountability in advertising practices. Stringent regulatory measures are essential to prevent exploitation and misinformation in the healthcare sector.

Solutions:

- **Enforcement of Existing Laws:** There is a need for strict enforcement of laws such as the DMR&OA and the CPA to curb misleading advertising campaigns on medicines. Authorities must take prompt action against violators and impose appropriate penalties to deter future offenses.
- **Enhanced Oversight:** Regulatory bodies should strengthen monitoring mechanisms to identify and address illegal and misleading advertisements effectively. Collaboration with relevant stakeholders, including medical associations and consumer rights groups, can facilitate comprehensive oversight of advertising practices.

Nut Graf: *The penalization of Patanjali by the Supreme Court underscores the imperative of upholding ethical standards in medical advertising and protecting public health. Addressing the issue of misleading advertisements requires a concerted effort from regulatory authorities, healthcare professionals, and policymakers to ensure that accurate information is provided to consumers, enabling them to make informed decisions about their health and well-being.*

3. A women's urban employment guarantee act

Syllabus: Role of Women and Women's Organization

Mains: Need for Women's Urban Employment Guarantee Act

Introduction:

- Gender gaps in employment are a global concern and are linked to Sustainable Development Goals.
- The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) has been successful in rural areas, but urban areas present different challenges.
- The Periodic Labour Force Survey (PLFS) highlights the low employment rates among urban women.

Unmet Demand:

- Urban women face barriers like social norms, safety concerns, and transportation issues.
- The PLFS indicates a high demand for employment among urban women, with higher unemployment rates compared to rural areas.
- Many urban women are seeking employment despite having higher education levels.

Proposal for Women's Urban Employment Guarantee Act (WUEGA):

- Building on existing urban employment programs, the WUEGA aims to address the specific needs of urban women.
- Key features include women-centric management, childcare facilities at worksites, and free public transportation for women.
- Proposed works include plantation, harvesting reeds, and other locally relevant projects.
- Incentives like automatic inclusion in welfare boards and apprenticeships for college students are suggested to enhance women's participation.

Women-Led Initiatives:

- Examples like women-led waste management in Karnataka demonstrate the potential for women-led initiatives.
- Such initiatives empower women and contribute to local development.

Implementation and Cost Analysis:

- The PLFS estimates a significant number of urban women out of the workforce.
- The proposed WUEGA could initially target around 50% of this population.
- Estimated costs are around 2% of GDP, including wages and administrative expenses.
- Phased rollout and periodic assessments are suggested to manage costs and monitor effectiveness.

Conclusion:

- The WUEGA offers a promising solution to address urban women's employment challenges.
- It can pave the way for broader urban employment programs and ensure income assurance for women.

Nut Graf: Proposal for a Women's Urban Employment Guarantee Act (WUEGA) aims to tackle low urban employment rates among women. Key features include women-centric management, childcare facilities, and incentives for participation, with estimated costs at around 2% of GDP.

4. Green jobs and the problem of gender disparity

Syllabus: GS-1, Role of Women and Women's Organization

Mains: Role of women in Green Economy

Introduction:

- Transition to low-carbon development in India could generate 35 million green jobs by 2047.
- Green jobs are defined as those contributing to environmental preservation and restoration.
- Many sectors with potential green jobs traditionally lack female representation.

Gender Disparity in Green Job Transition:

- Globally, men are more likely to transition to green jobs faster than women.
- Despite renewable energy growth, women constituted only 11% of solar rooftop workers.

- Women are concentrated in industries like apparel, textiles, and food, while men dominate infrastructure and manufacturing.

Challenges Faced by Women:

- Social norms limit women's participation in green job training.
- Factors include perceived unsuitability for technical roles, safety concerns, and familial constraints.
- Women face barriers in STEM education and workforce representation.

Importance of Empowering Women in Green Jobs:

- Increasing women's representation in green jobs can address gender biases in the labour market and boost women's participation rates.
- Long-term benefits include enhancing women's agency and empowerment through economic, technical, and social opportunities.

Strategies for Closing Gender Gaps:

- **Addressing Data Gaps:** Collect sex-disaggregated data on green jobs to understand the landscape of women's work.
- **Supporting Women Entrepreneurs:** Implement gender-focused financial policies, provide collateral-free lending, and offer financial literacy training.
- **Empowering Women in STEM:** Increase hands-on learning, mentorship, scholarships, and awareness to bridge the gap in STEM participation.
- **Promoting Women in Leadership:** Increase women's representation in leadership positions to incorporate gender-specific needs in low-carbon development strategies.

Conclusion:

- A gender-just transition requires a multi-pronged approach focusing on employment, social protection, care work reduction, and skill development.
- Partnerships across sectors are crucial to leverage innovation, technology, and finance for women entrepreneurs and workers.
- Businesses must prioritize gender justice and equity in the green transition process to ensure inclusive job opportunities for all.

Nut Graf: *Despite the potential for 35 million green jobs in India by 2047, gender disparities persist, with women underrepresented in sectors crucial to the transition. Overcoming social norms and structural barriers is vital for empowering women in the green economy.*

5. Fall and rise in women's work participation

Syllabus: Issues related to the development and management of the social sector/Services relating to Health, Education, Human Resources

Mains: Issues of women's work participation

Context: The discourse surrounding trends in women's employment in India has become a subject of considerable debate, often paralleling discussions on poverty.

- However, while poverty measurement receives significant scrutiny, similar attention is not extended to employment measurement. This discrepancy underscores the complexity of understanding women's labour force participation, which has exhibited notable fluctuations over the years.

Two Contrasting Narratives

- **Pessimistic Perspective:** Views the decline in women's work participation as indicative of diminishing job availability, with subsequent increases seen as a sign of poverty.
- **Optimistic Perspective:** Attributes the initial decline to improved prosperity, allowing women to prioritize family responsibilities, with the subsequent surge reflecting increased job opportunities.

Examination of Trends

- Analysis of women's work participation, particularly in the 25-59 age group, reveals significant fluctuations driven primarily by changes in work on family farms.
- Challenges in accurately measuring women's work participation arise from survey methodologies that struggle to capture the nuanced activities of rural women, leading to discrepancies in reported data.
- Declining quality of statistical surveys further complicates the analysis, with recent attention to data quality potentially inflating reported figures.

Counterargument

- While some attribute the increase in women's farm work to economic shifts, such as men's movement out of agriculture, this argument is countered by modest declines in male self-employment in farming during periods of declining female work participation.

Way forward

- Rather than debating the causes of fluctuations in women's farm work, efforts should focus on expanding women's opportunities outside of agriculture, particularly in wage employment and small business ownership.

Nut Graf: *The fluctuations in women's work participation in India underscore the complexity of understanding labour force dynamics and the challenges inherent in accurately measuring women's economic activities, particularly in rural areas. Instead of engaging in debates over the causes of these fluctuations, policymakers must prioritize efforts to expand women's opportunities outside of agriculture, thereby promoting economic empowerment and fostering inclusive growth.*

6. The burden of women in construction

Syllabus: Issues related to the development and management of the social sector/Services relating to Health, Education, Human Resources

Mains: Issues faced by women in the construction sector

Context: Women's low participation in the labour force remains a critical issue in India, warranting scrutiny not only of their employment rates but also the quality of their work. The construction sector, often overlooked in discussions on women's employment, serves as a significant employer, particularly for migrant women from marginalized communities.

Dual Burden of Work

- **Time Allocation:** Women in the construction sector face a dual burden of paid employment and unpaid domestic work, spending substantial time on both activities. This includes childcare responsibilities, often necessitating simultaneous engagement in multiple tasks.
- **Workplace Challenges:** Employers in construction often exploit women's labour by breaking down tasks to evade minimum wage regulations, resulting in high-intensity, laborious work without adequate safety measures. Women are often paid based on the quantity of work completed rather than hourly wages.

Challenges and Opportunities

- **Technology and Automation:** Increasing automation in construction may reduce job opportunities for women in labour-intensive tasks. However, skilling initiatives can empower women to engage in higher-quality, better-paying work within the sector.
- **Employer Perceptions:** Despite the potential for skill development, employers often hesitate to train women, citing assumptions about their capabilities in operating equipment and machinery.

Solutions

- **Social Protection:** The provision of social protection measures, including on-site childcare facilities, can alleviate women's burden of unpaid childcare responsibilities, enabling greater focus on paid employment.
- **Skills Training:** Investments in skills training programs tailored to the needs of women in construction can enhance their employability and enable access to higher-quality jobs.
- **Workplace Safety:** Ensuring workplace safety standards and providing necessary safety equipment are essential to protect women from occupational hazards associated with labour-intensive tasks.

Nut Graf: *The construction sector, as a significant employer of women, holds immense potential to absorb a substantial portion of the female labour force, particularly migrant women, into productive paid work.*

7. Bridging the gender gap in health research

Syllabus: Issues related to the development and management of the social sector/Services relating to Health, Education, Human Resources

Mains: Gender gap in health research

Context: Prioritizing women's health is imperative for achieving health equity globally. Despite comprising nearly half of the world's population, women have historically faced deep-seated biases in healthcare, with their health needs often overshadowed by a focus on gynaecological and reproductive issues.

Historical Bias and Disparities

- **Medical Research Bias:** Traditional medical research has favoured the male body as the standard, resulting in disproportionate risks and disparities in women's health.
- **Systemic Biases in Data Collection:** Biases in data collection perpetuate disparities, leading to misdiagnoses, ineffective treatments, and unnecessary suffering for women.

Significance of Addressing the Gender Gap

- **Global Recognition:** Reports like the World Economic Forum's 'Closing the Women's Health Gap' highlight the urgent need for global efforts to address gender disparities in health research, funding, and policymaking.
- **Indian Context:** Genetic variations in the Indian population underscore the importance of gender-sensitive approaches in healthcare research and policy formulation.

Solutions

- **Gender Analysis in Clinical Trials:** Clinical trials must analyze and report gender-specific findings to tailor treatments effectively.
- **Inclusion of Gender Differences on Drug Labels:** Providing information on gender differences and safe use during pregnancy empowers healthcare providers and patients to make informed decisions.
- **Recruitment of Women in Clinical Trials:** Ensuring adequate representation of women in clinical trials is essential for understanding treatment efficacy across diverse populations.

- **Dissecting Data with a Gender Lens:** Analyzing data through a gender lens reveals nuances crucial for refining healthcare strategies.
- **Embracing Precise Terminology on Sex and Gender:** Clear and accurate language fosters inclusivity and effective healthcare communication.

Importance of Women's Inclusion in Research

- **Enriching Insights:** Women's unique insights and experiences enrich research, fostering a more inclusive, women-centric perspective in healthcare.
- **Dismantling One-Size-Fits-All Approaches:** Women's inclusion in research allows for the development of more nuanced, effective healthcare solutions that benefit everyone.

Nut Graf: Bridging the gender gap in health research and practice is essential for building a future founded on equality and fairness in healthcare access and outcomes. It transcends gender, reshaping healthcare systems to serve everyone equitably and effectively.

8. The determinant in 'more women in the job market'

Syllabus: GS-2, Issues related to the development and management of the social sector/Services relating to Health, Education, Human Resources

Mains: Opportunities and challenges for women in the job market

Context: There is a growing consensus among social scientists, governments, and international organizations regarding the imperative to increase women's participation in the economy and labour market to foster India's economic growth.

- Despite this recognition, women's involvement in the workforce remains notably low in India compared to other countries in Asia.
- This discrepancy can be attributed to various factors, with patriarchy emerging as the underlying determinant shaping women's roles within society and the economy.

Issues

- **Root Cause: Patriarchy:** Patriarchy, characterized by male dominance in familial, societal, and economic spheres, serves as the primary obstacle to women's participation in the labour market.
- **Unpaid Domestic Work:** Women are burdened with disproportionate responsibilities for unpaid domestic work, relegating them to inferior roles with limited economic agency and mobility.
- **Gendered Choices in Employment:** Women's labour market choices are influenced by societal expectations and domestic obligations, leading to the perpetuation of gender stereotypes and occupational segregation.

Significance

- **Economic Productivity:** The underutilization of women's labour potential hampers overall economic productivity and growth, necessitating interventions to unlock this latent workforce.
- **Gender Equality:** Addressing barriers to women's labour force participation is crucial for achieving gender equality and dismantling patriarchal structures within households and society at large.

Solutions

- **Redistribution of Domestic Work:** Efforts to redistribute unpaid domestic work and caregiving responsibilities within households can alleviate the burden on women and enable their greater participation in the labour market.
- **Infrastructural Support:** Providing infrastructural support, such as access to fuel-efficient stoves and doorstep water supply, can enhance the productivity of women's domestic work and reduce time constraints.

- **Mainstreaming Unpaid Work:** Shifting certain unpaid care responsibilities, such as childcare and eldercare, to the mainstream economy through government or civil society interventions can free up women's time for educational and economic pursuits.
- **Promotion of Gender Equality:** Promoting gender equality within households is essential for fostering equal opportunities for men and women in both domestic and economic spheres. This involves challenging traditional gender roles and dismantling the subordination of women within households.

Nut Graf: Addressing the low participation of women in the labour market requires a multifaceted approach that confronts the entrenched patriarchal norms shaping gender roles and expectations. By redistributing unpaid domestic work, providing infrastructural support, and promoting gender equality, India can create an environment conducive to greater female workforce participation.

9. India's suboptimal use of its labour power

Syllabus: GS-1, Poverty and Developmental Issues

Mains: Challenges in the use of India's labour power

Context:

- India heavily relies on labour for income generation, with informal employment dominating the landscape.
- The dynamics of the labour market significantly impact GDP growth, the standard of living, and overall economic development.

Issues:

Informal Employment Dominance:

- Around 90% of the Indian workforce engages in informal employment, lacking job security, benefits, and social protection.
- Informal employment encompasses casual labourers, self-employed individuals, and even some regular wage workers.

Quality of Employment:

- Recent data shows an increase in labour force participation rates (LFPR) and a decrease in unemployment rates, primarily driven by self-employment.
- However, a closer examination reveals a concerning trend of rising unpaid family labour, indicating a deterioration in job quality.

Earnings Trends:

- While there's a marginal increase in average daily earnings, it's not uniform across employment types.
- Salaried workers and the self-employed witness stagnating real earnings, whereas casual workers experience moderate growth, albeit from a low base.

Significance

- The composition of the labour force and earnings trends are critical indicators of economic well-being and social welfare.
- The prevalence of low-quality work raises concerns about productivity, income inequality, and long-term economic sustainability.

Solutions

● **Enhanced Job Quality:**

- Policies should focus on creating quality employment opportunities with fair wages, job security, and social protection.
- Initiatives to formalize informal sectors and improve labour market regulations are essential.

● **Skill Development and Training:**

- Investing in skill development programs can enhance the employability of the workforce and promote upward mobility.
- Encouraging entrepreneurship and providing support for small businesses can create avenues for self-employment with higher productivity.

● **Social Safety Nets:**

- Strengthening social safety nets, including healthcare, pension schemes, and unemployment benefits, can mitigate the vulnerabilities of informal workers.
- Targeted interventions for vulnerable groups, such as women and youth, are necessary to address specific labour market challenges.

Nut Graf: India's suboptimal utilization of labour power poses significant challenges to inclusive growth and economic development. Addressing the quality of employment, earning disparities, and informal sector vulnerabilities is imperative to harness the demographic dividend effectively and ensure sustainable and equitable growth.

10. Gender equality as the plank of sustainable development

Syllabus: GS-2, Issues related to the development and management of the social sector/Services relating to Health, Education, Human Resources

Mains: Gender equality as the plank of sustainable development

Context:

- Gender equality and women's empowerment are essential components of sustainable development.
- The intersection between gender equality and sustainable energy development is often overlooked but holds significant importance.

Issues:

Role of Women in the Energy Sector:

- Women play vital roles in energy access, production, and consumption, yet they face barriers limiting their participation.
- Lack of access to modern energy disproportionately affects women and children, exposing them to health risks from traditional fuel sources like biomass and kerosene.

Gender Disparity in the Energy Sector:

- The energy sector remains gender imbalanced, with women significantly underrepresented.
- Educational disparities, limited technical training opportunities, and inequitable company policies contribute to this gender gap.

Significance

- Gender equality is crucial for sustainable development and achieving Sustainable Development Goals (SDGs), particularly SDG5 (gender equality), SDG7 (clean energy), and SDG12 (climate action).
- Women's empowerment in the energy sector can lead to innovative solutions, increased productivity, and improved social and environmental outcomes.

Solutions:

Mainstreaming Gender in Energy Policies:

- Governments and international institutions should prioritize gender mainstreaming in energy policies at all levels.
- Efforts should focus on changing perceptions of women's roles in the energy sector and providing opportunities for education and technical training.

Enabling Environment and Support:

- Stakeholders, including governments, non-state actors, and philanthropic organizations, should create an enabling environment for women's meaningful participation in the energy sector.
- Initiatives like the Women at the Forefront program and the Energy Transitions Innovation Challenge (ENTICE) provide platforms for women to drive sustainable energy practices.

Promoting Distributed Renewable Energy (DRE):

- DRE initiatives, such as Solar Mamas, empower women by providing training in solar engineering and increasing access to clean energy.
- Collaboration between state governments and philanthropic organizations can accelerate the adoption of DRE, improving women's productivity and quality of life.

Conclusion

- Closing the gender gap in energy can lead to economic growth, innovation, and improved social and environmental outcomes.
- Gender-responsive initiatives have shown success in the clean energy space, highlighting the importance of harnessing the power of women for a more inclusive and sustainable world.

Nut Graf: Empowering women in the energy sector is not only a matter of social justice but also a smart investment in sustainable development.

11. What's in a surname?

Syllabus: GS-1, Role of Women and Women's Organization

Mains: Surname as a symbol of prevailing patriarchy in society

Introduction:

- Ms. Divya Modi Tongya's petition to the Delhi High Court highlights the struggle women face in reclaiming their maiden names post-divorce.
- Government notifications requiring documentation from divorced women perpetuate gender bias and restrict their constitutional right to choose their identity.
- The requirement for divorce papers or a no-objection certificate (NOC) from the husband reflects deep-seated misogyny and control over women's preferences.

Social Challenges and Discrimination:

- Women who choose not to adopt their husband's surname face harassment and unnecessary paperwork in various social and administrative settings.
- Instances such as opening joint bank accounts, enrolling children in school, or obtaining passports become hurdles, adding to societal discrimination against women's choices.

Gender Disparities and Societal Norms:

- India, grappling with gender disparities, continues to uphold patriarchal norms where women bear the brunt of unpaid domestic work and face exclusion from the labour force.
- Traditional gender roles dictated by men and sometimes accepted by women further entrench inequalities, hindering progress towards gender equality.

The Urgent Need for Change:

- The United Nations identifies achieving gender equality and empowering women as the paramount human rights challenge globally.
- Mere rhetoric on gender equality without robust legislative measures and social frameworks undermines the pursuit of true equality, necessitating tangible action for meaningful change.

Nut Graf: *In a battle against gender bias, Ms. Divya Modi Tongya's petition challenges legal and social hurdles hindering women's rights to reclaim their maiden names post-divorce, highlighting broader societal disparities and the urgent need for substantive change.*

12. Have India's health centres really 'collapsed'?

Syllabus: Issues Relating to Development and Management of Social Sector/Services relating to Health, Education, Human Resources.

Mains: Issues related to the health sector

Introduction:

India's public health centres are under scrutiny due to widespread dilapidation and disrepute, reflecting what some label the "greatest failure of the Indian state." These centres, meant to provide essential healthcare services, often lack basic amenities like doctors, diagnostics, and drugs, painting a grim picture of the country's healthcare infrastructure.

Challenges in Public Health Centres:

- Public health centres across India face myriad challenges, ranging from staff shortages and inadequate facilities to social discrimination. The absence of essential resources leaves many centres unable to fulfil their mandate of providing accessible and affordable healthcare, pushing marginalised communities towards expensive private alternatives.
- Despite the prevalent shortcomings, recent studies indicate signs of improvement in some health centres. However, progress remains largely superficial, with many centres still grappling with underutilisation, high staff absenteeism, and limited service offerings. The journey towards meaningful improvement is far from over.

The Role of Women in Rural Health Settings:

Women play a pivotal role in rural health settings, often shouldering the bulk of the effort in running district hospitals and providing essential healthcare services. Despite facing challenges like inadequate facilities and social discrimination, female health workers continue to demonstrate resilience and dedication.

Government Initiatives and Budget Allocation:

- Government initiatives like the National Health Mission and Ayushman Bharat aim to improve healthcare accessibility and affordability. However, budget allocations often prioritise tertiary healthcare over primary health centres, hindering progress at the grassroots level.
- While the challenges facing India's public health centres are daunting, there are glimpses of hope in initiatives undertaken by certain states. States like Himachal Pradesh and Chhattisgarh have shown significant improvements in healthcare provision, offering valuable lessons for others to emulate.

Way forward:

To truly transform India's public health infrastructure, substantial support and investment from the central government are essential. Merely tokenistic measures will not suffice; meaningful progress requires a concerted effort to address systemic issues and prioritise primary healthcare delivery.

Nut graf: *India's public health centres stand at a critical juncture, facing both challenges and opportunities for improvement. While the road ahead may be long and arduous, concerted efforts and substantial support can pave the way for a brighter future, where every citizen has access to quality healthcare services. It is imperative for stakeholders to work collaboratively towards this shared goal of building a healthier and more equitable society.*

13. A tribe in the Western Ghats in need of a lifeline

Syllabus: GS-2, Welfare Schemes for Vulnerable Sections of the population by the Centre and States and the Performance of these Schemes

Mains: Forest Rights Act

Introduction: Makuta Village and the Phani Yerava Tribe

- Located in the Western Ghats of Karnataka, Makuta village is home to the Phani Yerava tribe within the Makuta Aranya Valaya.
- The tribe successfully claimed 135 acres of forest land under the Forest Rights Act, facilitated by local individuals and authorities.

Shift in Livelihood Patterns:

- Despite acquiring forest rights, the tribe's enthusiasm for forest dependence has diminished over time.
- Gathering minor forest produce has become less appealing due to market volatility and exploitation by middlemen.
- Many tribe members now prefer wage labour, particularly in nearby areas like Kasaragod, Kerala, where they are comfortable speaking Malayalam.

Challenges and Issues:

- The tribe faces a significant challenge of alcohol addiction, affecting individuals of all ages, including adolescents.
- Alcohol abuse has led to a decline in school attendance and overall community well-being.
- Important documents and government rights are entrusted to non-tribal members due to the community's uninformed state and vulnerability.

Call for Attention and Action:

- NGOs, government officials, and tribal leaders express concern over the lack of policy attention to social issues like addiction.
- There's a plea for the government to address such challenges and prioritize the well-being of marginalized tribal communities.

- Addressing these social issues is crucial for effectively conserving forest dwellers' livelihoods and well-being.

Nut Graf: *Despite acquiring forest rights, the Phani Yerava tribe in Makuta village, Karnataka, faces challenges such as diminishing forest dependence, alcohol addiction, and lack of policy attention, highlighting the urgent need for government intervention.*

14. Intra-group caste variances, equality and the Court's gaze

Syllabus: GS-2, Welfare Schemes for Vulnerable Sections of the population by the Centre and States and the Performance of these Schemes

Mains: Sub-classifications of Scheduled Castes

Introduction:

- The impending judgment in the State of Punjab vs Davinder Singh case by a seven-judge Bench of the Supreme Court of India holds significant implications for affirmative action and reservations under the Constitution.
- The central question revolves around whether State governments have the authority to make sub-classifications within the proportion prescribed to Scheduled Castes and Scheduled Tribes in public employment recruitment.

Background:

- The issue stems from a circular issued by the Government of Punjab in 1975, which reserved 50% of SC seats for Balmikis and Mazhabi Sikhs, sparking legal challenges.
- The Supreme Court's 2004 judgment in E.V. Chinnaiah vs State of Andhra Pradesh struck down the Andhra Pradesh Scheduled Castes (Rationalisation of Reservations) Act, establishing that only Parliament holds authority to modify the President's list of SCs.

Legal Arguments and Precedents:

- The Punjab government persisted by enacting the Punjab Scheduled Castes and Backward Classes (Reservation in Services) Act, 2006, prioritizing Balmikis and Mazhabi Sikhs, leading to further legal battles.
- The Supreme Court's questioning of its earlier verdict in Chinnaiah, citing precedents like Indra Sawhney vs Union of India, suggests the possibility of permitting sub-classifications within backward classes.
- This potential deviation from previous interpretations calls for a fresh examination of the Constitution's provisions on reservations and equality.

Constitutional Interpretation:

- The crux of the matter lies in the constitutional commitment to substantive equality enshrined in Articles 14 to 16, necessitating remedial measures for historically disadvantaged groups like SCs.
- Reservations should be viewed not as contradictory to equality but as a tool to fulfil its essence by addressing historical injustices and ensuring fair treatment.
- Article 341, while preserving the President's authority over the SC list, doesn't inherently bar sub-classifications or special measures within the listed castes.

Implications and Conclusion:

- Evaluating sub-classifications within SCs and STs should consider the objective of ensuring fair treatment and addressing intra-group variances in development.
- The government's power to implement reservations is coupled with a duty to achieve constitutional equality, highlighting the need for a nuanced approach to affirmative action.

- Ultimately, the Supreme Court's decision in State of Punjab vs Davinder Singh will shape the trajectory of affirmative action policies and their alignment with the constitutional principles of equality and justice.

Nut Graf: *The impending Supreme Court judgment in State of Punjab vs Davinder Singh addresses the legality of sub-classifications within Scheduled Castes for reservations, pivotal for affirmative action and equality under the Constitution.*

15. Higher engagement, better learning

Syllabus: GS-2, Issues Relating to Development and Management of Social Sector/Services relating to Health, Education, Human Resources

Mains: Importance of engaging students in learning outcome

Introduction:

- Despite high enrollment rates, a significant portion of students in India struggle with basic reading skills.
- Public school attendance is low, leading to poor learning outcomes.
- Lack of engagement in classrooms contributes to the problem.
- Teachers often blame poor attendance for low engagement and subsequently low motivation.

Current Classroom Dynamics:

- Traditional teaching methods prevail, with teachers primarily focusing on front-row students.
- Rote learning is common, but it's not effective for all students, especially given the rapidly changing world.
- Classrooms lack cognitive and emotional engagement, hindering meaningful learning experiences.
- The lack of real-time feedback makes it challenging for teachers to gauge student comprehension and adjust teaching accordingly.

Importance of Student Engagement:

- Active participation and engagement are crucial for meaningful learning experiences.
- Students need opportunities for discussion, problem-solving, and hands-on learning.
- Teachers play a pivotal role in facilitating engagement and must actively participate in the learning process.
- Classroom environments should be inclusive and cater to the diverse needs of all students.

Addressing Challenges and Solutions:

- Teacher training in India tends to be theoretical and lacks practical components.
- Teachers need ongoing support and coaching to adopt new teaching practices effectively.
- Shifting focus from the Right to Education to the Right to Learning is essential.
- Implementing structured lessons, fostering high-quality teacher-student relationships, and promoting student autonomy can enhance engagement and improve learning outcomes.

Nut Graf: *Despite high enrollment rates in Indian schools, a significant learning deficit persists, largely due to low student engagement. Traditional teaching methods, lack of feedback, and inadequate teacher training contribute to this issue, highlighting the urgent need for reform.*

16. How women in India have fared

Syllabus: Issues related to the development and management of the social sector/Services relating to Health, Education, Human Resources

Mains: Steps taken for women's development in India

Context:

- International Women's Day, celebrated on March 8, 2024, prompts a reflection on the status and progress of women globally, particularly in India.
- The United Nations Development Programme's 'Gender Social Norms Index' sheds light on prevailing biases against women, spanning political, educational, economic, and physical integrity dimensions.

Educational Empowerment in India

- India's strides in education reflect a departure from traditional gender norms, with inclusive policies ensuring free education for all children, irrespective of gender or socio-economic background.
- Notably, about 12 crores of girls have availed themselves of this opportunity, paving the way for increased female literacy and empowerment.
- Despite advancements, gender disparities persist in higher education, particularly in STEM fields, where women remain underrepresented both as students and faculty members.

Entrepreneurship and Professional Pursuits

- Women entrepreneurs in India are breaking barriers across various sectors, ranging from entertainment and advertising to biotechnology and medicine.
- While traditional sectors like entertainment witness significant female participation, women with science and technology backgrounds are venturing into innovative and profitable enterprises.
- In healthcare, women are excelling in specialized fields such as ophthalmology, neurology, and maternal health, contributing to societal well-being and economic growth.

Political Representation

- India's political landscape showcases significant strides towards gender equality, with notable examples like Pratibha Patil and Draupadi Murmu serving as Presidents.
- Compared to other countries, India has demonstrated substantial progress in women's political leadership, setting a positive example for gender inclusion in governance.

Global Perspective

- Despite global gender biases prevalent in both low and high Human Development Index (HDI) countries, India stands out as a beacon of progress.
- Examples from neighboring countries and beyond highlight the presence of women in key political positions, emphasizing India's comparative advancement in gender equality.

Issues

- STEM Gender Gap: Persistent underrepresentation of women in STEM fields poses a challenge to achieving gender parity in higher education and scientific research.
- Political Participation: While progress has been made, women's representation in political spheres still falls short of equitable levels, hindering inclusive governance.
- Societal Norms: Deep-rooted gender biases and stereotypes continue to impede women's advancement in various spheres, necessitating concerted efforts for societal transformation.

Significance

- India's journey towards gender equality holds significance on a global scale, inspiring other nations to prioritize women's empowerment and inclusive development.

- Achieving gender parity is not only a matter of social justice but also crucial for fostering sustainable economic growth and societal progress.

Solutions

- Education Reform: Implement targeted initiatives to bridge the gender gap in STEM education and promote female participation in scientific research and academia.
- Political Empowerment: Enhance efforts to increase women's representation in political institutions through affirmative action and gender-sensitive policies.
- Awareness and Advocacy: Foster public awareness campaigns to challenge gender stereotypes and promote a culture of gender equality and inclusivity from grassroots to policymaking levels.

Nut Graf: As India celebrates Women's Day, it reflects on its journey towards gender equality and recognizes the collective efforts of individuals, organizations, and policymakers in fostering women's empowerment.

17. Violence, homelessness, and women's mental health

Syllabus: GS-2, Issues Relating to the Development and Management of Social Sector/Services relating to Health, Education, Human Resources.

Mains: Women's mental health and interplay with other factors

Introduction:

- The National Family Health Survey (NFHS-5) highlights concerning levels of violence against women in India, with a significant portion experiencing physical and sexual violence.
- Violence against women, mental health issues, and homelessness are interconnected, creating a cyclical pattern of vulnerability and marginalization.

Findings and Evidence:

- Research indicates a reciprocal relationship between violence, mental health conditions, and homelessness, with relational disruptions often predicting homelessness even when mental healthcare is accessed.
- Qualitative studies reveal the impact of trauma, violence in social relationships, and experiences of alienation on women's mental health and homelessness.
- Personal narratives illustrate the journey into homelessness, often as a means of escape from cycles of violence, including child sexual abuse and intimate partner violence.

Understanding the Complexities:

- Structural barriers like poverty and caste intersect with violence, leading women to sever conventional relational bonds in search of safety and belonging.
- Ellen Corrin's work challenges reductionist views of mental illness, suggesting a nuanced understanding that considers personal experiences and meanings behind behaviours labelled as symptoms.

Madness and Women's Mental Health:

- Historical and contemporary societal constructs confine women within reproductive roles and silence those who resist oppression, labelling them as "mad".
- Some women perceive madness as resistance or a means of transcending patriarchal norms, while others find solace or a journey inward through altered perceptions.

Comprehensive Solutions and Recommendations:

- Comprehensive solutions must address the systemic factors perpetuating violence against women, including recognizing and compensating unpaid labour, ensuring economic independence, and fostering egalitarian norms through education.
- Robert Sapolsky's research underscores the need for policies and interventions targeting childhood adversity to reduce violence and its impact on mental health.
- A multifaceted approach involving diverse professionals, innovative research, and meaningful involvement of those with lived experiences is essential for addressing the complexity of issues surrounding violence, mental health, and homelessness.

Nut Graf: *The interplay between violence against women, mental health challenges, and homelessness underscores a complex, intertwined narrative. Understanding this multifaceted relationship is crucial for crafting comprehensive solutions to address the root causes and support affected individuals effectively.*

18. Don't use counselling to turn LGBTQ persons against their identity, says SC

Syllabus: Social Empowerment

Mains: LGBTQ Rights

Introduction:

- The Supreme Court emphasized that court-ordered counselling for LGBTQ+ individuals should aim to ascertain their wishes, not influence their identity or sexual orientation.
- Individuals undergoing such counselling are often distressed or separated from their partners by relatives, making sensitivity paramount.

Judicial Responsibility and Constitutional Values:

- Judges are urged to refrain from imposing their subjective values on LGBTQ+ individuals protected by the Constitution.
- Chief Justice D.Y. Chandrachud stressed the importance of empathy and compassion, directing judges to avoid biased views or personal sympathies toward the natal family.

Guidelines for Court Proceedings:

- The court lays out guidelines for Habeas corpus petitions and pleas for protection filed by LGBTQ+ individuals.
- Courts must ensure adherence to the law while respecting the free will of detained or missing persons.
- Social morality with homophobic or transphobic undertones should be avoided in judicial proceedings.

Recognition of Chosen Families:

- The concept of "family" extends beyond the natal family to include chosen families, especially significant for LGBTQ+ individuals facing violence or lack of safety.
- Chief Justice highlighted the enduring support provided by chosen families amidst adversity, underscoring their importance in LGBTQ+ individuals' lives.

Nut Graf: *The Supreme Court cautions against using court-ordered counselling to alter LGBTQ+ individuals' identities. Emphasizing empathy and impartiality, it sets guidelines for judicial proceedings, recognizing the significance of chosen families in LGBTQ+ lives.*

19. Eliminating diseases, one region at a time

Syllabus: GS-2, Issues Relating to Development and Management of Social Sector/Services relating to Health, Education, Human Resources

Mains: Regional Approach for Eliminating Diseases

Introduction: Disease Elimination Strategy

- **Differentiating Elimination from Eradication:** The focus lies on eliminating transmission rather than eradicating the disease entirely.
- **Importance of Disease Elimination:** It enhances public health, particularly benefiting vulnerable populations.
- **Rigorous Certification Requirements:** Certification by international agencies necessitates rigorous preparation, leading to improvements in primary health care, diagnostics, and surveillance.
- **Political and Bureaucratic Commitment:** Disease elimination garners high political and bureaucratic commitment, essential for success.

Challenges and Considerations:

- **Resource Intensive Nature:** Elimination efforts require significant resources and may strain weak health systems, potentially leading to neglect of other health priorities.
- **Cost-Benefit Analysis:** Careful evaluation of costs and benefits, along with informed political support, is crucial before planning disease elimination strategies.
- **Strategic Focus:** Prioritize diseases with high impact and low prevalence for elimination, considering feasibility and practicality.

Surveillance Systems and Preparedness:

- **Investment in Surveillance:** Developing robust surveillance systems is essential to capture every incidence of the disease and detect reintroduction post-elimination.
- **Strengthening Infrastructure:** Strengthen laboratories, ensure the availability of medicines and consumables, and train the workforce to meet the requirements of elimination strategies.
- **Continuing Surveillance:** Surveillance efforts must continue even after elimination to prevent reintroduction of the pathogen.

Regional Approach to Elimination:

- **Advantages of Regional Implementation:** Multisectoral collaboration and innovation are more effective at the regional level.
- **Phased Elimination:** Implement elimination strategies in defined geographical regions, gradually scaling up to the national level.
- **National Ownership and Support:** While regional implementation progresses, national and state governments must provide technical and material support and monitor progress.

Nut Graf: The strategy for disease elimination emphasizes regional implementation, rigorous surveillance, and political commitment. Despite resource challenges, prioritizing diseases based on impact and feasibility can lead to successful elimination efforts, enhancing public health.

20. How water insecurity affects women

Syllabus: Role of Women and Women's Organization

Mains: Women and water crisis

Introduction: Water Insecurity and Gendered Burdens

- Women and girls bear the primary responsibility for water collection in households, particularly in areas where water access is limited.
- Despite progress in India's water access, the National Sample Survey indicates significant gaps, with over 41% of rural households lacking safe drinking water within their premises.
- Geographical disparities persist, with households often having to travel considerable distances, up to 1.5 km or more, for their principal water source.
- Water scarcity exacerbates stress within households and negatively impacts women's lives, household dynamics, and social relationships.
- Lack of access to water affects girls' school attendance and academic performance, while women face gender-based violence during water collection, leading to mental health issues.

Effects of Water Insecurity on Women's Health:

- Water insecurity contributes to open defecation practices, resulting in health risks such as diarrhoea, typhoid, and cholera, as well as menstrual health issues.
- Women practising open defecation experience psychosocial stress and face a higher risk of non-partner sexual violence, further impacting their well-being.

Policy Responses and Empowerment Efforts:

- The Jal Jeevan Mission (JJM) and the National Water Mission represent significant policy shifts in water management, aiming to provide household tap connections for drinking water access.
- JJM initiatives reduce women's burden by minimizing the time spent on water collection, allowing them more time for productive activities.
- Women's empowerment is promoted through increased participation in community engagement, including gram panchayat and self-help group activities, as well as involvement in Pani Samitis for water program planning and monitoring.
- JJM guidelines prioritize training women in water quality monitoring, empowering them and ensuring the delivery of quality water to rural households.

Research Findings and Implications:

- A study conducted in rural Tamil Nadu demonstrates the positive outcomes of household access to safe drinking water under JJM.
- Improved water access leads to time savings for women, which they utilize for household management, childcare, and children's schooling.
- Women with higher empowerment indicators spend less time fetching water and exhibit better mental health.
- Positive correlations exist between water access and sanitation, emphasizing the interconnectedness of these issues and the need for comprehensive approaches to address them.

Nut Graf: Water insecurity disproportionately burdens women in India, impacting their daily lives, health, and safety. Policy initiatives like the Jal Jeevan Mission aim to alleviate these burdens, emphasizing gender empowerment and improved water access for better socio-economic outcomes.

21. Anaemia prevalence in eight States found to be overestimated

Syllabus: Issues related to the development and management of the social sector/Services relating to Health, Education, Human Resources

Prelims: Reasons for Anaemia in India

Mains: Steps taken by India to reduce Anaemia

Context:

- The prevalence of anaemia in India was overestimated in previous surveys.
- Recent study across eight states challenges previous findings.
- Discrepancies attributed to measurement methods and sample types.

Issues

Measurement Discrepancies

- Capillary blood sampling vs. venous blood sampling.
- Capillary blood underestimates haemoglobin levels.
- Dilution effect due to tissue fluid mixing.
- A comprehensive study across eight Indian states with 4,613 participants found previous anaemia prevalence estimates to be overstated.
- The prevalence of anaemia was primarily mild, with overall rates of 18.4% mildly anaemic, 14.7% moderately, and 1.8% severely. Women had higher anaemia rates than men.
- NFHS surveys showed much higher anaemia rates compared to this study, attributing discrepancies to different blood sampling methods.

Prevalence Discrepancies

- NFHS surveys show higher anaemia prevalence. The highest anaemia prevalences were observed in Assam and Odisha, while Meghalaya and Telangana had the lowest.
- Current study reveals lower prevalence rates.
- Iron deficiency is not the primary cause of anaemia as assumed.

Anaemia

- Anaemia is a condition characterized by a deficiency in the number or quality of red blood cells (RBCs) in the body or a reduction in the hemoglobin concentration within those cells.
- Hemoglobin is a protein in red blood cells that carries oxygen from the lungs to the rest of the body.
- When you have anaemia, your body doesn't get enough oxygen-rich blood, leading to symptoms such as fatigue, weakness, pale or yellowish skin, irregular heartbeats, shortness of breath, dizziness, or cold hands and feet.

Significance

- Understanding true prevalence crucial for effective healthcare policies.
- Implications for resource allocation and intervention strategies.

- Challenges assumptions regarding iron deficiency as the main cause of anaemia.
- Raises questions about the effectiveness of current supplementation programs.

Solutions

Improved Measurement Techniques

- Consider venous blood sampling for more accurate results.
- Address dilution effects and plasma-skimming phenomenon.

Reconsideration of Policies

- Rethink universal iron supplementation policies.
- Focus on diverse nutritional interventions rather than solely targeting iron.
- Emphasize reducing inflammation and improving overall diet diversity.

Promotion of Dietary Diversification

- Shift from cereals to more resilient options like millets.
- Address challenges of phytate content in millets through education and strategies.
- Highlight benefits of increased iron and calcium intake from millets.

Conclusion

- Iron deficiency is not the sole cause of anaemia, challenging existing assumptions.
- Policy reconsideration needed to focus on diverse nutritional interventions and dietary diversification rather than universal iron supplementation.

Nut Graf: Anaemia prevalence in India may have been overestimated in previous surveys due to measurement and sampling discrepancies. Emphasis on accurate measurement techniques and promoting resilient food options like millets to combat anaemia effectively.

22. TB control in India calls for person-centred solutions

Syllabus: GS-2, Issues Relating to Development and Management of Social Sector/Services Relating to Health

Mains: Issues in eliminating TB and the way forward

Introduction:

- TB remains a significant public health challenge globally and particularly in India despite ambitious elimination goals.
- Access to quality TB care, including diagnosis and treatment, is lacking for many individuals.
- A paradigm shift is essential, emphasizing the importance of prioritizing the needs and experiences of TB patients within the healthcare system.

Understanding Lived Experiences:

- Historically, TB care has often overlooked the lived experiences of affected individuals.
- The emergence of TB survivor advocates has helped highlight community needs, resulting in some policy changes such as nutritional support and addressing stigma.
- However, there's still a gap between policy intent and on-the-ground realities, particularly in terms of access to diagnosis and treatment.

Making Care More Humane:

- Efforts are needed to make TB care more humane, including providing mental health support and gender-responsive care.
- Strengthening community-based TB care models and empowering frontline healthcare workers are crucial for comprehensive care delivery.
- Addressing stigma, discrimination, and mental health issues, as well as treatment side-effects, are vital aspects of improving care.

Addressing Socio-Economic Determinants and Leveraging Technology:

- TB disproportionately affects marginalized groups and is not just a health crisis but also an economic one.
- Multi-sectoral approaches are required to address socio-economic determinants, including poverty alleviation, improved nutrition, and better housing.
- Leveraging technology, such as AI and digital health solutions, holds promise in enhancing TB care delivery and surveillance.
- Investment in developing better vaccines is crucial for long-term TB control and elimination efforts.

Nut Graf: *In India, TB remains a significant public health challenge despite ambitious elimination goals. Urgent action is needed to prioritize person-centred solutions, understand lived experiences, make care more humane, address socio-economic determinants, and leverage technology for enhanced TB control.*

23. Religious Diversity in Indian society

What are the diversities witnessed in Indian society?

What is Religion?

- Pioneer sociologist Émile Durkheim described religion with the statement that it consists of “things that surpass the limits of our knowledge”.
- He went on to elaborate: Religion is “a unified system of beliefs and practices relative to sacred things, that is to say set apart and forbidden, beliefs and practices which unite into one single moral community, called a church, all those who adhere to them” (1915).

Role of Religion?

Functionalism

Religion serves several functions for society. These include

- (a) giving meaning and purpose to life
- (b) reinforcing social unity and stability
- (c) serving as an agent of social control of behavior
- (d) promoting physical and psychological well-being
- (e) motivating people to work for positive social change.

Conflict theory

- Religion reinforces and promotes social inequality and social conflict. It helps convince the poor to accept their lot in life, and it leads to hostility and violence motivated by religious differences.
- Indian Society is a poly religious and poly cultural society.
- According to the 2011 census, 79.8% of the population of India practices Hinduism, 14.2% adheres to Islam, 2.3% adheres to Christianity, 1.7% adheres to Sikhism, 0.7% adheres to Buddhism and 0.4% adheres to Jainism.
- Even within these major religions there are numerous sects and regional groupings.

- Indians take a pluralistic view of religion.
- This has contributed to Unity in Diversity, which refers to unity without uniformity and diversity without fragmentation.

Is India Secularising?

- Around 0.7 million people in India did not state their religion in the 2001 census and were counted in the "religion not stated" category. They were 0.06% of India's population.
- Their number has significantly increased four times, from 0.7 million in the 2001 census to 2.9 million in the 2011 census (0.24% of India's population) at an average annual rate of 15%.

Why the Debate between Secularism & Secularisation?

- Due to huge religious diversity there has been widespread opposition in the implementation of Uniform Civil Code (Article 44).
- UCC proposes an overarching legal regime for governing civil matters for citizens, including marriage, divorce, adoptions, live-in relationships, and succession, regardless of religion.

Is Indian society truly Secular?

- Jawaharlal Nehru and Law Minister B.R Ambedkar are credited with the formation of secular values in the modern history of the country.
- With the Forty-second Amendment of the Constitution of India enacted in 1976, the Preamble to the Constitution asserted that India is a secular nation.
- However Indian Secularism has been a topic of debate. It is non the conventional Western interpretation of Secularism.
- It is in fact known as Non Discriminatory version of Secularism or Soft / Positive Secularism.
- According to R.A. Jahagirdar, in the Indian context, secularism has been interpreted as the equality before law, including of all religions, while the state is neutral.
- Article 44 of the Directive Principles of State Policy adds, "the state shall endeavor to secure for the citizens a uniform civil code throughout the territory of India".

24. Linguistic Diversity in Indian society

- Language is a symbolic system through which people communicate and through which culture is transmitted.
- It is associated with the social function of creating and propagating non material culture in society.
- Language is imbibed among members of society during primary socialisation
- Some languages contain a system of symbols used for written communication, while others rely on only spoken communication and nonverbal actions.
- Languages spoken in the Republic of India belong to several language families, the major ones being the Indo-Aryan languages spoken by 78.05% of Indians and the Dravidian languages spoken by 19.64% of Indians, both families together are sometimes known as Indic languages
- According to the People's Linguistic Survey of India, India has the second highest number of languages (780), after Papua New Guinea (840)
- There are 22 official languages in India and they are covered under the 8th schedule of the Indian Constitution.
- More than 19,500 languages or dialects are spoken in India.
- Six languages in India namely Tamil, Telugu, Sanskrit, Kannada, Malayalam and Odia have been given the status of classical language.

As per Section 3 of the Official Languages Act 1963:

- Continuance of English language is permitted for official purposes of the Union and for use in Parliament
 - (1) Notwithstanding the expiration of the period of fifteen years from the commencement of the Constitution, the English language may, as from the appointed day, continue to be used, in addition to Hindi.

- (a) for all the official purposes of the Union for which it was being used immediately before that day; and
- (b) for the transaction of business in Parliament

- States in India – Creation of States on Linguistic Criteria After Independence
- During the rule of British rule in India, the states were merely divided on the basis of administrative convenience, princely states, and coinciding with the areas annexed by British.
- The then Prime Minister of India announced the formation of a separate Andhra state in December 1952.
- This was the result of mass unrest, violent protests, injuries and deaths of protestors due to police firing, resignation of some legislators.
- This outburst of people was due to the death of Veteran Congress Leader Pottu Sriramulu who had gone on an indefinite fast for 56 days which ultimately led to his death.
- His fast was for reorganising the earlier Madras Province and creation of a separate state of Andhra Pradesh for Telugu speaking people.
- The movement for separate Andhra was known as the Vishalandhra Movement.
- The Andhra movement created the struggle for creation of other states on the basis of linguistic principle.
- Hence, the Central Government formed the States Reorganisation Commission in 1953 to redraw the boundaries of the states.
- On the recommendation of the Commission, the State Reorganization Act was passed in 1956 which led to the creation of 14 new states and 6 new union territories in India.
- The states of Gujarat and Maharashtra were created in 1960, prior to this there was an experiment on a bilingual Bombay state having Marathi and Gujarati speaking people.
- There were two linguistic groups in the state of Punjab – Punjabi-speaking and Hindi speaking.
- There was a demand for a separate state by the Punjabi speaking people.
- However the separation of state materialised only in 1966, 10 years after 1956.
- The states of Himachal Pradesh and Haryana were carved out of the state of Punjab.
- Nagaland became a state in 1963.
- In 1987, the states of Arunachal Pradesh and Mizoram were created.
- In 1972, Meghalaya was carved out of Assam.
- Tripura and Manipur were also created in 1972.
- Later on, linguistic basis was not the only criteria for creation of new states.
- Regional imbalances in a region and separate regional culture raised demands for formation of new states, this Jharkhand was split from Bihar, Chhattisgarh was separated from Madhya Pradesh and Uttarakhand was carved out of Uttar Pradesh.
- These new states were formed in 2000.

25. Tribal Diversity in Indian society

- Tribal diversity in Indian society
- According to the Imperial Gazetteer of India, a tribe is a collection of families bearing a common name, speaking a common dialect, and occupying or professing to occupy a common territory.

The essential characteristics of these communities are:

- Primitive Traits
- Geographical isolation
- Distinct subculture
- Cultural isolation
- Economically backward
- Totemism and Animism
- India is known as a melting pot of tribes and races.

- The total population of Scheduled Tribes is 10.43 crore as per the Census 2011 . This is 8.6% of the country's total population and 11.3 percent of the total rural population.
- According to Article 366(25) of Constitution, Scheduled Tribes are those communities that are scheduled in accordance with Article 342 of the Constitution.

Article 342 of the Constitution:

- The Scheduled Tribes are the tribes or tribal communities or part of or groups within these tribes and tribal communities which have been declared as such by the President through a public notification.
- Particularly Vulnerable Tribal Groups (PVTGs)
- They are considered the most disadvantaged and marginalized among the tribal communities.
- On the recommendation of the Dhebar Commission (1973), in 1975 Government of India created a sub-category called Primitive Tribal Groups (PTGs), later renamed as Particularly Vulnerable Tribal Groups (PVTGs).
- Now there are a total of 75 PVTGs spread over 17 states and one Union Territory (UT).

Characteristics of PVTGS:

- Government of India follows the following criteria for the identification of PVTGs:
- Pre-agricultural level of technology
- Low level of literacy
- Economic backwardness
- A declining or stagnant population.

Examples of PVTGS:

- Birhor, Bondo, Didayi, Dongria-Khond, Juangs, Kharias, Kutia, Kondh, Lanjia Sauras, Lodhas, Mankidias, Paudi Bhuyans, Soura, and Chuktia Bhunjia.
- Both the 5th and 6th schedules of the Indian Constitution deal with the administration of schedule and tribal areas.
- The difference between the 6th and 5th Schedule of Indian Constitution is that the sixth schedule covers only four states – Assam, Meghalaya, Tripura, and Mizoram, which are excluded from schedule Fifth.

26. Racial Diversity & Regionalism in India

Race:

- A category of humankind that shares certain distinctive physical traits.
- D.N. Majumdar - "If a group of people who by their possession of a number of common physical traits can be distinguished from others, even if the members of this biological group are widely scattered, they form a race".
 - i) The Negrito: Perhaps they were the first of the racial groups that came to India. They settled in the hilly areas of Kerala and the Andaman Islands. Eg. Kadar, Irula and Puliyan tribes of Kerala.
 - ii) The Proto-Australoid: These came just after the Negritos. Their sources are Australian aborigines. They are settled in central India from the Rajmahal hills to the Aravallis. Eg. Santhal, Bhil, Gond, Munda, Oraon etc.
 - iii) The Mongoloid: The original homeland of this race was Mongolia (China). These people are concentrated in the nearby areas of the Himalayas, e.g. Ladakh, Sikkim, Arunachal Pradesh and other areas of north-eastern India. The Mongoloids have pale or light pale skin, short height, comparatively large head, half open eyes, flat face and broad nose.
 - iv) The Mediterranean: They came to India from south-west Asia. They may be divided into three groups. They developed the Indus valley civilization in collaboration with the Proto-Australoids and initiated the bronze culture for the first time during 2500-1500 BC.
 - v) The Western Brachycephals (Western race with broad head) -

- vi) The Nordic: Last of the racial groups that came to India. They came from Taiga and Baltic regions. They were Aryan speaking families with long heads, fair complexion, and sharp noses, well-developed and well-built bodies. They are found in the region of Punjab, Haryana, Rajasthan and Jammu.

What has contributed to cohesion in India despite heterogeneity?

Various articles of the Indian Constitution ensure this continuity:

- Article 1 - India, that is Bharat, shall be a Union of States.
- Article 2 – Admission and establishment of the new state.
- Article 3 – Formation of new states and alteration of areas, boundaries, and name of existing states
- Articles 14-19
- Article 21 states that “No person shall be deprived of his life or personal liberty except according to a procedure established by law.”
- Thus, article 21 secures two rights:
 - 1) Right to life
 - 2) Right to personal liberty.
- Articles 25-(Freedom of conscience and free profession, practice, and propagation of religion)
- Article 26 (Freedom to manage religious affairs)
- This Article provides that every religious denomination has the following rights, subject to morality, health, and public order.
 - The right to form and maintain institutions for religious and charitable intents.
 - The right to manage its own affairs in the matter of religion.
 - The right to acquire the immovable and movable property.
 - The right to administer such property according to the law.
- Article 27 (Freedom as to payment of taxes for promotion of any particular religion)
- According to Article 27 of the Constitution, there can be no taxes, the proceeds of which are directly used for the promotion and/or maintenance of any particular religion/religious denomination.
- Article 28 (Freedom as to attendance at religious instruction or religious worship in certain educational institutions)
- This article permits educational institutions that are maintained by religious groups to disseminate religious instruction.
- Article 29 – Protection of Interests of Minorities
- This article is intended to protect the interests of minority groups.
 - Article 29(1): This provides any section of the citizens residing in India having a distinct culture, language, or script, the right to conserve their culture, language and script.
 - Article 29(2): The State shall not deny admission into educational institutes maintained by it or those that receive aid from it to any person based only on race, religion, caste, language, or any of them.
- Article 30 – Right of Minorities to Establish and Administer Educational Institutions
- This right is given to minorities to form and govern their own educational institutions.
- Article 30 is also called the “Charter of Education Rights”.
- Article 30 (1): All religious and linguistic minorities have the right to establish and administer educational institutions of their choice.
- Article 30 (2): The State shall not, when granting aid to educational institutions, discriminate against any educational institution on the ground that it is under the management of a minority, whether based on religion or language.

27. The countdown to a pandemic treaty

Syllabus: Issues Relating to Development and Management of Social Sector/Services relating to Health, Education, Human Resources

Mains: Pandemic Treaty Negotiations in WHO

Introduction to the Pandemic Treaty Negotiations:

- In March 2021, a call for a pandemic treaty was made by 25 heads of government and international agencies, marking a significant moment in global health governance.
- The ninth meeting of the Intergovernmental Negotiating Body (INB) for the World Health Organization (WHO) Pandemic Agreement commenced in March 2024.
- The treaty aims to address systemic failures revealed by the COVID-19 crisis and strengthen global defences against future pandemics.

Key Features of the Pandemic Treaty:

- The treaty aims to strengthen pandemic prevention, preparedness, and response with equity as a primary goal.
- It covers areas such as pathogen surveillance, healthcare workforce capacity, supply chain and logistics, and technology transfer for medical products.
- Emphasis is placed on equitable access to medical products, including provisions for access and benefit sharing.
- The proposed establishment of a Conference of Parties (COP) is suggested to oversee the implementation of the treaty.

Concerns and Contentious Issues:

- Developing countries are hesitant about sharing pathogen information without assurances of equitable benefits, leading to debates over the WHO Pathogen Access and Benefit-Sharing (PABS) System.
- The challenge of global governance, enforcement, and accountability poses a major obstacle to the effectiveness of the treaty.
- Proposals for decision-making bodies and enforcement mechanisms are included in the negotiating text, but consensus remains uncertain.
- The issue of intellectual property waivers for firms receiving public financing is particularly contentious.

Next Steps and Potential Outcomes:

- The current round of negotiations aims to reach a consensus decision by the World Health Assembly in May.
- The risk of a watered-down agreement due to the imperative to secure consensus is present.
- Failing to reach an agreement would be a serious setback in rebuilding trust and coordination between nations to confront future pandemics.

Nut Graf: *The ongoing negotiations for the WHO Pandemic Agreement address systemic failures revealed by COVID-19, focusing on equitable access to medical products. However, contentious issues like benefit-sharing and enforcement mechanisms threaten consensus.*

28. Households across the world waste 1 billion meals a day, says UN report

Syllabus: Poverty and Developmental Issues

Mains: Tackling Food wastage

Introduction: Food Waste Statistics

- In 2022, households globally wasted over one billion meals daily, while 783 million people faced hunger and a third of humanity dealt with food insecurity.

- The total food waste generated amounted to 1.05 billion tonnes, with each person wasting about 132 kilograms per capita, which equates to almost one-fifth of all available food for consumers.
- The distribution of food waste was observed with 60% occurring at the household level, 28% in food services, and 12% in retail.

Challenges in Tracking Progress:

- The report emphasizes the need to expand and strengthen data infrastructure for tracking and monitoring food waste, especially in low- and middle-income countries.
- Only four G-20 countries and the European Union currently possess suitable food waste estimates for tracking progress towards Sustainable Development Goal 12.3 of halving food waste by 2030.

Global Impact and Link to Climate Change:

- Food loss and waste contribute to 8%-10% of annual global greenhouse gas emissions, exceeding emissions from the aviation sector by almost five times.
- Additionally, significant biodiversity loss occurs, as food loss and waste consume almost a third of the world's agricultural land.
- The economic toll of food loss and waste is estimated at \$1 trillion, underscoring the urgency for addressing this issue.

Regional Trends and Government Recommendations:

- Contrary to assumptions, food waste is not solely a problem in affluent nations, with marginal differences in waste observed across income levels.
- Hotter countries tend to generate more food waste per capita, possibly due to higher consumption of fresh foods with substantial inedible parts and inadequate cold chains.
- Rural areas generally waste less food compared to urban areas, attributed to greater diversion of food scraps to pets, livestock, and home composting.
- Governments are urged to integrate measures to address food loss and waste into their climate strategies to elevate climate ambition.

Nut Graf: *In 2022, global households wasted over one billion meals daily, revealing a stark reality amidst widespread hunger. The Food Waste Index Report 2024 emphasizes urgent action, linking food waste to climate change and urging integrated efforts for sustainability.*

GOVERNANCE

1. Many top electoral bond donors were under scanner of ED, I-T Department

Syllabus: Government policies and interventions for the development of various sectors

Mains: Issues with electoral bonds

Context: The revelation that many top electoral bond donors were previously under scrutiny by agencies such as the Enforcement Directorate (ED) and the Income Tax (I-T) Department raises significant concerns about transparency and integrity in political funding. Patterns emerge where companies made substantial purchases of electoral bonds either before or after facing investigations, suggesting potential links between political donations and regulatory actions.

Issues

- **Questionable Timing of Donations:** The timing of electoral bond purchases by companies, either preceding or following investigations by enforcement agencies, raises suspicions of potential motives behind political contributions.
- **Potential Influence on Regulatory Actions:** The correlation between donations and regulatory scrutiny suggests the possibility of influence exerted through political funding, raising concerns about the integrity of regulatory processes.
- **Opaque Nature of Electoral Bonds:** The opacity surrounding electoral bonds, including the anonymity of donors and lack of disclosure requirements, exacerbates concerns about accountability and transparency in political funding.

Data:

- **Future Gaming and Hotel Services PR:** This company was the largest donor to political parties through the electoral bond route, despite being investigated by the ED for a lottery scam. They made significant purchases of electoral bonds both before and after ED searches.
- **Kolkata-based Companies with Common Director:** Keventer Food Park Infra Ltd., MKJ Enterprises Ltd., and Madanlal Ltd. are three firms registered at the same address and sharing a common director. They collectively donated a substantial amount through electoral bonds, with notable purchases made in specific batches.
- **Controversy Surrounding Keventer Agro:** Keventer Agro faced controversy after the West Bengal government's sale of its stake in Metro Dairy to Keventer Agro. The ED investigated the divestment but the investigation lost steam after legal proceedings.
- **Yashoda Super Speciality Hospital Group:** This group donated a significant amount through electoral bonds after their premises were searched by the Income Tax Department.
- **Aurobindo Pharma:** Following the arrest of Aurobindo Pharma's director, the company purchased electoral bonds. The company continued purchasing bonds even after the arrest.
- **Shirdi Sai Electricals Ltd. and Kalpataru Projects International:** Both companies faced Income Tax searches. Shirdi Sai Electricals purchased electoral bonds after the searches, while Kalpataru Projects International bought bonds before and after similar searches.

Significance

- **Threat to Democratic Principles:** Instances of potential quid pro quo between corporate entities and political parties undermine the democratic principles of accountability and fair representation.
- **Public Distrust:** Revelations about the nexus between political donations and regulatory actions contribute to public distrust in the political system and erode confidence in governance.
- **Need for Reforms:** The exposure of such patterns underscores the urgency for reforms in political funding mechanisms to enhance transparency and accountability.

Solutions

- **Strengthen Regulatory Oversight:** There is a need to strengthen regulatory oversight mechanisms to prevent undue influence on political processes and ensure impartiality in regulatory actions.
- **Transparency in Political Funding:** Implementing measures to enhance transparency in political funding, including comprehensive disclosure requirements for electoral bonds and public access to donor information, can promote accountability and deter illicit practices.
- **Legal Reforms:** Reviewing existing laws and regulations governing political funding to address loopholes and vulnerabilities that facilitate undue influence by corporate entities.

Nut Graf: The revelation of electoral bond donations by companies under the scanner of enforcement agencies underscores the urgent need for reforms in India's political funding landscape.

2. IT Act change yet to aid MSMEs

Syllabus: Government policies and interventions for the development of various sectors

Mains: Steps taken by government for MSME

Context: The Union Budget introduced a significant change in the Income Tax Act, specifically Section 43 b (h), aimed at ensuring timely payments to Micro, Small, and Medium Enterprises (MSMEs). While this intervention holds the potential to benefit MSMEs in the long run, its immediate impact has raised concerns among experts.

Issues

- **Delayed Payments:** Despite the provision in Section 43 b (h) of the Income Tax Act mandating timely payments to MSMEs, many small-scale industries continue to face delays in receiving payments from buyers. This delay not only affects the financial stability of MSMEs but also hampers their operational efficiency.
- **Risk of Losing Buyers:** Some MSMEs, particularly micro-units, face the risk of losing buyers who may opt to source from suppliers not registered under the UDYAN scheme. This could be attributed to the stringent payment timelines imposed by the revised Income Tax Act, which may prompt buyers to seek alternative suppliers to avoid potential tax implications.

Significance

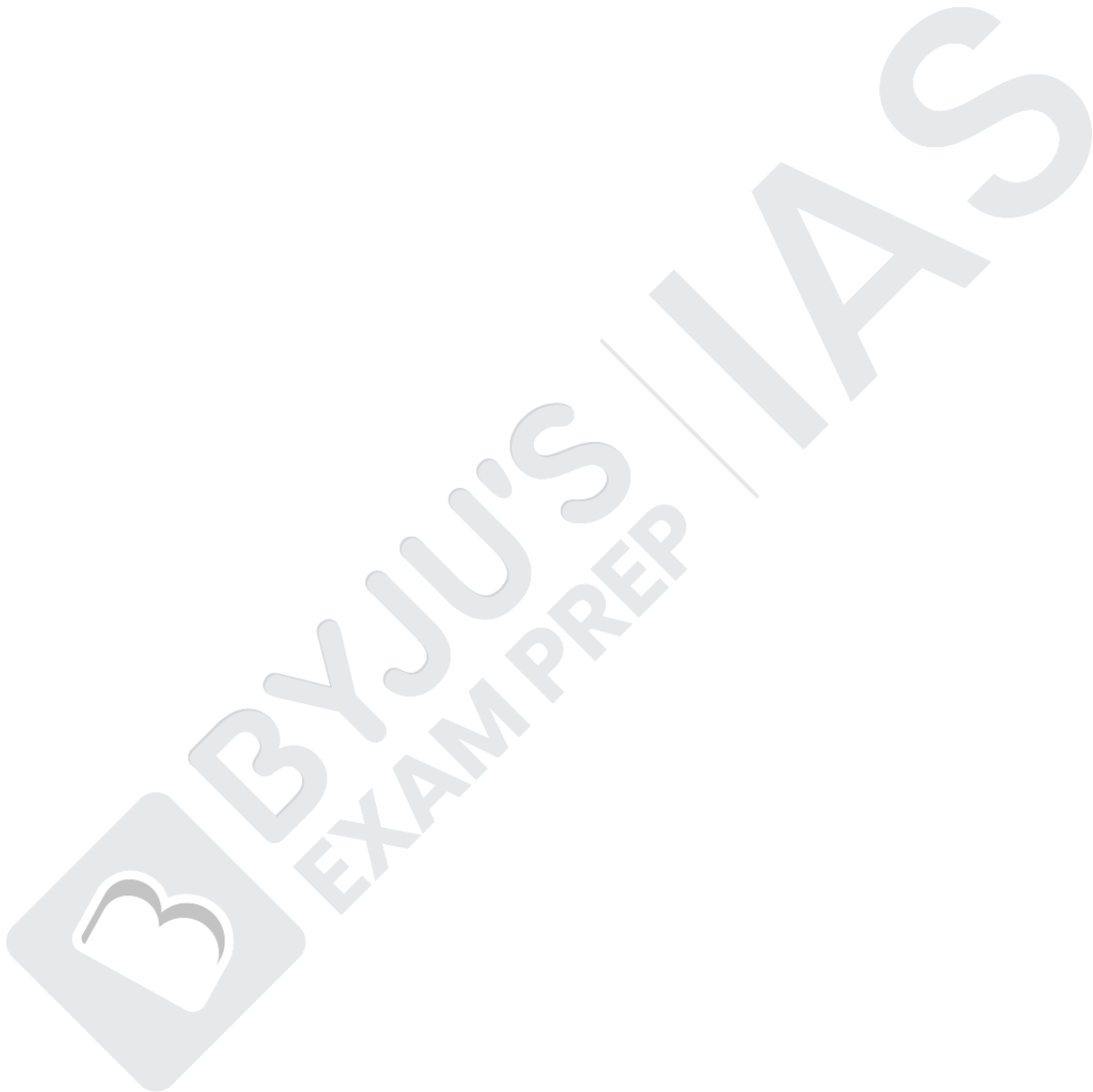
- **Financial Stability for MSMEs:** Timely payments to MSMEs are crucial for their financial stability and sustainability. The intervention in the Income Tax Act aims to address the prevalent issue of delayed payments and provide much-needed relief to small-scale industries, enabling them to manage their cash flow effectively.
- **Enhanced Business Environment:** Ensuring timely payments fosters a conducive business environment for MSMEs, encouraging their growth and contribution to the economy. By mitigating the risks associated with delayed payments, MSMEs can operate more efficiently and seize growth opportunities.

Solutions

- **Awareness and Outreach:** Government agencies and industry associations should conduct awareness campaigns to educate MSMEs about the provisions of the revised Income Tax Act and the benefits of timely payments. Enhanced outreach efforts can ensure that MSMEs leverage the provisions effectively to their advantage.
- **Streamlined Implementation:** Authorities responsible for enforcing the provisions of Section 43 b (h) should streamline implementation processes to minimize disruptions to MSMEs' operations. This may involve providing guidance and support to both MSMEs and buyers in adhering to the stipulated payment timelines.

- **Policy Adjustments:** Policymakers should consider revising certain aspects of the intervention, such as extending the payment timelines or offering incentives to buyers who comply with the regulations. Flexibility in policy implementation can alleviate the immediate challenges faced by MSMEs while ensuring the overall objectives are met.

Nut Graf: The amendment to Section 43 b (h) of the Income Tax Act represents a significant step towards addressing the issue of delayed payments to MSMEs. While its implementation may pose challenges in the short term, particularly for micro-units, the long-term benefits of ensuring timely payments are substantial.



DISASTER MANAGEMENT

1. 3 degrees to year-long droughts in the Himalayas

Context:

- Research conducted by the University of East Anglia (UEA) in the U.K. examines the impact of global warming on various countries, including India, Brazil, China, Egypt, Ethiopia, and Ghana.
- The study aims to quantify the risks posed to human and natural systems as global temperatures rise, with a focus on the consequences of a 3-degree Celsius increase.

Issue:

- The research highlights that a 3-degree Celsius increase in global temperatures could lead to severe and prolonged droughts in about 90% of the Himalayan region.
- There is a significant risk of increased exposure to heat stress in India, affecting around 80% of the population if global warming reaches 3 degrees Celsius.
- The study predicts detrimental effects on agriculture, biodiversity, and natural capital, including declines in crop yields, loss of pollination, and increased exposure of agricultural land to severe droughts lasting over a year.
- Economic damages associated with sea-level rise are also projected to escalate in coastal nations, albeit at a slower pace if warming is limited to 1.5 degrees Celsius.

Significance:

- Adhering to the Paris Agreement goal of limiting global warming to 1.5 degrees Celsius could mitigate many of these risks, including reducing heat stress exposure in India and minimizing the impact on agricultural productivity and natural capital.
- The findings underscore the urgent need for global efforts to curb greenhouse gas emissions and limit the rise in global temperatures. Current policies are insufficient, and without further action, the world is on track to warm by 3 degrees Celsius.
- The research serves as a wake-up call for policymakers, highlighting the escalating risks associated with climate change and emphasizing the importance of aligning climate policies with the objectives of the Paris Agreement.

GEOGRAPHY

1. India to see warmer summer as El Nino conditions continue

Context: The India Meteorological Department (IMD) has forecasted a warmer summer for India due to the continuation of El Nino conditions until at least May. Regions such as Telangana, Andhra Pradesh, north interior Karnataka, Maharashtra, and Odisha are expected to experience more heatwave days than usual. Additionally, above-normal rainfall is predicted for March, with above-normal maximum and minimum temperatures anticipated across most parts of the country from March to May.

Issues

- **El Nino Conditions:** The persistence of El Nino conditions contributes to warmer temperatures, affecting weather patterns and climatic conditions across India.
- **Heatwave Vulnerability:** Northeast peninsular India, including Telangana, Andhra Pradesh, and north interior Karnataka, along with parts of Maharashtra and Odisha, are particularly vulnerable to heatwaves, posing risks to public health and agricultural productivity.

Significance

- **Impact on Agriculture:** Warmer temperatures and reduced rainfall may adversely affect agricultural activities, potentially leading to crop failures and water scarcity in certain regions.
- **Public Health Concerns:** Higher temperatures increase the risk of heat-related illnesses and fatalities, necessitating public health interventions and awareness campaigns to mitigate the impact on vulnerable populations.

2. Spring season is disappearing in many states, shows study

Context: A recent analysis of meteorological records spanning 50 years suggests that Indian states are experiencing a gradual withdrawal of spring, a transitional period between winter and summer.

Issue:

- Researchers from Climate Trends examined temperature trends across 33 states and union territories since 1970, observing a significant warming trend during winter months.
- Regions, such as Sikkim and Manipur, witnessed substantial temperature increases in December and January, while the north experienced weaker warming or even cooling during these months.
- February showed pronounced warming across all regions, indicating a potential abrupt transition from cool winter temperatures to warmer conditions traditionally seen in March.

Significance: This shift has led to concerns about the disappearance of spring in many parts of India. Meteorologists attribute these changes to alterations in the pattern of Western Disturbances and the jet stream, impacting rainfall distribution and temperature patterns across the country.

3. 2023 was the 'hottest year' on record, confirms WMO

Context:

- The World Meteorological Organisation (WMO) confirms 2023 as the hottest year on record, aligning with findings from various climate agencies.
- The announcement comes as part of "The State of Global Climate Report" released on 19th March.

About:

- The global average near-surface temperature for 2023 measured 1.45 degrees Celsius above the pre-industrial baseline, with a margin of uncertainty of ± 0.12 degrees Celsius.
- This marks the warmest 10-year period on record, highlighting a concerning trend in global temperatures.
- Previously, the joint warmest years were 2016 and 2020, at 1.29 ± 0.12 degrees Celsius and 1.27 ± 0.13 degrees Celsius respectively, above the 1850–1900 average.

Significance:

- The confirmation underscores the urgency of addressing climate change as temperatures continue to rise.
- It emphasizes the need for global cooperation to mitigate the impacts of climate change, with countries urged to take significant steps towards reducing greenhouse gas emissions.
- The report serves as a wake-up call for intensified efforts in adopting sustainable practices and policies worldwide to combat the escalating threat of climate change.

4. Tropical cyclones of higher intensity demand a new category

Syllabus: Important Geophysical Phenomena such as earthquakes, Tsunami, Volcanic activity, cyclone etc., geographical features and their location-changes in critical geographical features (including water-bodies and ice-caps) and in flora and fauna and the effects of such changes.

Prelims: Tropical cyclones

Mains: Recent patterns of Tropical cyclones

Context: The increasing intensity of tropical cyclones, attributed to global warming, has prompted discussions about the necessity of introducing a new category, Category 6, to the Saffir-Simpson (SS) hurricane wind scale. Tropical cyclones are powerful and destructive weather phenomena formed over warm tropical ocean basins, characterized by strong winds, heavy precipitation, and storm surges.

Issues

- **Intensifying Cyclones:** Global warming has led to the intensification of tropical cyclones, resulting in peak wind speeds exceeding those accommodated by Category 5 on the SS hurricane wind scale. Observations indicate a rising trend in the occurrence of cyclones with wind speeds far surpassing the existing scale's upper limit.
- **Impact of Global Warming:** The increase in greenhouse gas emissions has elevated sea surface temperatures and ocean heat content, providing favorable conditions for the intensification of tropical cyclones. Climate change-related factors, such as warmer atmosphere and extended warm waters, contribute to the strengthening and prolonged duration of cyclones.
- **Need for Category 6:** The SS hurricane wind scale, initially designed to categorize cyclones up to Category 5, lacks provisions for storms with wind speeds beyond 252 km/hour. As evidenced by recent research, there is a growing need to recognize and communicate the heightened risks posed by cyclones exceeding Category 5 intensity.

Significance

- **Enhanced Risk Communication:** Introducing Category 6 to the SS wind scale would facilitate more accurate risk communication regarding the dangers associated with exceptionally intense cyclones. This would enable communities and authorities to better prepare for and respond to extreme weather events.

- **Disaster Management Preparedness:** The recognition of Category 6 cyclones necessitates a reassessment of disaster management strategies and early warning systems. Governments, particularly in vulnerable regions like the North Indian Ocean, must enhance preparedness measures to mitigate the potential impact of future extreme cyclonic events.

Solutions

- **Amendment of Wind Scale:** Adoption of the proposed modification to the SS wind scale to include Category 6 for cyclones with peak wind speeds exceeding 309 km/hour would provide a standardized framework for classifying and communicating the severity of tropical cyclones.
- **Adaptive Disaster Management:** Governments, including India, should revise their disaster management policies and early warning systems to account for the heightened risk posed by Category 6 cyclones. This entails investing in infrastructure, strengthening evacuation procedures, and enhancing community resilience to withstand extreme weather events.
- **Climate Mitigation Efforts:** Addressing the root cause of intensifying tropical cyclones requires concerted global efforts to mitigate climate change. Reducing greenhouse gas emissions and implementing adaptation measures are essential for minimizing the frequency and severity of extreme weather events in the long term.

Nut Graf: The proposal for Category 6 cyclones reflects the urgent need to adapt to the escalating risks posed by intensifying tropical cyclones in a warming climate. By recognizing and preparing for the challenges posed by extreme weather events, governments can safeguard vulnerable communities and build resilience in the face of climate change-induced disasters

MISCELLANEOUS

1. ZSI names a newly discovered sea slug after President Murmu

Context: The Zoological Survey of India (ZSI) has unveiled a remarkable discovery along the West Bengal and Odisha coasts: a new marine species of head-shield sea slug.

Issues:

- Named *Melanochlamys droupadi* in honour of India's President Droupadi Murmu, this species stands out with its brownish-black body adorned by a vivid ruby-red spot at the hind end. Measuring up to 7 mm, these sea slugs exhibit distinctive features like a short, blunt, cylindrical body and smooth dorsal surface.
- Their hermaphroditic nature and habitat in intertidal zones, where they leave distinct crawl marks, characterize them.
- They secrete transparent mucus to protect against sand grains.

Significance: This finding sheds light on the rich marine biodiversity along India's coastline and emphasizes the importance of continued exploration and conservation efforts in these regions.

2. Additional taxation

Context:

The then-Union Finance Minister Mr. Y.B. Chavan introduced additional taxation measures to generate a net amount of Rs. 186 crores for the 1974-75 fiscal year, reducing the budgetary gap to Rs. 125 crores from Rs. 311 crores.

About:

- The proposed changes in indirect taxes included levying auxiliary duties on various goods such as unmanufactured tobacco, cigarettes, plywood, cement, dyestuffs, rubber products, and cosmetics.
- These duties ranged from 10% to 50% of the effective basic duty depending on the product category.
- Moreover, basic excise duties were substantially increased for items like "special boiling point" spirits, raw naphtha for methanol, and petrochemicals.

Significance: The proposed taxation adjustments aimed to bolster revenue streams while aligning with the government's fiscal objectives. These measures underscored efforts to address budgetary shortfalls and support financial stability amidst economic challenges.

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

Context: The PM Janjati Adivasi Nyay Maha Abhiyaan (PM-JANMAN), a housing scheme targeting tribal communities, faces challenges due to the lack of accurate data on beneficiaries. The scheme, launched with ambitious targets, aims to provide housing to tribal groups but is hindered by discrepancies in population estimates and incomplete surveys.

Issues

- **Data Accuracy:** Inaccurate estimates of the tribal population, varying from 28 lakh to 44.64 lakh, pose challenges in identifying eligible beneficiaries for the housing scheme.
- **Incomplete Surveys:** State governments conducted surveys based on estimates provided by the Centre, leading to discrepancies and incomplete data on tribal populations and their locations.

Significance

- **Tribal Welfare:** The PM-JANMAN scheme is crucial for improving the living conditions of tribal communities, addressing housing needs, and reducing vulnerability.
- **Development Goals:** Providing housing to tribal groups aligns with broader development objectives, promoting inclusive growth and reducing disparities in access to basic amenities.

4. U.S. drone sales to India progress to the next stage

Context: The progress of the sale of MQ-9B high altitude long endurance armed Unmanned Aerial Vehicles (UAVs) from U.S. company General Atomics to India marks a significant development in bilateral defense cooperation. The deal, initiated during Prime Minister Narendra Modi's State visit to Washington DC, has advanced to the next stage after completing a 30-day Congressional notification period.

Issues

- **Allegations of Conspiracy:** The sale faced obstacles in the U.S. Congress due to allegations of Indian government involvement in a plot to assassinate Khalistani separatist Gurbhagat Singh Pannun, a U.S. citizen, on American soil.
- **Political Considerations:** With general elections approaching in India, the timing of further steps in the procurement process may be influenced by domestic political dynamics.

About MQ-9B high altitude long endurance armed UAV

- Designed and manufactured by General Atomics Aeronautical Systems.
- It is part of a family of remotely piloted aircraft systems that are used for surveillance, reconnaissance, and strike missions.
- Designed for long-duration flights, capable of staying airborne for more than 40 hours, depending on the mission requirements.
- Can operate at altitudes of up to 40,000 feet.
- Capable of carrying a variety of weapons, including precision-guided bombs and missiles.

Significance

- **Enhanced Defense Capabilities:** The acquisition of MQ-9B UAVs will bolster India's defense capabilities, providing advanced reconnaissance and surveillance capabilities in both conventional and asymmetric warfare scenarios.
- **Bilateral Relations:** The progress of the sale underscores the deepening defense ties between India and the United States, reflecting mutual trust and strategic partnership in the Indo-Pacific region.

5. Centre signs five contracts to procure arms and ammunition for ₹39,125 cr.

Context: The Union Ministry of Defence recently finalized five major capital acquisition contracts amounting to ₹39,125.39 crore for the Indian armed forces. These contracts encompass a range of equipment, including aero-engines, Close-in Weapon Systems (CIWS), High-Power Radar (HPR), BrahMos missiles, and ship-borne BrahMos cruise missile systems.

Issues

- **Dependency on Foreign Equipment:** Historically, India has relied on imports for its defense equipment needs, leading to significant expenditure and dependency on foreign manufacturers.
- **Indigenous Capabilities:** Enhancing indigenous defense manufacturing capabilities has been a longstanding goal to reduce dependency on imports and strengthen national security.

About MIG 29:

- The MiG-29, also known as the Mikoyan MiG-29, is a twin-engine jet fighter aircraft designed in the Soviet Union.
- Developed by the Mikoyan Design Bureau as an air superiority fighter during the 1970s.
- It was designed to counter the American F-15 and F-16 fighter aircraft.

About Close-in Weapon System (CIWS):

- A Close-in Weapon System (CIWS) is a point-defense system for detecting and destroying incoming missiles, aircraft, and sea threats at short range.
- Typically mounted on naval ships, CIWS is designed to intercept and neutralize threats that have penetrated other layers of defense before they can hit the ship.

Significance

- **Strengthening Indigenous Capabilities:** The procurement contracts with Hindustan Aeronautics Limited (HAL), Larsen & Toubro (L&T), and BrahMos Aerospace Private Limited (BAPL) aim to bolster indigenous capabilities in defense manufacturing.
- **Cost Savings and Self-Reliance:** By investing in domestic production, these contracts are expected to save foreign exchange, create employment opportunities, and reduce reliance on foreign-origin equipment, contributing to self-reliance in defense production.

6. Shah launches umbrella body for urban cooperative banks

Context: Union Cooperation Minister Amit Shah recently inaugurated the National Urban Cooperative Finance and Development Corporation Limited, serving as an umbrella organization for urban cooperative banks (UCBs). This initiative aims to enhance self-regulation among UCBs and facilitate their compliance with regulatory norms, fostering their development and expansion across the country.

Issues:

- **Regulatory Compliance:** Urban cooperative banks often face challenges in adhering to the regulatory requirements set forth by the Reserve Bank of India (RBI). Non-compliance with these regulations can hinder their competitiveness and sustainability in the banking sector.
- **Financial Performance:** While UCBs play a significant role in catering to the financial needs of urban areas, they encounter issues related to asset quality, particularly non-performing assets (NPA). Addressing these financial concerns is crucial for maintaining stability and viability in the banking sector.

Significance:

- **Enhanced Self-Regulation:** The establishment of the National Urban Cooperative Finance and Development Corporation Limited signifies a concerted effort towards promoting self-regulation among UCBs. This initiative aims to streamline their operations, improve governance standards, and ensure compliance with regulatory norms.
- **Expansion of UCBs:** By providing support and guidance to UCBs, the umbrella organization seeks to facilitate their expansion across various cities in India. This will contribute to greater financial inclusion and accessibility, particularly in urban areas where traditional banking services may be limited.

7. IAF finishes black-topping of landing strip near LAC

Context: The Indian Air Force (IAF) has completed the black-topping of the Advanced Landing Ground (ALG) in Nyoma, situated near the Line of Actual Control (LAC) in eastern Ladakh. This strategic infrastructure development aims to enhance India's military capabilities in the region, particularly in light of border tensions with China.

Issues:

- **Strategic Significance:** The proximity of Nyoma ALG to the LAC makes it a vital asset for India's defense posture in eastern Ladakh. However, concerns persist regarding its vulnerability to potential threats from China due to its geographical location.
- **Infrastructure Development:** While progress has been made in black-topping the landing strip, further work is underway to extend the runway to accommodate fighter jets. The completion of this infrastructure project is crucial for bolstering India's aerial capabilities in the region.

Significance:

- **Enhanced Operational Capabilities:** The development of Nyoma ALG will significantly enhance the IAF's operational capabilities by providing a strategically located base for aircraft operations near the LAC. This will enable rapid deployment of forces and improved response times to emerging security challenges.
- **Deterrence Against Threats:** The strengthened infrastructure at Nyoma ALG serves as a deterrence against potential threats from adversaries, particularly China. It underscores India's commitment to safeguarding its territorial integrity and national security interests in the region.

8. Google's app delisting cannot be allowed

Context: The delisting of certain Indian apps from Google's Android Play Store due to resistance against platform fees for in-app purchases has sparked controversy. Minister of Electronics and Information Technology has emphasized that such actions by Google cannot be permitted, leading to a scheduled meeting between the government and Google representatives to address the issue.

Issues:

- **Platform Fees:** Google requires app developers to pay commissions ranging from 11-30% on in-app purchases, which has led to resistance from some Indian apps, including those in the matrimonial, streaming, and job search sectors.
- **Impact on Indian Apps:** The delisting of these apps from the Play Store can significantly affect their visibility, user acquisition, and revenue generation. Many Indian apps rely on direct payments for digital goods, and the imposition of platform fees could hinder their growth and sustainability.

Significance:

- **Protection of Start-ups:** Minister Vaishnav underscores the importance of protecting Indian start-ups against practices that could stifle their innovation and competitiveness in the digital market.
- **Policy Clarity:** The government's stance on safeguarding the interests of Indian app developers against excessive platform fees sets a precedent for regulatory oversight and policy enforcement in the digital ecosystem.

9. Advanced landing systems cut flight delays, but come at a cost

Context: Indian airports faced significant disruptions due to adverse weather, leading to flight diversions and cancellations.

Issue:

- The Airports Authority of India has been upgrading ILS categories at various airports to enhance air navigation services. However, only six international airports in India possess CAT III B landing facilities, leaving many airports vulnerable to weather-related disruptions.
- Installing advanced ILS systems comes with substantial costs, including installation and maintenance expenses, posing challenges for both airports and airlines.
- Despite the benefits of enhanced safety and operational efficiency, the transition requires careful planning and investment.

Significance: Addressing these issues is crucial for ensuring reliable air travel and mitigating disruptions caused by adverse weather conditions.

10. Big Swedish study hints at link between bowel disease, infant diet**Context:**

- A study examined the dietary habits of over 80,000 children from Norway and Sweden, focusing on their intake at one and three years of age.
- Inflammatory Bowel Disease (IBD), comprising ulcerative colitis and Crohn's disease, has multifactorial causes including diet, genetics, and environment.
- Gut microbiome changes during infancy are implicated in IBD development, influencing dietary effects.

Findings:

- High intake of fish and vegetables at one year correlated with lower IBD risk, while sugar-sweetened beverage consumption increased risk.
- At three years, only fish intake remained a predictor of lower IBD risk, potentially due to polyunsaturated fatty acids and Vitamin D content.
- The study highlighted the importance of early dietary patterns in IBD development, particularly the role of fish intake.

Significance:

- Prospective analysis of early-life diet and subsequent IBD risk is novel, providing insights into preventive measures.
- The study emphasizes the need for balanced infant diets, including fruits, vegetables, and fish, while minimising sugar-sweetened beverages.
- Findings suggest a potential avenue for intervention to reduce IBD prevalence through dietary modifications in infancy.

11. Tired of spam or fraud calls? File a complaint on Chakshu**Context:**

- The Department of Telecommunications (DoT) has introduced a new platform called Chakshu for telecom users.
- Chakshu aims to address the issue of spam and fraud calls.
- This platform is part of the government's efforts to enhance cybersecurity and protect citizens from fraudulent activities in the telecom sector.

About Chakshu:

- Chakshu is a platform launched by the DoT where telecom users can report suspected fraud or spam callers.
- Users can access Chakshu at sancharsaathi.gov.in/sfc.
- It enables citizens to proactively report various types of fraud communications, including those related to bank accounts, payment wallets, SIM cards, gas and electricity connections, KYC updates, impersonation, and sextortion.

Significance:

- The launch of Chakshu provides a structured mechanism for citizens to report fraudulent activities, thereby contributing to a safer telecom environment.
- In addition to Chakshu, the DoT has also introduced the Digital Intelligence Platform, a resource for sharing non-public data among various stakeholders such as telecom service providers, law enforcement agencies, banks, and social media platforms.
- Minister for Communications and Electronics & Information Technology, Ashwini Vaishnaw, has expressed support for Caller Name Presentation (CNAP), a feature that allows users to see the registered name of callers.
- While some stakeholders have raised concerns about CNAP's impact on privacy rights, Vaishnaw compared it to the right to know who is knocking at the door, emphasizing the need for a balanced approach that considers both privacy and security concerns.

12. 'Foreign state actors stashed illicit funds in Paytm bank accounts'

The Financial Intelligence Unit (FIU) has levied a substantial ₹5.49 crore fine on Paytm Payments Bank Limited (PPBL) for its involvement in extensive illegal activities. The infractions, orchestrated by a syndicate with ties to a foreign state, encompassed illicit operations such as offering banned gambling services and fraudulent dating platforms.

About:

- This transgression came to light following FIRs filed by the Cyber Crime Station of Hyderabad over two years ago, citing violations of Indian laws.
- The FIU's investigation revealed a network of businesses associated with PPBL engaging in prohibited activities and funnelling proceeds through the bank's accounts.
- Additionally, PPBL was reprimanded for its failure to implement internal mechanisms for detecting and reporting suspicious transactions in accordance with the Prevention of Money Laundering Act (PMLA) guidelines.

Significance: The FIU's actions underscore the imperative of upholding regulatory compliance in financial operations to mitigate illicit activities and safeguard consumer interests.

13. Transparent yet impenetrable

Context: Bulletproof materials have evolved into sophisticated defenses against ballistic threats.

Issue:

- Bulletproof glass, composed of high-strength ceramics like silicon nitride, steel, and layers of heavy nylon fabric, offers formidable protection.
- Upon impact, the ceramic component abruptly halts the bullet, dissipating its energy and destroying initial glass layers while ensnaring it in a coarse mesh.
- Textile bulletproof vests, crafted from 16-24 layers of tightly woven nylon cloth, provide discreet full-torso protection under regular clothing.
- Vests with 16 layers effectively stop handgun and submachine-gun bullets, while those with 24 layers offer resilience against more powerful magnum bullets from the same firearms.

Significance: These advancements underscore the relentless pursuit of security solutions, ensuring safety in environments where threats persist. As technology advances, the quest for even more effective protective materials continues, reshaping the landscape of personal and structural defense mechanisms.

14. Navy commissions INS Jatayu, MH-60R helicopter squadron

Context: In a significant development, the Indian Navy commissioned INS Jatayu at Minicoy island, its second Lakshadweep base after INS Dweeprakshak in Kavaratti. Additionally, the Navy inaugurated its inaugural MH-60R multi-role helicopter squadron INAS 334 'Seahawks' at Kochi, enhancing its rotary fleet and anti-submarine warfare capabilities.

About:

- INS Jatayu marks the start of phased expansion to strengthen surveillance and security in Lakshadweep, crucial for the Nine Degree channel and sea lanes.
- Plans include infrastructure upgrades for larger vessels and better connectivity.
- The MH-60R squadron, led by Captain M. Abhishek Ram, signifies a significant milestone. Featuring traditional rituals, the event emphasized historic significance.

Significance: The Navy's proactive measures demonstrate its commitment to maritime security and regional stability.

15. PM launches India's first underwater Metro line in Kolkata

Introduction: Prime Minister Narendra Modi unveiled the Esplanade-Howrah Maidan section of the Kolkata Metro, featuring the nation's first underwater transportation tunnel beneath the Hooghly River.

About:

- The 4.8-km Esplanade-Howrah Maidan stretch, part of the East-West Corridor, was completed at a cost of ₹4,965 crore.
- Additionally, the ₹1,430-crore Kavi Subhash-Hemanta Mukhopadhyay section of the New Garia-Airport line was inaugurated, extending Metro connectivity to southeastern Kolkata.

Significance: These new sections promise to alleviate road congestion and offer seamless connectivity, fostering urban mobility and development.

16. HC seeks Centre's response on shutting down of MAEF

Introduction: The Delhi High Court has demanded a response from the Central government regarding a petition challenging the Ministry of Minority Affairs' decision to close the Maulana Azad Education Foundation (MAEF), approved by the Central Waqf Council.

Issue:

- As a key organization in disbursing educational funds, the MAEF supported initiatives like the Maulana Azad National Fellowship, discontinued in 2022.
- Filed by concerned citizens, the petition deems the MAEF's closure a questionable exercise of authority, stating it will deprive deserving students, especially girls, of scholarships.

Significance: The petitioners also argue that the dissolution process was flawed as the remaining funds were directed to the CWC instead of a similar society as dictated by the minority ministry. The court has set March 7 for further proceedings, awaiting government input on the matter.

17. Centre to rope in ISRO to provide Internet in 80 remote tribal villages

Context: The Tribal Affairs Ministry plans to collaborate with the Indian Space Research Organisation (ISRO) to provide Internet services to around 80 remote tribal villages in Jharkhand, Madhya Pradesh, Odisha, and Maharashtra. This initiative aims to bridge the digital divide and empower tribal communities by enabling access to essential services such as education, healthcare, and e-governance.

Collaboration with ISRO

- **Deployment of V-SAT Stations:** ISRO will deploy V-SAT (very small aperture terminal) stations in geographically remote and difficult-to-reach tribal villages.
- **Memorandum of Understanding (MoU):** ISRO chief S. Somnath confirmed the collaboration and stated that an MoU would be signed soon to provide pilot connectivity services, including Internet, medical, and educational connectivity.

Other Proposals Discussed

- **Projects with Eminent Institutes:** Proposals for projects with institutes like AIIMS Delhi, IIT Delhi, IIM Calcutta and IISc Bengaluru were discussed.
- **Health Research and Training:** Partnership with AIIMS Delhi for advanced research on tribal health issues, including sickle cell anaemia, and organizing training programs for medical staff in tribal areas.
- **Technology and Entrepreneurship:** Plans to set up a specialized department for appropriate technology and entrepreneurship in collaboration with IIT Delhi and IIM Kolkata.
- **Training Facility in Semiconductors:** Proposal to collaborate with IISc Bengaluru to establish a training facility offering semiconductor courses for tribal students.

Significance

- **Bridging the Digital Divide:** Providing Internet access to remote tribal villages enhances connectivity and access to essential services, contributing to socio-economic development.
- **Empowering Tribal Communities:** Access to education, healthcare, and e-governance empowers tribal communities, enabling them to participate more actively in economic and social activities.

18. Backed by BrahMos, Navy's Minicoy base to keep watch over Arabian Sea

Context: The establishment of the Indian Navy's new base on Minicoy Island in Lakshadweep, named INS Jatayu, marks a significant development in India's maritime security strategy. Equipped with advanced infrastructure and weaponry, including BrahMos supersonic cruise missiles, INS Jatayu aims to enhance India's security posture in the Arabian Sea region.

Background

- **Long-term Capability Development:** The upgrade of INS Jatayu is part of a broader capability development plan aimed at bolstering India's security presence in strategically important areas near critical Sea Lanes of Communication (SLOC).
- **Strategic Location:** Minicoy Island's proximity to the Maldives and the Nine Degree Channel in the Arabian Sea makes it a crucial location for surveillance and defense operations.

Issues

- **Growing Chinese Naval Presence:** The expansion of Chinese naval activities, including research vessels, in the Indian Ocean underscores the need for India to strengthen its maritime defenses in the region.
- **Security Challenges:** India faces diverse security challenges, including potential threats from state and non-state actors, piracy, and maritime terrorism, necessitating robust surveillance and defense capabilities.

Significance

- **Enhanced Surveillance:** The establishment of INS Jatayu with radar facilities and coastal batteries enhances India's maritime surveillance capabilities, enabling early detection and response to threats.
- **Deterrence Against Adversaries:** The deployment of BrahMos missiles on Minicoy Island serves as a deterrent against the adversarial naval presence and reinforces India's defense posture in the Arabian Sea.

19. Centre tweaks PM solar 'free electricity' scheme

Context: The Union government has introduced modifications to the PM Surya Ghar Muft Bijli Yojana, a rooftop solar scheme aimed at providing free electricity to households. The scheme, initially designed to fully subsidize the installation of solar systems, will now cover only up to 60% of the costs, with households required to contribute the remaining amount.

Background

- **Original Scheme:** The scheme aimed to install rooftop solar systems in one crore households through tie-ups with renewable energy service companies, fully subsidized by the government.
- **Revised Approach:** Under the revised scheme, households will bear a portion of the installation cost, with the government providing a subsidy of up to 60%. Consumers can avail of low-interest, collateral-free loans to cover their share of the expenses.

Issues

- **Financial Burden on Households:** Requiring households to contribute financially may pose a challenge for low-income families, hindering their ability to adopt solar power.
- **Complex Financing Structure:** Discrepancies in the financing model, as outlined by different officials, may lead to confusion among beneficiaries and stakeholders.

Significance

- **Reduced Electricity Bills:** Despite the cost-sharing arrangement, the scheme aims to reduce electricity bills for participating households through net-metering, where excess solar power generated is fed back into the grid.
- **Promotion of Renewable Energy:** By incentivizing the adoption of rooftop solar systems, the scheme contributes to India's renewable energy targets and reduces dependency on conventional power sources.

20. 'Food plate costs show vegetarian thali prices rose 7% in February'

Context: Crisil's monthly food cost assessment reveals contrasting trends in vegetarian and non-vegetarian food plate prices for February. While vegetarian plate costs surged by 7% due to escalating onion and tomato prices, non-vegetarian plate costs saw a significant year-on-year decline of 9%.

Vegetarian Plate Costs

- **Factors Driving Increase:** A surge in onion and tomato prices, along with a rise in rice and pulses costs, contributed to the 7% increase in vegetarian plate costs.
- **Month-on-Month Decline:** Despite the year-on-year increase, there was a 2% sequential drop in vegetarian plate costs, reaching a 7-month low.
- **Regional Variations:** Cost variations are computed based on input prices prevailing in different regions of India, affecting overall plate costs.

Non-Vegetarian Plate Costs

- **Year-on-Year Decline:** Non-vegetarian plate costs witnessed a significant 9% decline from the previous year.
- **Broiler Prices:** The drop in costs was primarily attributed to a 20% decline in broiler prices, which account for a substantial portion of the non-vegetarian thali's cost.
- **Month-on-Month Increase:** However, on a month-on-month basis, non-vegetarian plate costs increased by 4%, mainly due to rising broiler prices caused by lower supply and increased demand ahead of Ramadan.

Issues

- **Vegetable Price Volatility:** Fluctuations in onion and tomato prices significantly impact overall food plate costs, posing challenges for households.
- **Supply Chain Disruptions:** Bird flu outbreaks and seasonal factors affecting broiler prices highlight vulnerabilities in the supply chain, leading to cost fluctuations.

Significance

- **Inflation Indicators:** Crisil's food cost assessment provides insights into food price trends ahead of official inflation data, aiding in economic forecasting and policy formulation.
- **Household Budgets:** Understanding the dynamics of food plate costs is crucial for households in managing their budgets and adjusting consumption patterns.

Solutions

- **Diversification of Diets:** Encouraging diversification in dietary habits can mitigate the impact of price fluctuations.
- **Strengthening Supply Chains:** Enhancing resilience in food supply chains through better infrastructure, storage facilities, and disease management can help stabilize prices and ensure food security.

21. Kozhikode to get India's first cooperatives museum

Context: Kozhikode, Kerala, is set to become home to the first International Cooperative Museum (ICM) in India.

- The museum, initiated by Karassery Service Co-operative Bank, aims to showcase India's rich history of cooperative movements.

History and Significance of Cooperatives:

- Cooperatives have played a significant role in various sectors of the Indian economy, including agriculture, finance, and consumer goods.
- The museum seeks to highlight the success stories and achievements of cooperatives in India, particularly in Kerala.

Construction and Technology:

- The construction of the 14-storey museum, which began in 2016, faced delays due to the COVID-19 pandemic.
- Plans have been updated to incorporate the latest technology, such as artificial intelligence and virtual reality, for interactive displays.

Collaboration and Expansion:

- The project has received support from organizations like the National Bank for Agriculture and Rural Development (NABARD) and the International Cooperative Alliance.
- Efforts are being made to gather information and display materials from cooperatives in Europe, Japan, and other countries.

Significance

- The ICM aims to serve as an educational and research hub, attracting tourists, students, and scholars interested in cooperative movements.
- By showcasing the achievements of cooperatives, the museum intends to inspire future generations and promote the cooperative model as a viable business strategy.

22. Navy demonstrates twin-carrier operations

Context: The Naval Commanders' Conference of 2024 concluded, with its first part held at sea aboard INS Vikramaditya, showcasing twin-carrier operations.

- The operations involved MiG-29K fighter jets taking off simultaneously from INS Vikramaditya and INS Vikrant, followed by cross-deck landings.

Twin-Carrier Operations:

- Demonstrated coordination and capability of the Indian Navy to conduct operations with multiple aircraft carriers simultaneously.
- INS Vikrant, the first indigenous aircraft carrier, has been fully integrated into operational activities, marking a significant milestone.

Operational Tempo:

- The conference occurred amidst heightened operational activity, including developments in the Red Sea and renewed piracy attempts in the Gulf of Aden.
- Highlighted the Navy's readiness to respond to emerging challenges and maintain maritime security in strategic regions.

Significance**Operational Capability Showcase:**

- The successful execution of twin-carrier operations underscores the Navy's proficiency in conducting complex manoeuvres at sea.
- Demonstrates India's growing maritime prowess and capability to project power across the Indian Ocean Region.

Leadership Role in Maritime Security:

- Defence Minister Rajnath Singh emphasized the Indian Navy's leadership role in ensuring peace and prosperity in the Indian Ocean Region.
- Reflects India's commitment to safeguarding maritime interests and promoting stability in vital sea lanes.

23. CO₂ from chemical weathering has its limits

Context: A recent study explores the relationship between the chemical weathering of rocks and atmospheric carbon dioxide (CO₂) drawdown.

- Chemical weathering plays a crucial role in regulating CO₂ levels in the atmosphere and consequently influences the Earth's climate.

Carbon Dioxide Drawdown:

- Chemical weathering processes contribute to the removal of CO₂ from the atmosphere through reactions with rocks and minerals.

- Understanding the factors influencing the efficiency of CO₂ drawdown is essential for climate modelling and predicting future climate change.

Impact of Erosion Rates:

- The study suggests that CO₂ drawdown peaks at moderate erosion rates, indicating a limit to the effectiveness of chemical weathering in reducing atmospheric CO₂.
- Identifying these limits provides valuable insights into the Earth's carbon cycle and helps refine climate models.

Significance

Insights into the Carbon Cycle:

- The findings offer new insights into the mechanisms governing the Earth's carbon cycle, shedding light on the processes regulating CO₂ levels in the atmosphere.
- Improved understanding of chemical weathering limits enhances climate projections and informs strategies for mitigating climate change.

Climate Modeling Accuracy:

- Accurate representation of chemical weathering processes in climate models is crucial for predicting future climate scenarios and assessing the efficacy of climate mitigation strategies.
- Incorporating findings on the limitations of CO₂ drawdown from chemical weathering improves the accuracy of climate models and enhances predictive capabilities.

24. Introducing a new toll collection system

Context: The Indian government is poised to revolutionize highway toll collection with the introduction of a cutting-edge system based on global navigation satellite technology.

About:

- Road Transport and Highways Minister Nitin Gadkari announced plans to implement this innovative system before the 2024 election's model code of conduct takes effect.
- Under this system, vehicles will be equipped with On-Board Units (OBUs) that utilize the Indian satellite navigation system, GAGAN, for precise mapping and toll calculation.
- Gantries mounted with CCTV cameras along highways will enforce compliance by capturing vehicle registration plates.
- Challenges such as toll recovery from non-compliant vehicles and privacy concerns remain.

Significance: The new system is expected to coexist with FASTag-based toll collection, offering potential cost savings and operational efficiencies.

This technological leap underscores India's commitment to modernizing infrastructure and improving transportation systems for its citizens.

25. What are the factors pushing Bitcoin to a new all-time high?

Context: Bitcoin, the foremost cryptocurrency in terms of market capitalization, surged to a new all-time high.

About:

- Various factors likely contributed to Bitcoin's recent price surge.
- The aftermath of Russia's invasion of Ukraine in 2022 and the collapse of cryptocurrencies like LUNA/UST and trading platforms such as FTX prompted market recovery.

- The approval of the first spot exchange traded funds (ETFs) for Bitcoin by the U.S. Securities and Exchange Commission (SEC) signaled growing regulatory acceptance, attracting traditional investors.
- Investor anticipation surrounding the upcoming Bitcoin halving event scheduled for April also buoyed prices.
- The halving, occurring approximately every four years, halves the cryptocurrency mining reward, thereby increasing scarcity and potentially driving up prices.

Significance: The cryptocurrency landscape remains volatile, emphasizing the importance of caution for new investors. Bitcoin's recent price fluctuations serve as a reminder of the rapid wealth fluctuations inherent in cryptocurrency investments.

26. 7,396 golden langurs in India, reveals survey

Context: A recent survey conducted by multiple organizations including the Primate Research Centre NE India and SACON has shed light on the population of golden langurs in India.

About:

- The study, spanning two phases, revealed an estimated 7,396 golden langurs across various forest reserves and national parks in Assam.
- Utilizing the block count method, researchers meticulously observed the langurs and identified distinct populations divided into northern and southern fragments.
- The survey highlighted the necessity for corridor linkage among fragmented habitats to mitigate potential threats faced by the primates due to anthropogenic interactions.
- While the population estimation marks a significant milestone in conservation efforts, the survey also underscored an unstable situation in the langurs' fragmented habitats.

Significance: With the average group size slightly higher than in previous estimations, efforts to safeguard these endangered primates become increasingly critical, emphasizing the importance of habitat conservation and corridor linkage initiatives to ensure the survival of golden langurs in India.

27. India world's top arms importer between 2019-23

Context: India has reclaimed its position as the world's top arms importer, according to a report by the Stockholm International Peace Research Institute (SIPRI).

About:

- Between 2019 and 2023, India's arms imports increased by 4.7% compared to the previous period.
- Despite Russia remaining India's main arms supplier, accounting for 36% of imports, this marked the first time in over five decades that Russian deliveries comprised less than half of India's imports.
- SIPRI noted a significant surge in European arms imports, up by 94%, coinciding with the conflict in Ukraine.

Significance: The report highlighted that nine of the top ten arms importers during this period were located in Asia, Oceania, or the Middle East. India's fiscal year 2024-25 interim budget allocated ₹6.2 lakh crore to the Defence Ministry, reflecting the country's renewed focus on strengthening its military capabilities.

28. Number of poor people increases in Sub-Saharan Africa

Context: In a global landscape where poverty has seen a general decline, Sub-Saharan Africa stands out for its contrasting trend of increasing poverty levels.

About:

- Recent data from the World Bank reveals a worrying rise in poverty within the region, with the number of impoverished individuals swelling from 278 million in 1990 to 397 million in 2019. This surge, particularly notable since 2008, coincides with numerous conflicts across Sub-Saharan African nations.
- In stark contrast, regions like South Asia have witnessed significant reductions in poverty over the same period.
- While poverty rates have declined in terms of population share, the challenge persists, especially in fragile and conflict-affected states.

The World Bank emphasizes the critical connection between stability and poverty alleviation, highlighting the urgent need for concerted efforts to address instability and conflict as integral components of poverty reduction strategies in Sub-Saharan Africa.

29. Drug regulator warns about Meropenem, Disodium

Context:

The Central Drugs Standard Control Organisation (CDSCO) has issued a stern warning against the production and distribution of unapproved drugs, particularly those categorized as “New Drugs.”

Issue:

- This cautionary measure follows reports indicating the unauthorized manufacture and sale of drugs, including Meropenem (an antibacterial agent) and Disodium EDTA (used for treating calcium overload).
- No new drug should be manufactured or sold without proper authorization from the licensing authority. Manufacturers intending to produce new drugs are required to seek permission from the central licensing authority before proceeding.

Significance:

This proactive step aims to safeguard public health by ensuring that only authorized and regulated drugs are available in the market.

30. SC stops Assam Government's move to de-notify rhino habitat

Context: The Supreme Court has intervened to halt the Assam government's attempt to withdraw a notification constituting the Pobitora Wildlife Sanctuary, home to a significant population of Greater One-Horned Rhinoceroses. The government's move to de-notify the sanctuary, citing the unilateral issuance of the notification by the Forest Department in 1998, has raised concerns about the protection of forest dwellers' rights and wildlife conservation.

Issues:

- **Unilateral notification:** The Forest Department's issuance of the sanctuary notification in 1998 without consulting other relevant departments or stakeholders has sparked controversy over procedural irregularities and lack of consensus.
- **Rights of forest dwellers:** The withdrawal of the sanctuary notification without settling the rights of marginalized communities residing in the area raises questions about the protection of their livelihoods and traditional rights.
- **Conservation implications:** Pobitora Wildlife Sanctuary serves as a crucial habitat for the endangered Greater One-Horned Rhinoceroses, and any alteration in its status could jeopardize conservation efforts and biodiversity.
- **Legal clarity:** The legality of the government's decision to withdraw the sanctuary notification and its implications for wildlife protection and forest governance needs to be examined in light of existing laws and court directives.

Significance:

- **Wildlife conservation:** The Supreme Court's intervention underscores the importance of upholding sanctuary notifications to safeguard endangered species and their habitats, contributing to biodiversity conservation.
- **Protection of forest dwellers' rights:** The court's directive to ensure that forest dwellers' rights are not infringed upon during decision-making processes highlights the need for equitable and inclusive conservation policies.
- **Legal precedent:** The case sets a legal precedent regarding the withdrawal of sanctuary notifications and the process of consultation and decision-making in matters concerning environmental conservation and forest governance.
- **Balancing interests:** The court's emphasis on protecting both wildlife habitats and the rights of forest dwellers reflects the necessity of balancing conservation objectives with socio-economic considerations.

31. Modi, Sunak assess progress on India-U.K. FTA negotiations

Context: Prime Minister Narendra Modi and U.K. Prime Minister Rishi Sunak recently engaged in discussions to assess the progress of negotiations on a Free Trade Agreement (FTA) between India and the United Kingdom. Amidst ongoing general elections in both countries, the leaders reiterated their commitment to reaching a mutually beneficial agreement, reflecting the significance of enhancing bilateral trade relations.

Issues:

- **Prolonged negotiations:** Despite ongoing negotiations since January 2022, both sides have yet to reach an agreement on key aspects of the Free Trade Agreement, leading to delays and uncertainties in finalizing the deal.
- **Election-related pressures:** The timing of the negotiations coincides with general elections in both India and the United Kingdom, adding political complexities and time constraints to the process.
- **Ambitious outcome:** Both countries aim to achieve an ambitious outcome covering various sectors, including goods and services, to maximize the benefits of the Free Trade Agreement and enhance bilateral trade ties.
- **Regional and global context:** The discussions between Prime Minister Modi and Prime Minister Sunak also considered broader regional and global developments, reflecting the interconnectedness of economic issues and geopolitical dynamics.

Significance:

- **Economic partnership:** The Free Trade Agreement holds significant potential for deepening economic cooperation between India and the United Kingdom, promoting trade, investment, and job creation in both countries.
- **Strategic implications:** Strengthening trade relations between India and the United Kingdom can contribute to enhancing strategic ties and fostering closer collaboration on shared interests, including security, technology, and climate change.
- **Market access:** The agreement could provide increased market access for businesses in diverse sectors, facilitating growth opportunities and expanding market reach for Indian and British companies.
- **Signal for global trade:** A successful conclusion of the Free Trade Agreement would send a positive signal to the international community, reaffirming both countries' commitment to free trade and economic openness amidst global uncertainties.

32. 'One nation one poll' panel may submit its report today

Context: The committee on "one nation, one election," chaired by former President Ram Nath Kovind, is poised to submit its report, potentially.

- This committee, established in September 2023, has been tasked with exploring the feasibility and implications of holding simultaneous elections for the Lok Sabha, State Assemblies, municipalities, and panchayats across India.
- The recommendations expected in the report may entail amendments to relevant articles of the Constitution or the introduction of new provisions to facilitate synchronized polls.

Issues:

- **Constitutional amendments:** The proposal for “one nation, one poll” necessitates constitutional amendments or additions to enable the synchronization of elections across various tiers of governance, considering the current framework of staggered elections.
- **Administrative challenges:** Implementing simultaneous elections requires significant administrative coordination and logistical arrangements at both central and state levels, posing challenges in terms of infrastructure, resources, and electoral management.
- **Political consensus:** Achieving consensus among political parties on the idea of simultaneous elections is crucial, as it involves restructuring electoral cycles and potentially altering the political landscape, leading to varied opinions and concerns among different stakeholders.
- **Federal structure considerations:** The move towards synchronized elections must consider the federal structure of India’s governance system, respecting the autonomy and diversity of states while promoting efficiency and accountability in electoral processes.

Significance:

- **Governance efficiency:** Synchronized elections aim to enhance governance efficiency by reducing disruptions caused by frequent electoral cycles, enabling policymakers to focus on governance and development priorities without the distraction of recurring elections.
- **Cost savings:** Holding simultaneous polls can lead to substantial cost savings for both the government and political parties, as it streamlines election-related expenditures and optimizes the utilization of resources.
- **Voter engagement:** Consolidating elections can potentially improve voter participation and engagement by reducing voter fatigue associated with frequent elections and simplifying the electoral process for citizens.
- **Political stability:** Simultaneous elections have the potential to contribute to political stability by providing a more cohesive electoral mandate, reducing political uncertainty and facilitating long-term policy planning and implementation.

33. Panel recommends simultaneous polls

Panel recommends simultaneous polls

Context: A high-level committee chaired by former President Ram Nath Kovind has proposed a phased approach to implement simultaneous elections for the Lok Sabha, State Assemblies, municipal bodies, and panchayats.

About:

- The 22nd Law Commission is also studying the issue; the Kovind panel suggests synchronizing elections from the 2029 cycle.
- It recommends setting an ‘Appointed Date’ after each general election for the commencement of a new electoral cycle. State Assemblies formed post this date would conclude before the next general elections, enabling simultaneous polls.
- To achieve this, amendments to Articles 83 and 172 of the Constitution are proposed, along with changes to Article 324A for local body elections.
- The committee submitted its extensive report, spanning over 18,000 pages, to President Droupadi Murmu, but a condensed version of 321 pages was made public.

Significance: While the committee emphasizes the need to alleviate the burden on various stakeholders, it also stresses the constitutional integrity of its recommendations.

34. Why govts. are seeing red on Rhodamine B in street food

Context: Tamil Nadu recently prohibited the sale of cotton candy or candy floss due to the detection of Rhodamine-B, an industrial dye, in samples collected from Chennai stalls.

About:

- Following suit, Karnataka banned harmful colouring agents in cotton candy and “Gobi Manchurian,” while Andhra Pradesh initiated sample analysis.
- Rhodamine-B, typically used in textiles, poses significant health risks when consumed. Meenakshi Bajaj, a dietician at Tamil Nadu Government Multi Super Speciality Hospital, highlighted its presence in various foods, including sweets, manchurian items, and sauces for Chinese cuisine.
- Doctors have emphasized the long-standing health concerns associated with Rhodamine-B, including allergies and potential carcinogenic effects.

Significance: While FSSAI has approved certain food colours and flavours, the presence of Rhodamine-B highlights the need for strict regulations to safeguard public health.

35. Indian team uses repurposed drug to treat oral cancer subtype

Context: A team of researchers based in Mumbai has identified a novel fusion transcript in head and neck cancer patients, offering a potential therapeutic target for treatment.

- The study, published in NPJ Precision Oncology, highlights the use of an FDA-approved deworming drug, pyrinium pamoate, as a promising treatment for this subtype of oral cancer.

Understanding Fusion Transcripts

- Fusion transcripts occur when segments of chromosomes exchange positions, leading to the emergence of chimeric genes or fusion transcripts.
- The identified fusion transcript (UBE3C-LRP5) activates the Wnt/beta-catenin signaling pathway, known for promoting cancer cell growth and invasion.

Prevalence and Significance

- Screening of 151 oral cancer patients in India revealed 5.3% positivity for the fusion transcript, indicating its potential role in cancer development.
- Oral cancer, predominant among Indian patients with approximately 2,00,000 new cases annually, underscores the significance of this finding in cancer treatment.

Therapeutic Potential of Pyrinium Pamoate

- Laboratory studies demonstrated that pyrinium pamoate effectively targets the signaling pathway activated by the fusion transcript.
- In animal models, treatment with the drug significantly inhibited the aggressive behavior of cancer cells and improved survival rates in mice carrying the fusion-overexpressing cells.

Clinical Implications and Future Prospects

- The promising results from animal studies pave the way for clinical trials in oral cancer patients, utilizing pyrinium pamoate as a potential therapeutic agent.
- Since the drug is FDA-approved with a well-established safety profile, clinical trials are expected to proceed smoothly, offering hope for effective cancer treatment.

Significance

- The identification of the UBE3C-LRP5 fusion transcript and the repurposing of pyrvinium pamoate for cancer treatment represent significant advancements in precision oncology.
- This research offers hope for more targeted and effective treatments for oral cancer patients, potentially improving survival rates and quality of life.

36. Toy-inspired engine creates power from evaporated water

Context: Scientists in Hong Kong and Guangzhou, China, have developed an innovative engine inspired by the classic drinking bird toy.

- This engine converts energy from water evaporation into electricity, offering a novel approach to powering small electronics.

The Drinking Bird Toy Concept

- The drinking bird toy, a staple in science classrooms, operates through the process of water evaporation causing a pressure difference that drives fluid movement.
- Inspired by this concept, scientists aimed to harness evaporation energy for practical applications, beyond mere demonstration.

Development of the Engine

- The researchers constructed the engine by integrating triboelectric nanogenerator modules, which collect mechanical energy, onto a reconstructed drinking bird toy.
- Despite challenges related to friction, the prototype successfully powered various small electronics, including liquid crystal displays (LCDs), temperature sensors, and calculators.

Overcoming Challenges

- Friction posed a significant obstacle to the efficiency of the generator, necessitating innovative solutions.
- The researchers addressed this challenge by incorporating patterned fibers as charge transfer materials in the triboelectric nanogenerator modules, reducing friction and improving operational smoothness.

Future Directions

- The team plans to further enhance the efficiency of the engine by designing a new drinking bird model specifically optimized for water evaporation to electrical energy conversion.
- This iterative approach aims to maximize energy output and operational longevity while minimizing resource requirements.

37. Animal Husbandry dept. plans to register Thenmala Kullan as indigenous breed

Context: The Kerala Animal Husbandry department has announced plans to conserve and register the Thenmala Kullan, a dwarf cow indigenous to the region, as a unique breed.

- Recognized for its distinctive features and adaptation to local agro-ecological conditions, the Thenmala Kullan holds significance for tribal communities and traditional farming practices in the area.

Unique Characteristics of Thenmala Kullan

- The Thenmala Kullan exhibits distinctive traits, including a small hump, and is primarily reared by tribespeople in Arippa and Thenmala.
- Known for its resilience and ability to thrive on forest-based fodder, this indigenous breed has adapted to the local environment over many decades.

Conservation Efforts and Initial Studies

- The Kerala Animal Husbandry department, in collaboration with the Kerala Veterinary and Animal Sciences University (KVASU), is undertaking studies to document and conserve the Thenmala Kullan.
- A preliminary survey has identified 42 cows from specific colonies, highlighting their strong build and high immunity.

Evaluation Process for Breed Registration

- Scientific evaluation of breed-specific traits, including phenotypic and genotypic characterization, is essential for registering the Thenmala Kullan as an indigenous breed.
- Criteria set by the National Bureau of Animal Genetic Resources (NBAGR) will guide the assessment process, which includes factors such as population size, breeding methods, and distinctive physical features.

Phases of Study and Analysis

- The initial phase focuses on assessing phenotypic traits, thermal tolerance, and immunity levels of the Thenmala Kullan.
- Subsequent phases will involve genetic studies, including DNA isolation and analysis, to meet the criteria for breed registration by the NBAGR.

Significance

- Conservation and registration of the Thenmala Kullan as an indigenous breed hold cultural, ecological, and economic significance for the region.
- By recognizing and preserving unique genetic resources, such initiatives contribute to biodiversity conservation and sustainable agricultural practices.

38. SC directs States to give ration cards to 8 cr. workers

Context:

- The Supreme Court's recent directive regarding ration cards for migrant workers has garnered attention.
- The order follows up on a previous ruling from April 2023.

About:

- The Supreme Court expressed concern over the delay in implementing its April 2023 order.
- The directive aims to provide ration cards to approximately eight crore migrant workers who are registered in the eShram portal but not covered under the National Food Security Act.
- Out of the 28.6 crore registrants on the portal, 20.63 crore are already registered in the ration card database.

Significance:

- The Supreme Court, led by Justice Hima Kohli, directed the issuance of ration cards to the remaining eight crore migrant and unorganized sector workers registered with the eShram portal within two months.
- This decision underscores the court's emphasis on the welfare of migrant workers and the need for expedited inclusion in social welfare schemes.
- The court reiterates the responsibility of a welfare state to promptly integrate migrant workers into the ration card system, ensuring their access to essential food supplies.

39. 27.6 million people engaged in forced labour in 2021: ILO

Context:

- The International Labour Organization (ILO) released a study in Geneva detailing findings on forced labour in 2021.

- The study highlights the alarming increase in illegal profits generated from forced labour, reaching \$36 billion annually.
- Surveys were conducted among workers, including Indians in Saudi Arabia and Qatar, to gather data for the study.

Issue:

- Forced labour has seen a significant rise, with 27.6 million people engaged in it in 2021, marking a 37% increase in illegal profits since 2014.
- The growth in both the number of people forced into labour and the profits derived from their exploitation contributes to this concerning trend.
- The study reveals that traffickers and criminals are now generating close to \$10,000 per victim, up from \$8,269 a decade ago.
- Forced commercial sexual exploitation accounts for a substantial portion (73%) of the total illegal profits, despite representing only 27% of victims in privately imposed labour.
- Various sectors such as industry, services, agriculture, and domestic work are affected, with significant illegal profits being made at the expense of workers' wages.

Significance:

- Forced labour perpetuates cycles of poverty and exploitation, depriving individuals of their dignity and rightful wages.
- The situation has worsened over time, with an increase of 2.7 million people in forced labour between 2016 and 2021.
- Urgent action is needed from the international community to combat this injustice and end the exploitation of vulnerable workers.

40. Why has Karnataka banned certain colouring agents?

Context:

- Karnataka has implemented a ban on certain colouring agents in food products, following similar actions in Tamil Nadu and Goa.
- The decision stemmed from a survey conducted by the Public Health Department, revealing harmful chemicals in food samples.

Issue:

- Harmful chemicals were found in cotton candy and gobi manchurian, prompting the ban.
- The presence of substances like Sunset Yellow, Tartrazine, and Rhodamine-b in unsafe samples raised health concerns.
- Tartrazine, though approved, has restrictions on its usage, particularly in freshly prepared food items.

Significance:

- The ban addresses health risks associated with prolonged consumption of snacks containing artificial colours, potentially leading to diseases like cancer.
- Legal penalties including hefty fines and jail time are outlined for offenders under the Food Safety and Standards Act.
- Immediate enforcement of the ban underscores the government's commitment to public health.
- Awareness campaigns aim to educate both manufacturers and consumers about the risks associated with artificial colours in food products.
- Random checks will ensure compliance with the regulations, extending scrutiny to other popular food items where colouring agents are used.

41. BEML conducts test-firing of indigenous 1,500 HP engine for main battle tanks

Context: BEML conducted a significant event involving the test-firing of India's inaugural 1,500-horsepower engine for Main Battle Tanks.

About:

- **Indigenous Engineering Feat:** This engine marks India's first indigenous endeavour in producing a powerful 1,500 HP engine for Main Battle Tanks.
- **Cutting-Edge Features:** The engine boasts cutting-edge attributes, including a high power-to-weight ratio and operability in extreme conditions like high altitudes, sub-zero temperatures, and desert environments.
- **Global Parity:** It's equipped with advanced technologies, placing it on par with the most sophisticated engines worldwide.

Significance:

- **Transformative Moment:** The Defence Secretary, Giridhar Aramane, hailed this achievement as a transformative moment that will significantly bolster the capabilities of the armed forces.
- **Developmental Cycle:** The project, which commenced in August 2020, was meticulously structured into five major milestones to ensure timely completion and adherence to stringent quality standards.

42. NASA craft that diverted space rock also dented it

Context:

- In 2022, NASA launched the DART spacecraft to alter the trajectory of the asteroid Dimorphos.
- The mission aimed to demonstrate the feasibility of diverting celestial objects to protect Earth from potential collisions.

About:

- The impact of DART not only changed Dimorphos' trajectory but also its shape, transforming it from a ball to a triaxial ellipsoid.
- Dimorphos, a moonlet of Didymos, is composed of debris, making it susceptible to deformation upon impact.
- DART collided with Dimorphos on September 26, 2022, altering its orbit and orbital period.
- The collision resulted in the ejection of rocky debris from Dimorphos into space.

Significance:

- The DART mission showcased the capability to redirect asteroids, enhancing planetary defence strategies.
- The study provides insights into the dynamics of rubble-pile asteroids and their response to kinetic impacts.
- Precise measurements of Dimorphos' orbital changes offer valuable data for understanding and predicting future asteroid interactions.
- Continued observations reveal ongoing changes in Dimorphos' orbit, indicating the gradual decay of its orbital period due to the release of angular momentum.

43. Ministry of Environment tightens rules on bioplastics

Context: The Environment Ministry's new regulations aim to tighten the labeling of disposable plastics as 'biodegradable,' insisting on zero microplastics residue.

Issue:

- Biodegradable and compostable plastics offer solutions to India's plastic waste dilemma, yet compostables require specialized facilities.
- Amendments to the Plastic Waste Management Rules now define biodegradables as those breaking down without leaving microplastics.
- However, clarity is lacking regarding the tests to confirm microplastics absence.
- CEO of Symphony Environmental India, advocates for standardized tests for fairness. Microplastics, a significant pollution source, highlight the urgency for stricter regulations.
- Companies face challenges obtaining biodegradable certification from the Central Pollution Control Board due to stringent degradation criteria, prolonging the process by two years.

44. Simon Harris set to be Ireland's youngest PM

Context: Simon Harris is poised to become Ireland's youngest-ever Taoiseach (Prime Minister), bringing a fresh face and strong social media presence to the role.

- Dubbed the "TikTok Taoiseach," Harris's ascent to leadership reflects a shift towards younger leadership and digital engagement in Irish politics.

Issues

- **Leadership Transition:** Following Leo Varadkar's resignation, Fine Gael seeks a new leader to lead the party into the upcoming elections.
- **Youthful Leadership:** Harris's candidacy represents a departure from traditional political norms, emphasizing youth and digital communication.
- **Party Fortunes:** Fine Gael hopes Harris's popularity and communication skills will rejuvenate the party's image and electoral prospects.

Significance

- **Generational Change:** Harris's election signals a generational shift in Irish politics, with younger leaders assuming prominent roles.
- **Digital Politics:** The rise of the "TikTok Taoiseach" underscores the increasing influence of social media in shaping political discourse and engagement.
- **Party Dynamics:** Fine Gael's selection of Harris reflects the party's recognition of the need for modernization and adaptation to appeal to younger voters.

45. Australia, Britain to build AUKUS subs

Context: Australia and Britain reaffirm their commitment to the AUKUS deal despite concerns over costs, capabilities, and potential political shifts, including the return of Donald Trump.

- AUKUS aims to bolster military capabilities among the three countries to counter China's growing influence.

Issues

- **Cost Concerns:** Questions arise about the financial feasibility of developing and maintaining a fleet of nuclear-powered submarines under the AUKUS agreement.
- **Capability Challenges:** Doubts linger regarding the technical capabilities and effectiveness of nuclear-powered submarines in enhancing maritime security in the Indo-Pacific region.
- **Political Uncertainty:** The potential return of Donald Trump and his "America first" approach raises concerns about the stability and continuity of international agreements like AUKUS.

Significance

- **Strategic Alliance:** AUKUS represents a significant step in deepening military cooperation between Australia, Britain, and the United States, aimed at countering China's assertiveness in the region.
- **Technological Advancement:** The development of nuclear-powered submarines signals a commitment to modernizing defense capabilities and maintaining military superiority in maritime domains.
- **Diplomatic Implications:** The success or failure of AUKUS could impact broader geopolitical dynamics, influencing alliances and power balances in the Indo-Pacific region.

46. Dispersal out of Africa may have occurred during arid period

Context: Recent study suggests that the dispersal of humans out of Africa may have occurred during an arid period following the Toba super-volcano eruption in Indonesia.

- Contrary to previous beliefs that human migrations occurred during humid periods, the study proposes that arid conditions may have facilitated movement.

Issues

Timing of Human Dispersal

- Dispersal out of Africa less than 100,000 years ago.
- Occurred during the arid period post-Toba super-volcano eruption.

Environmental Context

- Study site in northwest Ethiopia near the Shinfa River.
- Evidence of human presence, tool manufacturing, and animal remains.
- Chemical analysis links the site to the Toba supereruption around 74,000 years ago.
- Oxygen isotopes indicate a particularly arid environment.

Impact on Human Behaviour

- Paradoxical increase in reliance on fish during the arid period.
- Fish were trapped in waterholes due to shrinking rivers in the dry season.
- Adaptive foraging along dry-season waterholes may have facilitated human movement.
- Proposal that arid conditions spurred human migration contrary to previous beliefs.

Out of Africa Theory

- The "Out of Africa" theory, also known as the "Recent African Origin" model, is a widely accepted hypothesis in paleoanthropology that proposes all modern humans (*Homo sapiens*) originated in Africa.

Significance

- Challenges conventional understanding of human migration patterns.
- Highlights the role of arid conditions in shaping human behaviour and movement.
- Provides insights into the adaptability of early humans in diverse environments.
- Offers implications for understanding human expansion across different climates and habitats.

47. It's official: 'Statio Shiv Shakti' approved as name of Chandrayaan-3 landing site

Context: The International Astronomical Union's Planetary System Nomenclature working group recently approved the name "Station Shiv Shakti" for the Chandrayaan-3's Vikram lander landing site.

About:

- This endorsement follows strict guidelines set by the IAU for naming planetary surface features.
- According to IAU Rule 9, names with political, military, or religious connotations are prohibited, except for historical political figures predating the 19th century.
- “Station Shiv Shakti” was chosen for its depiction of the dual nature of masculinity (“Shiva”) and femininity (“Shakti”) in Indian mythology.

Significance: Prime Minister Narendra Modi announced the name citing the significance of “Shiv” for humanity’s welfare and “Shakti” for providing strength to fulfil resolutions. The naming aligns with the IAU’s goal of providing unique identifiers for planetary features, facilitating scientific discourse and exploration.

48. On the resurgence of mumps in Kerala

Context: The resurgence of mumps in Kerala has sparked concerns among public health officials and experts.

About:

- The viral infection, traditionally affecting children, has seen a significant increase in cases, not only in Kerala but also in several other states like Maharashtra, Telangana, and Andhra Pradesh.
- Despite being a self-limiting disease, mumps can lead to complications such as meningoencephalitis, pancreatitis, and even infertility in the long term.
- One of the reasons behind the surge in cases is the lack of mumps vaccination in the national immunization schedule.
- While diseases like measles have been prioritized due to their morbidity and mortality rates, mumps has been overlooked despite its potential long-term health impacts.
- To control the current outbreaks, health officials emphasize the importance of public awareness, isolation of infected individuals, and improving immunization coverage, particularly among unvaccinated children and adolescents.
- Strategies suggested by the World Health Organization advocate integrating mumps vaccination with existing measles and rubella control efforts.

Significance: Kerala’s initiative to replace the MR vaccine with MMR in its UIP reflects the urgency to address the mumps resurgence.

A coordinated effort between state and central health authorities is essential to combat the mumps’ resurgence effectively. By integrating mumps vaccination into routine immunization programs and raising public awareness, we can mitigate the impact of this preventable disease and safeguard public health.

49. To curb illegal trade, Health Ministry tells States to plug gaps in compiling data of organ donors

Context: The Union Health and Family Welfare Ministry has expressed concern over several states failing to compile crucial data on living and deceased donors, vital for monitoring the organ transplantation program and preventing illegal organ trade.

About:

- The Ministry highlighted the importance of linking hospitals conducting transplant procedures with the National Organ and Tissue Transplant Organisation (NOTTO) to maintain a national registry of donors and recipients.
- It emphasized the need for regular updates of transplant-related data and monthly reports to NOTTO.
- Non-compliance could result in penalties under the Transplantation of Human Organs and Tissues Act, 1994.
- The advisory underscores the significance of a robust national registry to ensure ethical transplantation practices and prioritize Indian patients on transplant waitlists.

Significance: It urges transplant hospitals to actively promote deceased organ donation and establish protocols for brain stem death certification. This advisory follows NOTTO's efforts to address allegations of organ trafficking and underscores the importance of transparency and accountability in organ transplantation.

50. Can 'good sounds' help coral islands recover from bleaching?

Context: Climate change poses a significant threat globally, largely due to the extraction and burning of fossil fuels, leading to rising temperatures and environmental instability.

About:

- Coral reefs, vital marine ecosystems, face unprecedented destruction as a result of warming oceans and ocean acidification.
- Scientists are exploring innovative strategies to mitigate coral reef degradation.
- Their recent study suggests that playing healthy reef sounds can enhance coral settlement rates in degraded areas, offering a glimmer of hope amidst the crisis.
- These interventions require further study and careful implementation to ensure their effectiveness and sustainability.

Significance: As climate change continues to impact our planet, urgent action is needed to address its root causes and protect vulnerable ecosystems like coral reefs for future generations.

51. Inaccessibility and cost cripple efforts to treat sickle cell disease

Context: The diagnostic journey of five-year-old Suraj from Nuapada District Hospital to the Veer Surendra Sai Institute of Medical Sciences underscores the hurdles marginalized communities face in accessing healthcare. Sickle Cell Disease (SCD), prevalent among tribal populations, demands urgent attention.

Issue: Despite national initiatives like the SCD Elimination Mission, regional disparities persist, hindering access to vital treatments like hydroxyurea.

- Amidst global advancements in gene-editing technology like CRISPR, questions of equity and accessibility arise.
- While India progresses in developing CRISPR therapies for SCD, ethical and legal considerations loom large.
- Regulatory frameworks must prioritize equitable access, ensuring healthcare for all.

Significance: A comprehensive approach, integrating basic treatments and advanced therapies, is essential to address healthcare disparities and ensure a healthier future for vulnerable populations like Suraj.

52. India achieves 16% decline in new TB cases since 2015

Context: India's battle against tuberculosis (TB) shows promising signs of progress, with a notable decline in both incidence and mortality rates since 2015.

About: According to the India TB Report 2024 by the Union Health Ministry, there has been a 16% reduction in TB incidence and an 18% decrease in mortality rates. Notably, the private healthcare sector's contribution to TB notifications increased by 17% in 2023, reflecting improved collaboration. Despite challenges posed by the COVID-19 pandemic, India's National Tuberculosis Elimination Programme (NTEP) remained resilient, conducting approximately 1.89 crore sputum smear tests.

Significance: With a target set for 2025 to eliminate the disease, India's continued efforts and engagement from both public and private sectors underscore its commitment to TB control and eradication.

53. Skyroot Aerospace successfully test-fires stage-2 of Vikram-1 launch vehicle in A.P.'s Sriharikota

Context: Skyroot Aerospace achieved a significant milestone in India's space sector with the successful test-firing of stage-2 of its Vikram-1 launch vehicle.

About: Conducted at ISRO's propulsion testbed in Sriharikota, Andhra Pradesh, the test demonstrated the critical propulsion capabilities required for the rocket's ascent into space. The Vikram-1 launch will mark India's first private orbital rocket launch, following Skyroot's suborbital launch of the Vikram-S in November 2022. The test recorded a peak thrust of 186 kilonewtons, vital for propelling the rocket through Earth's atmosphere. The Kalam-250 stage-2 motor, made of high-strength carbon composite, utilizes solid fuel and advanced thermal protection systems. With precision control mechanisms, including a carbon ablative flex nozzle, the stage ensures the rocket achieves its desired trajectory.

Significance: The successful test signifies a significant advancement in India's private space exploration endeavors.

54. Core sector output growth spurts to 6.7% in February

Context: India's core sector output surged to a three-month high of 6.7% in February, driven by robust growth in coal, natural gas, and cement production.

Issue: Fertilizers witnessed a sharp decline of 9.5%, marking the steepest contraction since May 2021. Crude oil production grew at a record pace of 7.9%, aided by base effects from the previous year. Natural gas output also saw a significant increase of 11.3%, the highest in two years. Despite this growth, overall output levels remained below January's levels, with only cement showing a sequential uptick.

Significance: With the core sector's substantial weightage in the Index of Industrial Production, economists anticipate a recovery in industrial output growth from the 3.8% recorded in January, suggesting positive momentum in India's industrial sector.

55. Pre-poll splurge lifts fiscal deficit

Context: The Centre's fiscal deficit surged to 86.5% of revised estimates by February-end, indicating a sharp increase in spending nearing the fiscal year-end.

About: With capital expenditure (capex) reaching ₹84,400 crore last month, the deficit totaled ₹15 lakh crore in the first eleven months of 2023-24, up from ₹11 lakh crore in January. Economists predict that the final figures for the fiscal year, expected in April, will likely meet the revised target of ₹17.3 lakh crore set in the Union Budget.

However, achieving the capex target of ₹1.4 lakh crore in March seems challenging due to the Model Code of Conduct for the upcoming General Elections.

Significance: This shortfall could result in significant savings, possibly around ₹50,000-₹60,000 crore, according to experts.

56. China sends glacier water from Tibet to climate-hit Maldives

Context: China's gesture of sending over a million bottles of water sourced from melting Tibetan glaciers to the Maldives signifies a significant move in climate diplomacy.

About: The Maldives, facing the imminent threat of rising sea levels and saltwater intrusion, welcomes this aid from the world's highest peaks. The island nation, vulnerable to the impacts of climate change, struggles with saltwater contamination, rendering its freshwater sources non-potable. While critics speculated about political motives behind the donation, the Maldives government clarified that the water was not earmarked for any specific individual but intended for general consumption. This act underscores the urgency of addressing climate change and highlights the interconnectedness of nations in tackling environmental challenges.

Significance: With glaciers melting at an alarming rate due to climate change, such initiatives emphasize the need for global cooperation to mitigate the adverse effects of environmental degradation.

57. Indian Navy seizes hijacked Iranian vessel, rescues crew

Context: The Indian Navy recently intercepted and freed a hijacked Iranian fishing vessel, Al-Kambar, in the Arabian Sea. The successful operation involved the deployment of Indian Navy ships Sumedha and Trishul, resulting in the rescue of the vessel's crew from the clutches of armed pirates.

Operation Details

- **Coercive Tactical Measures:** Indian Navy ships Sumedha and Trishul implemented intense coercive tactical measures in accordance with Standard Operating Procedures, compelling the pirates to surrender after over 12 hours of engagement.
- **Rescue Operation:** The crew of the hijacked vessel, consisting of 23 Pakistani nationals, was safely rescued by the Indian Navy. Specialist teams are conducting thorough sanitization and seaworthiness checks on the vessel to ensure its safe escort to resume normal fishing activities.

Incident Background

- **Hijacking Incident:** Al-Kambar, an Iranian fishing vessel, was hijacked by nine armed pirates approximately 90 nautical miles southwest of Socotra. Prompt action was taken by the Indian Navy following inputs about a potential piracy incident, leading to the interception and rescue operation.
- **Piracy Trends:** The hijacking of Al-Kambar is part of a series of piracy incidents in the Arabian Sea and off the coast of Somalia in recent months. Previous incidents, including the hijacking of the MV Ruen, involved Iranian fishing vessels repurposed as pirate mother vessels.

Significance of the Operation

- **Maritime Security:** The successful interception and rescue operation underscore the Indian Navy's commitment to maintaining maritime security in the region, safeguarding vessels from piracy threats.
- **Humanitarian Impact:** The rescue of the crew members from the hijacked vessel highlights the humanitarian aspect of the Navy's operations, ensuring the safety and well-being of seafarers amidst perilous conditions.

YOJANA

1. Traditional Art Forms in the Digital Age

Introduction to Art and Creativity:

- Art is a manifestation of human creativity, evolving continuously over time.
- Digital enhancement technology plays a crucial role in keeping artistic traditions aligned with the pace of human progress.

Preserving Cultural Traditions:

- Artistic traditions form the cultural scaffold of civilizations, evolving alongside technological advancements.
- To conserve, expand, and enhance cultural traditions, it's essential to connect traditional art forms with the digital world.

Adoption of Digital Techniques:

- Many artists across various disciplines, including sculptors, painters, writers, and architects, are increasingly adopting digital interfaces and tools.
- Digital art offers benefits such as design innovation, increased access, convenience, instant sharing, and wider recognition.

Scope for Innovation:

- Digitization allows for diverse experimentation and spontaneity, enabling the blending of different artistic disciplines.
- Through interactive multimedia elements, virtual reality (VR), augmented reality (AR), and other cutting-edge concepts, artists can create unique and imaginative outcomes.

Balancing Tradition and Technology:

- Traditional art forms embody authenticity, craftsmanship, and human touch, evoking a timeless aesthetic appeal.
- While some traditional artists may resist digital tools due to various reasons, there's recognition of the invaluable role they play in preserving art forms.

Enhancing Performing Arts:

- Digitization plays a supportive role in promoting performing arts through online platforms, social media campaigns, and digital media campaigns.
- The digital world offers avenues for creating better reach, awareness, and responsiveness for performing artists and their audiences.

Challenges and Counter-Effects:

- While digitization offers significant benefits, there's a need to maintain a balance and ensure that technology enhances rather than replaces human creativity.
- The absence of filters in digital media can sometimes lead to non-artistic experimentation and controversial statements.

Conclusion:

- Hybridizing traditional art forms with digital techniques can harness the benefits of technology while preserving the essence of human creativity.
- The key is to utilize digitization to enhance artistic expression and cultural preservation, ensuring a harmonious integration of tradition and technology.

2. Folk Art Reimagined Using Modern Techniques and Contexts**Introduction to Art and Connectivity:**

- Art serves as a means of connecting with our deepest selves and expressing the inexpressible, drawing inspiration from Bharat Muni's Rasa theory.
- Digitization and artificial intelligence are revolutionizing every aspect of life, including traditional folk art forms in India.

Preserving Cultural Identity Amidst Technological Change:

- Folk art forms play a crucial role in preserving unique customs and fostering communal cohesion, contributing to the cultural identity of communities.
- Adapting to technological advancements while preserving the authenticity of folk art poses significant challenges.

Evolution and Adaptability of Folk Art:

- Unlike classical art forms, folk arts exhibit dynamic and adaptable characteristics, responding to contemporary influences and trends.
- Globalization and digital platforms are expanding the reach of folk art while also presenting challenges of mutation and dilution of the original essence.

Transformative Power of Traditional Performing Arts:

- Traditional performing arts have the power to elevate audience consciousness and connect them with themselves, offering a transformative experience.
- Concerns arise about whether virtual performances can convey the nuanced expressions felt physically during live performances.

Concerns and Considerations for Digital Transition:

- Transitioning folk art to the digital realm provides opportunities for preservation and broader audience reach but raises concerns about authenticity and depth.
- There is a risk of reducing folk art to computational algorithms and standardization, erasing the nuances and cultural significance of traditional forms.

Balancing Innovation and Preservation:

- Preserving the integrity of folk art in the digital age requires a delicate balance between innovation and preservation.
- Collaborative efforts between technologists and traditional artists are essential to ensure that digital adaptations retain the genuineness and richness of their traditional counterparts.

Conclusion:

- Navigating the transition of folk art into the digital realm requires careful consideration of cultural heritage and technological innovation.

- Striking a balance between innovation and preservation will ensure that folk art forms thrive in the digital age while maintaining their essence and authenticity.

3. The Power of Art for Healing and Self-Expression

Introduction:

- Art is a unique form of human expression that allows individuals to explore their inner worlds and connect with others.
- It serves as a therapeutic tool for healing and self-expression, offering a non-verbal means of communication.

Art Therapy:

- Art therapy utilizes the cathartic power of artistic expression to facilitate healing.
- Through integrative methods, it engages the mind, body, and spirit in ways distinct from verbal articulation alone.
- Therapists guide clients to create art that addresses their emotional issues, promoting self-awareness and transformation.

Children and Art:

- Children often find it easier to express emotions through art rather than words.
- Art therapy helps children deal with emotional issues and provides insights into their thoughts and experiences.
- Art offers a non-judgmental space for children to explore and communicate their inner worlds.

Art for Persons with Special Needs:

- Art provides individuals with special needs a means of self-expression and empowerment.
- It allows them to communicate experiences and emotions that may be difficult to express verbally.
- Art therapy helps improve cognitive function, sensory motor skills, and emotional regulation in individuals with special needs.

Benefits of Art as Therapy:

- **Aid to Expression:** Art helps individuals visualize and analyze their emotions, facilitating the healing process.
- **Building Confidence:** The non-judgmental nature of art promotes a sense of control and confidence in individuals.
- **Improving Motor Skills and Cognitive Capacity:** Engaging in art promotes cognitive development and emotional regulation.
- **Creative Outlet:** Artistic expression fosters creativity and constructive self-expression.

Considerations in Art Therapy:

- **Choice and Comfort:** Individuals must feel safe and comfortable during art therapy sessions to fully benefit from the process.
- **Avoiding Compulsion:** Forcing individuals into art can hinder the healing process and lead to anxiety.
- **Safe and Non-Judgmental Environment:** Art therapy sessions should provide a supportive space for individuals to explore their emotions.

Conclusion:

- Art therapy offers a powerful means of healing and self-expression for individuals of all ages and abilities.
- Through artistic expression, individuals can explore and communicate their inner worlds in a safe and supportive environment.

- It promotes self-awareness, confidence, and emotional regulation, leading to holistic healing and personal growth.

4. From 'Art with Intelligence' to 'Artificial Intelligence'

Introduction:

- The digital era has revolutionized artistic expression, with innovations like artificial intelligence (AI) enhancing creativity and accessibility.
- Throughout history, art and intelligence have been intertwined, evidenced by ancient civilizations' remarkable technological advancements.

Historical Examples of Art with Intelligence:

- Early humans demonstrated intelligence through various art forms, such as cave paintings and metallurgy, showcasing advanced technologies like intercropping and alloying.
- Civilizations like the Harappan and those in the Ganga Valley displayed remarkable advancements in urban planning, metallurgy, and architecture, exemplifying artistry coupled with intelligence.

Impact of Digital Technology on Art:

- Digital technology has transformed traditional art forms, leading to the emergence of digital painting, graphic design, animation, and interactive media.
- The Covid-19 pandemic accelerated the adoption of digital formats for cultural institutions, leading to virtual museums, exhibitions, and performances.

Opportunities and Challenges in the Digital Era:

- Digital platforms offer opportunities for artists to reach a wider audience, collaborate globally, and preserve cultural heritage through digitization.
- However, digital art creation requires proficiency in digital tools, leading to barriers for some artists, while issues like trust, authenticity, and data privacy pose challenges.

Transformation of Art Forms in the Digital Era:

- **Visual Art:** Digital technology enables the creation of visual art with greater ease and flexibility, expanding creative possibilities.
- **Painting:** Digital painting allows for experimentation and exploration of abstract concepts, enhancing artistic expression.
- **Sculpture:** 3D techniques and projection technology contribute to the creation of digital sculptures with intricate details.
- **Architecture:** Digital technology aids in exploration, excavation, and design processes, revolutionizing architectural practices.
- **Performing Art:** Digital innovations enhance experiences in dance, music, and cinematography, offering new creative avenues for artists.

Conclusion:

- The digital era has democratized art, making it more accessible and diverse while presenting challenges like copyright infringement and digital rights.
- While digital technology enhances artistic expression, it also raises questions about authenticity and the impact of technology on cultural identity.

- Striking a balance between traditional and digital art forms is essential to preserve the integrity and authenticity of artistic expression in the digital age.

In essence, the integration of digital technology into art has ushered in a new era of creativity and accessibility, but it also requires careful consideration of ethical and cultural implications to ensure the integrity of artistic expression.

5. Impact of Digital Technology and Social Media on Art Museums

Introduction:

- Art museums play a vital role in preserving cultural heritage and educating the public about art history and traditions.
- With the advent of digital technology and social media, art museums are leveraging these tools to enhance their presence and relevance in the 21st century.

Art Museums in India:

- India boasts numerous art museums showcasing its rich cultural heritage, including the National Museum, NGMA, Salar Jung Museum, and others.
- These museums house diverse collections of art and artifacts, offering unique perspectives on India's artistic heritage.

The Story of the Salar Jung Museum:

- The Salar Jung Museum in Hyderabad originated from the private collection of Nawab Mir Yousuf Ali Khan, known as Salar Jung III, who had a passion for art.
- After his passing, his family donated the vast collection to the nation, leading to the establishment of the museum in 1951.
- Today, the museum houses around 46,000 artifacts and is renowned as one of the largest single-man collections globally.

Digitisation in Art Museums:

- Art museums are increasingly digitising their collections to make them more accessible to a wider audience.
- The Salar Jung Museum has embraced digitisation, with its artifacts and rare books being digitised, and the implementation of RFID technology in its library.
- The museum has a strong digital presence through its website, online exhibitions, and partnerships with platforms like Google Arts & Culture.

Social Media's Role:

- Social media platforms provide museums with tools to connect with audiences, share stories, and promote events.
- Museums use platforms like Instagram, Twitter, and Facebook to engage audiences, build communities, and enhance visibility.
- However, museums face challenges such as competition, content creation, accessibility, and measuring effectiveness in their social media efforts.

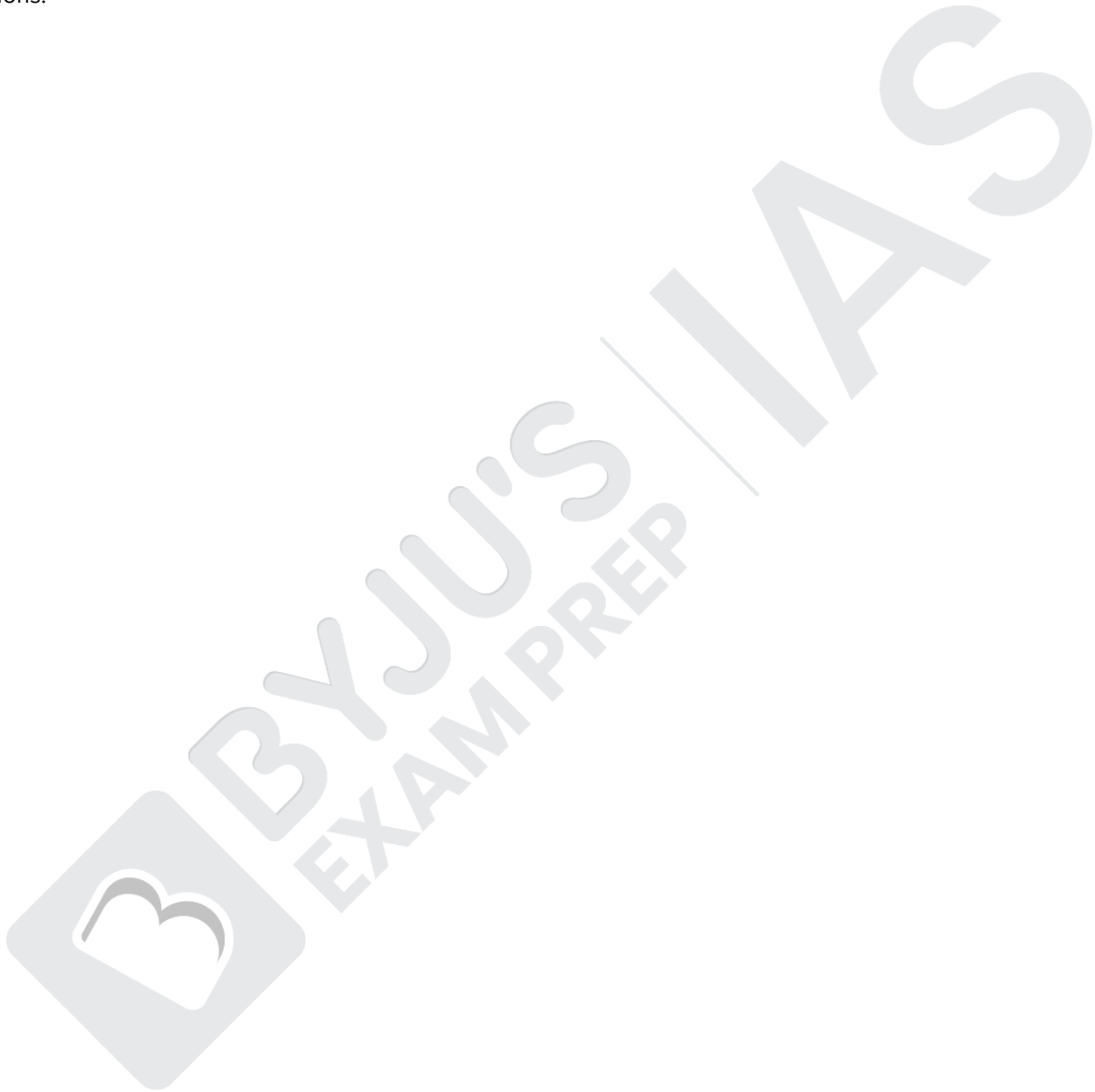
Challenges Faced by Art Museums:

- Museums encounter challenges in standing out in the crowded social media space, creating engaging content, ensuring accessibility, and measuring the impact of their efforts.
- Nevertheless, they are adapting to new platforms, leveraging live video for virtual tours, collaborating with influencers, and staying informed about emerging trends.

Conclusion:

- Art museums are embracing digital technology and social media to expand their reach, engage audiences, and promote cultural heritage.
- Despite challenges, museums are finding innovative ways to leverage digital tools to enhance the visitor experience and foster appreciation for art and culture.

In summary, the integration of digital technology and social media has transformed the landscape of art museums, allowing them to connect with audiences in new and meaningful ways while preserving and promoting cultural heritage for future generations.



KURUKSHETRA

1. Adoption of Digital and Innovative Farming Techniques

Introduction:

- Digitalisation plays a crucial role in enhancing competitiveness and achieving self-sustainability in Indian agriculture.
- The emergence of Farmer Producer Organisations (FPOs) presents an opportunity for digital agriculture to cover the entire agricultural value chain, from cultivation to post-harvest handling and value addition.

Digital Agricultural Revolution:

- The digital agricultural revolution aims to address challenges in agriculture caused by a growing population and limited natural resources.
- Digital agriculture has the potential to increase efficiency, productivity, profitability, and sustainability while promoting economic benefits and societal inclusion.

India's Agricultural Landscape:

- India ranks among the top producers of various agricultural commodities but faces challenges like small land holdings and insufficient revenue for farmers.
- Digital technology offers solutions to increase overall efficiency and revenue through innovative farming practices.

Innovative Farming Practices:

- **Precision Agriculture:** Utilizes GPS, sensors, drones, and data analytics to optimize resource utilization and improve efficiency.
- **Smart Farming:** Combines IoT devices and connectivity to create networked and automated agricultural ecosystems.
- **Vertical Farming and Controlled-Environment Agriculture:** Maximizes land use efficiency and minimizes environmental impact through stacked layers and regulated conditions.
- **Blockchain Technology in Agriculture:** Enhances transparency and traceability throughout the supply chain, ensuring authenticity and quality.

Digital Farming Techniques:

- **Technologies in Precision Agriculture:** Utilize GPS, sensors, and IoT devices for real-time monitoring and management.
- **Drones:** Provide high-resolution imagery for crop monitoring and problem detection.
- **Automated Technology:** Enables precision operations such as planting and harvesting with reduced labor.
- **Smart Irrigation System:** Utilizes soil moisture sensors for efficient water management.
- **Data-driven Farm Management:** Employs software programs to integrate and analyze multiple data sources for informed decision-making.
- **Robots for Agricultural Operations:** Automates tasks like harvesting and weed control for increased efficiency.
- **Machine Learning:** Predicts crop yields, disease outbreaks, and market trends for proactive decision-making.
- **Blockchain:** Ensures transparency and traceability in agricultural supply chains.
- **Digital Twins:** Create virtual replicas of farms for simulation and optimization.

Application and Adoption of Digital Agriculture Technologies:

- Startups are contributing to the increase in farm mechanization and the adoption of digital extension services.
- Technologies like drones, IoT devices, and blockchain are being used for crop monitoring, input management, and supply chain traceability.
- Initiatives like digital equipment rental platforms, mobile-based advisory services, and quality assessment tools are enhancing productivity and market access for farmers.

Digital Divide:

- Disparities in access, connectivity, and technological literacy pose challenges to the equitable adoption of digital agriculture.
- Bridging the digital divide requires efforts to enhance digital literacy, provide affordable access to technology, and implement supportive policies.

Conditions for Digital Transformation:

- Availability, connectivity, affordability, and ICT integration are fundamental conditions for technology utilization.
- Enabling conditions such as widespread internet use, digital skills, and innovation support contribute to smoother technology adoption.

Way Forward:

- India's National AI Strategy and initiatives like Agriculture 4.0 aim to unlock the economic and societal advantages of digital technology in agriculture.
- The establishment and promotion of FPOs present an opportunity to accelerate the adoption of digital agriculture and address challenges in the agricultural sector.

Conclusion:

- Digital farming practices represent a significant turning point in agriculture, offering solutions to increase productivity, sustainability, and efficiency.
- Through innovative techniques and technologies, farmers can meet the demands of a growing population while minimizing environmental impact.
- The establishment of FPOs and the adoption of digital agriculture present opportunities for inclusive growth and sustainable development in Indian agriculture.

2. Bamboo Farming - Growing Methods and Reaping Benefits**Introduction**

- Bamboo farming is gaining popularity among farmers and professionals.
- It offers environmental benefits and diverse uses, attracting progressive farmers.

Climate Requirement

- Bamboo thrives in various climates and soil types.
- Ideal conditions include temperatures between 7°C and 40°C and annual rainfall of 1200 mm to 4000 mm.
- Well-drained soil with pH 5.0 to 6.5 is optimal, with high nitrogen content enhancing growth.

Site Selection and Preparation

- Bamboo can grow in diverse landscapes, from valleys to hillsides.
- Choosing suitable locations with market potential, good access, and adequate water is crucial.
- Land preparation involves clearing, tilling, and creating fire breaks and fencing for protection.

Irrigation

- Adequate irrigation, especially in dry periods, is essential for optimal bamboo growth.
- Drip irrigation systems and water conservation methods are recommended.

Manuring and Fertilisation

- Bamboo requires nutrient-rich soil, and fertilisers with potassium, phosphorus, and nitrogen are vital.
- Proper fertilisation schedules based on soil testing and analysis ensure high-quality yield.

Mulching

- Mulching suppresses weeds, retains moisture, and enhances soil fertility.
- Organic mulch materials like leaf litter promote healthy bamboo growth.

Soil Mounding

- Soil mounding prevents rhizome exposure and promotes healthy growth.
- It is essential for sympodial bamboo varieties to maintain soil cover.

Bamboo Pests and Control

- Regular weeding and soil management are necessary to control pests and weeds.
- Pruning and thinning promote airflow and facilitate harvesting.

Harvesting and Yield of Bamboo

- Harvest mature bamboo culms during the dry season.
- Proper harvesting techniques ensure sustained growth and yield.
- Harvesting for timber and consumable stems requires different approaches.

Bamboo Use

- Bamboo finds applications in fabric, medicine, utensils, and musical instruments.
- Its eco-friendly nature and versatile properties make it a popular choice for various products.

Economic Contribution of Bamboo to India

- Bamboo holds a significant market share in industrial goods, with a growing contribution to India's economy.
- Industrial bamboo products dominate sectors like flooring, pulp, paper, and plywood, with the Asia-Pacific region leading in revenue.

Conclusion

- Bamboo farming offers a sustainable and lucrative opportunity for farmers.
- Proper cultivation techniques, including site selection, irrigation, and pest control, are essential for success.
- Bamboo's versatility and economic potential make it a promising crop for India's agricultural sector.

3. Apiculture Scope and Opportunities in India

Introduction:

- India is one of the largest producers and consumers of honey globally, with an estimated annual production of 1.2 lakh metric tonnes.
- Beekeeping has a rich tradition in India dating back to ancient times and offers significant income and employment opportunities, especially for rural households.

Importance of Apiculture:

- Apiculture contributes to the production of various outputs such as honey, beeswax, queen bees, and bee colonies.
- Bees, including wild pollinators, play a crucial role in biodiversity maintenance, agricultural production, forest regeneration, and climate change adaptation.
- It requires less land and initial capital, provides nutrition, economic security, and ecological benefits, and can be pursued by individuals of all ages and genders.

History of Beekeeping in India:

- India hosts four major honey bee species, with *Apis cerana* and *Apis mellifera* being the dominant species cultivated by beekeepers.
- The introduction of *Apis mellifera* in the 20th century helped revive the beekeeping industry after the outbreak of diseases affecting native bee species.
- Different species contribute varying proportions to the total honey production in India.

Government Initiatives:

- The National Beekeeping & Honey Mission (NBHM), part of the Aatmanirbhar Bharat scheme, aims to promote scientific beekeeping for income generation, employment, and agricultural enhancement.
- NBHM focuses on infrastructure development, awareness creation, post-harvest management, research, and technology generation in beekeeping.

Current Status and Market Trends:

- India currently has millions of honey bee colonies and beekeepers contributing to honey production valued at over Rs. 2704.31 crore.
- The country is a major honey exporter, with significant demand from countries like the USA, Saudi Arabia, and Canada.
- Market projections suggest a positive growth trajectory for the apiculture industry, driven by increasing domestic and international demand.

Challenges and Solutions:

- Challenges such as inadequate marketing facilities, beekeeping equipment availability, and lack of training in apiary management hinder industry growth.
- Strengthening beekeeping cooperatives, establishing nationwide bee businesses, and providing instruction in apiary management are proposed solutions.

Prospects and Opportunities:

- India's geographical and genetic diversity provides vast potential for expanding beekeeping activities.
- Bee pollination can significantly enhance agricultural productivity, aligning with the country's agrarian economy.

- Rising domestic and international demand, coupled with government support and market trends, present lucrative opportunities for beekeeping entrepreneurs.

Diverse Product Portfolio:

- Apart from honey, beekeeping yields various commercially important by-products like royal jelly, beeswax, propolis, bee venom, and pollen.
- These products find applications in food, beverages, pharmaceuticals, cosmetics, and other industries, contributing to the sector's economic viability.

Conclusion:

- Beekeeping in India offers a promising avenue for income generation, employment creation, and agricultural enhancement.
- Government initiatives, market trends, and geographical diversity contribute to the sector's growth potential.
- By addressing challenges, leveraging opportunities, and promoting sustainable practices, beekeeping can emerge as a thriving industry supporting rural livelihoods and environmental conservation.

Overall, the apiculture sector in India presents a sweet revolution with vast potential for economic prosperity and ecological sustainability.

4. Organic Farming in India: Benefits, Status, and Future Prospects

Introduction

- Organic farming is gaining momentum as a sustainable agricultural practice.
- Offers benefits for environment, health, and economy.

Organic Farming Defined

- Avoids synthetic pesticides, fertilisers, GMOs.
- Relies on natural inputs like vermi-compost, green manure.
- Embraces eco-friendly pest and disease control methods.

Need and Benefits

- Promotes biodiversity, soil health, and water conservation.
- Economic sustainability for farmers, better market access.
- Healthier, safer food options for consumers.
- Aligns with environmental conservation goals.

Status of Organic Farming

- Historical foundation in traditional agricultural practices.
- National Programme for Organic Production (NPOP) since 2001.
- Area under organic certification is growing, with 101.72 lakh hectares registered.
- India has the highest number of organic farmers globally.

Organic Production

- Diverse agro-climatic conditions conducive to organic farming.
- India produced 2,972.39 thousand metric tonnes of organic products in 2022-23.

- Wide range of organic crops cultivated across states.

Exports of Organic Products

- India is a key player in meeting global demand for organic products.
- Impressive export volume of 312,800.51 metric tonnes in 2022-23.
- Export revenue around Rs. 5,525.18 crore (USD 708.33 million).
- Organic exports are expected to grow to USD 2,601 million by 2026.

Initiatives

- National Mission for Sustainable Agriculture (NMSA) since 2014-15.
- Paramparagat Krishi Vikas Yojana (PKVY) supports transition to organic farming.
- Aims to create an environmentally friendly, economically viable agriculture sector.

Challenges

- Limited awareness among farmers, high certification costs.
- Initial yield decreases during transition to organic farming.
- Issues with pests and diseases management.
- Quality control, certification, and market infrastructure challenges.

Way Forward

- Increase research and development for better farming techniques.
- Integrate technology for precision farming, data analytics.
- Strengthen policy support, provide financial incentives.
- Encourage collaboration among stakeholders for collective marketing efforts.
- Educate consumers about the benefits of organic produce.

Conclusion

- India is poised to emerge as a global leader in organic farming.
- Addressing challenges and seizing opportunities crucial for sustainable agricultural practices.

5. Vertical Farming and Hydroponics: Future of Urban Agriculture

Introduction

- Vertical farming and hydroponics offer efficient and sustainable solutions to urban agriculture challenges.
- Maximize resource use, enable year-round crop production, and increase yields.

Rising Demand and Challenges

- Growing global population, diminishing farmlands, declining soil fertility, and increasing urbanization drive the need for advanced farming methods.
- Limited agricultural land necessitates exploration of innovative food production technologies like vertical and hydroponic farming.

Market Projection and Importance

- Global population expected to reach 9.8 billion by 2050, with 70% living in cities.
- Vertical farming market projected to reach USD 33.02 billion by 2030.
- Hydroponics and vertical farming crucial for future food security and nutrition, particularly in urban areas.

Understanding Vertical Farming and Hydroponics

- Vertical farming revolutionizes traditional agriculture by employing soilless cultivation in a multi-level, protected indoor environment.
- Hydroponics nurtures plants in nutrient-rich water solutions instead of soil, fostering quicker and more efficient growth.
- Various shapes and sizes of vertical farms worldwide employ hydroponic systems, including Deep Water Culture (DWC), Nutrient Film Technique (NFT), and Aeroponics.

Crop Management in Hydroponics

- Plants thrive in slightly acidic conditions with pH range of 5.5 to 6.5.
- Essential to maintain optimal temperature, oxygen levels, and nutrient solution strength.
- Crop selection and management crucial for maximizing productivity.

Suitable Crops and Examples

- Commercial crops grown under vertical farming and hydroponics include leafy greens, herbs, and strawberries.
- Institutions like ICAR-CISH, Lucknow, and ICAR-IIHR, Bengaluru, pioneer research and standardization efforts.
- Hydroponic companies in India include Nutrifresh and Akarshak hydroponics.

Advantages of Vertical Farming and Hydroponics

- Utilize 99% less land compared to traditional farming.
- Require less water and protect crops from pests and adverse weather conditions.
- Enable year-round cultivation and access to fresh produce in urban areas.
- Enhance plant productivity per unit area and enable automation for optimal growth conditions.

Disadvantages and Challenges

- High upfront infrastructure costs and energy-intensive operations.
- Require expertise and continuous maintenance.
- Limited crop variety and potential issues with pollination in controlled environments.

Way Forward

- Utilize affordable infrastructure options like shipping containers and abandoned warehouses.
- Collaborative research and supportive policies can encourage investment and promote adoption.
- Hydroponics and vertical farming hold immense potential for sustainable urban agriculture with further acceptance and support.

Conclusion

- Vertical farming and hydroponics offer promising solutions to urban agriculture challenges, maximizing resource efficiency and promoting sustainability.
- Despite challenges, ongoing research and policy support can facilitate widespread adoption, ensuring a resilient and food-secure future.

SCIENCE REPORTER

1. Harnessing Technology for Wildlife Conservation in India

Introduction

- World Wildlife Day 2024 theme: "Connecting People and Planet: Exploring Digital Innovation in Wildlife Conservation."
- India hosts remarkable biodiversity, with a quarter of the world's carnivore species and significant percentages of various other animal groups.
- Traditional conservation methods are now supplemented with digital innovations like Artificial Intelligence (AI), Augmented Reality (AR), and Virtual Reality (VR) to protect wildlife.

Revolutionising Wildlife Conservation with Digital Tools

- India utilizes GIS, remote sensing, camera traps, SMART anti-poaching systems, drones, DNA analysis, and mobile apps for wildlife conservation.
- These tools enable precise monitoring, efficient data collection, and better protection strategies against poaching and habitat loss.

The Indian Government's Initiatives and Beyond

- Ministry of Environment, Forest, and Climate Change leads initiatives like the Integrated Tiger Habitat Conservation Programme and the National Tiger Conservation Authority's wildlife crime control cell.
- Digital databases like the Indian Biodiversity Portal are developed to support effective conservation strategies.
- Experts emphasize the impact of climate change on ecosystems and the effectiveness of digital innovations in combating wildlife crimes.

Conservation Success Stories in India

- Success stories include the recovery of tiger, rhinoceros, lion, elephant, Great Indian Bustard, and Olive Ridley sea turtle populations.
- Conservation efforts involve setting up protected areas, strict anti-poaching measures, community-based initiatives, and captive breeding programs.

Citizen Science Initiatives in India

- Projects like the Save Our Tiger campaign, Wild Seve project, Mysore Butterfly Park, Marine Turtle Conservation Project, and Hornbill Nest Adoption Programme involve local communities in wildlife monitoring and protection.

Digital Innovation in Human-Wildlife Conflict Management

- All India Tiger Estimation (AITE) utilizes camera traps and the MSTripES mobile app for data collection while exploring the use of AI to address conservation challenges.

AI in Wildlife Conservation in India

- AI techniques analyse satellite imagery, identify high-risk areas for habitat loss, track migratory species' movement patterns, and enhance public awareness and engagement.
- Tools like the Deep Neural Network-based tool developed by IIT Delhi automate the task of image segregation, aiding conservation biologists.

Augmented Reality (AR) and Virtual Reality (VR) in promoting wildlife conservation in India

- AR overlays digital content on live video footage, allowing viewers to observe species behaviour and habitat.
- VR transports users to virtual environments, enabling exploration of different ecosystems and interaction with virtual animals.

Conclusion

- Technology continues to advance, offering new possibilities for innovation and collaboration in wildlife conservation.
- The harmonious integration of technology and traditional conservation approaches is crucial in safeguarding India's abundant wildlife legacy for future generations.

2. Urban Area Development and Wildlife Conservation**Impact of Urban Development on Wildlife:**

- Urban areas are expected to grow significantly due to increasing human population growth.
- Predicting the impact of urban development on wildlife populations is crucial for biodiversity conservation and managing human-wildlife conflict.
- Urban expansion leads to the replacement of natural habitats with dwellings and associated infrastructure, affecting wildlife populations.

Urban Wildlife and Human-Wildlife Conflict:

- Urban wildlife can pose various problems, including disease transmission, property damage, traffic accidents, and nuisance behaviour.
- However, the tolerance of urban residents towards wildlife varies, with many valuing nature in their gardens through ornamental plants.

Variation in Urban Area Definition:

- Different countries have varying definitions of urban areas based on factors like population density and settlement characteristics.
- For this article, urban areas are defined broadly as regions with permanent structures and associated infrastructure.

Categories of Urban Wildlife:

- Urban wildlife can be classified as commensal species (e.g., rats, mice) and synanthropic species (those benefiting from human environments).
- Synanthropic species may be resident or vagrant, depending on their breeding habits and reliance on urban resources.

Characteristics of Urban Areas:

- Urban areas in developed countries are highly fragmented, containing a mix of habitats such as woodlands, parks, and derelict areas.
- Habitat types and building densities vary within urban landscapes, influencing wildlife distribution and abundance.

Urban Wildlife Conservation Goals:

- Urban wildlife conservation aims to create, conserve, and maintain habitats for species affected by urbanization.
- Conservation efforts may focus on preserving habitat patches and enhancing connectivity across urban landscapes.

Role of Landscape Ecology:

- Landscape ecology studies the interactions between different habitat types within a landscape.
- Patch size, shape, and connectivity influence wildlife communities within urban areas, impacting species survival and dispersal.

Challenges in Urban Wildlife Conservation:

- Urbanization leads to habitat loss, fragmentation, and increased competition from non-native predators.
- Human disturbances, such as leaf litter removal and altered nutrient cycles, further impact urban wildlife populations.

Integration with Green Infrastructure:

- Wildlife zoning and green infrastructure frameworks can enhance urban wildlife conservation efforts.
- Using zoning language and promoting multiple-use aspects of green spaces can improve public support for conservation initiatives.

Future Considerations:

- Continued loss and fragmentation of natural habitats in urban areas are expected to negatively affect wildlife populations.
- Further research is needed to understand the factors influencing species distribution and abundance within urban environments.

3. Transboundary Animal Diseases (TADs) from an Indian Perspective

Introduction to TADs:

- TADs are infectious diseases that easily cross international borders, posing significant threats to animal health, human health, and the economy.
- India's diverse climate and extensive geography increase the likelihood of TAD emergence and spread, making effective management essential.

Impact on Livestock, Agriculture, and Human Health:

- TADs cause declines in livestock productivity, mortality, and infertility, leading to food shortages, price increases, and economic losses.
- Some TADs, like avian influenza, are zoonotic, posing risks to human health through direct contact with infected animals.

Prevalent TADs in India:

- **Avian Influenza (Bird Flu):** A highly contagious viral disease affecting birds and occasionally humans, causing significant economic losses and public health risks.
- **Porcine Reproductive and Respiratory Syndrome (PRRS):** Viral disease impacting pig husbandry, resulting in decreased fertility and increased mortality rates.
- **Lumpy Skin Disease (LSD):** Affects cattle and other livestock, causing discomfort, reduced productivity, and economic losses.
- **Crimean-Congo Hemorrhagic Fever (CCHF):** Transmitted by ticks, affecting both animals and humans with severe health implications.
- **African Swine Fever (ASF):** A highly contagious viral disease affecting domestic and wild swine, leading to trade restrictions and economic losses.

Tackling TADs:

- **Border Surveillance and Quarantine:** Enhanced monitoring and quarantine facilities at key checkpoints to prevent the entry of infected animals.
- **Strengthening Veterinary Services:** Investment in infrastructure, training, and development of veterinary health services for early detection and response.
- **Public Awareness Campaigns:** Educate communities about the risks of animal movement and the importance of reporting suspicious cases.
- **Bilateral and Regional Cooperation:** Collaborating with neighbouring countries to promote disease surveillance, control, and prevention.
- **Wildlife Protection and Conservation:** Implementing strict measures to combat wildlife trafficking and poaching to prevent disease spread.
- **Surveillance and Monitoring:** Establishing robust surveillance systems to detect TAD outbreaks timely.
- **Vaccination Programmes:** Investing in research and development of effective vaccines to prevent and control TADs.
- **Capacity Building:** Training veterinarians and livestock handlers to enhance awareness and response capabilities.

Conclusion:

- TADs pose complex challenges to livestock, agriculture, public health, and the economy in India.
- Proactive measures, including surveillance, vaccination, and international cooperation, are crucial for effective management.
- Collective action and commitment are necessary to combat TADs and ensure a healthier, safer future for animals and humans globally.

DOWN TO EARTH

1. Twist in Tradition

Traditional Utilization of Siali Creepers:

- Siali creepers are traditionally used for rope-making, fencing, and household items.
- Limited market access, leads to minimal income opportunities for tribes like the Mankirdias.

Shift towards Handicrafts:

- Since 2012, tribes learned to make baskets, bags, and other items from siali fibres.
- Assistance from organisations like HKMDA in skill development and product diversification.

Market Expansion and Demand:

- The eco-friendly nature of siali handicrafts boosts demand in markets.
- ORMAS facilitates sales through craft melas, ensuring fair returns for craftspersons.

Economic Impact and Sustainability:

- Craftspersons earn ₹4,000-8,000 monthly, providing significant additional income.
- Handicraft-making preserves traditional knowledge and cultural heritage.

Community Empowerment and Future Prospects:

- Handicrafts serve as a means to pass down ancestral skills to future generations.
- The transformation from rope-making to handicrafts empowers tribes and ensures sustainability.

Conclusion:

- Through the transition from traditional rope-making to handicrafts, Odisha tribes experience economic empowerment and cultural preservation, ensuring a brighter future for future generations.

2. Mind Your Thoughts

Introduction:

- Advancements in Brain-Computer Interface (BCI) technology revolutionize understanding of human thought.
- Recent breakthroughs showcase capabilities to translate brain activity into speech and control devices through neural signals.

1. Transformative Applications of BCI:

- BCI enables communication and control for individuals with disabilities, aiding in mobility and daily tasks.
- Potential applications span medicine, gaming, and accessibility, promising to reshape human-computer interaction.

2. Technological Advancements Driving Progress:

- Integration of Artificial Intelligence (AI) enhances BCI capabilities, decoding intricate neural patterns into meaningful actions.
- Non-invasive BCI technologies like EEG demonstrate potential for widespread adoption, fostering accessibility and usability.

3. Ethical and Privacy Concerns:

- Ethical debates arise regarding the collection, processing, and ownership of brain data, raising questions about mental privacy.
- Portable EEG devices enter consumer markets, presenting challenges in data security, consent, and potential misuse.

4. Safeguarding Mental Integrity:

- Threats to mental integrity emerge as BCI technologies become susceptible to hacking or manipulation, risking individual autonomy and psychological well-being.
- Hypothetical scenarios underscore potential dangers, prompting calls for regulatory frameworks and policy interventions.

5. Policy Responses and Legal Frameworks:

- Governments worldwide address ethical dilemmas by enacting laws to protect mental privacy and regulate neuro-data.
- Initiatives by organizations like UNESCO seek to establish guidelines and guardrails to mitigate risks associated with BCI technologies.

Conclusion:

- The burgeoning field of BCI holds promise for transforming human capabilities and improving quality of life.
- Ethical considerations and privacy concerns necessitate proactive measures to safeguard mental integrity and ensure the responsible deployment of BCI technologies in society.

3. Stronger Resolve

Advancing Conservation: Key Outcomes of CMS COP14

Firsts and Milestones:

- COP14 in Samarkand, Uzbekistan marked the first meeting of any UN environmental treaty in Central Asia.
- Launch of the inaugural "State of the World's Migratory Species" report highlighted human-led threats to nearly half of CMS-listed species.
- Over 50 resolutions passed, making it hailed as the "best COP ever" by CMS executive secretary Amy Fraenkel.

Strategic Planning for Migratory Species:

- Adoption of the "Samarkand Strategic Plan for Migratory Species 2024-2032" with six goals focusing on habitat conservation, threat reduction, and effective implementation.
- Acknowledgement of CMS's role in the Kunming-Montreal Global Biodiversity Framework under the UN Convention on Biological Diversity.

Regional Initiatives and Collaborations:

- Launch of the Initiative for the Central Asian Flyway, led by India and supported by 30 countries, to conserve critical waterbird migration routes.
- Inclusion of 14 migratory species, such as the Eurasian lynx and harbour porpoise, in CMS appendices for enhanced protection.

Addressing Emerging Challenges:

- Establishment of the Global Partnership on Ecological Connectivity to safeguard natural areas of migratory species.
- Launch of the One Health Central Asia project to mitigate the rise of zoonotic diseases in Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan.

Strengthened Conservation Measures:

- Emphasis on mitigating light pollution and understanding the impacts of deep-sea mining.
- Strengthened measures to combat illegal killing and unsustainable practices targeting migratory species.
- Introduction of action plans for vulnerable species like the Atlantic humpback dolphin and Hawksbill turtle.

Conclusion:

- COP14 outcomes reflect a commitment to robust conservation efforts, with a focus on strategic planning, regional cooperation, and addressing emerging threats to migratory species.

4. WOMEN SELF-HELP GROUP

Empowering Women through Self-Help Groups: A Catalyst for Development

Proliferation and Impact of SHGs:

- Over 9 million Self-Help Groups (SHGs) exist in India, comprising nearly 100 million women members, showcasing widespread adoption and significance.
- Originating in the 1970s, SHGs evolved into instrumental platforms for economic empowerment and livelihood creation, particularly in rural areas.

Government Support and Evolution:

- Government initiatives like Swarn Jayanti Gram Swarajgar Yojana and NRLM elevated SHGs to key implementers of rural development agendas.
- The introduction of dedicated funds and schemes like the Community Investment Fund facilitated SHGs' transition from informal alliances to formal development entities.

Microfinance Impact and Credit Discipline:

- SHGs constitute the world's largest microfinance project, disbursing loans amounting to billions of rupees annually.
- High repayment rates exceeding 96% underscore SHGs' credit discipline and reliability, contrasting with non-performing loans in commercial banks.

Diversification of Roles and Responsibilities:

- SHGs extend beyond microfinance, engaging in diverse activities such as managing community kitchens, healthcare services, and agri-nutri gardens.
- Preference in hiring for various government programs highlights SHGs' role in grassroots service delivery and employment generation.

Political Significance and Women Empowerment:

- SHGs emerge as pivotal electoral constituents, with political parties leveraging their influence to secure votes, particularly from women.

- Budgetary allocations and the establishment of dedicated departments by states like Uttar Pradesh and Madhya Pradesh underscore governmental recognition and support.

Conclusion:

- SHGs represent a transformative force in India's development landscape, empowering women and driving grassroots-level initiatives across diverse sectors.
- Their resilience and impact reflect not just stories of celebration but enduring narratives of women's leadership and contribution to national progress.

5. UN Environment Assembly Addresses Polycrisis**Introduction:**

- The UN Environment Assembly (UNEA) convened to address the polycrisis facing the planet, comprising the climate emergency, biodiversity loss, and pollution.

Key Resolutions:

- Members passed 15 resolutions aimed at addressing climate change, nature loss, and pollution, covering management of resources, environmental assistance in conflict zones, and promoting sustainable lifestyles.
- A Ministerial Declaration reaffirmed member states' commitment to combat climate change, protect biodiversity, and create a pollution-free world.

Focus on Plastic Pollution and Fossil Fuels:

- Calls were made to expedite the formulation and adoption of the Global Plastic Treaty to tackle the plastic crisis linked to the fossil fuel industry.
- There was a push for an international treaty to phase out fossil fuel production and transition to sustainable energy sources.

Critiques and Regrets:

- Some delegations expressed regret over the Ministerial Declaration's lack of urgency in addressing the plastic crisis and affirming the Paris Agreement's role.
- Saudi Arabia sponsored a resolution on combating desertification and land degradation, while other resolutions addressed minerals, sustainable agriculture, chemicals, and waste management.

Follow-up Actions:

- Emphasis was placed on the importance of follow-up actions to implement the decisions made during the Assembly.
- Stronger science-policy interface and resolutions addressing "silent killers" like sand and dust storms were highlighted.

Conclusion:

- While all resolutions were deemed important, the focus remains on follow-up actions to realize the decisions and address pressing environmental challenges effectively.

6. Supreme Court Interim Order Sparks Debate on Forest Definitions in India

Introduction:

- A recent interim order by the Supreme Court on February 19 mandates all states and Union Territories in India to ascertain their total forestland based on the dictionary definition of a forest.
- The order reignites the debate surrounding India's forest definitions, particularly in light of Parliament's 2023 Amendment to the Forest (Conservation) Act, 1980.

Key Points of the Supreme Court Order:

- The mandate for states and UTs to determine their forestland based on the dictionary definition as outlined in the T N Godavarman Thirumulpad v Union of India case in December 1996.
- The deadline for submission of forestland data to the Union government is March 31.

Challenges and Concerns Raised by Petitioners:

- Petitioners argue that the 2023 amendment to the Forest (Conservation) Act, 1980, could exclude a significant portion of forest area, contradicting the 1996 Supreme Court order.
- The 2023 amendment's provisions could lead to the exclusion of approximately 197,000 square kilometres, or roughly 27% of the total forest area.
- Ambiguity persists regarding the understanding of forests and the extent of forestland across the country.

Critique of the 2023 Amendment:

- Analysis reveals discrepancies between the 2023 amendment and the Godavarman verdict.
- The amended Act includes land declared or notified as forest under certain laws and records, potentially legitimizing diversions of forestland between 1980 and 1996.

Challenges in Obtaining Expert Committee (EC) Reports:

- Former principal chief conservator of forests, Prakriti Srivastava, highlights challenges in accessing EC reports necessary for evaluating forest areas.
- The lack of comprehensive information on forest location and demarcation hampers efforts to verify forest areas across states.

Inaction Over 28 Years:

- The delay in defining forests is attributed to challenges in identifying deemed forests, areas resembling forests but not recognized as such in government records.
- Despite court orders, many states have not identified deemed forest areas, leading to inconsistencies and challenges in forest governance.

Insights and Perspectives:

- State governments resist expanding the scope of the Forest Conservation Act, aiming to retain control over land use.
- Instances of forest areas diverted for other purposes highlight the consequences of inadequate forest governance.
- The recent Supreme Court order offers hope for clarity, but experts warn of potential delays and lingering issues in addressing the forest conundrum.

Conclusion:

- The Supreme Court's interim order underscores the ongoing debate and challenges surrounding forest definitions in India.
- It highlights the need for clarity and swift action to address long-standing issues in forest governance and ensure sustainable management of forest resources.

7. Exploring the Reality of RO Water Purification: Fact or Fallacy?**Demand-Driven Business Expansion:**

- Businesses supplying RO water witness a surge in demand, particularly in regions with issues of brackish groundwater or irregular tap water supply.
- Entrepreneurs like Vinod Lunge in Maharashtra and Virendra Mishra in Uttar Pradesh capitalize on the opportunity, investing in RO plants to cater to consumer needs.

Market Trends and Growth Potential:

- RO technology dominates the water purifier market in India, with a significant market share and projected growth.
- Transparency Market Research forecasts substantial market expansion, with the water purifier market expected to double by 2032.

Health Concerns and Regulatory Ambiguity:

- Lack of clarity surrounds the health effects of RO water consumption, with conflicting reports and limited research available.
- The National Green Tribunal (NGT) and Supreme Court's interventions aim to regulate RO use, but implementation challenges persist.

Impact on Essential Minerals and Health:

- RO systems effectively remove impurities and pathogens but also strip essential minerals like calcium and magnesium from water.
- Studies suggest a potential link between RO water consumption and health issues, including joint pain and vitamin deficiencies.

Regulatory Responses and Industry Practices:

- The government introduces regulations to manage RO waste and ensure water quality standards.
- However, questions remain about the efficacy of regulatory measures and the transparency of industry practices.

Technological Advancements and Consumer Choices:

- RO manufacturers introduce innovations like tds controllers and mineral infusion cartridges to address mineral deficiency concerns.
- Consumers face choices between different RO systems, with varying features and price points, influencing purchasing decisions.

Regional Considerations and Water Quality:

- Experts emphasize the need for region-specific approaches to water purification, considering factors like water source and contamination levels.
- In areas with arsenic or fluoride contamination, alternative purification methods may be more suitable than RO systems.

Balancing Health and Environmental Concerns:

- Debates persist about the role of RO in addressing water quality issues versus its potential health and environmental impacts.
- Balancing consumer demand for purified water with sustainable water management practices remains a challenge for policymakers and stakeholders.

Call for Research and Awareness:

- There is a pressing need for comprehensive research on the health effects of RO water consumption and the efficacy of regulatory measures.
- Public awareness campaigns can educate consumers about water quality, purification technologies, and sustainable water use practices.

Moving Forward:

- As the debate continues, stakeholders must collaborate to find holistic solutions that prioritize both public health and environmental sustainability.
- Continued research, transparent regulation, and consumer awareness are essential for navigating the complex landscape of water purification in India.