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Dear Readers,

In this issue, we delve into the intricate dynamics of India's fiscal and foreign policies, as well as judicial interventions that are shaping the nation's trajectory.

The spotlight shines on the Interim Budget 2024, presented by Finance Minister Nirmala Sitharaman. With its accentuated capital expenditure, the budget is a testament to the government's commitment to bolster infrastructure, a cornerstone for India's ambition to become a 'Viksit Bharat' by 2047. Our in-depth analysis dissects the implications of this fiscal strategy for a sustainable economic future.

The Supreme Court's landmark decision to annul the electoral bonds scheme has set a new precedent for political funding transparency. It is a significant stride toward dismantling opacity in electoral finance, ensuring that the electorate's voice remains untainted by undisclosed financial clout. This judgment is a reinforcement of the democratic ethos that values informed participation over silent capital domination.

In the international arena, Prime Minister Shri Narendra Modi's official visit to the UAE marked a milestone in bilateral relations. The warm reception by President His Highness Sheikh Mohamed bin Zayed Al Nahyan and the subsequent agreements signed between the two nations highlight a multifaceted partnership. This includes the Bilateral Investment Treaty, cooperation in digital infrastructure and energy sectors, and the interlinking of payment systems like UPI and AANI. These agreements are not just contracts but bridges that connect the people and economies of both nations, promising a horizon of mutual growth and understanding.

Furthermore, the BAPS Temple in Abu Dhabi is set to be a beacon of the shared cultural heritage and a symbol of the peaceful coexistence and tolerance that the UAE embodies. This, along with collaborations in maritime heritage and infrastructure development, weaves the social and cultural fabric that complements the robust economic ties.

Each section of this edition aims to balance the analysis of the budget, the impact of judicial reforms, and the nuances of international diplomacy. These are the pillars upon which India's present and future stand. We strive to offer you a holistic view, enabling a well-rounded preparation for those aspiring to navigate the complex waters of the competitive examination.

We trust that this issue will enrich your understanding and aid you in your journey towards becoming the informed and insightful leaders of tomorrow.

Warm regards,
AMIGOS IAS Editorial Team
Jai Hind!

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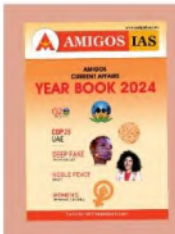

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COVER STORY

Interim Budget (2024-25)

Why is it in the news?

- The Interim Budget for the fiscal year 2024-25 was recently presented in the parliament.
- It outlines a vision of achieving 'Viksit Bharat' by 2047 through comprehensive development strategies.

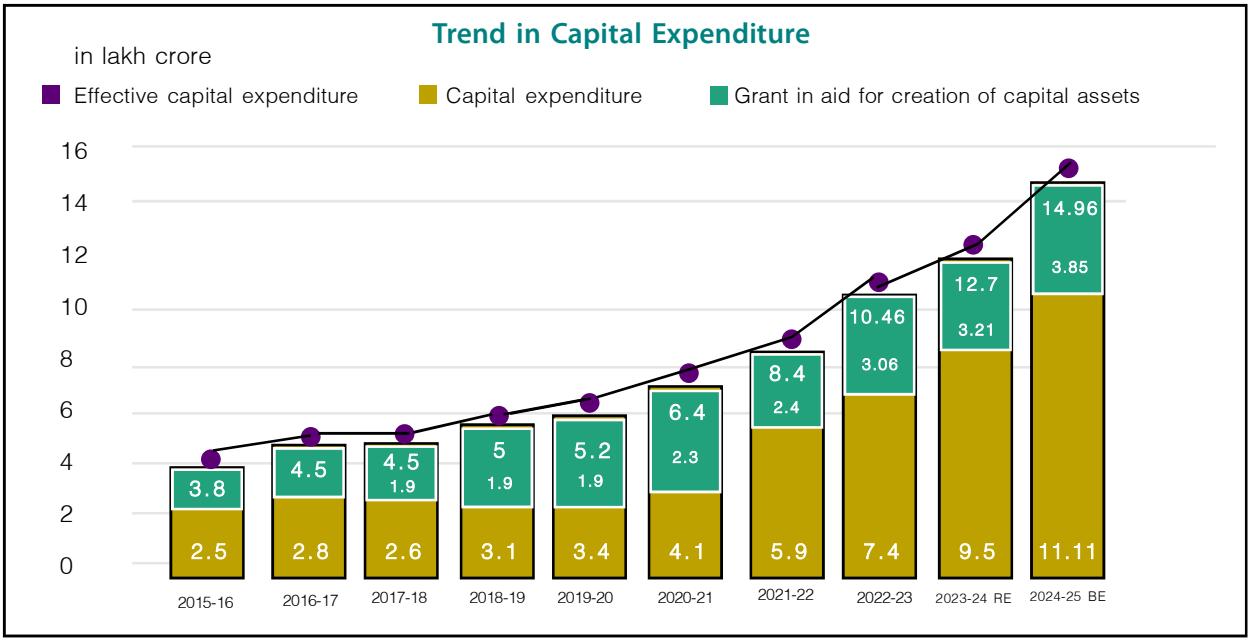
Interim Budget

- It is presented by a government undergoing a transition period or in its last year in office before general elections.
- It ensures the continuity of government expenditure and essential services until a fullfledged budget can be presented by the new government.

Major takeaways from the budget :

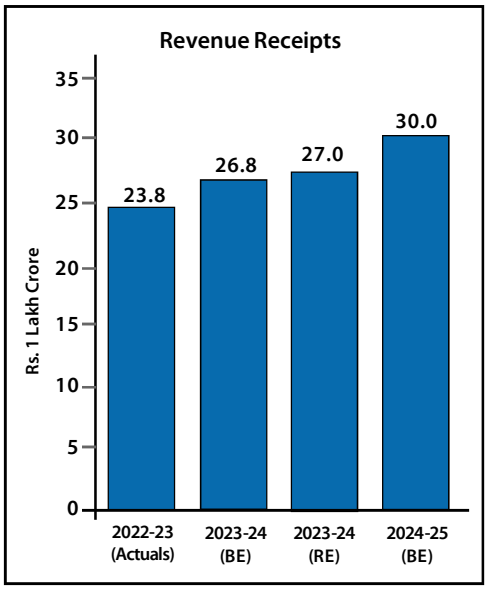
Capital Expenditure:

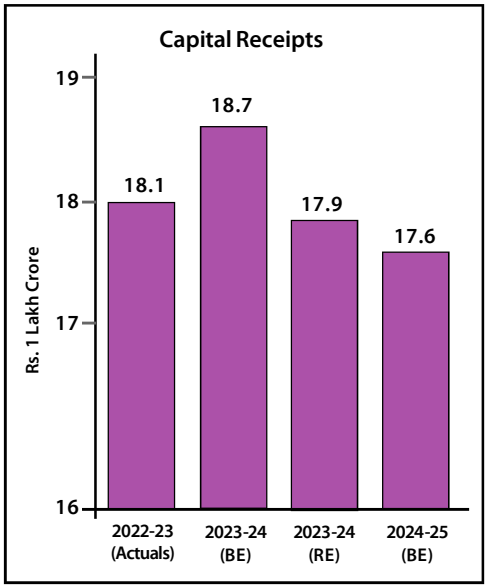
- The Interim Budget proposes a significant 11.1% increase in the capital expenditure outlay for the fiscal year 2024-25.The capital expenditure is set at an ambitious Rs 11,11,111 crore, which constitutes 3.4% of the GDP.
- This substantial increase reflects the government's commitment to boosting infrastructure development and investment in key sectors, which is crucial for economic growth and employment generation.

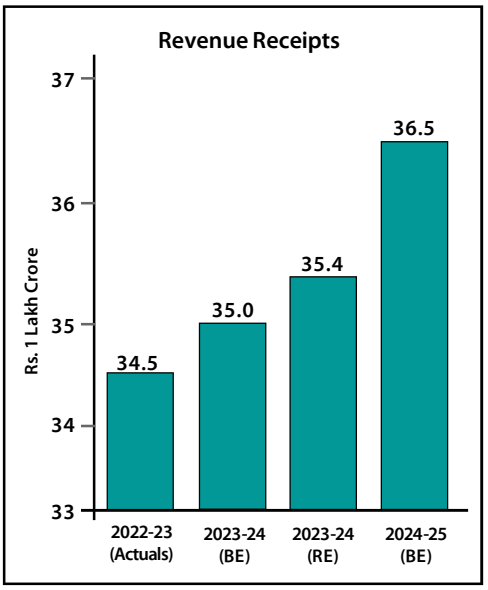


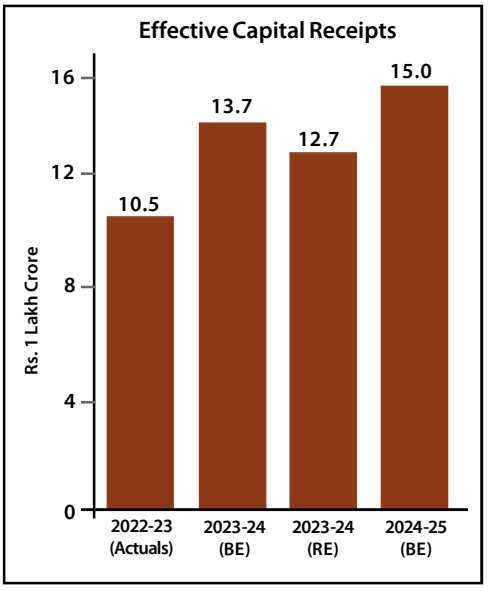
Economic Growth Projections:

- The projected real GDP growth for India in FY 2023-24 stands at a robust 7.3%, aligning with the revised forecast by the Reserve Bank of India (RBI).
- The International Monetary Fund (IMF) has revised its growth projection upwards to 6.3% for the same fiscal year, reflecting confidence in India's economic trajectory.
- Additionally, the IMF's anticipation of India becoming the third-largest global economy by 2027 further underscores the country's potential for sustained economic expansion.









Revenue and Expenditure Estimates (2024-25):

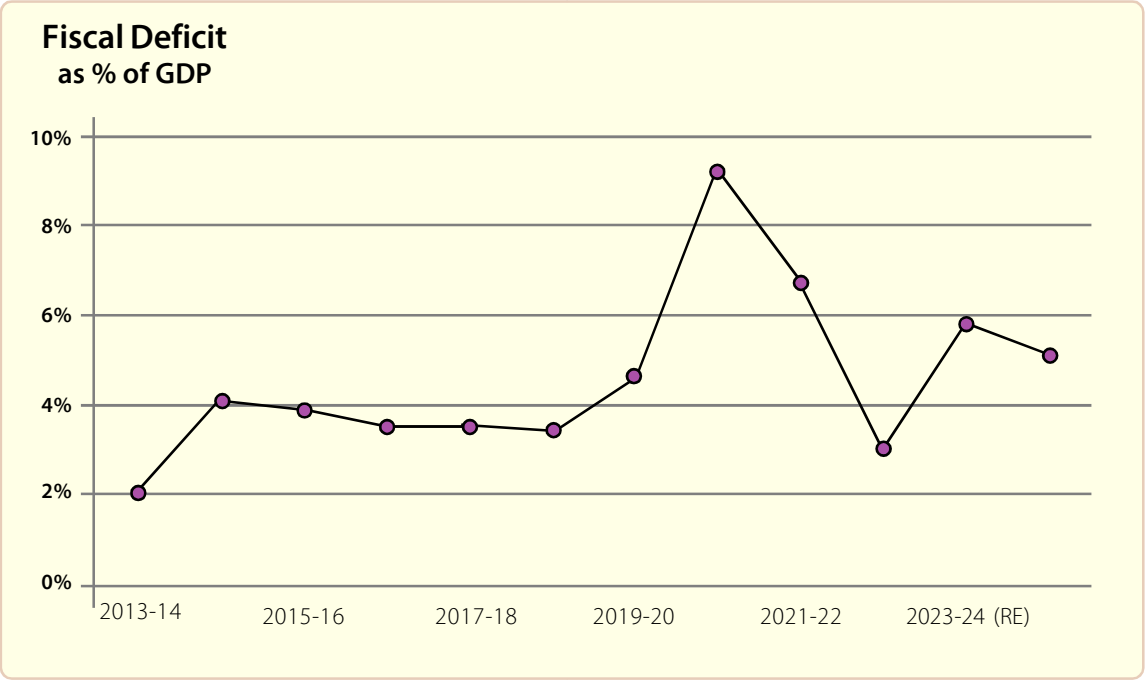
- The budget estimates total receipts (excluding borrowings) at Rs 30.80 lakh crore, indicating the government's revenue sources and financial inflows.
- Total expenditure is projected at Rs 47.66 lakh crore, reflecting the government's planned expenditure on various sectors and programs.
- Tax receipts are estimated at Rs 26.02 lakh crore, highlighting the contribution of taxes to the government's revenue.

GST collections :

- GST collections soared to Rs.1.65 lakh crore in December 2023, marking the seventh instance of surpassing the Rs.1.6 lakh crore milestone.

Fiscal Deficit and Market Borrowing:

- The fiscal deficit for 2024-25 is projected at 5.1% of GDP, in line with the target of reducing it below 4.5% by 2025-26, as announced in the 2021-22 budget.
- Gross market borrowings through dated securities for 2024-25 are estimated at Rs 14.13 lakh crore, while net market borrowings stand at Rs 11.75 lakh crore.

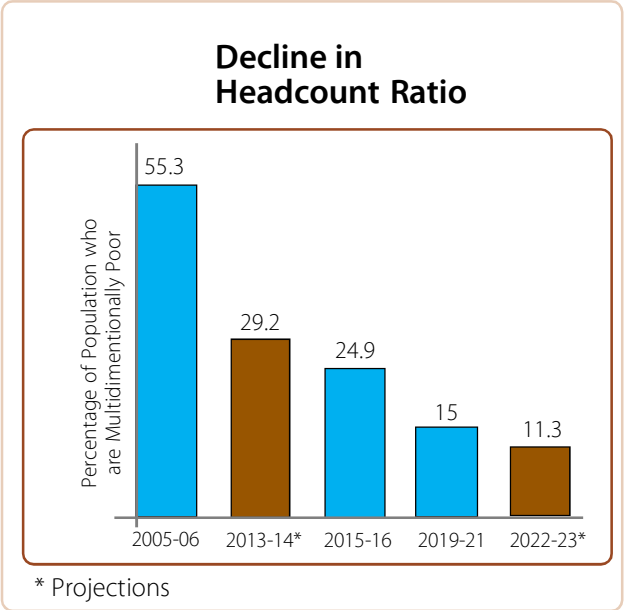


Taxation:

- The Interim Budget retains current rates for direct and indirect taxes, alongside import du-ties.
- Corporate tax rates remain unchanged at 22% for existing domestic companies, while new manufacturing companies enjoy a reduced rate of 15%.
- Individuals with income up to Rs.7 lakh face no tax liability under the new tax regime, promoting inclusivity and reducing the burden on lower income earners.
- Tax benefits for StartUps and investments are extended by one year until March 31, 2025, fostering an environment conducive to entrepreneurial growth and capital inflow.

Priorities:

- Prioritizing the poor, 25 crore individuals were successfully lifted out of multidimensional poverty, with 78 lakh street vendors receiving credit assistance under Prime Minister Street Vendor's AtmaNirbhar Nidhi (PM-SVANidhi).
- Empowering women, 30 crore Mudra Yojana loans were disbursed to women entrepreneurs, and 43% of female enrolment was achieved in Science, Technology, Engineering, and Mathematics (STEM) courses.



- Assistance to 1 crore women was extended through 83 lakh self-help groups (SHGs), while a 28% increase in female enrolment in higher education over a decade was recorded.
- Addressing youth concerns, 1.4 crore individuals were trained under the Skill India Mission, and 43 crore loans were sanctioned under PM Mudra Yojana to foster entrepreneurial aspirations.

- Supporting farmers, direct financial assistance was provided to 11.8 crore farmers under Pradhan Mantri Kisan Samman Nidhi (PM-KISAN), and crop insurance coverage was extended to 4 crore farmers through Fasal Bima Yojana.
- Agricultural trade was streamlined with the integration of 1,361 mandis under eNAM, enhancing market access and efficiency for farmers.

Infrastructure

Railways:

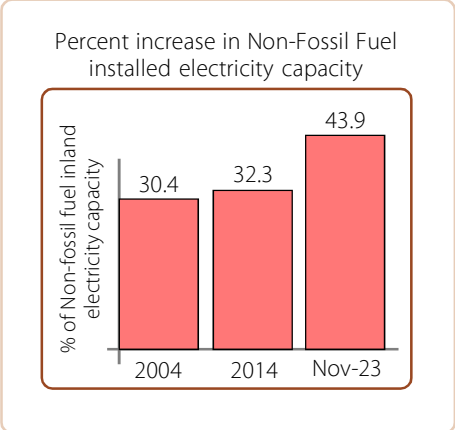
- The government plans to implement three major economic railway corridor programs, focusing on energy, mineral & cement corridors, port connectivity corridors, and high traffic density corridors. Additionally, there's a proposal to convert 40,000 normal rail bogies to Vande Bharat standards.

Aviation:

- The Interim Budget emphasizes the expansion of existing airports and the comprehensive development of new airports under the UDAN (Ude Desh ka Aam Nagrik) scheme.
- Furthermore, the budget highlights the promotion of urban transformation through the development of Metro rail systems and the NaMo Bharat initiative, which focuses on improving urban transportation infrastructure and services.

Clean Energy Sector

- Viability gap funding for wind energy will support harnessing offshore wind potential with an initial capacity target of 1 gigawatt, contributing to clean energy goals.



- Establishment of coal gasification and liquefaction capacity of 100 million tonnes by 2030 aims to promote cleaner alternatives in the energy sector.
- Phased mandatory blending of CNG, PNG, and compressed biogas underscores efforts to reduce reliance on fossil fuels and promote cleaner energy sources.
- Financial assistance for procurement of biomass aggregation machinery will aid in scaling up biomass utilization for energy production.
- Rooftop solarization initiative targets enabling 1 crore households to access up to 300 units of free electricity per month, promoting solar energy adoption.
- Strengthening the e-vehicle ecosystem by supporting manufacturing and charging infrastructure aims to accelerate the transition to electric mobility, reducing emissions.
- Additionally, a new biomanufacturing and biofoundry scheme will be launched to promote environmentally friendly alternatives.

Housing Sector:

- The Interim Budget proposes subsidizing the construction of 30 million affordable houses in rural areas, aiming to address housing shortages and improve living conditions for rural residents.
- Additionally, a new scheme called Housing for Middle-Class will be launched to promote home ownership among middle income individuals, fostering social and economic development.

Healthcare Sector:

- The healthcare sector will prioritize cervical cancer vaccination for girls aged 9-14 years, enhancing preventive care measures.
- The rollout of the U-WIN platform will streamline immunization efforts under Mission Indradhanush, ensuring effective vaccination coverage.
- Ayushman Bharat scheme expansion will now include all ASHA workers, Anganwadi workers, and helpers, widening access to healthcare services for frontline workers.

Agricultural Sector:

- In the agricultural sector, promotion of 'Nano DAP' across diverse agroclimatic zones aims to enhance crop productivity by addressing Nitrogen and Phosphorus deficiencies.
- 'Nano DAP', developed by IFFCO, utilizes nanotechnology to effectively correct nutrient deficiencies in standing crops, contributing to sustainable agriculture practices
- Policies will be formulated to bolster dairy farming and combat Foot and Mouth Disease, ensuring the welfare of dairy farmers and livestock health.
- Strategizing for selfreliance in oilseeds encompasses research, procurement, value

addition, and crop insurance, fostering AtmaNirbharta in this critical sector.

Fishery Sector:

- The budget proposes establishing a new department called 'Matsya Sampada' to address the needs of fishermen, highlighting the government's commitment to supporting the fishery sector and coastal communities.

For States Capex:

- The fifty-year interest free loan scheme for capital expenditure to states will continue, with a total outlay of Rs 1.3 lakh crore.
- A provision of Rs 75,000 crore has been allocated specifically for these interest free loans, aimed at supporting state-led reforms.
- Special emphasis will be placed on the eastern region to catalyse its development and position it as a significant contributor to India's overall economic growth.

Others:

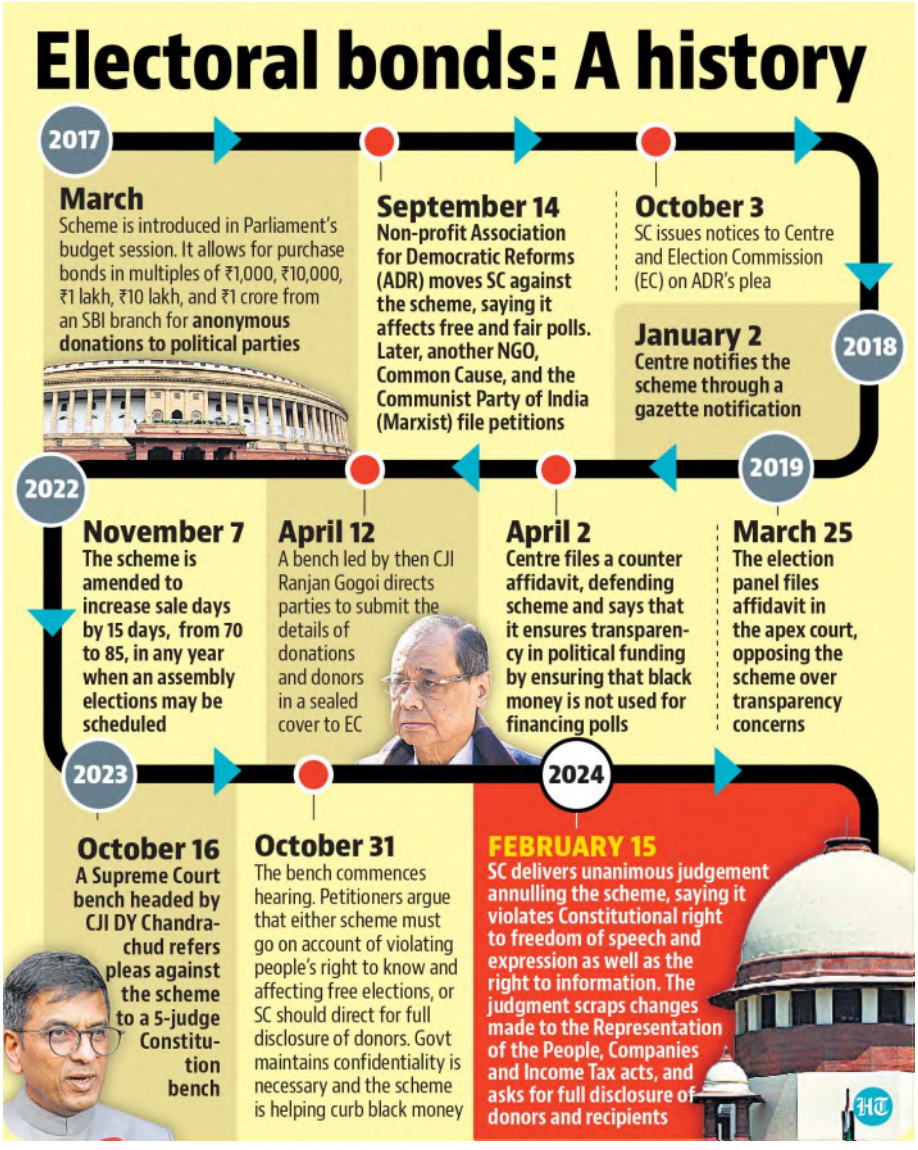
- A corpus of Rs 1 lakh crore will be established, offering a fifty-year interest free loan to foster research and innovation in sunrise domains, promoting technological advancement.
- Efforts to enhance private sector involvement in research and innovation will be intensified, aiming to catalyse innovation driven growth and economic development.
- To tackle rapid population growth and demographic changes, a highpowered committee will be formed to provide recommendations aligned with the vision of 'Viksit Bharat', fostering holistic development and inclusive progress.

COVER STORY

Electoral Bonds Scheme

Why is it in the news?

- Recently, the Supreme court has struck down the electoral bond scheme.



Reasons for SC striking down Electoral Bond Scheme

Violation of the Right to Information:

- The Supreme Court held that the Electoral Bonds Scheme, by allowing anonymous political donations, violated the fundamental right to information guaranteed under Article 19(1)(a) of the Constitution of India.
- The court emphasized that the right to information is not merely a means to an end but an end in itself, crucial for ensuring participatory democracy and holding the government accountable.
- It noted that economic inequality leads to varying levels of political engagement, and anonymous donations could potentially lead to quid pro quo arrangements, undermining the democratic process.

Not Proportionally Justified to Curb Black Money:

- The court applied the proportionality test laid down in the K S Puttaswamy case, which upheld the right to privacy.
- It concluded that the government did not adopt the least restrictive method to achieve its objective of curbing black money in politics.

- The Chief Justice cited examples such as the 20,000 cap on anonymous donations and the concept of Electoral Trusts as less restrictive methods that could have been employed.
- Additionally, the court agreed with the petitioners that curbing black money cannot be considered a legitimate purpose for restricting the fundamental right to information.

Concept of the Proportionality Test

- The Supreme Court, led by Chief Justice DY Chandrachud, applied the proportionality test to assess the electoral bonds scheme's compatibility with constitutional principles.
- According to the apex court,the restrictions it imposed on free speech were not proportional to its objectives of curbing black money and protecting donor privacy.
- The concept of proportionality in law is about ensuring that the extent of state intervention or restriction on individual rights is justified and proportionate to the legitimate aims it seeks to achieve.
- It's a critical aspect of judicial review, especially when evaluating laws or government actions that may infringe upon fundamental rights.

Justice Khanna's Opinion

- According to Justice Khanna, in his separate opinion, asserted that donor anonymity cannot be considered a legitimate state aim.
- He emphasized that voters' right to know takes precedence over donor anonymity in the context of political party funding.

Chief Justice Chandrachud's Opinion

- He applied a "double proportionality" test. He noted that the case involved balancing two fundamental rights: the right to information and the right to privacy.
- According to him, the standard proportionality test wasn't sufficient for such a balancing act. Instead, the court needed to examine whether the state adopted the least restrictive methods to achieve both rights and whether the measure disproportionately impacted either right.
- Chandrachud pointed out that less intrusive methods, such as the electoral trusts scheme, could achieve the objective of curbing black money and protecting donor anonymity without heavily infringing on individual rights. This suggests that the electoral bonds scheme was not the most proportionate means to achieve the government's objectives.

Right to Donor Privacy Does Not Extend to Contributions Made:

- The court highlighted that while financial contributions to political parties can be made for various reasons, including as an expression of support or as a quid pro quo measure, the right to privacy of political affiliation does not extend to contributions made with the intent to influence policies.
- It differentiated between contributions made by corporations and those made by individuals, stating that corporations' contributions should not be equated with donations from other sections of the population.

Unlimited Corporate Donations Violate Free and Fair Elections:

- The court found the amendment to Section 182 of the Companies Act, 2013, permitting unlimited political contributions by companies to be manifestly arbitrary.
- It noted that the provision allowed Indian companies to make financial contributions to political parties without any prior cap on the amount, leading to concerns about undue influence in the political process.
- Additionally, the court highlighted the removal of the requirement for companies to disclose the names of the political parties to which contributions were made in their financial accounts.

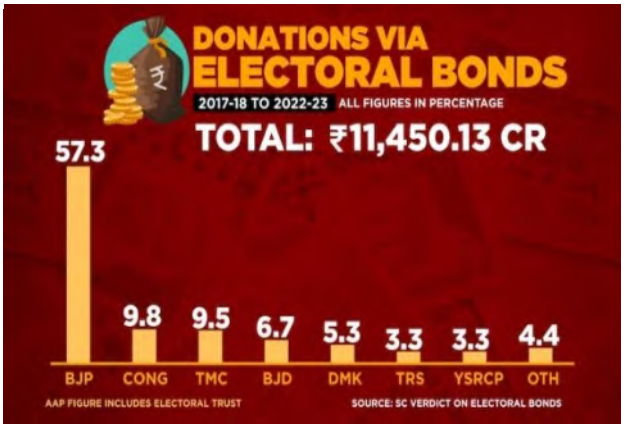
Amendment to Section 29C of RPA, 1951 Quashed:

- The court struck down the amendment to Section 29C of the Representation of the People Act, 1951, which created an exception for donations received through electoral bonds.

- The original requirement to disclose contributions above Rs. 20,000 was deemed to effectively balance the voters' right to information with the right to privacy of donors, especially since donations below this threshold were less likely to influence political decisions.

Other Observations by SC:

- The Supreme Court ordered the State Bank of India (SBI) to immediately halt the issuance of any further electoral bonds and provide details of bonds purchased by political parties since April 12, 2019, to the Election Commission of India (ECI) by March 6, 2024.
- The ECI was directed to publish this information on its official website by March 13, 2024.
- Electoral bonds that were within the validity period but had not yet been encashed by the political party were to be returned, with the issuing bank refunding the amount to the purchaser's account.



About Electoral Bonds

- The Electoral Bonds Scheme, introduced by the Government of India in 2018, aimed to reform political funding by introducing a mechanism for transparent donations while protecting the anonymity of donors.
- Electoral bonds function as promissory notes that can be purchased by Indian citizens or incorporated companies from select branches of the State Bank of India. These bonds can then be donated to eligible political parties.
- Donors have the discretion to contribute electoral bonds to the political party of their choice, maintaining their anonymity. This feature was intended to safeguard donors from potential repercussions or bias.
- The primary objective of the Electoral Bonds Scheme was to enhance transparency in political donations and curb the influence of black money in elections. By channelling contributions through formal banking channels, the scheme aimed to track and regulate polit-ical funding.

Working Mechanism

- Electoral bonds are issued in denominations of Rs 1,000, Rs 10,000, Rs 100,000, and Rs 1 crore.
- The bonds can be encashed through the verified account of the recipient political party and are valid for fifteen days.
- They are available for purchase for a duration of 10 days at the beginning of every quarter.
- Eligibility for receiving electoral bonds is restricted to political parties registered under section 29A of the Representation of the Peoples Act, 1951, and securing at least one percent of the votes polled in the most recent General or Assembly elections.
- Donors' identities remain anonymous as the electoral bonds do not bear the name of the donor, potentially leaving the political party unaware of the donor's identity.
- Tax exemption is granted to both the donor, who receives a deduction, and the recipient political party, provided returns are filed by the political party.

Concerns Raised :

Contradicting its Basic Idea:

- Critics argue that the electoral bonds scheme fails to bring transparency to election funding, contrary to its intended purpose.
- Anonymity of electoral bonds is seen as serving only the interests of the ruling party, while keeping the public and opposition parties in the dark.

Possibility of Extortion :

- Electoral bonds being sold via a government-owned bank (SBI) raise concerns about the government knowing the funders of its opponents.
- This creates the potential for the government to extort money from big companies or victimize them for not funding the ruling party, giving an unfair advantage to the party in power.

A Blow to Democracy:

- Exemption of political parties from disclosing donations received through electoral bonds un-dermines transparency in a representative democracy.
- Voters are unable to know which individuals, companies, or organizations have funded which party,

compromising the accountability of elected representatives.

Compromising Right to Know:

- The right to know, especially in the context of elections, is considered integral to the right to freedom of expression under Article 19 of the Indian Constitution.
- Lack of transparency regarding electoral bond donations limits citizens' ability to make in-formed decisions during elections.

Against Free & Fair Elections:

- Electoral bonds provide no details to citizens while the government can access donor details through the SBI.
- This allows the government to potentially disrupt free and fair elections by leveraging information asymmetry.

Crony Capitalism:

- Removal of limits on political donations through electoral bonds enables well resourced corporations to fund elections, leading to crony capitalism.
- Close, mutually advantageous relationships between business leaders and government officials may result from this scheme, undermining fair competition and public trust in governance.

Concerns raised in the Association for Democratic Reforms (ADR) Report, 2023

Analysis of Skewed Ratios of Donations and Funding Sources:

- The report highlights the disproportionate reliance of political parties on Electoral Bonds as a source of funding.
- In 2019-20, which was the year of the general elections, the highest donations totalling Rs 3,438.8237 crore were received through Electoral Bonds.
- Similarly, in 2021-22, which witnessed 11 Assembly elections, donations worth Rs 2,664.2725 crore were made through Electoral Bonds.
- Out of the total donations analysed, the majority (55.90%) came from Electoral Bonds, followed by contributions from the corporate sector (28.07%) and other sources (16.03%).

National and Regional Parties:

- National parties experienced a staggering surge in donations through Electoral Bonds, with a remarkable 743% increase between FY 2017-18 and FY 2021-22.
- In contrast, corporate donations to national parties increased by a much lower rate of 48% during the same period.
- Regional parties also witnessed a substantial proportion of their funding coming from Electoral Bonds.

Power-Biased Donations of Electoral Bonds:

- The ruling party secured the highest donation among national political parties, with more than 52% of its total donations sourced from Electoral Bonds.
- The main Opposition party also received a significant portion of its donations from Electoral Bonds, accounting for 61.54% of its total donations.
- Similarly, the third-largest party received a significant proportion of its funding from Electoral Bonds, indicating a pervasive trend of power-biased donations favouring established political entities.

Suggestions for Electoral Funding in India

Regulation of Donations:

- Ban certain individuals or organizations, like foreign citizens or companies, from making donations.
- Implement donation limits to prevent parties from being dominated by a few large donors.
- Consider contribution limits as seen in jurisdictions like the US and the UK.

Limits on Expenditure:

- Impose expenditure limits on political parties to prevent a financial arms race.
- Expenditure limits relieve parties from excessive pressure to raise funds and compete financially rather than on policy.

Providing Public Funding to Parties:

- Establish predetermined criteria for public funding allocation, such as a party's past electoral performance and membership fees.
- Consider methods like "democracy vouchers" used in Seattle, where voters are given vouchers to donate to candidates of their choice.

Disclosure Requirements:

- Balance transparency and anonymity by requiring disclosure of large donations while allowing anonymity for small donors.
- Consider models like the Chilean experiment with "reserved contributions," where donors can contribute without revealing their identity.

Balancing Transparency, Anonymity:

- Allow anonymity for small donors and require disclosure for large donations to strike a balance between transparency and privacy.
- Establish reporting thresholds for donations to ensure transparency without exposing small donors to potential reprisals.

Establishing National Election Fund:

- Create a National Election Fund to which all donors can contribute, with funds allocated to parties based on their electoral performance.
- This would eliminate concerns about donors facing reprisals and ensure equitable funding distribution among parties.

Addressing Misuse Concerns:

- Address concerns about the misuse of funds by establishing controls on the end use of money received by political parties.
- Ensure transparency and accountability in the use of funds to prevent misuse for activities like funding terrorism or violent protests.

Recommendations on the funding of political parties

Indrajit Gupta Committee on State Funding of Elections, 1998:

- Endorsed state funding of elections to establish a fair playing field for parties with fewer financial resources.

Recommended limitations:

- State funds allocated only to national and state parties with allotted symbols, excluding independent candidates.
- Initial provision of state funding in kind, offering facilities to recognized political parties and their candidates.
- Advocated for partial state funding due to economic constraints.

Election Commission's Recommendations:

- Emphasized the necessity for political parties to publish their accounts annually for scrutiny by the public and concerned entities.
- Recommended making audited accounts public to ensure accuracy, with auditing performed by firms approved by the Comptroller and Auditor General.

Law Commission, 1999:

- Described total state funding of elections as "desirable" with the condition that political parties are prohibited from receiving funds from other sources.
- Proposed amending the Representation of the People Act, 1951, to introduce section 78A for maintenance, audit, and publication of political party accounts, with penalties for non-compliance.

COVER STORY

PM Modi's visit to United Arab Emirates (UAE)

Why is it in the news?

- PM Modi is on an official visit to the United Arab Emirates. This is his seventh visit to the UAE since 2015 and the third in the last eight months.

More about the news

- India and the United Arab Emirates (UAE) have signed eight pacts to bolster cooperation in key areas such as investments, electricity trade and digital payment platforms.

1) Interlinking of Digital Payment Platforms:

- The agreement facilitates the interlinking of two digital payment platforms: UPI (Unified Payments Interface) from India and AANI (Arab African International Bank) from the UAE.
- It simplifies payment processes for individuals and businesses conducting transactions between India and the UAE.
- The pact involves interlinking RuPay, India's domestic card payment system, with JAYWAN, UAE's domestic card system.

2) Bilateral Investment Treaty (BIT)

- The Union Cabinet of India has given approval for the signing and ratification of a Bilateral Investment Treaty (BIT) with the United Arab Emirates (UAE).
- The UAE's commitment to invest USD 75 billion in India's infrastructure sector further underscores the importance of this treaty in facilitating bilateral investments.
- In 2022-2023, UAE was the fourth biggest FDI (Foreign Direct Investment) investor for India.
- The primary objective of the BIT with the UAE is to provide a framework for protecting investments made by nationals and companies of one state (India or UAE) in the other state (UAE or India, respectively).
- It is designed to create a conducive environment for bilateral investment flows by providing legal protections and guarantees to investors.
- The existing Bilateral Investment Protection Agreement between India and the UAE is set to expire in September 2024.
- The new BIT will replace this agreement and is expected to address any shortcomings while aligning with contemporary investment practices and international standards.
- The BIT is expected to facilitate growth and employment generation by attracting increased investments, particularly in key sectors such as real estate and renewable energy.

Evolution of India's BIT Framework :

- India has signed BITs with 83 countries from the period post-1991 economic reforms up to 2015, based on the Model BIT text of 1993.
- However, in 2015, the Union Cabinet adopted a new Model BIT text due to a rise in international arbitration cases under existing BITs.
- The Model BIT of 2015 serves as a template for (re)negotiations of BITs and investment chapters of Free Trade Agreements (FTAs) and Economic Partnership Agreements.
- Key provisions of the Model BIT of 2015 include an "enterprise" based definition of investment, national treatment ensuring similar treatment as domestic investors, voluntary incorporation of internationally recognized standards of Corporate Social Responsibility (CSR), and the requirement to exhaust local remedies before commencing international arbitration for the settlement of disputes.

3) Intergovernmental Framework Agreement on India-Middle East Economic Corridor (IMEC):

- The IMEC agreement aims to establish a framework for cooperation between India and the UAE in fostering regional connectivity.
- It builds upon the commitments made during the G20 leaders' summit in New Delhi, emphasizing the strategic importance of enhancing connectivity and economic cooperation in the region.

4) Energy Cooperation:

- Pacts signed on electrical interconnection and trade signify a deepening collaboration in the energy sector.
- Given the UAE's position as a significant source of crude oil and LPG for India, these agreements are crucial for ensuring energy security and promoting bilateral trade in the energy sector.

5) Cultural Cooperation:

- The protocol between the National Archives of both countries aims to strengthen cultural ties and preserve historical heritage.
- Supporting the Maritime Heritage Complex at Lothal, Gujarat, reflects the shared commitment to preserving and showcasing cultural heritage.

6) Gratitude for BAPS Temple Construction

- The BAPS Mandir, Abu Dhabi inaugurated by Prime Minister Modi, marking the first Hindu temple in the city. The temple serves as a symbol of friendship and mutual respect, enhancing people-to-people ties.

About BAPS Mandir

- Located at Abu Mureikhah near Al Rahba, it embodies traditional Nagar style architecture.

- The temple boasts an impressive structure with 402 pillars crafted from 25,000 stone pieces and stands at a height of 108 feet.
- It features seven spires, each representing one of the seven emirates of the UAE, constructed using pink Rajasthan sandstone, white Italian marble, and 18 lakh bricks.

Features:

- The entrance is adorned with eight murtis symbolizing foundational values of Sanatana Dharma.
- The temple includes shrines dedicated to various deities such as Lord Ram, Sita, Hanuman, Shiva, Parvati, Ganesh, and Karthik.
- Intricate carvings in each shrine depict the life and teachings of the respective deities.
- Inscriptions depict stories from ancient civilizations such as Maya, Aztec, Egyptian, Arabic, European, Chinese and African, highlighting the interconnected essence of global spirituality.
- Fly ash is used instead of cement to reduce carbon footprint, and nano tiles with designed patterns ensure comfort in extreme heat.
- The construction avoids ferrous materials, aligning with eco-friendly practices.

About Bochasanwasi Akshar Purushottam Swaminarayan Sanstha (BAPS)

- BAPS is a socio-spiritual Hindu faith rooted in the Vedas, emphasizing moral, social, cultural, and spiritual activities.
- Founded in 1907 CE by Brahmaswarup Shastriji Maharaj, it follows principles such as abstaining from alcohol, addictions, adultery, meat, and impurities of body and mind.
- Engaged in various humanitarian activities including disaster relief, educational initiatives, healthcare services, and anti-addiction campaigns.

7) Port Infrastructure Development:

- Agreements signed between RITES Limited and Gujarat Maritime Board with Abu Dhabi Ports Company to enhance port infrastructure and connectivity between India and the UAE.

8) Bharat Mart:

- The foundation stone laying for Bharat Mart in Dubai signifies efforts to promote exports from India's micro, small, and medium sectors.
- By providing a platform for these sectors to reach international buyers in the Gulf, West Asia, Africa, and Eurasia, Bharat Mart plays a vital role in boosting India's exports and economic growth.

1 POLITY & GOVERNANCE

1. Uniform Civil Code (UCC) Bill

Why is it in the news?

- The Uniform Civil Code (UCC) Bill was recently introduced in the Uttarakhand Assembly.

More about the news

- The Uniform Civil Code (UCC) Bill introduced in the Uttarakhand Assembly aims to fulfil Article 44 of the Constitution of India, advocating for a uniform civil code across the nation.
- While states like Gujarat, Madhya Pradesh, and Assam have shown willingness to adopt the UCC, none have officially implemented it.
- Goa stands as an exception with its own version of the UCC based on the Portuguese Civil Code of 1867.

About Uniform Civil Code (UCC)

- UCC is a directive principle outlined in Part IV of the Indian Constitution, specifically in Article 44 of the Directive Principles of State Policy (DPSP).
- Article 44 states that "The State shall endeavour to secure for the citizens a uniform civil code throughout the territory of India."
- The idea of a UCC has its roots in the debates during the framing of the Indian Constitution. Proponents, including Dr. B.R. Ambedkar, believed that a UCC was essential to promote gender equality, secularism, and national integration.
- However, there were opposing views, with some members of the Constituent Assembly arguing against tampering with religious laws without the consent of respective religious communities.
- The purpose of UCC is to establish a uniform legal framework for all citizens of India, irrespective of their religion. Currently, matters such as marriage, divorce, and succession are governed by religion based personal laws.

Key Features of Uttarakhand Uniform Civil Code (UCC) Bill :

- **Uniform Marriage Age:** Establishes a common marriage age of 18 for both genders across all religions.
- **Prohibition of Polygamy and Child Marriage:** Bans the practice of simultaneous multiple marriages and child marriage.
- **Simplified Adoption Process:** Aims to streamline adoption procedures for individuals and couples, irrespective of religion.
- **Registration of Live-in Relationships:** Mandates registration of live-in relationships with-in the state, without granting them legal status equivalent to marriage. Prescribes a jail term of up to six months for failure to produce a relationship certificate.
- **Inheritance Rights:** Ensures equal inheritance rights for sons and daughters, regardless of religion.
- **Grounds for Divorce:** Specifies uniform grounds for divorce applicable to all communities.
- Further, it provides for maintenance to women deserted by their partners.
- **Exclusion:** Tribal communities governed by customary laws are exempted from the UCC provisions.

Concerns Raised Regarding the Bill :

- **Religious Freedom:** Critics argue that the bill infringes upon the right to follow religious personal laws, particularly in matters of marriage and inheritance.

- **Privacy Concern:** Mandatory registration undermines the privacy of individuals, as upheld by Article 21 of the Constitution and the K.S. Puttaswamy judgment of 2017.
- **Parochial Approach:** Critics view compulsory registration as a paternalistic approach, potentially disregarding the autonomy of consenting adults.
- **Impact on Minorities:** Some minority communities express apprehensions about losing their cultural and legal traditions.
- **Lack of Consultation:** Stakeholders, including religious communities and experts, were al-legedly not adequately consulted before drafting the bill.
- **Potential for Misuse:** There are fears that the bill might be misused to target specific communities.
- **Unclear Definition of 'Live-in Relationships':** Lack of clarity regarding rights and obligations associated with registered live-in relationships raises concerns and generates uncertainty.

Related Supreme Court's Observations

- Over the years, the Supreme Court has deliberated upon the issue of UCC in various judgments but has refrained from issuing directives to the government, stating that law-making falls within the exclusive domain of Parliament.
- In the landmark Shah Bano case of 1985, the Court expressed regret over the non-implementation of Article 44 and called for its enforcement.
- Similar sentiments were reiterated in subsequent cases like Sarla Mudgal v. Union of India (1995) and John Vallamattom v. Union of India (2003), among others.

Conclusion:

- Adoption of a uniform code should ensure respect for all religions and address fears among minority communities.
- Thorough discussions regarding concerns related to live-in relationships and privacy are necessary before implementing the code.

2. Places of Worship Act, 1991

Why is it in the news?

- Recent events surrounding civil suits concerning mosques in Varanasi and Mathura have brought the Places of Worship Act back into focus.
- These legal disputes challenge the Act's efficacy in preserving the status of religious sites.

About the Places of Worship Act

- The Act was passed in 1991 against the backdrop of the Babri-Masjid Ram Janmabhoomi dispute, which had escalated tensions between Hindu and Muslim communities.
- The legislation aimed to freeze the status of places of worship as they were on August 15, 1947, the day India gained independence, in order to prevent further conflicts over religious sites.
- It prohibits the conversion of places of worship from one religious denomination to another.
- The Act abates any ongoing legal proceedings related to changing the character of a place of worship that were pending before August 15, 1947.
- Certain exceptions are provided, such as ancient monuments and settlements before the Act's enactment, which are not covered by its provisions.

Provisions of the Places of Worship Act 1991

- **Prohibition of Conversion (Section 3):** Prevents the conversion of a place of worship, whether in full or part, from one religious denomination to another or within the same de-nomination.
- **Maintenance of Religious Character (Section 4(1)):** Ensures that the religious identity of a place of worship remains the same as it was on 15th August 1947.
- **Abatement of Pending Cases (Section 4(2)):** Declares that any ongoing legal proceed-ings concerning the conversion of a place of worship's religious character before15th August 1947, will be terminated, and no new cases can be initiated.

Exceptions to the Act (Section 5):

- The Act does not apply to ancient and historical monuments, archaeological sites, and re-mains covered by the Ancient Monuments and Archaeological Sites and Remains Act, 1958.
- It also excludes cases that have already been settled or resolved and disputes that have been resolved by

mutual agreement or conversions that occurred before the Act came into effect.

- The Act does not extend to the specific place of worship known as Ram Janmabhoomi-Babri Masjid in Ayodhya, including any legal proceedings associated with it.
- Penalties (Section 6): Specifies penalties, including a maximum imprisonment term of three years and fines, for violating the Act.

Status of ongoing cases on the Gyanvapi mosque

- Legal battles concerning the Gyanvapi mosque in Varanasi involve suits filed by Hindu women worshippers and others in 1991. These aim to assert Hindu rights to worship at the site.
- The Hindu claim is based on the belief that an ancient temple dedicated to Lord Vishweshwar existed at the location of the Gyanvapi mosque before it was demolished by Aurangzeb in 1669.
- Recent court rulings have favoured the Hindu claimants, allowing Hindu prayers to be conducted in the mosque's cellar based on the Archaeological Survey of India's report, which supports the existence of a pre-existing temple.

Mathura dispute involving the Shahi Idgah mosque

- Legal disputes in Mathura revolve around the Shahi Idgah mosque, which stands adjacent to the Krishna Janmabhoomi Temple.
- These suits claim that the mosque was built over the birthplace of Lord Krishna.
- Despite a previous settlement in 1968, current suits challenge the compromise as fraudulent, seeking the transfer of the entire parcel of land to the deity.

Reasons why the Act hasn't barred suits on Gyanvapi and Shahi Idgah

- Courts have ruled that the Act does not serve as an absolute bar to such litigation.
- In the case of the Gyanvapi mosque, courts argue that the Act doesn't define 'religious character,' and therefore, a thorough examination of evidence is required to determine it.
- Additionally, the Act doesn't apply to challenges on decrees established before its enactment in 1991, allowing these suits to proceed despite the Act's provisions.

3. Andhra Pradesh Launches Caste Census

Why is it in the news?

- Andhra Pradesh recently initiated caste census exercise, following the footsteps of Bihar, to comprehensively enumerate all communities in the state.
- The method involves deploying the village secretariat system and volunteers for data collection.

Historical Context

- Caste-wise enumeration was first introduced by the British colonial administration in 1881 and continued until the 1931 census.
- Independent India abandoned caste enumerations, citing concerns about potential social division and strengthening caste hierarchies.
- Subsequently, census data from **1951 to 2011** focused on Scheduled Castes and Scheduled Tribes only.

Arguments for Caste Census :

- **Effective Governance:** Caste census provide a comprehensive picture of India's caste composition, aiding in effective governance by including marginalized communities and subcastes.
- **Tracking Progress:** The absence of official data hinders tracking progress in affirmative action, addressing caste based discrimination, and allocating resources effectively.
- **Certainty in Policy Making:** Lack of clarity on the progress of various caste groups impedes effective policy formulations.
- **Social Justice:** Caste census enables better targeting of affirmative action programs, addressing persistent discrimination and extending welfare schemes to overlooked castes.
- **Resource Allocation:** It facilitates equitable distribution of resources based on the needs of different caste groups.
- **Social Reforms:** Data driven evidence supports social reform initiatives aimed at addressing caste based disparities.

Arguments Against a Caste Census

- **Social Division:** Critics argue that caste census could solidify caste identities, exacerbate tensions, and lead to renewed claims of dominance and hierarchy.

Education & Employment Indicators by Social Group

The table shows the Percentage distribution of persons by general education level, workers in usual status by broad status in employment, and employees in posts and services of the Central Government.

	ST	SC	OBC	General	Data sources
Percentage distribution of persons of age 7 years and above by general education level					
Literacy rate	69.6	72.4	76.9	85.9	Household Sociall Consumption on Education in India, NSS 75th Round (July 2017 - June 2018), NSO, MoSPI, GOI
Secondary Education	9.9	11.5	13.5	15.8	
Higher Secondary Education	6	7.7	9.4	12.8	
Graduate	3.3	4.1	5.9	12.3	
Post Graduate and above	0.7	0.9	1.2	3.4	
Percentage distribution of workers in usual status (ps+ss) by broad status in employment					
Regular wage / salaried	12.3	19.8	20.1	30.6	Periodic Labour Force Survey 2021-22, NSSO, MoSPI, GoI
Casual Labour	28.9	38.2	20	11.2	
Self-employed	58.8	42.1	59.9	58.2	
Percentage distribution of employees in posts and services of the Central Government					
Group A	5.9	13.0	16.6	64.6	Annual report 2021-22, Ministry of Personnel, Public Grievances and Pensions, GoI
GROUP B	7.1	16.8	16.7	59.5	
GROUP C	7.8	17.7	22.8	51.7	
Total	7.7	17.5	22.1	52.7	

Related Supreme Court Rulings

Indra Sawhney v Union of India, 1992

Emphasized the need for a "reasonable & adequate" data-driven approach to identify backward classes.

Janhit Manch vs. Union of India, 2020

The court ruled that the government is not obligated to conduct a caste census at present, relying on existing data.

Bihar Caste Census Case 2023

The Supreme Court is currently hearing challenges to the validity of Bihar's 2023 caste census.

- **Data Misuse:** Concerns exist about potential misuse of caste census data for political gains or discrimination against certain caste groups.
- **New Issues :** The survey data may reignite debates over the 50% ceiling on reservations imposed by the Supreme Court.
- **Logistical Challenges:** Conducting a nationwide caste census is a complex and expensive undertaking, requiring careful planning and implementation.
- **Alternative Data Sources:** Some argue that existing databases and surveys can provide sufficient data on caste and socioeconomic conditions.

Way Forward :

- Caste data is crucial for understanding the labour market, wealth inequality, and policy scheme implementation. Rather than politicizing the caste census, every political party should embrace the idea to ensure the welfare of the most marginalized sections of the citizens.

4. Political empowerment of Women

Why is it in the news?

- According to the 2023 UNDP report, women's political empowerment is crucial for enhancing governance and stimulating economic growth.

About Political empowerment

- Political empowerment of women refers to their increased capacity to influence and participate in decision making processes across all levels of political life.

- It is integral to achieving gender equality and fostering a just and equitable society.

Current Status :

- India ranks 127th out of 146 countries in the Global Gender Gap Report 2023, with a political empowerment rank of 48.
- In the 2019 Lok Sabha elections, only 9% of contestants were women, with 78 winning seats, representing under 14.4% of all seat winners.
- Women comprised only 10.5% of all Members of Parliament in 2021, with state assembly representation averaging at 9%.
- Projections indicate transformative gender shifts in India's electoral landscape, with women's voter turnout expected to exceed men's by 2029.
- Recent state elections witnessed significant voter turnout among eligible women, particularly in rural areas.
- Factors contributing to increased participation include India's 33% reservation of seats in local representative bodies and grassroots selfhelp group movements.

Benefits of Women Political Empowerment (WPE)

- WPE leads to responsive and transparent governance, reduces risks of civil unrest, and challenges gender stereotypes.
- Studies show that WPE correlates with higher GDP growth rates, augmented presence in the economy, and reduced gender wage gaps.
- Increased WPE fosters technological change, innovation, and growth, especially in non-Western nations.
- WPE contributes to the realization of Sustainable Development Goals.
- Women legislators demonstrate better economic performance and are less vulnerable to political opportunism.
- WPE enhances women's access to financial resources, as observed in rural India.

Challenges

- Deep-rooted gender biases limit women's access to political opportunities.
- Women in politics face higher risks of violence, harassment, and intimidation.
- Limited access to childcare, funding, and political networks hinder women's ability to campaign and run for office.
- Existing power structures and political systems often favour men, making it difficult for women to break through and win elections.
- Women's importance is often reduced to a transactional "vote for my scheme" approach.

Strategies for Progress

- Affirmative action policies can increase women's representation, as seen in the Constitution (106th Amendment) Act, 2023.
- Empowering women with political knowledge and leadership skills enhances their confidence.
- Implementing robust legal frameworks is crucial to prevent violence against women in politics.
- Public education campaigns can challenge stereotypes and promote gender equality.
- Women's organizations play a crucial role in advocating for women's rights and supporting female candidates.

Conclusion

- Gender equality in politics is essential for a stable and sustainable economy.
- Further, women's active participation as voters, poll workers, candidates, and lawmakers are crucial for accountable governance.

5. Citizen-Centric IT Initiatives in Courts

Why is it in the news?

- During the Diamond Jubilee celebration of the Supreme Court, the Prime Minister launched **citizen centric information and technology initiatives** aimed at enhancing judicial accessibility and efficiency.

The initiatives include:

1) Digital Supreme Court Reports (Digi SCR)

- This initiative aims to make Supreme Court judgments available to citizens of the country in electronic format free of cost.
- By digitizing these reports, individuals can access judgments conveniently from anywhere, facilitating legal research, and empowering citizens to understand legal precedents and rulings.

2) Digital Courts 2.0 under e-Courts Project

- The Digital Courts 2.0 initiative focuses on providing district court judges with electronic access to court records.

- It enables judges to access case documents and information digitally, leading to faster decision making and improved judicial productivity.
- By leveraging AI technology, speech to text transcription can be performed in realtime during court proceedings.

3) Redesigned Website of Supreme Court

- The Supreme Court launched a redesigned website with a userfriendly interface, catering to users in both English and Hindi languages.
- The userfriendly interface improves navigation and search functionalities, enabling easier access to legal resources, case status, and other relevant information.

4) Expansion of Supreme Court Building Complex

- With an approved budget of Rs. 800 crores, the expansion of the Supreme Court building complex aims to accommodate the growing needs of the judiciary.
- The expansion project facilitates the effective functioning of the Supreme Court, providing adequate space for courtrooms, administrative offices, and support facilities.
- Since 2014, the government has disbursed over Rs. 7,000 crores for upgrading the physical infrastructure of courts across the country.

E-Court Project

- The E-Court project is a comprehensive initiative aimed at transforming the Indian judiciary through Information and Communication Technology (ICT) enablement.
- It is a Pan-India Mission Mode Project monitored and funded by the Department of Justice, Ministry of Law and Justice.
- By leveraging ICT solutions, the E-Court project enhances transparency, judicial productivity, and case management.
- It seeks to reduce pendency by enabling efficient handling and disposition of cases across district courts in the country.

National Judicial Data Grid (NJDG)

- The NJDG serves as a centralized database of orders, judgments, and cases, created as an online platform under the e-Courts Project.
- It provides stakeholders with access to comprehensive and up to date judicial data, facilitating informed decision making and monitoring of court proceedings.
- The NJDG enhances transparency and accountability in the judicial system by promoting data-driven insights and analysis.

National Service and Tracking of Electronic Processes

- This initiative involves the development of a technology enabled platform for serving electronic processes and issuing summons.
- It streamlines the process serving mechanism, ensuring timely and accurate delivery of legal documents.

AI-Powered Portals (SUPACE and SUVAS)

- SUPACE (Supreme Court Portal for Assistance in Court's Efficiency) and SUVAS (Supreme Court Vidhik Anuvaad Software) are AI powered portals designed to enhance the efficiency and effectiveness of court operations.
- SUPACE provides assistance to the judiciary in improving court efficiency, while SUVAS serves as a machine assisted translation tool for legal documents, facilitating multilingual communication and comprehension.

6. The Public Examinations (Prevention of Unfair Means) Bill, 2024

Why is it in the news?

- Recently, the Public Examinations (Prevention of Unfair Means) Bill, 2024 was introduced in the Lok Sabha by the Central government to address the rising concerns regarding leaks, malpractices, and organized cheating in various recruitment examinations.
- The aim is to strengthen the legal framework to prevent unfair means in public examinations, ensuring the integrity and credibility of these exams.

Provisions of the Bill

- The Bill outlines 15 specific unfair practices that are prohibited during public examinations.
- These include leaking of question papers; colluding to leak question papers; unauthorized possession of materials such as question papers or answer sheets; providing answers by unauthorized individuals; assisting candidates without authorization; manipulating exam condi-tions; conducting fake exams; and issuing fraudulent admit cards among others.

- The Bill extends its coverage to a wide range of entrance examinations conducted by various government bodies. These include examinations held by the Union Public Service Commis-sion (UPSC); Staff Selection Commission (SSC); Railway recruitment examinations; Banking recruitment examinations; Computer-based examinations conducted by the National Testing Agency (NTA); and entrance tests such as NEET (National Eligibility cum Entrance Test), JEE (Joint Entrance Examination), and CUET (Common University Entrance Test).
- The Bill proposes stringent punishment for those found guilty of unfair means during public examinations.
- All offenses under the Act are categorized as cognizable, non-bailable, and non-compoundable.
- Individuals involved in cheating face a minimum of three to five years of imprisonment.
- Those engaged in organized crimes of cheating are subject to even harsher penalties, includ-ing five to ten years of imprisonment and a minimum fine of Rs 1 crore.
- Additionally, in cases where institutions are found guilty, provisions include attachment and forfeiture of property, as well as the recovery of the proportionate cost of the examination from the institution.
- The severity of the punishment is intended to serve as a deterrent against malpractices and to ensure the sanctity of the examination process.

Objectives of the Bill

- The Bill addresses the pressing need to curb leaks and malpractices that have adversely af-fected the interests of lakhs of students in recent years, often leading to the cancellation of examinations.
- It aims to target organized gangs and institutions that engage in unfair means for monetary gains while safeguarding the interests of genuine candidates.
- By enhancing transparency, fairness, and credibility in public examination systems, the Bill seeks to reassure the youth that their sincere efforts will be fairly rewarded, thereby securing their future prospects.

7. Water (Prevention and Control of Pollution) Amendment Bill, 2024

Why is it in the news?

- Recently introduced in the Rajya Sabha, the Water (Prevention and Control of Pollu-tion) Amendment Bill, 2024 aims to amend the existing Water (Prevention and Control of Pollution) Act, 1974.
- The proposed amendments seek to address various lacunae and enhance the effectiveness of the legislation in combating water pollution.

Key Features of the Bill :

- The bill proposes the appointment of specialized 'adjudication officers' who will be tasked with determining penalties for environmental violations.
- The amendment introduces a provision to prescribe the manner of appointment for the Chairman of the State Pollution Control Boards (SPCBs) by the Central Government.
- Initially applicable to the states of Himachal Pradesh and Rajasthan, the bill also provides pro-visions for other states to adopt the amendments through a resolution under the Water (Pre-vention and Control of Pollution) Act, 1974.
- One significant aspect of the bill is the proposed decriminalization of minor offenses under the existing Act. Instead of imposing imprisonment as a penalty for violations, the bill advocates for the imposition of fines, thereby promoting a more lenient approach towards minor infrac-tions while still ensuring accountability.
- The bill proposes to revise the penalties for certain offenses under the 1974 Act. For instance, the imprisonment penalty for failing to inform the State Board about water abstraction or the construction of disposal systems will be replaced with fines ranging from Rs 10,000 to Rs 15 lakhs.
- Another noteworthy provision of the bill is the empowerment of the Central Government to exempt certain categories of industrial plants from restrictions on new outlets and discharges.
- The bill empowers the Central Government to issue guidelines pertaining to the grant and establishment of industries, particularly concerning their environmental impact.

About Water Pollution

Causes:

- Water pollution is primarily caused by the discharge of untreated or inadequately treated waste from urban areas, accounting for a significant portion of India's water pollution.
- Industrialization and urbanization have further exacerbated the problem, leading to the emergence of large point sources of pollution.
- Heavy metals contamination from various industrial activities also contributes significantly to water pollution, posing severe health risks to humans and ecosystems.

The detrimental effects of water pollution on human health and the environment are profound:

- In 2019 alone, water pollution contributed to over 23 lakh premature deaths in India, making it the leading cause of premature mortality in the country.
- Beyond its human toll, water pollution also degrades freshwater supplies and ecosystems, undermining biodiversity and ecological stability.

Measures to Control

- To address the menace of water pollution, the Indian government has enacted various legislative measures, including the Water (Prevention and Control of Pollution) Act and the Environment (Protection) Rules, 1986.
- Additionally, the Central Pollution Control Board (CPCB) plays a pivotal role in enforcing these laws and regulations, monitoring pollution levels, and coordinating pollution control efforts at the national level.
- However, despite these efforts, effective implementation and enforcement remain a challenge, necessitating continuous vigilance and proactive measures.

8. Annual NeSDA Way Forward Report 2023

Why is it in the news?

- The Department of Administrative Reforms and Public Grievances (DARPG), under the Ministry of Personnel, Public Grievances, and Pensions, released the 'Annual NeSDA Way Forward Report' for the year 2023.
- This report is a comprehensive assessment of the progress made by States and Union Territories (UTs) in implementing e-Governance initiatives, particularly under the National e-Governance Service Delivery Assessment (NeSDA) Framework.

About the Report :

- The report highlights a substantial increase in the number of e-Services provided by States and UTs. In December 2023, the total number of e-Services stood at 16,487, showing notable growth from 11,614 e-Services in April 2023.
- The Union Territory of Jammu and Kashmir emerged as a leader in e-Service provision, offering 1,117 e-Services.
- States and UTs collectively achieved a saturation level of 76% of possible mandatory e-Services. This marks an improvement from the previous assessment under NeSDA 2021, where the saturation level was recorded at 69%.
- Several States and UTs have demonstrated exemplary performance in e-Service delivery. States like Kerala, Assam, and Odisha, along with the UT of Jammu and Kashmir, have achieved the milestone of providing one hundred per cent e-Services through their unified portals.

About NeSDA Framework :

- Launched in 2018, the NeSDA Framework aims to assess the depth and effectiveness of existing e-Governance service delivery mechanisms.
- It provides a structured approach to measure progress and identify areas for improvement in e-Service delivery across States and UTs.
- The NeSDA Framework primarily focuses on promoting the adoption of e-Service delivery through unified portals by States and UTs. It is customized to suit India's federal structure and diverse e-Governance landscape, ensuring that assessment parameters are relevant and tailored to the country's specific context.
- To accommodate variations in size and diversity, States have been categorized into three groups: North East States and Hill States (11), Union Territories (7), and Remaining States (18).

About e-Services

- e-Services play a crucial role in enhancing India's socio-economic landscape by boosting economic growth. The country aims to double its economy to $5 trillion within five years, and digital infrastructure,

including e-Services, forms a fundamental component of this goal.

- The Digital India Mission is pivotal in the country's digitization efforts, focusing on digital security and trust to create a robust digital infrastructure that supports various e-Services.
- India's e-commerce sector is experiencing rapid growth, expected to reach a 41% Compound Annual Growth Rate and cross USD 103 billion by 2020. This sector contributes significantly to the economy, creating new markets and potentially contributing 4% to GDP by 2020.
- With a large number of internet and smartphone users, India has immense potential for e-banking growth. The increasing internet penetration sets the stage for the expansion of electronic banking services across the country.
- Digital education enhances teaching efficiency and student engagement. It enables better content access, more effective lesson planning, and improved classroom management, leading to socio-emotional benefits for teachers and students.

Challenges and Concerns

- **e-Waste Generation:** The exponential growth of the ICT sector has led to a significant increase in electronic waste generation, posing environmental challenges.
- **Low e-Readiness Rank**: India's low e-readiness rank indicates the limited adoption of ICTs, posing challenges for widespread implementation of e-Governance initiatives.
- **Privacy and Security Concerns:** Privacy and security issues related to personal information, along with the digital divide, remain significant challenges in the implementation of e-Governance in India.
- **E-learning Challenges:** The COVID-19 pandemic highlighted challenges in online education, exacerbating inequality and pedagogical issues. Rural areas face additional challenges like financial constraints, lack of infrastructure, faculty, and gender inequality.
- **Remote Work Challenges:** India's remote work ranking has declined due to infrastructure issues, low English proficiency, and internet connectivity challenges.
- **Telecommunication Act of 2023 Impact:** While the act introduces important changes, contested provisions related to safety standards and government powers raise concerns about citizen privacy.

Government Initiatives :

- **e-Kranti (National e-Governance Plan 2.0):** Aims to transform e-Governance by integrating services, reengineering government processes, and focusing on ICT infrastructure, security, and data preservation.
- **National e-Governance Plan (NeGP):** Integrates e-Governance initiatives under a collective vision, offering various e-Services like BHIM-UPI, GeM, GSTN, DigiLocker, UMANG, Jeevan Pramaan, e-Hospital, MyGov, and e-NAM.
- **Digital Currency:** The introduction of a digital rupee or Central Bank Digital Currency (CBDC) is seen as an opportunity to enhance ease of doing business.

Way Forward :

- **Open Digital Ecosystems (ODEs):** Creating digital commons, ensuring interoperability, and leveraging open-source software, data, standards, licenses, and APIs can enhance citizen experience.
- **IndiaStack:** Aims to solve India's challenges through a unique digital infrastructure, facilitating presence-less, paperless, and cashless service delivery.
- **Government-as-a-Service/Platform (GaaP):** Offers a more organized, digital-based service delivery system, focusing on removing bureaucratic hurdles for citizens by providing a single ID/card for multiple services.

9. SC overturned Chandigarh mayoral poll results

Why is it in the news?

- The Supreme Court nullified the outcome of the January 30 elections for the Chandigarh Municipal Corporation Mayor's post.

More about the news

- The apex court announced the AAP-Congress candidate as the winner, overturning the previous declaration of the BJP candidate's victory.
- The court found that the presiding officer deliberately defaced eight votes intended for the alliance candidate, rendering them invalid.

- In rectifying the electoral malpractice, the Supreme Court utilized its broad powers under Article 142 of the Constitution.
- Article 142 empowers the Supreme Court to pass any decree or order necessary for ensuring complete justice in any matter before it, allowing the Court to address situations where existing laws may be inadequate.
- This decision underscores the significant role of the judiciary in upholding the integrity of democratic processes and preventing electoral fraud or malpractice.

Overview of Article 142

About:

- Article 142 of the Indian Constitution grants the Supreme Court unique powers to deliver complete justice in situations where existing laws may be insufficient or where justice demands extraordinary measures.
- Article 142 confers upon the Supreme Court plenary power to pass decrees or orders as necessary for doing complete justice in any cause or matter pending before it.
- Orders passed under Article 142 are enforceable throughout the territory of India as prescribed by any law made by Parliament or order of the President.

Noticeable Use of Article 142:

- **Union Carbide Case:** In the aftermath of the Bhopal Gas Disaster, the Supreme Court invoked Article 142 to settle civil and criminal proceedings and provide compensation to the victims.

  Article 142 played a crucial role in resolving the Ram Janmabhoomi-Babri Masjid land dispute by facilitating the handover of the disputed land to a trust formed by the central government.
- **Manohar Lal Sharma Case:** In cases involving exceptional circumstances that interfere with the larger public interest, such as issues related to governance or constitutional matters, Article 142 empowers the Supreme Court to intervene to uphold the rule of law and protect the interests of the public.
- **Curative Petitions:** The concept of curative petitions (Rupa Ashok Hurra vs. Ashok Hurra), introduced by the Supreme Court, is based on Article 142. These petitions allow litigants to seek relief against judgments that may have resulted in gross miscarriage of justice, ensuring that substantive rights are protected even after the conclusion of legal proceedings.

Controversies:

- **R.S. Naik vs A. R. Antulay:** In this case, the Supreme Court's use of Article 142 to transfer cases against Antulay pending before a special judge to the High Court raised questions about the judiciary's interference in the domain of lower courts.
- **Vinay Chandra Mishra Case:** The conviction of Vinay Chandra Mishra for contempt of court by the Supreme Court raised concerns about the judiciary's exercise of disciplinary jurisdiction over legal practitioners, which is traditionally vested in the Bar Council under the Advocates Act.
- **Coal Block Allocation:** The Supreme Court's cancellation of coal block allocations through Article 142 was criticized for encroaching upon the domain of the executive and legislative branches of government.

Criticism:

- **Violation of Separation of Powers:** Critics argue that Article 142 grants unchecked power to the judiciary, thereby undermining the principle of separation of powers between the legislature, executive, and judiciary.
- **Lack of Accountability:** Unlike the legislature and executive, the judiciary is not held accountable for its actions, leading to concerns about the potential misuse or abuse of Article 142 powers.
- **Subjectivity of Complete Justice:** The term "complete justice" lacks a standard definition, allowing for subjective interpretation by the judiciary, which may lead to inconsistency or arbitrariness in its application.

Limitations on Article 142:

- **Substantive Rights:** While exercising power under Article 142, the Supreme Court must not ignore the substantive rights of litigants under existing laws.
- **Supplementation of Law:** Article 142 cannot be used to supplant substantive law applicable to a case or to ignore express statutory provisions.
- **Jurisdictional Limits:** Courts cannot issue directions contrary to law or violate statutory provisions while exercising power under Article 142. The courts are meant to enforce the rule of law and not to pass orders contrary to law.

- **Justice According to Law:** In the landmark judgment of 'State of Karnataka vs Umadevi', the Supreme Court clarified that complete justice under Article 142 means justice according to law, emphasizing the importance of adhering to legal principles and procedures even when exercising extraordinary powers.

10. Boeing Sukanya Program

Why is it in the news?

- Launched by the Prime Minister, the Boeing Sukanya Program aims to facilitate the entry of girls into the aviation sector.
- The program is designed to provide girls and women with opportunities to acquire crucial STEM skills, focusing on **Science, Technology, Engineering, and Mathematics,** which are essential for careers in aviation.

More about the news

- As part of the Boeing Sukanya Program, STEM Labs will be established at 150 planned loca-tions. These labs are intended to ignite interest in STEM careers among young girls, providing them with hands-on experiences and exposure to various STEM disciplines.
- Scholarships will be made available to support women who are undergoing training to become pilots.
- The program acknowledges the current representation of women in the aviation sector, stating that 15 percent of India's pilots are women. This figure is noteworthy as it is three times higher than the global average, showcasing progress in gender inclusion within the industry.
- According to the All India Survey on Higher Education, female enrolment in STEM courses has increased to 42.6% in the academic year 2021-22.
- Despite the growth in enrolment, women's participation in the STEM workforce remains comparatively low at 14% in the year 2021.
- Factors contributing to the under representation of women in STEM fields include Skill inadequacy; Lack of role models; Safety concerns during the commute to work; Societal pressures and constraints related to domestic life, such as expectations around marriage, childbirth, etc.

Initiatives by India to Promote Women in STEM

- Knowledge Involvement Research Advancement through Nurturing (KIRAN) scheme.
- Pragati Scholarship and TechSaksham Programme.
- Vigyan Jyoti Scheme.

Boeing India Engineering & Technology Center (BIETC) Campus, Banglore

- Inaugurated by the Prime Minister, the Boeing India Engineering & Technology Centre (BIETC) campus serves as a focal point for innovation in the aviation sector.
- The campus is dedicated to driving advancements in the aerospace and defence industries.
- BIETC is envisioned to be at the forefront of developing next generation products and services that will contribute to the global aerospace sector's growth and technological progress.

11. UN Secretary General's Call for Global Governance Reform

Why is it in the news?

- In the **third summit of the G-77 plus China,** the UN Secretary General emphasizes the urgent need for reform in **global governance.**
- Global governance involves managing international issues such as diplomacy, trade, finance, migration, and climate change through institutions, rules, and processes.

Issues highlighting the need for reform

- The composition of the UN Security Council, with veto power held by five permanent members, does not reflect the current global reality.
- Institutions like WTO and IMF have failed to provide a global safety net for distressed developing countries, emphasizing the need for greater inclusivity.
- Multilateralism is losing trust, leading to a shift towards alternative arenas like bilateral and plurilateral groupings, intensifying global political polarization.
- Cross-border cooperation and global governance are essential in addressing challenges posed by artificial intelligence, 5G, semiconductors, etc.
- Conflicts, climate change, migration, macroeconomic instability, and cybersecurity are identified as

challenges that can only be effectively addressed through collective action.

About Group of 77 (G-77)

- Established in 1964 by 77 developing countries signatories during the first session of the UNCTAD in Geneva.
- Membership includes more than 130 countries, representing 80% of the planet's population.
- Significance lies in enabling countries of the South to articulate and promote their collective economic interests.

12. Social Audit Advisory Body (SAAB)

Why is it in the news?

- The 1st meeting of the Social Audit Advisory Body (SAAB) was held recently.

More about the news:

- SAAB serves as a crucial mechanism within the governance structure to enhance transparency and accountability in the implementation of various government schemes, particularly those related to social justice and empowerment.
- It acts as an advisory body to provide strategic guidance and expertise in institutionalizing social audits across different ministries and departments.
- SAAB consists of representatives from key ministries and academic institutions.
- The involvement of academic institutions brings in research-based insights and methodologies, enriching the process of social audit and evaluation.

Social Audit

- Social Audit entails a comprehensive examination and assessment of government programs or schemes.
- It involves comparing official records and reports with the ground realities to ascertain the effectiveness and efficiency of implementation.
- The scope of social audit extends beyond financial audits to encompass qualitative assessments, such as the quality of work undertaken, utilization of resources, employment generation, and impact on beneficiaries.
- The fundamental objective of social audit is to ensure public accountability in governance by promoting transparency and responsiveness to citizens' needs and expectations.

Establishment of NRCSA (National Resource Cell for Social Audit) :

- NRCSA serves as a centralized hub for capacity building, technical support, and knowledge sharing in the field of social audit.
- Through dedicated Social Audit Units at the state level, NRCSA facilitates the implementation of social audits across different regions, ensuring uniform standards and best practices.

13. Empowering Odisha's Tribal Communities

Why is it in the news?

- The Odisha government recently unveiled comprehensive measures aimed at enhancing the welfare of the tribal population.

LABHA Yojana (Laghu Bana Jatya Drabya Kraya Yojana)

- The primary aim of LABHA Yojana is to provide a safety net for tribal communities engaged in collecting **minor forest produce (MFP)** by ensuring a fair price for their goods.
- By instituting a 100% State funded **minimum support price (MSP)** scheme, the govern-ment aims to stabilize the income of tribal individuals who rely on MFP collection as a livelihood.
- Under the scheme, tribal individuals, who are often primary collectors of MFP, gain the ability to sell their produce directly. This eliminates the need for intermediaries or middlemen, en-suring that more of the profits from their labour stay within the community.

Tribal Population in Odisha

- Odisha's diverse tribal landscape, comprising 62 distinct tribes and 13 Particularly Vulnerable Tribal Groups (PVTG), reflects the rich cultural tapestry of the state.
- With Scheduled Tribes constituting over two thirds of the tribal population in the state, their socio-economic well-being is of paramount importance for overall development.
- Scheduled Tribes in Scheduled Areas make up about 68.09% of Odisha's total tribal population,

positioning it as the third largest concentration nationally after Madhya Pradesh and Maharashtra.

- Additionally, Odisha boasts a rich linguistic diversity with 21 distinct tribal languages spoken throughout the state.

14. Track Child Portal

Why is it in the news?

- The "Track Child Portal" was recently developed by the Ministry of Women and Child Development to track missing and found children across all States and Union Territories.

Key Features of Track Child Portal

- The Track Child Portal is integrated with the Crime and Criminal Tracking & Network Systems (CCTNS) of the Ministry of Home Affairs.

- One of the key components of the Track Child Portal is "Khoya-Paya," which allows citizens to report cases of missing or sighted children.
- The implementation of the Track Child Portal involves collaboration and support from various stakeholders, including the Ministry of Home Affairs, Ministry of Railways, state governments, union territory administrations, Child Welfare Committees, Juvenile Justice Boards, National Legal Services Authority, and others.

About GHAR (Go Home and Re-Unite) Portal

- The GHAR portal, launched by the National Commission for Protection of Child Rights (NCPCR), aims to facilitate the digital monitoring and tracking of the restoration and repatriation of children under the Juvenile Justice (Care and Protection of Children) Act, 2015.
- This initiative is crucial for ensuring the welfare and protection of children who are in need of care and protection, especially those who require repatriation to their home country, state, or district.

Key Features :

- The GHAR portal enables digital tracking and monitoring of children who are part of the Juvenile Justice system and need to be repatriated to another country, state, or district.
- It facilitates the digital transfer of children's cases to the concerned Child Welfare Committees (CWCs) of the state.
- The portal allows CWCs and District Child Protection Units (DCPUs) to ensure proper restoration and rehabilitation of children by digitally monitoring the progress of each child's case.

15. RS passed bills modifying lists of SC and ST Communities

Why is it in the news?

- Rajya Sabha passed the Constitution (Scheduled Tribes) Order Amendment Bill, 2024 and Constitution (Scheduled Castes and Scheduled Tribes) Order Amend-ment Bill, 2024.

More about the news

- The primary objective of these bills is to modify and update the lists of Scheduled Tribes in Odisha and Andhra Pradesh.
- This involves adding new communities, recognizing synonyms, and incorporating phonetic variations to ensure a more comprehensive and accurate representation of tribal groups with in the ST category.

Inclusions in Odisha's ST List:

- The bill includes several additions to Odisha's ST list, such as Pauri Bhuyan and Paudi Bhuyan as synonyms of the Bhuyan tribe, Chuktia Bhunjia as a synonym of the Bhunjia tribe, and Bondo as a sub-tribe of the Bondo Poraja tribe.
- Furthermore, synonyms like Mankidia for the Mankirdia tribe are also included.
- The bill also entails the shifting of two entries, Tamadia and Tamudia, from the Scheduled Castes list to the Scheduled Tribes list in Odisha.

- Additionally, Odisha's ST list is expanded by adding two new communities: the Muka Dora community and the Konda Reddy (and synonyms) community.

Inclusions in Andhra Pradesh's ST List:

- In Andhra Pradesh, the bill adds Bondo Porja and Khond Porja as synonyms of the Porja tribe and Konda Savaras as a synonym for the Savaras tribe.

Particularly Vulnerable Tribal Groups (PVTGs)

- The bills' provisions are significant for Particularly Vulnerable Tribal Groups (PVTGs), which are identified as a more vulnerable subgroup among tribal communities due to various factors such as geographical isolation, low literacy, and backwardness.
- India has 75 PVTGs spread across 18 states and the Union Territory of Andaman & Nicobar Islands, with Odisha having the largest population of PVTGs followed by Madhya Pradesh.
- The recognition of PVTGs began with the Dhebar Commission in 1973, which identi-fied Primitive Tribal Groups (PTGs) as a separate category.
- In 1975, the Indian government initiated the identification of the most vulnerable tribal groups, designating them as PVTGs, with an initial declaration of 52 such groups.
- Over the years, additional tribes have been included in the PVTG category, highlighting the government's efforts to address the specific needs and vulnerabilities of these communities.

16. Equity and Benefits Distribution Committee for SCs

Why is it in the news?

- The Central government has formed a committee to address the equitable distribution of benefits among Scheduled Castes (SCs) across the country under the leadership of the Cabinet Secretary.

More about the news

- The committee's primary goal is to formulate a methodology that ensures fair distribution of benefits and initiatives among more than 1,200 Scheduled Castes nationwide.
- The committee to focus on addressing the disparity among SCs caused by the dominance of certain relatively forward communities.
- However, the committee does not have the authority to delve into questions related to reservation policies.
- The committee's constitution holds significance in light of the demand for the subcategorization of SCs, although it cannot directly address reservation-related issues.
- A 7-judge Constitution bench of the Supreme Court is set to hear whether states have the power to subcategorize SCs.

Precedents on Subcategorization

In the case of **E.V. Chinnaiah v State of Andhra Pradesh**, the Supreme Court held that state-based subcategorization of SCs is violative of the right to equality and **Article 341** of the Constitution.

State of Punjab v. Davinder Singh (2020) clarified that deciding on the quantum of benefits in the lists of SCs/STs would not amount to "tinkering" and states have the authority to make such decisions.

In **'Jarnail Singh v Lachhmi Narain Gupta' (2018),** the SC upheld the concept of "creamy layer" within SCs, particularly in the context of reservation in promotions.

Article 341 grants the President the power to create a list of SC communities for reservation purposes.

Experts argue that Article 16(4) of the Constitution already provides for states to create special laws for any backward classes they perceive as under-represented.

2 INTERNATIONAL RELATIONS

1. India and Qatar

Why is it in the news?

- The Prime Minister of India engages in a bilateral meeting with the Emir of Qatar, Sheikh Tamim bin Hamad Al Thani, to explore avenues for enhancing and strengthening India-Qatar relations.

About the Bilateral Meeting

- **Expansion of Cooperation:** During the bilateral meeting, both discussed the expansion of bilateral cooperation across various sectors, including trade, investment, energy, finance, and technology.
- **Regional Developments:** Both leaders exchanged views on recent developments in West Asia, emphasizing the importance of regional stability and peace.
- **Peace and Stability Advocacy:** The leaders underscored the significance of upholding peace and stability not only in West Asia but also beyond the region.

Release of Indian Navy Officials

- Qatar's decision to release eight former Indian navy officials who were facing death sentences for alleged spying showcases the strength of India-Qatar bilateral ties.
- The Indian government has effectively cultivated strong ties with Arab states in the Gulf, extending beyond energy and diaspora linkages to strategic partnerships.
- This development follows intense diplomatic efforts nearly four months after a Qatari court's death sentences were commuted to various prison terms.
- Millions of Indians reside and are employed across the Gulf region, serving as a significant source of remittances for India and playing a key role in the prosperity of Gulf economies.
- India's approach to the Middle East has evolved into a strategic character, focusing on broader regional policy responses rather than just bilateral relations.
- This approach is reflected in initiatives like the India-Middle East-Europe Economic Corri-dor, aimed at enhancing economic prosperity and infrastructure development.

India-Qatar Relations :

- India and Qatar's relationship dates back centuries, with trade in pearls, dhows, spices, and textiles serving as the main drivers of early contact. Over time, the relationship has evolved to encompass political, economic, and cultural dimensions, laying a strong foundation for bilat-eral cooperation.
- The significant Indian community in Qatar, comprising around 7 lakh individuals, plays a crucial role in nurturing bonds of friendship and cooperation between the two countries.

Importance for Qatar:

- **Trade and Economic Collaboration:** Qatar views India as a crucial trade partner, with bilateral trade reaching $10.3 billion in 2021. India ranks as Qatar's third-largest export destina-tion and fourth-largest import source, indicating substantial economic interdependence be-tween the two nations.
- **Energy Security:** Qatar plays a pivotal role in fulfilling India's energy needs, particularly in liquefied natural gas (LNG). As the largest supplier of LNG to India, Qatar addresses approximately 70% of India's natural gas requirements, contributing significantly to India's energy security and economic growth.
- **Defence and Security Cooperation:** Both nations have strengthened their defence and security cooperation through joint exercises, training programs, information sharing, and counter terrorism initiatives.

- **Investment and Infrastructure Development**: Qatar's investments in India's National Investment and Infrastructure Fund (NIIF) reflect a commitment to collaborative infrastructure development.
- **Cultural Ties and Soft Power:** Qatar values India's cultural diversity and recognizes its soft power on the global stage. Agreements on cooperation in various fields demonstrate a commitment to fostering cultural exchanges and collaboration. Hosting Indian cultural events and festivals in Qatar further strengthens people to people ties and promotes mutual understanding.

Importance for India:

- **Energy Security and Economic Growth:** Qatar is a vital partner for India's energy security, supplying a significant portion of its LNG needs.
- **Diaspora and People to People Ties:** The Indian diaspora in Qatar contributes to bilateral relations and serves as a cultural and economic bridge between the two countries.
- **Regional Stability and Common Interests:** India and Qatar share common interests in issues such as regional peace, stability, maritime security, counter-terrorism, and climate change.
- **Cultural Exchange and Mutual Understanding:** India values Qatar's cultural diversity and heritage, fostering cultural exchange programs to promote mutual understanding and respect.

Challenges :

- **Balancing Relations:** India faces the challenge of balancing relations with other Gulf countries amidst regional disputes, such as the diplomatic crisis between Qatar and some of its neighbours since 2017. India maintains a neutral stance on the issue, advocating for dialogue and deescalation to preserve regional stability.
- **Diversifying Trade:** There is a need to diversify trade beyond hydrocarbons and explore new areas of cooperation to enhance economic ties between India and Qatar. This includes sectors such as renewable energy, food security, digital economy, etc., which offer opportunities for mutual growth and collaboration.
- **Enhancing Connectivity:** Improving connectivity between India and Qatar is essential for strengthening bilateral relations. Addressing gaps in air links, shipping routes, and visa issues will facilitate the movement of people, goods, and services between the two countries, fostering greater economic and cultural exchange.
- **Promoting Cultural Awareness:** Despite historical and cultural ties, there is still a lack of awareness and understanding of each other's culture, values, and traditions among the people of both countries. Promoting more cultural exchanges, educational programs, media interactions, etc., will bridge the knowledge gap and foster mutual respect and appreciation.

Way Forward :

- **Expanding Strategic Dialogue:** Both countries should enhance their strategic dialogue at various levels to exchange views on regional and global issues and coordinate their positions and actions effectively.
- **Boosting Economic Engagement:** India and Qatar should work towards increasing trade and investment flows by removing barriers, facilitating business to business contacts, creating joint ventures, etc.
- **Improving Connectivity:** Both countries should focus on improving connectivity by increasing air links, establishing direct shipping routes, easing visa norms, etc.
- **Strengthening Cultural Ties:** India and Qatar should strengthen their cultural ties by organizing more cultural events and festivals, encouraging academic and student exchanges, supporting media collaborations, etc.

2. Greece's Gateway to Asia, India's Gateway to Europe

Why is it in the news?

- The upcoming state visit of Greek Prime Minister Kyriakos Mitsotakis to New Delhi underscores the commitment to forging a strategic relationship between Greece and India.
- Following Indian PM's historic visit to Greece in August 2023, the anticipation surrounding this visit highlights the shared enthusiasm among Greek political and business leaders to deepen bilateral ties and cooperation across multiple sectors.

Geopolitical Significance of Indo-Greek Relationship

Strong Historical Foundation:

- Diplomatic relations established in 1950 provide a robust historical foundation for the Indo-Greek relationship.
- The longevity of ties adds depth to contemporary diplomatic efforts, fostering a sense of shared history and understanding.

India's Global Power Status:

- Against the backdrop of India's rising status as a global power, the Indo-Greek relationship gains significance.
- India is perceived not only as an old friend but also as a dynamic and influential player on the international stage, contributing to the geopolitical relevance of the partnership.

Pivotal Diplomatic Moment:

- The historic visit of the Indian Prime Minister to Greece in August 2023 marked a pivotal moment in the diplomatic exchange.
- The visit set the stage for increased collaboration, generating excitement among Greek political leaders and business figures.

Strategic Geographical Locations:

- The geopolitical significance of the relationship is heightened by the strategic locations of Greece and India.
- Both nations find themselves in regions crucial to the global system, facing geopolitical vola-tility that necessitates collaboration for regional stability.

Interdependence of Regions:

- Recent events in the Red Sea highlight the interdependence of the East Mediterranean (where Greece is situated) and the Indian Ocean region on security, stability, and prosperity.
- Shared challenges emphasize the strategic imperative for Greece and India to collaborate, recognizing their interconnected roles in global affairs.

Strategic Vision- Gateway to Europe and Asia:

- The Greek Prime Minister's assertion that India will find no better gateway to Europe than Greece, and vice versa, reflects a strategic vision.
- Each country is recognized for its unique role in serving as a bridge to the other's region, demonstrating a pragmatic acknowledgment of geographical realities.

Mutual Benefit through Collaboration:

- The strategic vision emphasizes leveraging each other's strengths for mutual benefit.
- Recognition of the unique roles as gateways underscores the potential for enhanced economic, cultural, and geopolitical cooperation.

Current State of Bilateral Relationship between India and Greece

Slow and Steady Progress:

- Historical ties and shared enthusiasm have shaped the bilateral relationship between Greece and India.
- However, the pace of cooperation has been gradual and measured, emphasizing sustainable progress.

Military Collaboration:

- Positive strides have been made in military collaboration, with joint exercises involving the Indian Navy, Air Force, and Greek armed forces.
- Planning for reciprocal exercises demonstrates a commitment to deepening military ties, contributing to regional security and trust building.

Economic Collaboration:

- Noteworthy instances of economic collaboration include joint ventures such as the collaboration between Indian and Greek construction firms to build an airport on the island of Crete.

Economic Reforms and Importance of IMEEC

- Greece's support for deeper EU-India relations adds significance to economic reforms, in-cluding efforts to conclude the EU-India bilateral trade and investment agreement (BTIA).
- Economic reforms within Greece, under PM Kyriakos Mitsotakis, aim to steer the economy towards sustainable growth and position Greece as a reliable partner within the EU.
- The vision of the India-Middle East-Europe Economic Corridor (IMEEC) represents a comprehensive initiative to connect India, the Middle East, and Europe, fostering trade, invest-ment, and economic collaboration.
- IMEEC aligns with the shared vision of deepening economic ties between Greece and India and exploring new avenues for cooperation. It represents a strategic initiative to enhance connectivity and promote economic development across regions, emphasizing the potential for collaboration and growth.

Ways Ahead to Deepen Indo-Greek Ties

- **Cross-Cultural Understanding:** Increase university student exchange programs to expose the younger generation to each other's cultures, traditions, and educational systems.
- **Cultural Exchanges:** Promote cultural events, exhibitions, and festivals to create opportunities for citizens to experience and appreciate the diversity of each other's cultural expressions.
- **Media Cooperation:** Bridge the geographical gap by enhancing media cooperation to keep citizens informed about developments, cultural nuances, and societal trends in both nations.

Conclusion :

- The exchange of visits between political leaders underscores their determination to advance the strategic partnership.
- Policymakers and businesses must seize the momentum to strengthen the Indo-Greek strate-gic partnership in 2024 and beyond.

3. Kaladan Multimodal Project

Why is it in the news?

- The Kaladan Multi-Modal Transit Transport Project has faced a significant setback after an important town in Myanmar was captured by a rebel group.
- This event has disrupted the progress and implementation of the project, leading to delays and challenges.

About the Project

- The project aims to establish a transportation network connecting the port of Kolkata in India to the port of Sittwe in Rakhine, Myanmar. From Sittwe, the project seeks to extend connectivity to Mizoram via road and the Kaladan River.
- India and Myanmar entered into a Framework Agreement in 2008 to initiate the project, emphasizing the bilateral cooperation between the two nations.
- The primary goal of the project is to create a multimodal mode of transport for the shipment of cargo from the eastern ports of India to Myanmar, as well as to the northeastern part of In-dia through Myanmar.

Components of the Project:

- **Road Connectivity:** One of the major components involves the construction of roads to connect Mizoram state in northeastern India to the port of Sittwe in Myanmar's Rakhine state.
- **Development of Inland Waterways:** The project includes the development of inland waterways along the Kaladan River.
- **Construction of Multi-Modal Terminal**: A multimodal terminal is being constructed at the port of Sittwe. This terminal serves as a key infrastructure asset for the project, enabling the efficient transfer of goods between different modes of transportation, such as ships and trucks.

4. The Rise of 'Intelligence Diplomacy' in a time of Global Security Challenges

Why is it in the news?

- Three major events highlighting the expanding Indian diplomatic footprint including the annual Raisina Dialogue, the Milan Exercise, and gatherings of top intelligence officials, showcases India's proactive engagement in global affairs.

More about the Key Events

Annual Raisina Dialogue:

- Hosted by the Observer Research Foundation and the Ministry of External Affairs.
- Promotes an India-centred global agenda, attracting ministers, officials, scholars, and policy researchers worldwide.
- Regarded as a "must-go" event for the global strategic community interested in India.

Milan Exercise:

- Biennial Multilateral Naval Exercise in the Bay of Bengal fostering professional exchanges on maritime issues. Part of longstanding naval diplomacy, highlighting the flexibility of navies in power projection and diplomacy.
- Alongside the annual Malabar exercises with the US, showcases India's strategic importance in the Indo-Pacific region.

Gathering of Top Intelligence Officials:

- Involves sharing information with allied governments and security agencies, termed as "intelligence diplomacy."
- Similar to established intelligence-sharing arrangements like the "Five Eyes" alliance and networks among NATO allies and EU partners.
- Emerging as a consequential aspect alongside traditional diplomatic and military engagements.

Other efforts by India

- **Communication with Foreign Stakeholders:** India has actively engaged with foreign media, academia, and civil society to shape perceptions and influence global narratives.
- **Role of Foreign Office and Embassies:** The Foreign Office's External Publicity (XP) Division, in coordination with Indian embassies worldwide, has spearheaded outreach activities.
- **Involvement of Business Chambers:** Business chambers such as the Confederation of Indian Industry (CII) and the Federation of Indian Chambers of Commerce and Industry (FICCI) have played a crucial role in creating and nurturing networks since the onset of economic reforms in the 1990s.

Significance and Need

- **Rapid Expansion of International Engagements**: Increased global interest in commercial, political, technological, and military affairs has led to a proliferation of think tanks and media outlets discussing foreign and security matters.
- **Deepening Military Crises and Economic Stresses:** Escalating military crises, coupled with challenges to the global economic order and renewed great power rivalry, pose significant risks to global peace and prosperity.
- **Role of Intelligence Agencies in National Security:** Intelligence agencies play a crucial role as the first line of defence against internal and external threats, alongside diplomatic and military efforts.
- **Growing Significance of Intelligence in Recent Years:** The role of intelligence in national security has significantly expanded due to various contemporary challenges. Factors such as international terrorism, crossborder criminal networks, economic competition, intellectual property protection, great power rivalry, and technological advancements have heightened the importance of intelligence in shaping domestic and global dynamics.

Way Forward

- **Shifting from Isolationism to Intelligence Partnerships:** Regular exchanges between Indian agencies and counterparts from like-minded nations during events like the Raisina Dialogue signify a departure from the isolationist stance of the Cold War era.
- **Alignment with India's Strategic Goals:** India's intelligence diplomacy aligns with its current strategy of forging regional and global coalitions to address common security challenges.
- **Modernization of Intelligence Agencies**: Intelligence diplomacy serves as a vital compo-nent

of India's efforts to modernize its intelligence agencies, including the Intelligence Bureau and its subsidiaries established since the late 19th century.

5. Gulf Countries: A Significant Win for Indian Diplomacy

Why is it in the news?

- Over the past decade, India's relations with Gulf countries have undergone a significant transformation, characterized by heightened diplomatic engagement, strategic economic alliances, and strengthened collaboration in counter terrorism and defence.
- This evolution is driven by diplomatic, political, and religious recalibrations, alongside recognition of the Gulf's potential to bolster India's economic development.

Recent Achievements

Inauguration of BAPS Temple in Abu Dhabi:

- The inauguration of the Bochasanwasi Akshar Purushottam Swaminarayan (BAPS) temple in Abu Dhabi symbolizes a significant milestone in India-UAE relations.
- It represents cultural diplomacy and highlights the growing acceptance and tolerance in the Gulf region towards diverse religious communities.

Release of Indian Ex-Naval Personnel:

- The release of eight Indian exnaval personnel who were held on espionage charges in Qatar demonstrates successful diplomatic efforts to resolve sensitive issues. It underscores the importance of diplomatic dialogue and negotiation in managing bilateral disputes and fostering mutual trust.

Factors Responsible for Transformation in India's Relations with Gulf Countries

- **Diplomatic Efforts:** Prime Minister Narendra Modi's frequent visits to the Middle East, including his historic visit to the UAE in 2015, signify a proactive approach towards enhancing bi-lateral ties.
- **Quality of Engagement:** Recognizing the importance of personal relationships in Gulf poli-tics, Indian leaders have prioritized building rapport with Gulf monarchs.
- **Political Domain:** Initiatives such as the establishment of the I2U2 group (India, Israel, US, UAE) and the India-Middle East-Europe Economic Corridor signal a strategic reorientation of India's

geopolitical engagement with the Middle East.

- **Religious Perceptions:** India's recognition of the importance of religious tolerance and cooperation in the Gulf region has led to a shift in its approach.
- **Strategic and Economic Engagements:** India's engagement with Gulf countries has evolved from purely transactional to strategic partnerships, particularly in the economic domain.
- **Khaleeji Capital:** The accumulation of hydrocarbon wealth in Gulf countries has led to the emergence of "Khaleeji capital," which wields influence globally across various sectors such as sports, real estate, banking, and technology. India recognizes the importance of engaging with this capital to foster economic cooperation and mutual prosperity.
- **Defence Domain:** Cooperation in the defence domain has expanded, with India and Gulf countries collaborating on counter terrorism efforts and diversifying defence partnerships. Gulf countries, amid shifting regional geopolitics, are increasingly looking to India as a reliable partner for regional security.

Conclusion

- The transformation in India's relations with Gulf countries reflects a strategic shift towards deeper engagement and cooperation.
- Opportunities for collaboration in economic, defence, and regional security domains abound, providing mutual benefits for both India and the Gulf countries.
- Continued dialogue and collaboration are essential to capitalize on these opportunities and address shared challenges, ensuring prosperity and peace in the Western Indian Ocean region.

3 ECONOMY

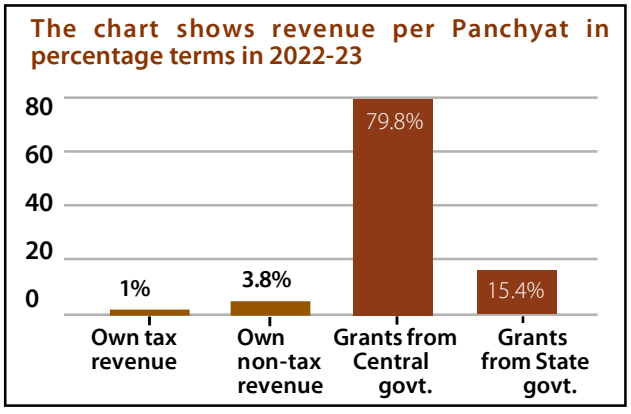
1. Finances of PRIs

Why is it in the news?

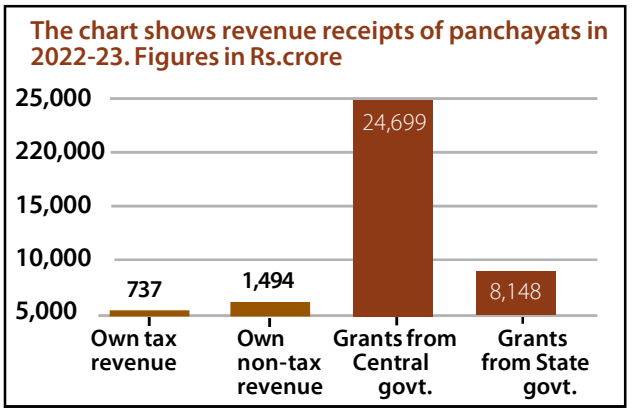
- The Reserve Bank of India's 2022-23 report on Panchayati Raj Institutions' finances provides an assessment of their fiscal status and their contribution to India's socio-economic development.

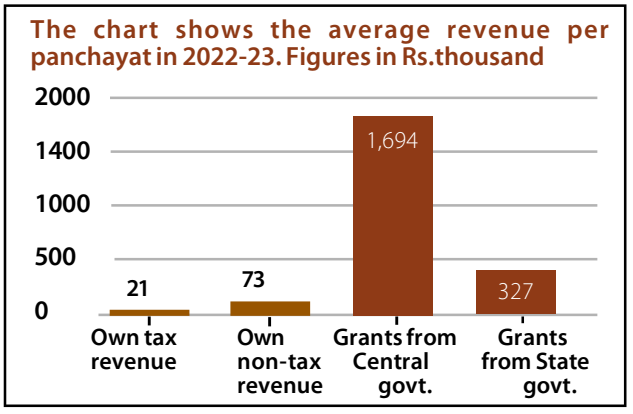
Key Findings of the Report :

- **Grant Dependency:** PRIs rely heavily on grants from the State and Union Governments, with only about 1% of their revenue being earned independently. This indicates a significant dependence on external sources for funding.



- **Total Revenue :** In the fiscal year 2022-23, the total revenue of PRIs in India amounted to 35,354 crore. While this is a substantial sum, the majority of it comes from grants rather than independent revenue generation efforts.
- **Own Revenue vs. Grants:** The individual contributions of PRIs through own tax revenue (21,000 per panchayat) and non-tax revenue (73,000 per panchayat) are minimal compared to the grants received from the Central and State governments.





- **State-wise Performance:** Kerala and West Bengal stand out with higher average revenues per panchayat, indicating better revenue generation capabilities compared to other states. Conversely, states like Andhra Pradesh, Haryana, Mizoram, Punjab, and Uttarakhand exhibit lower revenue per panchayat, suggesting potential challenges in revenue generation.

Functions and Finances of PRIs

- **Expansion of Responsibilities:** The 73rd Amendment to the Indian Constitution in 1992 significantly expanded the responsibilities of PRIs,

entrusting them with 29 subjects outlined in the Eleventh Schedule. These subjects encompass a wide range of areas crucial for local development and governance, such as rural development, education, health, agri-culture, and more.

- **Own Resources:** PRIs have their own revenue sources, including taxes (such as property taxes) and non-tax revenue (like fees and fines). They also generate capital receipts from the sale of land. However, these own resources contribute only a small fraction to their total revenue.
- **Government Funding**: PRIs receive substantial funds from higher levels of government in the form of grants-in-aid, loans, and recommendations from State Finance Commissions. These funds are essential for the implementation of developmental schemes, creation of infrastructure, and general administration in rural areas.

Challenges and Constraints highlighted in the Report

- **Limited Own Revenues:** PRIs face challenges in generating sufficient own revenue. The revenue they generate through local taxes and fees is minimal compared to their total revenue, which is primarily grant-dependent.
- **Low Expenditure:** Despite their responsibilities and revenue, PRIs exhibit low expenditure levels, constituting less than 0.6% of the gross state domestic product for all states. This suggests potential underutilization of funds or inefficiencies in spending.
- **Grant Dependency:** The heavy reliance on grants from higher government levels (about 95% of total revenue) limits the financial autonomy of PRIs, potentially affecting their decision making and effectiveness in local governance.
- **Inter-State Variations:** There are significant variations across states in terms of the devolution of powers and functions to PRIs, impacting their socio-economic outcomes. States with higher levels of devolution tend to show improved outcomes, highlighting the importance of decentralization.

Way Forward :

- **Boosting Revenue Generation:** PRIs need to explore innovative approaches to enhance their revenue-generating capabilities. This may involve expanding the tax base, improving administrative infrastructure, and implementing clearer guidelines for revenue collection.
- **Fair Revenue Sharing**: Effective implementation of Article 243(I) and recommendations from State Finance Commissions can ensure fair revenue sharing between different levels of government, providing PRIs with a more stable and predictable source of funding.
- **Strengthening Local Administration:** Investing in the capacity-building of local adminis-trative staff and officials can improve financial management practices within PRIs, leading to better utilization of resources and enhanced governance.
- **Promoting Decentralization:** Further efforts to promote decentralization and empower PRIs are essential for enhancing their role in local development and governance. This may involve devolving more powers and functions to PRIs and promoting participatory decisionmaking processes.

Conclusion :

- **Role of PRIs:** PRIs play a crucial role in grassroots development and governance, acting as the primary interface between rural populations and higher levels of government. Strengthening PRIs is essential for ensuring effective and inclusive development across rural India.
- **Empowerment:** The empowerment of PRIs aligns with the vision of Mahatma Gandhi for local self-governance, emphasizing the importance of bottomup approaches to development.
- **Innovation and Transparency**: Embracing innovation, promoting transparency, and enhancing accountability at the Panchayat level are key to improving the effectiveness and sustainability of PRIs in India's governance framework.

> If we would see our dream of Panchayat Raj, i.e., true democracy realized, we would regard the humblest and lowest Indian as being equally the ruler of India with the tallest in the land.
>
> **(Mahatma Gandhi)**

2. RBI Imposes Restrictions on Paytm Payments Bank

Why is it in the news?

- The Reserve Bank of India imposed strict restrictions on Paytm Payments Bank Ltd (PPBL) following an audit report revealing persistent non-compliances and supervisory concerns.

Background

- Section 35A of the Banking Regulation Act, 1949 empowers the Reserve Bank of India (RBI) to issue directives to banks and take necessary actions to prevent the operations of any banking entity from being conducted in a manner detrimental to the interests of deposi-tors or prejudicial to the bank's own interests.

- Essentially, it gives RBI regulatory authority over banks to maintain the stability and integrity of the banking system.
- The RBI's action against Paytm Payments Bank Ltd (PPBL) stemmed from concerns regarding dubious transactions between Paytm and its associated banking entity.
- PPBL was found to have numerous accounts that lacked proper Know Your Customer (KYC) verification.
- Thousands of instances were identified where a single Permanent Account Number (PAN) was used to open multiple accounts.

Key Restrictions Imposed on PPBL

Deposit Bar:

- PPBL is under a strict prohibition from accepting any further deposits, topups, or credit transactions into its accounts or wallets starting from 29th February, 2024.
- This restriction extends to its prepaid instruments for FASTags and National Common Mobility Cards (NCMC) cards.

Service Limitations:

- Beyond deposit restrictions, PPBL is also facing limitations on various banking services. This includes essential services such as Aadhaar Enabled Payment System, Immediate Payment Service, bill payments, and UPI transactions.
- The bank is required to settle all ongoing transactions, including those in pipeline and nodal accounts, by 29th March. After this deadline, no further transactions will be permitted.

Closure of Nodal Accounts:

- PPBL is directed to terminate the nodal accounts of its parent company and Paytm Payments Services before 29th February, 2024.
- Nodal accounts are specialized bank accounts established by businesses to act as financial intermediaries. They are designed to hold funds collected from participating banks on behalf of consumers, with the primary purpose of later transferring these funds to specific merchants.

About Payment Banks

- Payment banks were introduced by the Reserve Bank of India (RBI) in 2014 as a specialized type of bank to promote financial inclusion.
- They aim to provide basic banking services to the unbanked and underbanked population in India.
- Payment banks are licensed under Section 22 (1) of the Banking Regulation Act, 1949. They fall under the differentiated bank license category of the RBI.

Features:

Reserve Requirements:

- Payment banks must maintain Cash Reserve Ratio (CRR) and Statutory Liquidity Ratio (SLR).
- Minimum 75% of demand deposit balances must be in Statutory Liquidity Ratio eligible G-securities/T-bills with maturity up to one year.
- Maximum 25% of demand deposit balances can be in current and time/fixed deposits with other scheduled commercial banks, in addition to maintaining CRR requirements.

Minimum Paid-up Capital:

- The minimum paidup equity capital for payment banks is set at Rs 100 crore.
- Promoter's minimum initial contribution to the paidup equity capital must be at least 40% for the first 5 years.

Prohibited Services:

- Payment banks are prohibited from conducting lending operations or issuing credit cards.
- They are exempt from priority sector lending regulations applicable to traditional banks.

Rural Outreach Requirements:

- At least 25% of a Payment Bank's physical access points must be in rural centres to promote financial inclusion in rural areas.

Major Activities Performed by Payment Banks

- Payment banks accept deposits from individuals and small businesses, up to a certain limit (currently set at Rs 2 lakh per account).
- They provide remittance services and facilitate domestic money transfers.
- Payment banks issue ATM/debit cards, prepaid payment instruments, and other electronic payment methods.
- They offer internet banking services, including online fund transfers and bill payments, to their customers.

Limitations and Challenges

- One major limitation of payment banks is their inability to earn revenue through lending, which is a primary source of income for traditional banks.
- Moreover, the digital nature of their operations necessitates substantial investments in digital infrastructure, posing financial challenges.
- Payment banks face stiff competition from traditional banks that also offer mobile banking services, unified payment interfaces, and other digital solutions.

3. The Indian Economy: A Review by DEA

Why is it in the news?

- The Department of Economic Affairs (Ministry of Finance) released a report titled 'The Indian Economy: A Review'.

More about the news

- It is authored by V Anantha Nageswaran, the Chief Economic Adviser (CEA) to the government of India, along with his team of economists.
- It's important to note that this document differs from the Economic Survey of India prepared by the Department of Economic Affairs (DEA). Instead, it offers an analysis of the Indian economy's trajectory over the past decade, providing insights into its past performance, current status, and potential future developments.

Key Highlights of the Report

- The CEA predicts a growth rate of at least 7% for the Indian economy in the fiscal year 2024 (FY24).
- Despite sluggish global economic growth, with most economies growing at around 2%, India's economy is expected to perform notably well.
- The document discusses the end of the era of hyper-globalization in manufacturing. However, it suggests that complete deglobalization isn't imminent due to the deep integration of global supply chains. Instead, India is focusing on strategies such as onshoring and friend-shoring of production.
- Infrastructure and Public Expectations: As infrastructure improves and financial exclusion decreases, public expectations are rising. The document emphasizes the importance of lowering logistics costs and investing in product quality to maintain and expand market share where India has advantages.
- Green Initiatives and Energy Transition: Balancing economic growth with reducing fossil fuel dependence amid international pressure is a significant challenge. The document acknowledges the need for India to transition to cleaner energy sources while ensuring continued economic growth.
- Public Sector Investment: The government has significantly increased public sector capital investment, particularly in physical and digital infrastructure. This investment is aimed at boost-ing economic growth and improving the overall competitiveness of the Indian economy.
- Financial Sector and Household Financial Health: The financial sector is described as healthy, with active lending. Indian households show financial robustness, with notable growth in bank accounts and deposits, as well as increased financial assets and liabilities since 2019, leading to improved net financial assets.
- Labour Market Dynamics: Post-COVID, the unemployment rate has declined, with rising la-bour force participation, especially among women and younger individuals. This indicates positive developments in the Indian labour market.
- Fiscal and External Sector Management: Since 2014, India has effectively managed high fiscal and

current account deficits, as well as doubledigit inflation. Currently, the country maintains controlled inflation, a lower fiscal deficit, and a manageable current account deficit, reflecting sound macroeconomic management.

- **Foreign Exchange Reserves:** India's foreign exchange reserves are sufficient to cover nearly eleven months of imports, indicating a strong economic position and providing stability to the country's external sector.

Key Challenges faced by Indian Economy

- **Geoeconomic Fragmentation and Slowdown of Hyper-Globalization:** Increased fragmentation in the global economy poses challenges to India's economic growth and international trade relationships.
- **Trade-off between Energy Security and Economic Growth vs. Energy Transition:** India faces the dilemma of balancing energy security and economic growth against the imperative for energy transition towards sustainability.
- **Human Capital Development:** Ensuring the availability of a talented and appropriately skilled workforce is crucial for sustaining economic growth. Emphasis on achieving age appropriate learning outcomes in schools at all levels to nurture a skilled workforce.
- **Impact of Artificial Intelligence (AI):** The advent of AI presents both opportunities and challenges for the Indian economy. An IMF paper estimated that 40% of global employment is exposed to AI, highlighting the need for strategic adaptation and workforce reskilling.

Factors Contributing to Indian Economy's Resilience

- **Domestic Economy:** Projected growth rate of over 7% in the next three years, positioning India as the third-largest economy globally with a GDP target of $5 trillion. Robust Digital Public Infrastructure has transformed the authentication ecosystem, significantly reducing e-KYC costs.
- **Macroeconomic Stability:** Establishment of the Price Stabilization Fund (PSF) in 2014-15 has effectively managed price volatility in the economy.
- **Human Resources:** Significant reduction in multidimensional poverty with 13.5 crore Indians escaping poverty between 2015-16 and 2019-21. Further, remarkable increase in Female Labour Force Participation Rate (LFPR) from 23.3% in 2017-18 to 37% in 2022-23.
- **India's External Sector:** India emerges as the largest recipient of worker remittances globally, receiving USD 125 billion in 2023. External debt as a ratio to GDP declined to 18.6% by September 2023 from 22.4% in 2013.

4. Demand for Legalization of MSP

Why is it in the news?

- Farmers from Punjab and Haryana are currently marching to Delhi to demand the legalization of Minimum Support Price (MSP).

About MSP

- MSP is crucial for farmers as it provides them with a safety net against sharp falls in farm prices, especially during bumper production years.
- However, MSP currently lacks statutory backing, meaning that farmers cannot legally demand it as a guaranteed right.
- The MSP is announced for 22 crops, encompassing a variety of kharif, rabi, and commercial crops. These include:
- 14 kharif crops (paddy, jowar, bajra, maize, ragi, tur/arhar, moong, urad, groundnut, soyabean, sunflower, sesamum, niger seed, cotton),
- 6 rabi crops (wheat, barley, gram, masur/lentil, rapeseed and mustard, and safflower) and
- 2 commercial crops (jute and copra).
- In addition, MSP for Toria and de-husked coconut is also fixed on the basis of MSPs of rapeseed & mustard and copra respectively.
- Additionally, a Fair and Remunerative Price (FRP) is set for sugarcane, which ensures that farmers receive a minimum price for their sugarcane produce.
- The Cabinet Committee of Economic Affairs decides on MSP at the beginning of each sowing season based on recommendations from the Commission for Agricultural Costs and Prices (CACP). The CACP considers various factors such as demand supply dynamics, production costs, market trends, intercrop price parity, and implications for consumers while making its recommendations.
- The CACP calculates different costs (A2, A2+FL, C2) for each crop in different states based on production cost estimates.

- A2 cost covers all paid-out costs directly incurred by the farmer, while A2+FL includes an imputed value of unpaid family labour. C2 cost is the most comprehensive, incorporating rentals and interest for owned land and fixed capital assets. However, the government announces MSP based on A2+FL, not the recommended C2+50% proposed by the National Commission for Farmers.

Benefits of MSP

- Price Stability: MSP helps stabilize agricultural prices, preventing extreme fluctuations and ensuring affordability for consumers.
- **Production Encouragement:** It motivates farmers to increase agricultural production by offering a fair price for their produce.
- **Food Security:** MSP promotes a steady food supply by encouraging the production of staple crops, reducing dependence on imports, and enhancing domestic food security.
- **Income Security:** It provides farmers with a guaranteed minimum price for their crops, ensuring a stable and predictable income, particularly during market volatility.

The cost of legal MSP is greatly exaggerated

- **Misunderstanding of MSP Costs:** Claims about the fiscal costs of guaranteeing Minimum Support Prices (MSP) are exaggerated due to a poor understanding of agricultural markets and the role of MSP in stabilizing prices.
- **Purpose of MSP:** MSP ensures price stability for essential agricultural commodities, aiming to shield farmers from market price volatility by government intervention when prices fall below MSP.
- **Limited Implementation:** While MSP is announced for 23 crops annually, it's effectively implemented only for rice and wheat, occasionally for pulses, and other crops. Farmers demand proper implementation of MSP as intended.
- **Fear of Excessive Fiscal Requirements:** Governments hesitate to legalize MSP due to concerns over high fiscal costs, with figures ranging from Rs 10-18 lakh crore being floated, mostly based on misconceptions.
- **Fallacy of Government Procurement:** It's a misconception that guaranteeing MSP would require the government to procure all agricultural produce. Government intervention is only needed when market prices fall below MSP.
- **Procurement Data:** Government procurement of rice and wheat has been lower than targets in recent years, indicating that intervention is only necessary when market prices are below MSP.
- **NFSA Obligations:** Procurement under the National Food Security Act (NFSA) is neces-sary irrespective of the MSP guarantee, primarily benefiting consumers rather than farmers.
- **Opportunities for Profit:** Government can profit from procured produce by selling it do-mestically or internationally when market prices are higher, contributing to price stabiliza-tion.
- **Need for MSP Reform:** There's a need for a diversified and expanded MSP system cov-ering a larger basket of crops to address regional imbalances and promote agricultural in-vestment and diversification.
- **Economic Benefits of MSP Guarantee:** Guaranteeing MSP could rectify imbalances in the agricultural economy, contribute to price stability, protect consumer interests, and revive the rural economy.

Demand to Legalize MSP:

- Farmers often end up selling their produce below MSP due to various market factors. Legaliz-ing MSP would give farmers the legal right to sell their crops at the government-guaranteed price, providing them with financial security and stability.

Issues Associated with Legalizing MSP:

- **Distorted Crop Selection:** MSP often focuses on specific crops like rice and wheat, leading to imbalanced crop selection and neglect of others, affecting agricultural diversity and sus-tainability.
- **Market Distortions:** MSPs can distort market dynamics by influencing cropping patterns and leading to surplus production of certain crops, resulting in storage challenges, market in-efficiencies, and price distortions.
- **Storage and Logistics Challenges:** Implementing MSP requires robust storage and logis-tics infrastructure to handle large quantities of procured crops. Inadequate facilities can lead to wastage and storage-related losses.

- **Fiscal Burden:** Procuring crops at guaranteed prices and managing surplus stocks require significant financial resources, impacting the government's budget and fiscal health.

Way Ahead :

- **Encouraging Private Sector Involvement:** Incentivize the private sector to develop effi-cient value chains for agriculture, following a cluster approach.
- **Implementing Price Deficiency Payments (PDP):** Instead of physical procurement, the government can pay farmers the difference between market price and MSP, ensuring income support without market distortions.
- **Expanding Existing Schemes:** Expand the scope of schemes like PM-KISAN to include more landholdings, providing direct income support to farmers.
- **True MSP Intervention:** Introduce genuine MSP interventions where the government steps in when market prices fall below a predefined level, especially during times of excess production or international price collapses.

5. Public stock holding (PSH) for food grains

Why is it in the news?

- In the 13th ministerial conference (MC13) of the World Trade Organization (WTO), India will advocate for a resolution to the issue of public stockholding for food grains.

More about the news

Issue of public stockholding

- Public stock holding is a **policy tool** used by governments to maintain food security and protect vulnerable populations from hunger.
- Governments create and maintain stockpiles of essential food grains to ensure a stable supply during emergencies or to stabilize prices in the domestic market.
- According to WTO norms, agricultural subsidies provided by developing countries should not exceed 10 percent of the value of agricultural production.
- However, developing nations, including India, argue for a permanent solution to the issue, enabling them to expand schemes like **Minimum Support Price (MSP)** for food grains without breaching these limits.

About Peace Clause

- At the Bali ministerial meeting in 2013, the **Peace Clause** was established to address differences between nations on food subsidy issues.
- Developing nations were granted temporary relief from arbitration if they breached the 10 per-cent subsidy limit, but there were concerns about the continuation of this reprieve after four years.

Concerns of Western Nations

- Countries like the US and Canada are critical of higher subsidies, believing that they distort global agriculture prices.
- Public stockholding at administered prices is seen as providing an unfair competitive advantage to countries like India, contrary to the principles of open and fair trade according to the WTO.
- Critics argue that the Peace Clause has allowed India to become a major rice exporter, affecting global trade dynamics.
- Further, concerns are raised about the potential negative consequences of such subsidies on international trade.

India's Stand

- India proposes that domestic support for PSH programs should be considered compliant with the WTO's **Agreement on Agriculture (AoA)** rules and not subject to reduction commit-ments.
- India argues that the external reference price for calculating the subsidy element is pegged to outdated 1986-88 prices, leading to inflated subsidy calculations due to current higher international prices.
- India highlights the enactment of the National Food Security Act, 2013, as a crucial step to provide subsidized food grains for the benefit of farmers and the poor population. Public procurement at subsidized rates and storage is deemed necessary to fulfill the objectives of the Act.

6. Pradhan Mantri Khanij Kshetra Kalyan Yojana (PMKKKY) scheme

Why is it in the news?

- As per the revised guidelines, 70% of Pradhan Mantri Khanij Kshetra Kalyan Yojana (PMKK-KY) funds are now allocated to high priority sectors, and 30% to other priority sectors, marking a shift from the previous ratio of 60% and 40%.

About the PMKKKY

- Launched in 2015 under the Mines and Minerals (Development and Regulation) Act, 1957, by the Central government.
- Administered by the Ministry of Mines, the scheme aims to ensure the proper utilization of funds generated from mining activities for the development and welfare of communities af-fected by mining.
- District Mineral Foundations (DMFs) are non-profit trusts established under the MMDR Act by state governments in all mining affected districts. Mining companies are mandated to contribute a portion of their royalty, ranging from 10% to 30%, depending on the date of the mining lease, to DMFs. This contribution is in addition to royalties paid to state governments.

Key objectives:

- Implement various welfare programs and development projects in mining-affected areas to improve the quality of life for affected communities.
- Minimize adverse impacts of mining activities on local populations and the environment through targeted interventions.

Beneficiaries:

- Directly affected individuals include those classified as 'Affected families' and 'Displaced families' under the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation, and Resettlement Act, 2013.
- Other individuals or areas identified by the concerned gram sabha as directly or indirectly affected by mining activities.

High Priority Sectors:

- Ensuring access to clean and safe drinking water for communities affected by mining activities.
- Implementing measures to mitigate environmental degradation caused by mining operations and reducing pollution levels.
- Providing healthcare facilities and services to improve the health outcomes of affected populations.
- Enhancing educational opportunities and infrastructure to promote literacy and skill development among mining affected communities.
- Implementing programs and initiatives to uplift the socio-economic status of women and children in mining-affected areas.
- Providing support and assistance to elderly and differently-abled individuals in mining affected communities.

Other Priority Sectors:

- Constructing and upgrading infrastructure such as roads, bridges, and public buildings to facilitate development in mining affected regions.
- Undertaking irrigation initiatives to enhance agricultural productivity and livelihood opportunities for local communities.
- Promoting renewable energy projects and access to clean energy sources in mining affected areas.
- Implementing measures to conserve water resources and improve soil fertility in mining affected regions.
- Introducing measures aimed at enhancing environmental quality and mitigating the impact of mining activities on ecosystems and biodiversity in affected districts.

Other Features:

- Special provisions are included for scheduled areas to address specific needs and challenges faced by tribal communities residing in these regions.
- Mandates yearly audits of DMF accounts to ensure transparency, accountability, and efficient utilization of funds allocated under the PMKKKY scheme.

7. Pradhan Mantri Matsya Kisan Samridhi Sahay Yojana (PM-MKSSY)

Why is it in the news?

- The Union Cabinet approved the Pradhan Mantri Matsya Kisan Samridhi Sahay Yojana (PM-MKSSY) as a component under the Pradhan Mantri Matsya Sampada Yojana (PMMSY).

About PM-MKSSY

- The scheme operates from FY 2023-24 to FY 2026-27 and covers all States and Union Territories of India.
- The total outlay for PM-MKSSY is Rs. 6,000 crores. The funding structure involves 50% from public finance, including contributions from entities like the World Bank and the Agence Française de Développement (AFD) of France. The remaining 50% is expected to be invested by beneficiaries and the private sector through leverage.
- Intended beneficiaries include Fishers; Fish (Aquaculture) Farmers; Fish workers; Fish Ven-dors; Limited Liability Partnerships (LLPs); Cooperatives; Federations; and Village Level Or-ganizations such as Self-Help Groups (SHGs) and Fish Farmers Producer Organizations (FFPOs).

Components (Implementation Strategy):

- **Formalization of Fisheries Sector:** The scheme aims to formalize the fisheries sector and facilitate access to fisheries microenterprises. A National Fisheries Digital Platform (NFDP) will be established for this purpose.
- **Facilitating Adoption of Aquaculture Insurance:** Measures will be taken to promote the adoption of aquaculture insurance among stakeholders.
- **Supporting Microenterprises:** Assistance will be provided to improve fisheries sector val-ue chain efficiencies, particularly for microenterprises.
- **Adoption and Expansion of Safety and Quality Assurance Systems:** Efforts will be made to enhance the adoption and expansion of fish and fishery product safety and quality assurance systems.
- **Project Management, Monitoring, and Reporting:** The scheme proposes to establish Project Management Units (PMUs) to oversee project management, monitoring, and reporting activities.

Fisheries Sector of India

- India holds a significant position in the global fisheries sector, ranking as the 3rd largest fish producing and 2nd largest aquaculture producing nation.
- Furthermore, India's standing as the 4th largest exporter of fish and fisheries products underscores its role in the international market. The notable growth in exports between FY 2021-22 and FY 2022-23, at a rate of 26.73%, reflects the increasing demand for Indian seafood products globally.
- Employment within the fisheries sector is substantial, providing livelihoods for over 30 million people across the country.
- The Department of Fisheries, operating under the Ministry of Fisheries, Animal Husbandry and Dairying, oversees the implementation of various schemes and initiatives aimed at fostering sustainable and responsible development within the fisheries sector. Among these initiatives, the flagship scheme "Pradhan Mantri Matsya Sampada Yojana (PMMSY)" stands out as a key driver for the sector's growth and modernization.

Challenges faced by the Fisheries Sector in India

- The overexploitation of fish stocks due to excessive fishing pressure poses a significant challenge to the sustainability of the fisheries sector.
- Illegal, Unreported and Unregulated (IUU) fishing activities undermine efforts to manage and conserve fish stocks, leading to depletion and imbalance within ecosystems.
- Inadequate infrastructure, including storage and transportation facilities, hampers the efficiency of the fisheries supply chain.
- Weak enforcement of regulations, coupled with limited data on fish stocks, impedes effec-tive fisheries management.
- Pollution from industrial activities, coastal development, and agricultural runoff poses a threat to marine and freshwater habitats.
- Climate change induced phenomena such as rising sea temperatures, ocean acidification, and extreme weather events disrupt fish populations and fisheries ecosystems.

- Poverty, lack of alternative livelihood options, and unequal distribution of resources contribute to the vulnerability of fishing communities.

Government Initiatives for the Growth of the Sector

- **NFDB (National Fisheries Development Board):** Established in 2006, it plans and promotes fisheries development in India, implementing schemes to enhance fish production and support fishers/farmers.
- **PMMSY (Pradhan Mantri Matsya Sampada Yojana):** Launched in 2020, it focuses on boosting fish production and doubling farmers' income by modernizing infrastructure, promoting sustainable practices, and improving post-harvest management.
- **Blue Revolution:** Started in 2015, it aims at sustainable fisheries development by increasing fish production through modern technologies, infrastructure enhancement, entrepreneurship promotion, and governance strengthening.
- **Sagarmala Programme:** Introduced in 2015, it fosters port-led development and supports the maritime sector by developing fishing harbours, cold chain infrastructure, and fish processing facilities.
- **National Fisheries Policy (2020):** Provides a comprehensive framework for sustainable fisheries development, emphasizing responsible management, biodiversity conservation, increased production, and socio-economic upliftment.
- **FFDAs (Fish Farmers Development Agencies):** Operational at the district level, they offer technical guidance, training, and extension services to fish farmers, facilitating access to credit, inputs, and promoting entrepreneurship.
- **CAA (Coastal Aquaculture Authority):** Regulates and promotes sustainable coastal aquaculture, formulating guidelines for shrimp farming, monitoring land use, and ensuring compliance with environmental norms to protect coastal ecosystems.

Way Forward

- Collaboration among government agencies, fishery stakeholders, civil society, and the private sector is crucial to tackle challenges in the fisheries sector effectively.
- To ensure the long-term viability of India's fisheries sector, it's essential to implement sustainable management practices, invest in infrastructure and technology, strengthen governance, promote community-based approaches, and address the impacts of climate change.

8. Nano DAP

Why is it in the news?

- Recently, the Finance Minister in the Interim Budget 2024-25 has announced the expansion of the application of Nano DAP (Di-Ammonium Phosphate) as a Fertilizer on various crops in all agroclimatic zones.
- This follows the successful introduction of nano urea in the previous fiscal year (FY21), indicating a continued focus on innovative agricultural inputs.

About DAP (Di-Ammonium Phosphate)

- DAP is the second most commonly used fertilizer in India after urea.
- DAP is a preferred fertilizer in India because it contains both Nitrogen and Phosphorus which are primary macro-nutrients and part of 18 essential plant nutrients.
- Fertilizer grade DAP contains 18% Nitrogen and 46% Phosphorus. It is manufactured by reacting Ammonia with Phosphoric acid under controlled conditions in fertilizer plants.

Nano Urea

- Nano Urea is urea formulated into nanoparticles, providing nitrogen to plants in a liquid form. Unlike conventional urea, which is in granular form, Nano Urea is a liquid nutrient.
- Nano Urea contains approximately 40,000 mg/L of nitrogen. A 500 ml bottle of Nano Urea provides the equivalent impact of nitrogen nutrient as one bag of conventional urea.
- Nano Urea aims to reduce the dependency on conventional urea by at least 50%.
- Nano Urea is indigenously developed at the Nano Biotechnology Research Centre located in Kalol, Gujarat. This development aligns with India's self-reliant initiatives such as Atma-nirbhar Bharat and Atmanirbhar Krishi.
- It aims to enhance crop productivity while simultaneously reducing soil, water, and air pollution caused by excessive urea application.

About Nano DAP

- Nano DAP is a specialized form of DAP designed with the goal of improving the fertilizer's effectiveness in promoting plant growth and development.
- In 2023 Indian Farmers Fertilizer Cooperative (IFFCO) launched its Nano DAP, containing 8% Nitrogen and 16% Phosphorus by volume.
- Unlike conventional DAP, which comes in granular form, IFFCO's Nano DAP is in liquid form.

IFFCO (Indian Farmers Fertilizer Cooperative Limited)

- IFFCO is one of India's biggest cooperative societies which is wholly owned by Indian Cooperatives.
- Founded in 1967 with just 57 cooperatives, today it is an amalgamation of over 36,000 Indi-an Cooperatives with diversified business interests ranging from General Insurance to Rural Telecom apart from its core business of manufacturing and selling fertilisers.

Significance of Nano DAP

Increased Efficiency:

- Nano DAP, with particle sizes less than 100 nanometers, exhibits higher efficiency compared to conventional DAP fertilizers.
- Its tiny particles can easily penetrate the seed surface or enter through stomata and other plant openings, facilitating better assimilation of nutrients into the plant system.
- This enhanced assimilation leads to various benefits such as increased seed vigor, improved chlorophyll content, higher photosynthetic efficiency, better crop quality, and ultimately, higher yields.

Cost-effectiveness:

- Nano DAP offers a pocket-friendly alternative to conventional DAP fertilizers.
- A 500 ml bottle of Nano DAP, equivalent to a 50-kg bag of conventional DAP, is priced at Rs 600, significantly lower than the conventional counterpart priced at Rs 1,350.
- Given the significant subsidies provided by the government on DAP fertilizers, adopting Nano DAP can alleviate the subsidy burden on the government.

Convenience for Farmers:

- Nano DAP comes in small, easy to handle 500 ml bottles, which are more convenient for farmers compared to heavy 50kg bags of conventional DAP.
- Farmers can easily carry, store, and apply Nano DAP by simply mixing 250-500 ml of it with water and spraying it on their crops, requiring this amount per acre per spray.

Reduction of Import Dependency:

- India currently relies on significant imports of fertilizers to meet domestic demand.
- The adoption of domestically produced Nano DAP, manufactured in Kalol, Gujarat, can substantially reduce this import burden.
- This move not only strengthens India's self-reliance in fertilizer production but also contributes to the country's agricultural self-sufficiency.

Environmental Benefits:

- Due to its liquid nature, Nano DAP has a lesser environmental impact compared to conven-tional fertilizers.
- It leads to lower land contamination and has the potential to promote soil health and biodiversity.

Conclusion

- Ongoing research aims to address concerns and enhance understanding of nanofertilizers' benefits and risks in agriculture.
- A cautious, well informed approach is imperative for their sustainable and responsible use.

9. 54th Annual Meeting of the World Economic Forum (WEF)

Why is it in the news?

- Recently concluded in **Davos,** Switzerland, the annual meeting brought together leaders from various fields, including business, politics, and economics, to discuss global challenges and potential solutions.
- The five-day session marked the first offline meeting in Davos in three years.

Key Takeaways of the 2024 Summit

Artificial Intelligence

- Discussions covered the transformative potential of AI for human welfare.
- Concerns about the need for regulation, job losses, risks of impersonation and misinformation, and potential inequalities were addressed.
- Overall consensus leaned towards the belief that the positives of AI outweigh the negatives, with human intelligence not facing a significant threat.

War and uncertainty

- Business leaders highlighted risks arising from geopolitical fragility, wars in the Middle East and

Europe, threats to global supply chains, and uncertainties regarding food security. No specific plans or roadmaps for peace were provided concerning the Israel-Gaza violence.

Climate

- Discussions emphasized the need for businesses to adapt to climate change. The call for global unity in climate action, despite differences among countries, was a prominent theme. Further, the discussion included the responsibility of developed countries to assist in financing climate action in developing nations.

China's Economy

- China, facing a slowing economy, aimed to attract more investment from the West. Despite a 5.2% GDP growth in 2023, still below prepandemic levels, China grappled with at-tempts by the U.S. to isolate it.

India

- India stood out among regional Asian peers, with major tech companies showcasing their presence.
- Indian business leaders actively participated in debates on technology and supply chain issues.
- A significant announcement from the Forum was the launch of the **Global Good Alliance for Gender Equity and Equality,** supported by the WEF and the Government of India. The alliance aims to bring together global best practices, knowledge sharing, and investments in areas such as women's health, education, and enterprise.

About World Economic Forum (WEF)

Genesis

Founded in 1971 by Klaus Schwab, a German economist.

Headquartered in Geneva, Switzerland.

Vision & Mission

Known for its annual meeting in Davos, where global leaders gather to discuss pressing economic and social issues.

Function

WEF publishes major reports, including the Fostering Effective Energy Transition report, Global Competitiveness Report, Global Gender Gap Report, Global Risk Report, and Future of Jobs Report.

10. India's First AI Unicorn

Why is it in the news?

- Krutrim, an AI firm under the Ola group, has achieved unicorn status, with a valuation of $1 billion after raising $50 million in a funding round.

About Unicorn

- A unicorn refers to a privately held startup company with a valuation exceeding $1 billion.
- These companies are rare and unique, characterized by rapid growth, disruptive business models, and substantial investor interest.
- The pandemic-induced shift to remote work has accelerated the growth of digital businesses in India, leading to the emergence of numerous unicorns.
- Factors such as a robust digital payments ecosystem, large smartphone user base, and digitalfirst business models have contributed to the proliferation of unicorns.
- India is now home to 111 unicorns with a total valuation of $349.67 billion as of 2023, with Bengaluru serving as the unicorn capital followed by Delhi (NCR) and Mumbai.

Significance of Unicorns for the Indian Economy

- Unicorns play a crucial role in job creation, fostering innovation and technology development, attracting foreign investments, and boosting economic growth.
- They also serve as inspiration for aspiring entrepreneurs, contributing to the overall entre-preneurship ecosystem and enhancing India's global recognition as a hub for technology and business innovation.

Government Support Measures :

- The Indian government has implemented various initiatives to support startups and unicorns, such as the Atal Innovation Mission (AIM), Multiplier Grant Scheme (MGS), Dairy Entrepreneurship Development Scheme (DEDS), Startup India Initiative, Startup India Seed Fund Scheme, and Fund of Funds for Startups (FFS).
- These schemes provide financial assistance, mentorship, and infrastructure support to startups, enabling them to thrive and scale their operations.

Challenges Faced by Startup Ecosystem

- Despite the growth of unicorns, challenges such as regulatory hurdles, high operational costs, and the lack of a dedicated stock exchange for startups hinder their growth and scalability.

- Additionally, stringent listing norms on existing stock exchanges may not align with the needs of startups, preventing them from going public.

Conclusion :

- The success of India's startup ecosystem is integral to the country's economic growth, with promising long-term prospects projected by organizations like the International Monetary Fund (IMF).
- Investment activity in startups is expected to increase in the coming years, bolstering India's position as a top investment destination.
- To further support the growth of startups, there is a need for increased investments in professional upskilling and education, emphasizing the empowerment of workers.

11. Blue Economy 2.0 Scheme

Why is it in the news?

- The Blue Economy 2.0 Scheme was announced in the Union Interim Budget 2024-25, representing a strategic blueprint to further advance India's initiatives in exploring the poten-tial of the maritime blue economy.

More about the news

- The primary objective is to promote climate resilient activities within the blue economy framework, focusing on restoration and adaptation measures to mitigate the impacts of cli-mate change.
- The scheme emphasizes an integrated and multisectoral approach, recognizing the interconnectedness of various sectors within the blue economy.
- Aquaculture involves the cultivation of aquatic animals and plants in natural or controlled marine or freshwater environments, while mariculture pertains specifically to marine and estuarine waters.
- The scheme places significant emphasis on coastal aquaculture and mariculture, recognizing their potential to contribute to economic growth and livelihood improvement.

About Blue Economy

- Blue economy is defined as the sustainable utilization of ocean resources for economic growth, improved livelihoods, and job creation while ensuring the health of ocean ecosys-tems.
- It encompasses various sectors such as renewable energy, fisheries, ports, shipping, and tourism, with India's blue economy estimated to be around $1 trillion.

- The scheme acknowledges and addresses several challenges limiting the development of the blue economy, including threats to maritime security, climate change impacts, pollution (e.g., plastic usage), lack of infrastructure, and high operational and installation costs.
- In addition to the Blue Economy 2.0 Scheme, various other initiatives have been undertaken to promote the development of the blue economy in India. These include the Deep Ocean Mission aimed at mining metals in Indian oceans, the Pradhan Mantri Matsya Sampada Yojana focused on fisheries development, the SAGARMALA project aimed at port-led development, and the Draft Blue Economy Policy.

Driving Factors of Blue Economy in India

- Several factors contribute to the potential growth of the blue economy in India, including the country's vast coastline spanning 7,516.6 km, which includes island territories.
- India's infrastructure includes 12 major ports and numerous non-major ports, providing essential infrastructure for maritime activities.
- Additionally, India's exclusive economic zones (EEZ) extend over 2.2 million square km, offering significant opportunities for economic activities such as fisheries, renewable energy, and shipping.

12. Annual Survey of Industries (ASI) released by MoSPI

Why is it in the news?

- Recently, the annual survey of industries was released by Ministry of Statistics and Pro-gramme Implementation (MoSPI).

More about the news

- The ASI serves as the principal source of Industrial Statistics in India.
- Authorized under the Collection of Statistics (COS) Act, 2008, ASI comprehensively covers all factories registered under the Factories Act, 1948.
- Additionally, it encompasses units falling under other relevant acts such as the Bidi and Cigar Workers (Conditions of Employment) Act, 1966, thereby providing a holistic view of industrial activity in the country.
- However, certain establishments like defence establishments, oil storage and distribution depots, etc., are excluded from its purview.

Key highlights from ASI

- Gross Value Addition (GVA) rankings reveal Gujarat as the top performer, followed by Maharashtra, Tamil Nadu, Karnataka, and Uttar Pradesh.
- Employment statistics indicate Tamil Nadu, Gujarat, Maharashtra, Uttar Pradesh, and Haryana as the leading states in terms of providing employment opportunities in the industrial sector.
- Despite disruptions caused by the pandemic, the manufacturing sector has shown resilience, particularly driven by industries such as Basic metal, Coke & Refined Petroleum Products, Pharmaceutical Products, and Motor vehicles.

About Manufacturing Sector

- Contributes approximately 17% to India's Gross Domestic Product (GDP), highlighting its significance in the economy.
- With an ambitious target to increase its share to 25% by 2025, the manufacturing sector holds immense potential for growth and development.
- The sector offers substantial opportunities for exporting manufactured goods, owing to factors such as a large domestic demand base and Foreign Direct Investment (FDI) inflows.
- However, the sector faces several challenges, including limited credit availability, comparatively lower productivity levels compared to global counterparts like China and Vietnam, prevalence of informal/unorganised sector, shortage of skilled labour, and infrastructural bottlenecks.

Government Initiatives

- National Manufacturing Policy, 2011, aimed at enhancing the competitiveness of the manufacturing sector and promoting inclusive growth.
- Make in India initiative, launched in 2014, seeks to transform India into a global manufacturing hub by promoting domestic manufacturing and attracting foreign investment.
- PM Gati Shakti National Master Plan, introduced in 2021, focuses on integrating infrastructure planning and development to expedite project implementation and boost industrial growth.
- Additionally, initiatives such as the Production Linked Incentive (PLI) scheme and Industrial Corridor Development Programme have been rolled out to incentivize manufacturing activities and develop industrial infrastructure across the country.

13. Importance of Fiscal Consolidation

Why is it in the news?

- The Union Finance Minister's announcement of reducing the fiscal deficit to 5.1% of GDP in 2024-25 reflects a commitment to fiscal prudence and economic stability.

The fiscal deficit road map (as a % of GDP)

Years	Budget estimates	Actual
2017-18	3.2	3.5
2018-19	3.3	3.4
2019-20	3.3	4.6
2020-21	3.5	9.2
2021-22	6.8	6.7
2022-23	6.4	-
2023-24	5.9	-

About Fiscal Consolidation

- Fiscal consolidation refers to the process of reducing fiscal deficits and stabilizing government debt levels relative to GDP.

Significance of fiscal consolidation:

- **Macroeconomic Stability**: By reducing fiscal deficits, governments can stabilize the economy and

avoid excessive borrowing that might lead to macroeconomic imbalances such as high inflation or currency depreciation.

- **Investor Confidence:** Lower fiscal deficits signal to investors that the government is managing its finances responsibly, which can improve investor confidence in the economy. This, in turn, can lead to increased investment, both domestic and foreign, fostering economic growth.
- **Interest Rates:** Fiscal consolidation can help in keeping interest rates lower. When governments borrow less, they reduce the demand for credit, which can lead to lower interest rates. Lower interest rates stimulate investment and consumption, further supporting economic growth.
- **Sustainable Growth:** By avoiding excessive borrowing, fiscal consolidation promotes sustainable economic growth. It ensures that the government's borrowing doesn't crowd out private investment, allowing businesses to access credit at reasonable rates and invest in productivity enhancing activities.
- **Fiscal Space for Policy Interventions:** A lower fiscal deficit provides governments with more room to manoeuvre during economic downturns. With lower debt levels, governments can implement countercyclical fiscal policies such as increased spending or tax cuts to stimulate demand and stabilize the economy without risking a debt crisis.
- **Improved Credit Ratings:** Reduced fiscal deficits and government debt can lead to improved credit ratings from credit rating agencies. Higher credit ratings indicate lower risk and can result in lower borrowing costs for the government, saving taxpayer money in the long term.
- **Long-term Sustainability:** Fiscal consolidation is essential for ensuring the longterm sustainability of government finances. High levels of debt and persistent deficits can lead to debt crises, as seen in various countries around the world. By consolidating finances, governments can avoid such crises and ensure the stability of public finances for future generations.

14. SAMARTH Centres

Why is it in the news?

- The Minister of State for Heavy Industries has recently informed the Lok Sabha about SAMARTH Centres.

About SAMARTH Centres

- SAMARTH Centres are established under the Scheme for "Enhancement of Competi-tiveness in the Indian Capital Goods Sector."
- It provides assistance to MSMEs by training their workforce and in raising awareness about Industry 4.0 technologies.

Training Methods:

- Organizing seminars, workshops, and knowledge-sharing events focused on Industry 4.0.
- Providing training to industries to increase awareness about Industry 4.0.
- Offering consultancy services in areas like IoT hardware, software development, and data analytics.
- Providing incubation support to startups, including MSMEs.

Note :

- **Samarth Portal**: A purpose built platform for Universities and Higher Education Institutions (HEIs) to deploy a digital framework of good governance.
- **Samarth Scheme**: A demand driven and placement oriented umbrella skilling program of the Ministry of Textiles.

About the Enhancement of Competitiveness in the Indian Capital Goods Sector Scheme:

- Launched by Ministry of Heavy Industries.
- Its objective is to address technological obsolescence, limited access to quality industrial infrastructure, and common facilities.

Components of the Scheme:

- Identification of technologies through Technology Innovation Portals.
- Setting up four new Advanced Centres of Excellence and augmenting existing ones.
- Promoting skilling in the Capital Goods Sector by creating qualification packages for skill levels 6 and above.
- Establishing four Common Engineering Facility Centres (CEFCs) and augmenting existing ones.

- Augmenting existing Testing and Certification Centres.
- Establishing ten Industry Accelerators for Technology Development.

19. SMART Food Grain Storage System Technology

Why is it in the news?

- The Ministry of Electronics and Information Technology (MeitY) recently made headlines by transferring the SMART food grain storage system technology to Paras Defence.
- This collaboration signifies a concerted effort towards realizing the objectives outlined in the Innovation, Science, and Technology theme of Viksit Bharat @2047, reflecting India's commitment to technological selfsufficiency and advancement.

About SMART Food Grain Storage System (SAFEETY) Technology

- Developed under the guidance of the Society for Applied Microwave Electronics Engineering and Research (SAMEER), a renowned institution known for its expertise in microwave electronics and research.
- The technology represents a significant leap forward in grain storage methodologies, integrating cutting edge features and advanced functionalities.
- It boasts innovative components such as conveyorized loading and unloading systems for grain bags, streamlining the storage process and enhancing efficiency.
- Each grain bag is equipped with RFID (Radio-Frequency Identification) tags, ensuring meticulous traceability throughout the storage and distribution process.
- The system facilitates realtime measurement of crucial parameters like weight and moisture content, providing operators with invaluable insights into grain quality and condition.

Significance of the Technology

- SMART food grain storage systems prioritize sustainability through the integration of energy efficient components and meticulous monitoring mechanisms.
- Automation and predictive analytics embedded within the technology significantly enhance productivity and operational efficiency.
- The implementation of SMART storage systems plays a crucial role in bolstering food security by mitigating losses due to spoilage and contamination.
- Through comprehensive traceability measures, these systems ensure the integrity and safety of stored grains, particularly vital in the context of global supply chain dynamics.
- While initial investments in SMART storage infrastructure may be higher, the longterm cost benefits are substantial.
- With the ability to efficiently process nearly one truckload (approximately 28 tons) of grains in just 40 minutes, these systems represent a significant advancement in storage technology.
- This collaboration signifies a concerted effort towards realizing the objectives outlined in the Innovation, Science, and Technology theme of Viksit Bharat @2047, reflecting India's commitment to technological selfsufficiency and advancement.

20. Pradhanmantri Suryodaya Yojana (PSY)

Why is it in the news?

- Government unveils Pradhanmantri Suryodaya Yojana (PSY) to boost solar power ac-cess across the nation.

More about the news

- PSY aims to install solar rooftop systems on 1 crore houses, specifically targeting low and middle income individuals.

- The initiative intends to reduce electricity bills for beneficiaries while providing an additional source of income through surplus electricity generation.
- PSY will actively support the Grid Connected Solar Rooftop Programme (2014), aligning with its objectives.
- A national campaign will be launched to mobilize residential consumers, encouraging wide-spread adoption of rooftop solar systems.

About Grid Connected Solar Rooftop Programme

- The program aims to achieve a cumulative installed capacity of 40,000 Megawatt (MW) by 2026.
- The current grid connected solar rooftop capacity is approximately 11GW.
- The second phase of the program was launched in 2019.
- Funding for the Grid Connected Solar Rooftop Programme is provided under two components:
  1) **Component A:** Central Financial Assistance (CFA)/Subsidy, aimed at supporting residential electricity consumers.
  2) **Component B:** Coverage of DISCOMs (Distribution Companies).
- The Ministry of New & Renewable Energy (MNRE) is responsible for overseeing the implementation of the Grid Connected Solar Rooftop Programme.

About Solar rooftop system

- A solar rooftop system includes solar modules, solar inverters, and other electrical components like meters and cables. These systems are known as Grid connected Rooftop Photovoltaic systems (GRPV), and are installed on residential and commercial rooftops, connecting to the power grid.

21. FAO's Committee on Fisheries

Why is it in the news?

- India has been appointed as the first vice chair of the UN Food and Agriculture Organization (FAO) Committee on Fisheries (COFI) Sub-Committee on Fisheries Management marking the first time in 59 years.
- The appointment comes amid growing global concerns about China's illegal fishing activities in international waters, attracting condemnation for engaging in illegal, unreported, and unregulated fishing in the exclusive economic zones of over 80 countries.
- India's inclusion in the committee is viewed as a step towards bringing balance and perspec-tive to the global discourse on fisheries governance and management.

About Food and Agriculture Organization (FAO)

FAO is a specialized agency of the United Nations.

Vision & Mission

Its primary objective is to lead global efforts to end hunger and ensure food security for everyone.

Function

FAO was established on October 16, 1945.

The headquarters of FAO is located in Rome, Italy.

About Committee on Fisheries (COFI)

- COFI was established in 1965 and stands as the sole global intergovernmental platform dedicated to examining significant international fisheries and aquaculture problems and issues.
- It operates as a subsidiary body of the FAO Council.
- COFI membership is open to FAO Members, and non-Members can participate as observers without voting rights. Representatives from the UN, its bodies, specialized agencies, regional fishery bodies, and international non-governmental organizations are involved in debates.
- COFI assesses the FAO work program related to fisheries, conducts regular reviews of global fishery issues, and proposes potential solutions.
- The committee has played a crucial role in negotiating global agreements and non-binding instruments related to fisheries.
- COFI has two subsidiary bodies: the Sub-Committee on Aquaculture and the Sub-Committee on Fish Trade.
- COFI has played a key role in negotiating important agreements such as the Code of Conduct for Responsible Fisheries and the Agreement on Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas.

22. Direct Tax to GDP ratio

Why is it in the news?

- The Direct Tax to GDP ratio reached a 15-year high of 6.11% in FY23, according to data from the Central Board of Direct Taxes.

More about the news

- Direct Tax to GDP Ratio reached a 15-year high of 6.11% of GDP in FY23, indicating the country's capacity to mobilize resources for development.
- It declined from 2.52 to 1.18 compared to the previous year, indicating less responsiveness in tax collection to GDP growth.
- It is increased by over 173% to Rs 19.72 trillion in FY23 from Rs 7.22 trillion in FY14.

Initiatives Prompting Rise in Direct Tax to GDP

- Gradual decrease in corporate tax rate since the Finance Act of 2016.
- Phasing out of exemptions and incentives for the corporate sector.
- Vivad se Vishwas Scheme for reducing litigations in direct tax payments.
- Finance Act of 2020 allowing individual taxpayers to pay income tax at lower slab rates by forgoing specified exemptions.
- Other reforms include Aadhaar-PAN linkage, digital technology (Faceless Assessment, Faceless Appeal), Taxpayers Charter, etc.

About Direct Tax in India

- Primary direct taxes at the central level include personal and corporate income taxes governed by the Income Tax Act of 1961.
- India's tax to GDP ratio is relatively low compared to OECD countries, mainly due to factors like the dominance of the informal sector, tax evasion, and extensive exemptions and incentives.

23. Kinnow Farming

Why is it in the news?

- Kinnow growers in Punjab are anticipating losses this season due to delays in harvesting, with almost half of the 13 lakh tons of the crop still awaiting harvest.

About Kinnow Farming

- During the early stages of growth, Kinnow trees require consistent moisture to establish strong root systems and promote healthy vegetative growth.
- Irrigation should be carried out regularly, ensuring that the soil remains consistently moist but not waterlogged.
- As Kinnow trees mature and reach the age of 3-4 years, their water requirements change slightly.
- Weekly watering helps to maintain soil moisture levels and ensures that the trees receive a steady supply of water, particularly during periods of low rainfall or dry weather conditions.
- Mature Kinnow trees, typically older than 4 years, have established root systems and are more resilient to fluctuations in water availability.
- However, they still require irrigation to support fruit development and overall tree health.
- Irrigation intervals for older Kinnow trees can be extended to 2-3 weeks, depending on various factors such as soil type, weather conditions, and the amount of rainfall.
- Flood irrigation, which involves applying water in large quantities and allowing it to flow freely over the soil surface, should be avoided in Kinnow farming. This is because flood irrigation can lead to waterlogging, where the soil becomes saturated with water, depriving the roots of oxygen and leading to root rot and other diseases.
- Additionally, flood irrigation can contribute to the spread of soilborne pathogens and increase the risk of collar rot, which can negatively impact tree health and productivity.
- Instead of flood irrigation, drip irrigation or other efficient irrigation methods should be employed to deliver water directly to the root zone while minimizing water wastage and the risk of soilborne diseases.

24. UPI goes Global

Why is it in the news?

- UPI has significantly transformed digital payments in India, offering a convenient way to make transactions without additional charges.
- It is no longer restricted to India, with an expanding list of countries officially accepting UPI.

About Unified Payments Interface (UPI)

- UPI is a mobile-first payment system developed by the National Payments Corporation of India (NPCI).

- Users can send and receive money by scanning a QR code or using a phone number, and the amount is directly debited from the linked bank account.
- UPI can be utilized through the BHIM app or accessed via thirdparty platforms such as Google Pay, Amazon Pay, PhonePe, BharatPe, etc.
- Most Indian banks officially support UPI payments, and there are no charges involved, unlike credit or debit card payments.

- NCPI has implemented security features like linking the account to the phone number.
- UPI ceases to work if the SIM card is removed, and there are downtime measures to prevent fraudulent activities.
- UPI Lite is introduced for transactions without a PIN or internet, but with a transaction limit of Rs 500 per transaction and Rs 4,000 per day.

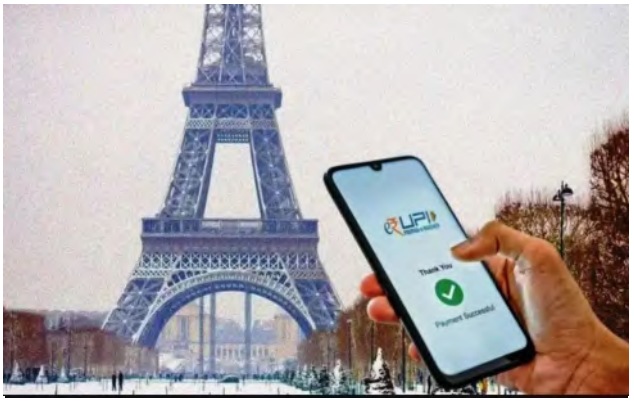
Countries Supporting UPI :

- Singapore
- Nepal
- Bhutan adopted UPI in 2021 in collaboration with the Royal Monetary Authority.
- France implemented UPI payments, including iconic locations like the Eiffel Tower.
- UAE, as India's third-largest trade partner, announced UPI adoption in collaboration with Mashreq.
- Sri Lanka and Mauritius adopted UPI recently in February, benefiting Indian tourists.

- NPCI International Payments Limited (NIPL), in collaboration with Lyra, a French leader in securing e-commerce and proximity payments, announced the acceptance of Unified Payments Interface (UPI) payment mechanism in France.
- France became the first European country to accept UPI payments.

About UPI

- UPI, launched by the National Payments Corporation of India (NPCI) in 2016, is an instant payment system facilitating inter-bank transfers within India.
- UPI is an integral component of the Payments layer within India Stack, which is a set of open APIs and digital public goods aimed at unlocking economic primitives of identity, data, and payments at population scale.



India Stack

About:

- India Stack is a collection of APIs (Application Programming Interfaces) aimed at enabling presence-less, paperless, and cashless service delivery in India.
- APIs, or Application Programming Interfaces, are sets of defined rules that enable different applications to communicate with each other seamlessly.
- It's a governmentled initiative focusing on building a robust digital infrastructure to facilitate various digital services across sectors.
- Components of India Stack are owned and maintained by different agencies, both govern-mental and private.

Components:

Identity Layer (Aadhaar):

- Aadhaar, issued by UIDAI, serves as the cornerstone of India Stack, providing digital identity products.
- It's proof of residence, not citizenship, and supports remote authentication, receiving digitally signed records, and digital signatures.

Payments Layer (UPI):

- Unified Payments Interface (UPI), managed by NPCI, ensures interoperability among payment systems and applications.
- Licensed to thirdparty entities like PhonePe, Google Pay, and Paytm.

Data Governance Layer:

- Digital Locker, built on Data Empowerment and Protection Architecture (DEPA), includes a consent management system for secure information sharing.
- Enables better financial, health, and telecom-related products and services.
- India Stack offers digital resources and tools to support various digital services and initiatives,

enhancing accessibility and efficiency for citizens.

- India Stack components are utilized in various digital solutions rolled out by the Indian government, such as CoWin, DigiLocker, Aarogya Setu, and Government e-Marketplace (GeM). These solutions leverage the fundamental layers of India Stack for streamlined service delivery.
- The vision of India Stack extends beyond India and can be applied to any nation, whether developed or emerging, to enhance digital infrastructure and service delivery.

Significance of Internationalization of India Stack

The internationalization of India Stack holds several significant implications:

- Global market expansion for Indian startups and tech firms, enabling them to offer their products and services to a wider audience.
- Interoperability and standardization at a global scale, fostering smoother transactions and operations across borders.
- Innovation and collaboration leading to the development of new solutions and services that leverage the capabilities of India Stack.
- Soft power and digital diplomacy, particularly in regions such as the global south, where India can showcase its technological prowess and leadership in digital infrastructure.

Efforts at Internationalization of India Stack

- NPCI International Payments Limited (NIPL), established in 2020 as a wholly owned subsidi-ary of NPCI, is spearheading efforts to deploy RuPay and UPI outside of India.
- NIPL has enabled the acceptance of UPI payments in overseas markets such as Singapore, the UAE, and now France.
- Additionally, India has entered into Memoranda of Understanding (MoUs) with countries like Armenia, Sierra Leone, Suriname, and Antigua and Barbuda to share India Stack technologies and expertise.
- India's initiatives under the G20 include the establishment of the Global Digital Public Infrastructure Repository and the Social Impact Fund, aimed at advancing Digital Public Infrastructure (DPI) in the Global South.

25. Japan and the UK officially enter a Recession

Why is it in the news?

- Japan has officially entered a recession, falling to the world's fourth largest economy, behind the US, China, and Germany.

Recession

A recession typically involves the overall output in an economy contracting for at least two con-secutive quarters, along with job losses and reduction in overall demand.

More about the news

Japan's Economy

- Government data indicates Japan's economy contracted at an annual rate of 0.4% from Octo-ber to December, resulting in two consecutive quarters of shrinkage, indicative of a technical recession.
- Despite challenges, the Japanese stock market has shown resilience, with the Nikkei 225 breaching the 38,000 mark for the first time since 1990 and outperforming Wall Street with a 13% gain in the first six weeks of 2024.
- Japan's nominal GDP was USD 4.2 trillion last year, slightly below Germany's USD 4.4 trillion, highlighting Japan's declining competitiveness and productivity.
- Factors contributing to Japan's relative weakness include a declining population, lacking productivity, and competitiveness, compounded by a lower Japanese yen affecting nominal GDP.
- Japan's population is shrinking due to aging and declining birth rates, necessitating strategies like immigration to address labour deficits.
- However, Japan has been resistant to accepting foreign labour, except for temporary stays, leading to accusations of discrimination and a lack of diversity in the workforce.

Historical Economic Context of Japan

- Japan emerged as a post WWII economic miracle, becoming the world's second largest economy until it was surpassed by China in 2010.
- Despite periods of growth in the 1970s and 1980s, Japan's economy has stagnated since the burst of its financial bubble in 1990.

UK's Economy

- The UK's economy also entered a recession in the second half of 2023.

- Gross domestic product (GDP) declined by 0.3% in the three months to December, following a 0.1% fall between July and September.
- Economic output declined by 0.1% in monthly terms in December, with manufacturing, construction, and wholesale sectors contributing significantly to the fall in GDP.
- The UK's economy has remained stagnant for nearly two years, with expectations of slight improvement in 2024 according to the Bank of England.

Germany's Economy

- Germany, like Japan historically, has faced economic challenges, with its economy dropping by 0.3% in the fourth quarter of the previous year.
- Germany's economy has been characterized by robust small and mediumsized firms with high productivity, similar to Japan's economic structure.

26. Alliance for Global Good, Gender Equity, and Equality

Why is it in the news?

- India announced a new alliance at the World Economic Forum (WEF) Annual Meeting in Davos, Switzerland. The alliance focuses on promoting global good, gender equity, and equality.

More about the news

- The alliance targets crucial areas such as **women's health, education, and enterprise,** recognizing the pivotal role these play in advancing gender equity.
- The initiative builds on the commitments outlined in the G20 Leaders' Declaration, reinforcing India's dedication to development led by women.
- The alliance is supported by the Bill and Melinda Gates Foundation, signifying a collaborative effort with a globally renowned philanthropic organization.
- The **Confederation of Indian Industry Centre for Women Leadership** serves as the anchor organization for the alliance, playing a central role in coordinating and facilitating its activities.
- The World Economic Forum (WEF) is designated as a **'Network Partner,'** indicating its involvement in the alliance and commitment to supporting its objectives.
- **Invest India,** a national investment promotion and facilitation agency, is recognized as an **'Institutional Partner,'** showcasing the government's commitment to leveraging investment for gender focused initiatives.
- The alliance reflects a commitment to international collaboration, recognizing the need for a united effort to address gender disparities on a global scale.

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4 SCIENCE AND TECHNOLOGY

1. GSLV-F14/INSAT-3DS Mission

Why is it in the news?

- ISRO is set to launch the INSAT-3DS satellite aboard the Geosynchronous Satellite Launch Vehicle F14 (GSLV F14) on February 17, 2024.

Key Highlights of the Mission

- The primary objective of the GSLV-F14/INSAT-3DS mission is to enhance India's capabilities in weather forecasting and disaster warning.
- GSLV-F14 is a three-stage launch vehicle, featuring various propulsion stages:
  1) **First Stage (GS1):** This stage is equipped with a solid propellant motor and four earth-storable propellant stages (EPS).
  2) **Second Stage (GS2):** Another earth-storable propellant stage is utilized in this phase of the launch.
  3) **Third Stage (GS3):** The final stage of the launch vehicle is a cryogenic stage, powered by liq-uid oxygen (LOX) and liquid hydrogen (LH2).

     This combination of propulsion stages provides the necessary thrust to propel the satellite into its intended orbit.

- INSAT-3DS carries four distinct payloads, each serving specific functions crucial for weather monitoring and disaster management:
  1) **Imager:** Capable of generating Earth images in six different wavelength bands, the imager payload facilitates detailed observations of various environmental parameters.
  2) **Sounder:** With a 19-channel sounder payload, INSAT-3DS can gather data on atmospheric vertical profiles, including temperature and humidity.
  3) **Data Relay Transponder (DRT):** This payload enables the reception and relay of global meteorological, hydrological, and oceanographic data from automatic weather stations and data collection platforms.
  4) **Satellite-aided Search and Rescue (SA&SR) Transponder:** This transponder is dedi-cated to relaying distress signals for global search and rescue operations, covering the Ultra High Frequency (UHF) band.

GSLV nicknamed Naughty Boy

- The Geosynchronous Satellite Launch Vehicle (GSLV) is a space launch vehicle developed and operated by the Indian Space Research Organisation (ISRO). It is designed to place satellites and other space objects into Geosynchronous Transfer Orbits (GTO).
- GSLV is primarily used for launching communication satellites, which require placement into geosynchronous orbits where they appear to remain permanently fixed in the same po-sition in the sky relative to Earth.

- The GSLV rocket has earned the nickname 'naughty boy' due to its history of relatively high failure rates compared to other launch vehicles. Out of the 15 previous launches with GSLV, 4 have been unsuccessful, leading to its reputation for unpredictability and occasion-al unreliability.
- One of the primary advantages of GSLV over other Indian launch vehicles like the Polar Satellite Launch Vehicle (PSLV) is its capability to carry heavier payloads into orbit.
- Geosynchronous satellites launched by GSLV are placed into orbits that synchronize with Earth's rotation, allowing them to maintain a fixed position relative to the ground. This is crucial for communication satellites, as it enables continuous coverage of specific geographic regions.

Problems with GSLV:

- The GSLV rocket has faced significant challenges, particularly with its cryogenic engine, which powers the third and final stage of the flight.
- ISRO initially attempted to acquire cryogenic technology from Russia but faced opposition from the United States, leading to the decision to reverse engineer the cryogenic engine based on Russian designs.
- The reverse engineered cryogenic engine has been a source of concern, contributing to failures in several GSLV missions. This underscores the technical complexity and challenges associated with cryogenic propulsion systems.

Significance of Cryogenic Engines:

- Cryogenic engines are highly advanced propulsion systems that utilize extremely low temperature propellants, typically liquid oxygen (LOX) and liquid hydrogen (LH2).
- Despite their complexity, cryogenic engines offer unparalleled efficiency, providing greater thrust per unit of fuel compared to traditional solid or liquid propellant rocket stages.
- Only a handful of countries, including the United States, Russia, France/European Space Agency, China, Japan, and India, have developed their own indigenous cryogenic engines.

Additional Information :

- GSLV-F14 marks the 16th flight of the GSLV series and the 10th flight incorporating the indigenous cryogenic stage.
- INSAT-3DS is fully funded by the Ministry of Earth Sciences (MoES) and aligns with the objectives of the Third Generation Meteorological Satellites from Geostationary Orbit.
- The satellite is designed to augment existing INSAT-3D and INSAT-3DR satellites' services, providing enhanced capabilities for weather monitoring, forecasting, and disaster management.
- By monitoring land and ocean surfaces, the satellite will contribute to more accurate weather forecasts, enabling timely alerts and interventions during natural disasters.
- INSAT-3DR, launched in 2016, served as a precursor to INSAT-3DS, continuing the legacy of advanced weather monitoring from space.
- India has relied on INSAT series satellites for weather updates, with INSAT-3D and 3DR playing significant roles in improving weather forecasting capabilities.

Geosynchronous Transfer Orbit (GTO):

- Transfer orbits are a special kind of orbit used to get from one orbit to another.
- To attain geosynchronous (and also geostationary) Earth orbits, a spacecraft is launched into an elliptical orbit with an apoapsis altitude of around 37,000 km. This is called a GTO.

Geostationary orbit (GEO):

- Satellites in GEO circle Earth above the equator from west to east by travelling at the same rate as Earth.
- This makes satellites in GEO appear to be 'stationary' over a fixed position.

2. AI Governance Alliance Reports on Generative AI Governance

Why is it in the news?

- The AI Governance Alliance (AIGA) has recently unveiled a trio of reports addressing crucial aspects of advanced artificial intelligence (AI), with a particular focus on generative AI governance.
- The reports delve into unlocking the value of generative AI and propose a comprehensive framework for the responsible development and deployment of AI systems.

About the Reports

Generative AI Governance: Shaping Our Collective Global Future

- The report underscores the significance of international collaboration in governing generative

AI. Recognizing the global impact of AI development, it emphasizes the need for coordinated efforts among nations.

- A key point of emphasis is the call for more inclusive access to AI, both in terms of development and deployment.
- The report advocates for equitable opportunities for all stakeholders, irrespective of geographic or socioeconomic factors.

Unlocking Value from Generative AI: Guidance for Responsible Transformation

- This report provides stakeholders with comprehensive guidance on adopting generative AI more responsibly. It encourages thorough evaluation of use cases, implementation of multistakeholder governance models, and transparent communication practices.
- The document aims to assist organizations and individuals in navigating the transformative journey with generative AI while ensuring ethical considerations remain at the forefront.

The Presidio AI Framework: Towards Safe Generative AI Model

- Focusing on the technical aspect, this report stresses the need for a standardized framework governing the entire lifecycle of generative AI models. This includes development, deployment, and retirement phases, ensuring consistency and accountability.
- A significant aspect is the call for shared responsibility among various stakeholders in the AI ecosystem. Additionally, the report advocates for proactive risk management strategies to an-ticipate and mitigate potential issues.

About AI Governance Alliance (AIGA)

- Launched by the World Economic Forum in 2023, AIGA is a dedicated initiative focused on responsible generative AI.
- It is a collaborative effort, bringing together industry leaders, government bodies, academic institutions, and civil society organizations.
- AIGA's primary objective is to champion responsible global design and release of transparent and inclusive AI systems, recognizing the transformative impact AI technologies can have on societies worldwide.

About Artificial Intelligence (AI) :

- AI is a broad-ranging branch of computer science focused on creating intelligent machines capable of performing tasks that typically require human intelligence.
- From self-driving cars to generative AI tools like ChatGPT and Google's Bard, AI is increasingly becoming an integral part of everyday life across diverse industries.
- This subset of AI technology excels in producing various content types, including text, imagery, audio, and synthetic data.
- Generative AI models learn patterns and structures from input training data and generate new data with similar characteristics.
- Prominent examples include ChatGPT, DALL-E, and Bard, which create text or images based on user prompts.

Need for Regulation:

- The opacity of AI tools, particularly AI and deep learning models, poses challenges even for those directly involved in the technology's development and implementation.
- Decisions made by AI systems are susceptible to inaccuracies, discriminatory outcomes, and embedded bias, necessitating regulatory oversight.
- The rise of AI-generated content, deepfakes, voice changers, and other manipulative tools in online media and news raises concerns about authenticity and accountability.
- AI systems often collect personal data for customization, underscoring the need for robust da-ta privacy regulations.
- There is apprehension that rapid advancements in AI intelligence could lead to scenarios where AI acts

beyond human control, potentially in a malicious manner.

- Critical domains such as healthcare, transportation, and finance require AI systems to adhere to stringent safety standards.

Way Forward :

- Ethical concerns surrounding AI systems, including bias, discrimination, and invasion of privacy, necessitate robust regulations to ensure responsible development and deployment.
- Regulations play a crucial role in fostering public trust in AI technologies by establishing clear ethical standards and guidelines.
- The potential dangers associated with AI technologies can be mitigated by implementing legal frameworks and guiding AI development with a human-centred perspective. This approach ensures that AI contributes positively to societal values and avoids harmful consequences.

3. Pandemic Treaty and Disease X

Why is it in the news?

- The World Health Organization (WHO) is calling upon member nations to endorse a pandemic treaty aimed at bolstering global readiness for forthcoming health emergencies.

More about the news

- The Pandemic Treaty initiative was introduced in March 2021 by a coalition of world leaders aiming to address the inadequacies in global preparedness and response to pandemics.
- The objective is to fortify national, regional, and global capacities to effectively manage and mitigate the impact of future health crises.

Components:

- The treaty emphasizes the necessity of unified action on a global scale, recognizing that pandemics transcend borders and require collaborative efforts among nations, international organizations, and stakeholders.
- It underscores the importance of enhancing healthcare infrastructure, workforce capacity, and healthcare delivery systems to better withstand and respond to pandemics, especially in low and middle-income countries where resources may be limited.
- Prioritizing investment in scientific research and development of vaccines, medicines, diag-nostics, and other medical countermeasures is crucial for anticipating and combating emerging pathogens effectively.
- Transparency in datasharing, surveillance, and communication is vital for early detection, monitoring, and containment of outbreaks.
- Under the auspices of the World Health Organization (WHO), the treaty proposes the creation of a framework for equitable access to pathogens for research purposes while ensuring fair and ethical benefit-sharing arrangements.
- Recognizing the essential role of women in healthcare, the treaty advocates for addressing gender disparities in the healthcare workforce, promoting gender equality, and ensuring equal opportunities for women in pandemic preparedness and response efforts.

What is Disease X?

- Coined by the World Health Organization (WHO), "Disease X" represents a hypothetical pathogen or disease entity with the potential to trigger a severe pandemic in the future.
- Disease X could arise from a novel agent, such as a virus, bacterium, or fungus, for which no specific treatment or vaccine currently exists.
- It could belong to any of the 25 families of viruses known to cause illness in humans, highlighting the diverse nature of potential pandemic threats and the need for comprehensive surveillance and preparedness efforts.
- Disease X has been incorporated into the WHO's Blueprint list of priority diseases since 2018, reflecting its recognition as a potential high-consequence threat requiring proactive monitoring and research.
- Despite efforts to anticipate and prepare for future pandemics, the specific identity and characteristics of Disease X remain elusive, underscoring the imperative for sustained vigilance, research, and readiness.

WHO Initiatives for Future Pandemics

- The World Health Organization (WHO) has launched several initiatives aimed at enhancing global preparedness and response capabilities for future pandemics:
- World Bank's Pandemic Fund: Collaborative efforts involving multinational development banks, G20 countries, WHO, and civil society seek to bolster

health systems in low and middle income countries, which are often disproportionately impacted by pandemics due to limited resources and infrastructure.

- **Financial Intermediary Fund for Pandemic Preparedness and Response:** Established in 2022, this fund supports the implementation of early warning surveillance systems for zoonotic diseases, strengthening laboratory capacities, and enhancing emergency communication mechanisms to facilitate rapid response to outbreaks.
- **mRNA Technology Transfer Hub:** Launched in June 2021, this initiative aims to facilitate the transfer of mRNA vaccine technology to developing countries, enabling local production and distribution of vaccines to combat COVID-19 and potentially other future pandemics.
- **WHO Hub for Pandemic and Epidemic Intelligence:** This hub serves as a collaborative platform for developing a comprehensive research and development agenda, bridging the gap between academic institutions, public health agencies, and other stakeholders to foster innovation and knowledge sharing in pandemic preparedness and response.
- **WHO BioHub System:** Facilitating the global sharing of viruses and pathogens, the BioHub system promotes collaboration and cooperation among countries and research institutions to enhance understanding of infectious diseases and develop effective strategies for prevention and control.

Zoonotic Diseases

- Zoonotic diseases are infections that can be transmitted from animals to humans, posing significant public health risks.
- These diseases can be caused by various pathogens, including viruses, bacteria, parasites, and fungi, and may originate from wildlife or domestic animals.
- Examples of zoonotic diseases include influenza, Ebola virus disease, and COVID-19.
- Effective surveillance, prevention, and control measures are essential for mitigating the spread of zoonotic diseases and preventing future pandemics.

4. Neuralink Implants

Why is it in the news?

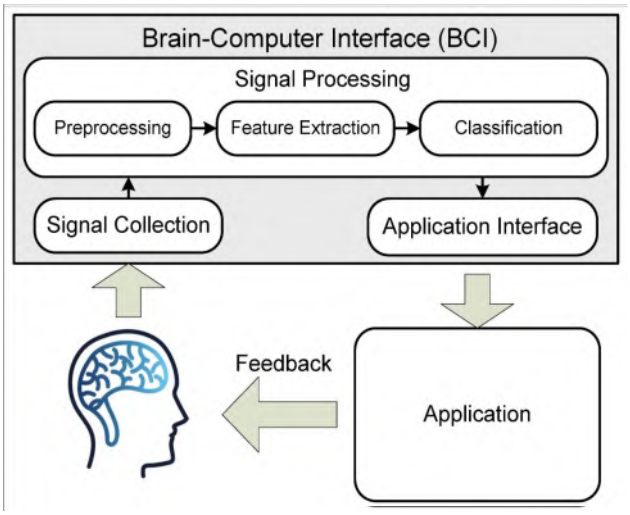
- The recent implantation of a Neuralink device in a human patient marks a significant milestone in neurotechnology, showing promising results in **detecting neuron spikes,** which could have implications for treating paralysis and neurological conditions.

What is Neuralink ?

- Founded by Elon Musk in 2016, Neuralink's primary objective is to develop **brain-computer interfaces (BCIs)** that can be implanted into the human brain.
- The company's BCI technology involves a small, flexible device implanted in the brain's motor cortex. This device contains thousands of tiny electrodes capable of detecting the electrical activity of neurons.

Brain-computer interfaces (BCIs)

- BCIs serve as a crucial link between human thought processes and external technology. They function by capturing and translating brain activity into understandable signals for external devices.
- Various approaches to BCIs exist, including non-invasive methods like EEG (electroencephalography), partially invasive methods involving electrodes placed under the scalp or skull, and fully invasive methods like Neuralink's implant directly interfacing with brain tissue.



Applications

- BCIs have the potential to revolutionize human interaction with technology, allowing for seamless control of devices using only the power of thought.

- Individuals with paralysis could benefit significantly from BCIs, enabling them to control assistive devices, prosthetics, and even computers directly with their thoughts.
- BCIs offer hope for restoring lost senses such as sight or hearing due to injuries or diseases.
- BCIs hold promise in treating various neurological conditions like epilepsy, Parkinson's disease, and chronic pain by modulating brain activity.
- In the future, BCIs could potentially be used to amplify cognitive abilities or memory, leading to significant advancements in human capabilities.

Challenges :

- Concerns have been raised regarding the safety of Neuralink's technology, particularly based on reported issues in animal testing, including paralysis, seizures, and brain swelling.
- There are ethical considerations surrounding the potential misuse of BCI technology, such as unauthorized access to individuals' thoughts or the creation of a new class of technologically enhanced individuals.
- Ensuring the security and ethical use of brain data collected through BCIs is crucial to prevent unauthorized access and protect individuals' privacy.
- Efforts must be made to ensure equitable access to BCI technology, addressing concerns of affordability and availability across different socio-economic groups.
- Defining the boundaries between human thought and machine control is essential to maintain autonomy and prevent potential abuse of BCI technology.
- The implications of cognitive and sensory augmentation through BCIs raise complex ethical and societal questions that require careful consideration.

Conclusion

- Despite these challenges, BCI research continues to advance rapidly, driven by developments in neuroscience, engineering, and artificial intelligence.
- The transformative potential of BCIs in healthcare, communication, and our understanding of brain-computer interfaces underscores the importance of ongoing research and ethical considerations in this field.

5. Sunrise Technologies

Why is it in the news?

- The Finance Minister unveiled plans to establish a corpus of Rs 1 lakh crore during the Interim Budget 2024-25.
- This allocation aims to bolster private investment in sunrise technologies, fostering a favourable environment for innovation and research.

More about the news

- The primary goal is to usher in a "golden era for tech-savvy youth" by incentivizing private sector involvement in emerging technology fields.
- By providing a substantial corpus through a fifty year interest-free loan, the government aims to stimulate innovation and propel India towards technological leadership.
- The introduction of extended tenors and low or zero interest rates seeks to encourage the private sector to prioritize research and development (R&D) in sunrise domains. This strategy is intended to address the funding gap and incentivize long-term investments in innova-tive ventures.
- The FM underscored the importance of research and innovation by highlighting the transition from "Jai Jawan Jai Kisan" to "Jai Jawan Jai Kisan Jai Vigyan and Jai Anusandhan." This shift signifies the recognition of innovation as a cornerstone of India's development trajectory, emphasizing the need for continuous technological advancements.

About Sunrise Technologies

- Sunrise technologies is a category of industries with high growth potential and expected to become significant in the future.
- It's important to note that the specific industries considered "sunrise" can change over time depending on technological advancements, economic trends, and societal needs.
- Sunrise technologies are characterized by their novelty or early stage development, offering innovative solutions or addressing emerging needs.
- They exhibit rapid growth potential, with significant increases in revenue, market share, and investment.
- These technologies are expected to have a substantial impact on the economy and society in

the long term, driven by innovation and disruptive business models.

- However, due to their early stage, there is inherent uncertainty regarding their future suc-cess and trajectory.

Examples of Potential Sunrise Technologies :

- **Renewable Energy:** Solar, wind, bioenergy, and other renewable sources are crucial for sustainable development and energy security.
- **Artificial Intelligence (AI) and Machine Learning (ML):** These technologies have transformative potential across various sectors, including healthcare, agriculture, manufac-turing, and finance.
- **Electric Vehicles (EVs) and Battery Technology:** Promising solutions for reducing emissions and promoting sustainable transportation.
- **Internet of Things (IoT) and Big Data**: Enabling efficiency improvements and in-formed decision-making through data analytics and connectivity.
- **Robotics and Automation**: Enhancing productivity, precision, and safety in diverse sec-tors such as manufacturing and healthcare.
- **Space Technology:** Offering opportunities in satellite communication, remote sensing, navigation, and exploration.
- **Genomics and Biotechnology:** Advancements in healthcare, agriculture, and beyond through genetic research and biotechnological innovations.

Challenges Ahead :

- Inadequate research centres and supportive infrastructure hinder the growth of sunrise industries.
- Insufficient availability of skilled professionals in emerging fields poses a barrier to innovation and adoption. Limited access to finance and investment restricts the expansion and development of sunrise technologies.
- Complex and outdated regulations impede the operational efficiency and growth potential of these industries. Continuous adaptation and innovation are required to address the evolving technological landscape and integrate cutting edge solutions.

Measures to Address Challenges

- Implementing policies to promote investment, infrastructure development, skill enhancement, and R&D.
- Collaborating with the private sector to leverage resources and expertise for optimal development.
- Upskilling and reskilling programs to bridge the workforce gap and prepare individuals for future job roles. Encouraging research initiatives and providing incentives for innovation to drive technological advancements.
- Simplifying and updating regulatory frameworks to facilitate ease of doing business and foster technological adoption.

Conclusion

- By addressing challenges and implementing supportive measures, India can unlock the full potential of sunrise technologies, contributing significantly to economic growth and societal progress. It's crucial to remain adaptable and responsive to the evolving dynamics of these industries to sustain growth and competitiveness over time.

6. Antibiotic Properties of Phytocannabinoids

Why is it in the news?

- Researchers at CSIR-IIIM Jammu have discovered the antibiotic properties of a compound called THCBD, a semisynthetic phytocannabinoid found in the cannabis plant.

About Staphylococcus aureus :

- THCBD has demonstrated potent antibiotic effects against the Staphylococcus aureus bacterium, which is responsible for a significant number of deaths due to antimicrobial resistance (AMR).
- It is a gram-positive bacterium causing various clinical diseases such as pneumonia, meningi-tis, osteomyelitis, and endocarditis.
- It is present in the environment and in the normal human flora, primarily on the skin and mucous membranes.
- The transmission of Staphylococcus aureus occurs mostly through direct contact.

THCBD as a Phytocannabinoid :

- THCBD stands for tetrahydrocannabidiol and is a semisynthetic phytocannabinoid naturally occurring in the cannabis plant.
- THCBD demonstrated strong effectiveness against efflux overexpression and MRSA strain in bacterial cultures in the lab.

- The compound reduced the number of viable microbial cells in S. aureus skin infections in mice, showing promise in combating AMR.

Challenges

- Solubility of the drug poses a challenge, as it needs to be dissolved in an aqueous medium, and THCBD tends to be lipophilic.
- Section 20 of the Narcotic Drugs and Psychotropic Substances Act 1985 restricts the use of cannabis, including for research purposes.

Note:

- India reported a substantial burden of antimicrobial resistance, with 2.97 lakh deaths in 2019 attributed to AMR.
- **Hydrophilic molecule:** Molecules which are water loving.
- **Lipophilic molecule:** Molecule which are fat loving.

7. VAIBHAV Fellowship Program

Why is it in the news?

- Government of India has launched the Vaishvik Bhartiya Vaigyanik (VAIBHAV) fellowship program.
- Department of Science and Technology (DST), Ministry of Science and Technology, spear-heads the VAIBHAV Fellowship Program.

About the Program

- Aimed at connecting the Indian Science, Technology, Engineering, Mathematics, and Medicine (STEMM) diaspora with academic and R&D institutions in India for collaborative re-search.

Eligibility Criteria for Applicants:

- Applicants must be Non-Resident Indians (NRI), Person of Indian Origin (PIO), or Overseas Citizen of India (OCI) residing abroad.
- Must hold a Ph.D./M.D./M.S. degree from a recognized University.
- Researchers must be associated with overseas academic/research/industrial organizations, having a proven track record of research & development and affiliated with top 500 QS World University Rankings.

Eligibility Criteria for Institutions:

- Higher Educational Institutions/Universities ranked within the top 200 in NIRF overall rankings and holding NAAC 'A' grade (3.0 and above) are eligible, along with scientific institutes.

Funding:

- The fellowship includes a grant of INR 4,00,000 per month along with provisions for international and domestic travel, accommodation, and contingencies.

Program Features:

- 75 VAIBHAV fellowships are awarded to outstanding scientists/technologists of Indian origin (NRI/OCI/PIO) engaged in research activities abroad.
- Fellows are invited to work in 18 identified knowledge verticals, including quantum technology, health, pharma, electronics, agriculture, energy, computer sciences, and material sciences.
- Fellows are expected to spend up to two months annually, for a maximum of 3 years, collaborating with an Indian institution of their choice.

First Batch of Fellows:

- The Department of Science and Technology (DST) announced the first batch comprising 22 scientists under the VAIBHAV scheme.
- These scientists will spend one to two months each year, for up to three years, at Indian institutes like the Indian Institute of Science (IISc), various IITs, Tata Institute of Fundamental Research, etc.
- Host institutions will receive a research grant to support the fellows, who are expected to initiate projects or technology startups within the three-year duration.

Distinguished Fellowships:

- Two 'distinguished fellowships' were granted to senior professors Arogyaswami Paulraj from Stanford University and Jitendra Malik from the University of California, Berkeley, under the VAIBHAV scheme.

8. End-to-End Encryption (E2E)

Why is it in the news (context)?

- End-to-end encryption (E2E) safeguards information, altering perspectives of human rights groups, law enforcement, and tech firms regarding access to and utilization of individual data for protection, prosecution, or profit.

Encryption

About:

- Encryption involves transforming consumable information into an unconsumable form based on specific rules.

- Different encryption methods exist, such as symmetric and asymmetric encryption, each with distinct functionalities and purposes.
- End-to-End Encryption (E2E) secures information as it moves between specific locations. In messaging apps, E2E encryption ensures messages are encrypted both in transit and at rest, only being decrypted by the intended recipient.

Types of Encryptions

1) Symmetric Encryption:

- Uses the same key for both encryption and decryption.
- Examples include the Data Encryption Standard (DES) and the Advanced Encryption Stand-ard (AES).

2) Asymmetric Encryption:

- Uses different keys for encryption and decryption.
- Provides enhanced security but requires the exchange of public and private keys.
- Examples include algorithms like Curve25519, based on elliptic curve cryptography (ECC).

3) Hash Functions:

- Responsible for encrypting messages.
- Must fulfil specific properties, such as producing unique digests for unique messages and maintaining message confidentiality.
- Examples include the hash function used in DES, which operates through a series of steps in-cluding S-box conversions.

Challenges and Risks

- Despite E2E encryption, messages can still be accessed through methods like **man-in-the-middle (MITM) attacks.**
- Users must verify keys through fingerprints to prevent interception and modification.
- Complacency regarding security measures may lead to vulnerabilities, such as malware infiltration or backdoor access by companies or authorities.
- Illegal use and surveillance risks persist, as highlighted by incidents like the Edward Snowden affair.

Conclusion

- Encryption is crucial for safeguarding information integrity and privacy.
- E2E encryption provides robust security measures but requires vigilance against potential threats and vulnerabilities.

9. Standards Machine Applicable Readable and Transferable (SMART)

Why is it in the news?

- Recently, the **Bureau of Indian Standards,** in collaboration with the International Electrotechnical Commission (IEC) and the International Organization for Standardization (ISO), organized a two day workshop on Digital Transformation at Yashobhoomi Con-vention Centre, Dwarka.

About SMART Approach

- SMART is a joint program of ISO and IEC aimed at driving the digital evolution of interna-tional standards.
- SMART standards enable machines to exchange data and undergo processes outlined in the standards, ensuring greater precision in operations.
- They facilitate easier comprehension of standards, allowing users more time for innovationled work.

Issues with Current Standards

- Current standards are often voluminous, highly technical, and not easily readable, making it difficult for experts and industry stakeholders to participate.
- Micro and Small sectors, which constitute over 80% of BIS licenses, find it challenging to understand the technical complexity of existing standards.

Key Benefits of SMART Approach

- Manufacturers can integrate SMART standards into their product and service lifecycles, reducing costs and ensuring compliance with the latest regulations.
- SMART standards provide content tailored to users' specific needs, ensuring they receive relevant information with ease.
- Automation of processes allows users to focus more effectively on content creation.

About Bureau of Indian Standards (BIS)

- BIS was established under the BIS Act 2016.
- It ensures harmonious development of standardization, marking, and quality certification activities for goods.
- It falls under the Ministry of Consumer Affairs, Food & Public Distribution.
- **Recent Initiatives:** BIS is involved in creating awareness about standards at grassroots levels and conducting training programs for village panchayats.

About International Organization for Standardization (ISO)

- ISO is an independent, non-governmental international organization.
- It has a membership of 170 national standards bodies.
- ISO brings together experts to develop voluntary, consensus-based, market relevant International Standards supporting innovation.

About International Electrotechnical Commission (IEC)

- IEC was founded in 1906.
- It is a global, not-for-profit membership organization with representation from over 170 countries.
- IEC provides a global, neutral, and independent standardization platform for experts worldwide.

10. WHO Recognizes Countries for Advancing Industrial Trans Fat Elimination

Why is it in the news?

- The **World Health Organization (WHO)** has recently recognized and awarded validation certificates to several countries, including Denmark, Lithuania, Poland, Saudi Arabia, and Thailand, for their significant efforts in eliminating **industrially produced trans-fatty ac-ids (iTFA).**
- With 53 countries now implementing best practice policies for iTFA elimination, approximately 46% of the world's population benefits from improved food environments with reduced trans-fat exposure.

WHO has set specific criteria for countries to be validated for transfat elimination:

- Implementation of a mandatory national limit of 2 grams of iTFA per 100 grams of total fat in all foods.
- Adoption of a mandatory national ban on the production or use of Partially Hydrogenated Oils (PHO), which are a major source of trans-fat, in all foods.
- Compliance with both the PHO ban and the iTFA 2% limit, ensuring a comprehensive ap-proach to trans-fat reduction.

About Trans-Fat

- Trans-fats are a type of unsaturated fat found in vegetable oils. There are two primary sources:
- **Naturally-occurring transfats** are found in small amounts in dairy and meat products.
- **Industrially produced trans-fats** are artificially created during the hydrogenation process and are commonly found in packaged foods, baked goods, and cooking oils.
- Consumption of trans-fats has been strongly linked to non-communicable diseases such as cardiovascular disease, leading to an increased risk of heart attacks and other health complications.

Regulatory Steps

India:

- The **Food Safety and Standards Authority of India (FSSAI)** launched the **Eat Right India Movement,** aimed at promoting healthier food choices and lifestyles.
- FSSAI mandated the declaration of trans-fat content on nutrition labels, providing consumers with essential information to make informed dietary decisions.

Global:

- WHO's **REPLACE initiative** outlines comprehensive strategies to reduce transfat consumption worldwide:
- **RE**viewing dietary sources of industrially produced trans-fat to identify key areas for intervention.
- **P**romoting the replacement of industrially produced trans-fat with healthier alternatives.
- **L**egislatively eliminating industrially produced transfat through policy implementation.
- **A**ssessing transfat content in the food supply to monitor progress and identify areas for im-provement.
- **C**reating awareness campaigns to educate the public about the negative health impacts of transfats.
- **E**nforcing compliance with transfat reduction policies through regulatory measures and oversight.

11. US approved Sale of 31 Predator drones to India

Why is it in the news?

- The United States has granted approval for the sale of 31 Predator drones to India.
- This approval follows the notification by the US Defence Security Cooperation Agency to the US Congress regarding the potential military sale of MQ-9B SkyGuardian drones and associ-ated equipment.

About MQ-9B SkyGuardian Drones

- MQ-9B SkyGuardian drones are sophisticated aerial vehicles capable of autonomous flight or remote piloting. They possess the capability to carry both lethal and non-lethal payloads, making them versatile assets for various military and surveillance operations.
- These drones are designed for long endurance missions, capable of flying over the horizon via satellite for more than 30 hours at a stretch.
- They are equipped with advanced technology to integrate safely into civil airspace, allowing for joint operations with civil authorities and providing real-time situational awareness.
- The drones are particularly adept at maritime intelligence, surveillance, and reconnaissance (ISR) operations, enabling real-time monitoring and patrolling above and below the ocean's surface.

Significance of Drone Technology in Defence

- Drone technology plays a crucial role in defence, offering strategic advantages such as enhanced intelligence, surveillance, and reconnaissance (ISR) capabilities.
- They also offer tactical benefits, including the ability to conduct precision strikes with minimal collateral damage, improved coordination and logistics in challenging terrains, and reduced risks to personnel compared to manned aircraft.
- Despite their advantages, drones present challenges such as navigating complex airspace management frameworks, mitigating the impact of adverse weather conditions like strong winds, and addressing concerns related to privacy and safety breaches.

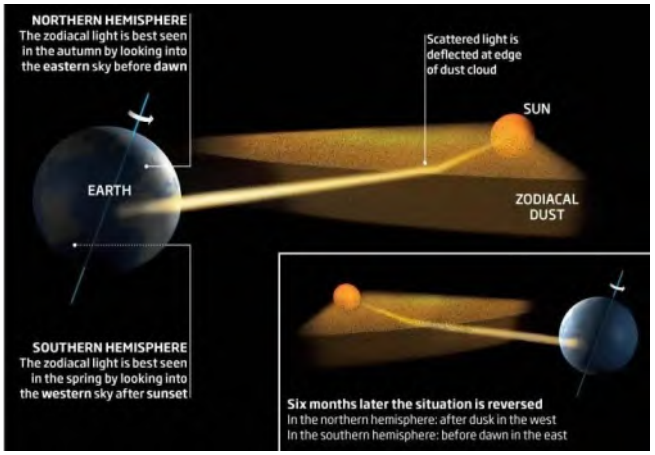
Drone Technology in India

- India has been actively developing indigenous drone technology for defence purposes. Projects like LAKSHYA and NISHANT, developed by the Defence Research and Development Organisation (DRDO), represent significant strides in this field.
- Additionally, DRDO has produced micro and mini-UAVs like Black Kite, Golden Hawk, and Pushpak, along with advanced UAVs like DRDO NETRA and DRDO Rustom, catering to various operational needs of the armed forces.
- To counter emerging threats posed by unauthorized drone activity, DRDO has also developed counterdrone systems aimed at protecting against potential security breaches.

12. Zodiacal Light

Why is it in the news?

- Scientists at the Physics Research Laboratory (PRL), Ahmedabad, have recently published a paper proposing a novel explanation for the origin of Zodiacal light.



More about the news

- According to the study, the dust from Mars's two moons, Deimos and Phobos, could be a significant contributor to the interplanetary dust responsible for Zodiacal light.
- This hypothesis suggests that dust particles ejected from the surfaces of these moons could scatter sunlight and contribute to the phenomenon observed from Earth.
- Phobos, in particular, is of interest due to its relatively close proximity to Mars and its distinctive features, including the Stickney crater.

Stickney crater

- Stickney crater is a prominent feature on Phobos, measuring approximately 10 kilometres in diameter.
- The crater's large size and unique characteristics make it a focal point of study for researchers interested in the composition and geology of Mars's moons.

About Zodiacal light :

- Zodiacal light refers to the faint, diffuse glow of sunlight scattered by interplanetary dust particles in the plane of the ecliptic.
- It is observable from Earth under specific conditions, typically on completely dark nights far from sources of light pollution.

- Interplanetary dust consists of tiny particles of cosmic dust distributed throughout the space between planets in the solar system. These particles can vary in size from microscopic to several millimetres in diameter.
- The ecliptic is the apparent path that the Sun traces across the celestial sphere over the course of a year from Earth's perspective. The Zodiacal light is visible along this path due to the scat-tering of sunlight by interplanetary dust.

13. Cervical Cancer

Why is it in the news?

- The Union Budget 2024-25 includes provisions to promote vaccination against cervical cancer as a preventive measure.
- Further, the girls aged 9 to 14 years will be the primary focus of the vaccination campaign.

Cervical Cancer

About:

- Cervical cancer originates in the cervix, the lower part of the uterus that connects to the vagina.
- The vast majority (99%) of cervical cancer cases are linked to persistent infection with highrisk strains of the human papillomavirus (HPV), which is commonly transmitted through sexual contact.
- Cervical cancer ranks as the fourth most common cancer in women worldwide and the second most common in India.

Prevention Strategies:

- Involves vaccination against HPV as it is highly effective in preventing HPV infection and subsequent development of cervical cancer. It is especially beneficial when administered to girls before they become sexually active.
- Includes screening for cervical abnormalities through methods like Pap smear tests and HPV testing. Early detection of precancerous lesions allows for prompt treatment, preventing the progression to invasive cervical cancer.

Treatment:

- Cervical cancer is highly treatable when detected early. Treatment options include surgery, radiation therapy, chemotherapy, or a combination of these approaches.
- Even in advanced stages, cervical cancer can be managed effectively with appropriate treatment and palliative care, focusing on improving the patient's quality of life.

Vaccines Available in India:

- Produced by Merck, Gardasil is one of the HPV vaccines available in India. It protects against several strains of HPV, including those most commonly associated with cervical cancer.
- Manufactured by the Serum Institute of India, Cervavac is another HPV vaccine option that provides protection against cervical cancer-causing HPV strains.

14. Codex Committee on Spices and Culinary Herbs (CCSCH)

Why is it in the news?

- The 7th session of Codex Committee on Spices and Culinary Herbs (CCSCH) took place in Kochi, India.

More about the news

- During this session, quality standards for five spices were finalized, namely small cardamom, turmeric, juniper berry, allspice, and star anise.
- These standards were then forwarded to the Codex Alimentarius Commission (CAC) for adoption as fullfledged Codex standards.
- Notably, this session marked the successful implementation of the strategy of grouping spices, a significant achievement for CCSCH.

About CCSCH :

- CCSCH was established as one of the Commodity Committees under the Codex Alimentarius Commission (CAC) in 2013.
- India has been hosting CCSCH since its establishment, and the Spices Board India, op-erating under the Ministry of Commerce and Industry, serves as the Secretariat organization.
- The term of reference for CCSCH includes elaborating worldwide standards for spices and culinary herbs in their dried and dehydrated state and consulting with international organizations to avoid duplication.

Codex Standards :

- Codex standards encompass various international food texts, such as standards, codes of practice,

codes of hygienic practice, guidelines, and other recommendations.

- These standards are voluntary and do not have a binding effect on national food legisla-tion.
- However, they serve as essential reference points for countries to develop their own food regulations, ensuring safety, quality, and fairness in food trade.

Codex and WTO

- The WTO Agreements on Sanitary and Phytosanitary Measures (SPS Agreement) and on Technical Barriers to Trade (TBT Agreement) encourage WTO members to harmonize their national regulations with international standards.
- This harmonization helps facilitate international trade by reducing barriers and promoting consistency in food safety and quality regulations.

Codex Alimentarius Commission (CAC)

- CAC was established jointly by the Food and Agriculture Organization (FAO) and the World Health Organization (WHO) in 1963.
- Its objective is to protect consumer health and ensure fair practices in food trade.
- CAC conducts its work through various Codex committees, including CCSCH, hosted by dif-ferent member countries.
- India has been a member of CAC since 1964, actively participating in its activities and con-tributing to the development of international food standards.

15. Kerr Black Holes

Why is it in the news?

- Rotating black holes, also known as Kerr black holes, exhibit a distinct region outside their outer event horizon known as the ergosphere.

About Black Holes

- Black holes are formed when massive stars collapse under their own gravity at the end of their life cycle. The collapse results in the formation of a singularity, a point of infinite den-sity where the laws of physics, as we currently understand them, break down.
- **Black holes are broadly classified into two main categories based on their mass:** stellar mass black holes and supermassive black holes. Stellar mass black holes have masses ranging from 5 to tens of times that of the Sun, while supermassive black holes have masses ranging from hundreds of thousands to billions of times that of the Sun.
- As objects approach the event horizon of a black hole, they experience extreme gravitational forces. This can lead to a phenomenon known as spaghettification, where objects are ver-tically stretched and horizontally compressed as they are pulled towards the black hole.
- Sagittarius A* (Sgr A*) is the closest known supermassive black hole to Earth, located at the centre of our Milky Way galaxy in the constellation of Sagittarius. It has an estimated mass millions of times that of the Sun and is the focus of extensive research by astrono-mers.

- Like all black holes, Kerr black holes are formed from the gravitational collapse of massive stars. When a massive star exhausts its nuclear fuel, it undergoes a supernova explosion, leaving behind a dense core. If this core is massive enough, it collapses into a black hole.
- One of the distinctive features of Kerr black holes is the presence of an ergosphere, which is a region of spacetime surrounding the black hole but outside its outer event horizon.
- The outer event horizon is the boundary beyond which nothing, not even light, can escape the gravitational pull of the black hole. Inside the outer event horizon lies the ergosphere.
- Kerr black holes have two event horizons an outer and an inner one. The space between these two horizons constitutes the ergosphere.

Properties of the Ergosphere :

- In the ergosphere, spacetime itself is dragged along with the rotation of the black hole. This dragging of spacetime creates a region where objects cannot remain stationary but are forced to rotate with the black hole.
- Despite the strong gravitational pull of the black hole, objects within the ergosphere still have the potential to escape if they have sufficient velocity.
- The presence of the ergosphere in Kerr black holes has significant scientific implications. It provides a mechanism for extracting rotational energy from the black hole.
- Objects or particles entering the ergosphere can be split into two parts, with one part falling into the black hole and the other escaping with increased energy

due to the black hole's rota-tion. This process allows for the extraction of rotational energy from the black hole itself.

16. GRAPES-3 Experiment

Why is it in the news?

- The GRAPES-3 experiment, short for Gamma Ray Astronomy PeV EnergieS phase-3, is a scientific endeavour aimed at studying cosmic rays.
- It is a collaborative effort between the Tata Institute of Fundamental Research, Mumbai, India, and the Osaka City University, Osaka, Japan.

More about the news :

- It utilizes a sophisticated setup comprising an array of air shower detectors and a large area muon detector.
- These detectors are strategically positioned to capture and analyse the behaviour of cosmic rays as they interact with the Earth's atmosphere.
- Situated in Ooty, Tamil Nadu, the GRAPES-3 experiment benefits from the geographical ad-vantages of its location. The unique atmospheric conditions in Ooty provide an ideal environ-ment for studying cosmic rays and their interactions.
- The primary objective of the GRAPES-3 experiment is to investigate various aspects of cosmic rays, including their origin, acceleration, and propagation.
- By studying the behaviour of cosmic rays, researchers aim to unravel the mysteries surrounding these highly energetic particles and their impact on the universe.
- The identification of this new feature holds promise for enhancing our understanding of cosmic ray phenomena and their implications for astrophysics and cosmology.

About Cosmic Rays

- Cosmic rays were first discovered more than a century ago through the pioneering work of scientists like Victor Hess.
- Their existence has since been confirmed through numerous experiments and observa-tions.
- Cosmic rays are known to be the most energetic particles in the universe, with some reaching energies far beyond those achievable in particle accelerators on Earth.
- Earth is constantly bombarded by cosmic rays originating from outer space. These cosmic rays penetrate the Earth's atmosphere and interact with its constituents, leading to the production of secondary particles.
- The interaction of cosmic rays with the atmosphere results in a cascade of secondary particles known as an air shower. This shower includes electrons, photons, muons, protons, neutrons, and other subatomic particles.
- Cosmic rays exhibit a wide range of energies, spanning from 10^8 to 10^20 electron volts (eV). This broad energy spectrum poses intriguing challenges and opportunities for re-searchers studying cosmic ray physics.

17. ABHYAS - High-Speed Expendable Aerial Target (HEAT)

Why is it in the news?

- India conducted a successful flight test of the High-Speed Expendable Aerial Target (HEAT) named ABHYAS.
- The test was carried out from the integrated test range in Chandipur, located off the coast of Odisha.

About ABHYAS

- It is indigenously developed by the Defence Research and Development Organisation's (DRDO) Aeronautical Development Establishment (ADE).
- It is designed as an expendable aerial target to simulate realistic threat scenarios for the practice of weapon systems.
- It is capable of autonomous flying with the help of an autopilot system, allowing for efficient training exercises.

- The system is equipped with Radar Cross Section, Visual, and Infrared augmentation systems, essential for simulating various types of threats.
- It includes a laptop-based Ground Control System, enabling integration with the aircraft, preflight checks, data recording during the flight, replay after the flight, and post-flight analysis.
- ABHYAS requires minimal logistics support, making it a cost-effective solution compared to imported equivalents.
- Developed entirely within India by DRDO's ADE, ABHYAS represents a significant achievement in indigenous defence technology development. This aligns with India's broader goal of achieving selfreliance in defence manufacturing and reducing dependency

18. Indigenous CAR-T cell therapy (NexCAR19)

Why is it in the news?

- NexCAR19, an indigenously developed CAR-T cell therapy for B-cell cancers, is now approved for commercial use.
- NexCAR19 is a result of collaborative efforts between ImmunoACT, a company incubated at the prestigious Indian Institute of Technology Bombay (IITB), and Tata Memorial Hospital, a renowned cancer treatment and research centre in India.

About CAR-T Cell Therapy

- CAR-T cell therapy, short for chimeric antigen receptor T-cell therapy, represents a revolutionary form of immunotherapy used to treat certain types of cancer, including B-cell malignancies like leukaemia and lymphoma.
- The therapy involves genetically modifying a patient's own T cells, a type of white blood cell involved in the immune response, to express chimeric antigen receptors (CARs) on their surface.
- These engineered CAR-T cells are then infused back into the patient, where they can recognize and target cancer cells expressing specific antigens, leading to their destruction.
- B-cells and T-cells are specialized types of white blood cells known as lymphocytes, playing crucial roles in the body's immune defence mechanisms.
- T-cells, categorized into cytotoxic, helper, and regulatory subtypes, are involved in directly kill-ing infected or cancerous cells, coordinating immune responses, and maintaining immune balance, respectively.
- B-cells are responsible for producing antibodies in response to antigens, with differentiating into plasma cells and memory cells upon activation, thus contributing to longterm immunity.

Significance and Impact

- NexCAR19's availability for commercial use holds profound significance, particularly for patients in India and other resource limited countries, providing access to a life-saving therapy at a fraction of the cost compared to international standards.
- With a price tag of ?30-40 lakh per patient, NexCAR19 offers a more affordable alternative to the exorbitant costs of CAR-T therapy abroad, addressing financial barriers to treatment access.
- India's success in developing NexCAR19 places it among the elite group of countries with access to CAR-T therapy, highlighting its technical prowess and contribution to global healthcare innovation.
- This breakthrough therapy has the potential to transform the treatment landscape for B-cell cancers, offering hope for improved survival rates, enhanced quality of life, and better overall outcomes for patients.

19. Transiting Exoplanet Survey Satellite (TESS)

Why is it in the news?

- Astronomers recently used data from NASA's Transiting Exoplanet Survey Satellite (TESS) to discover and analyse TOI-715b, a potentially habitable zone planet.

About TESS :

- TESS (Transiting Exoplanet Survey Satellite) is a NASA mission aimed at discovering planets orbiting the brightest stars visible from Earth.
- Launched on April 18, 2018, using a SpaceX Falcon 9 rocket from Cape Canaveral, USA, TESS succeeded NASA's Kepler space telescope, which operated from 2009 to 2018.
- The main mission of TESS concluded on July 4, 2020, and it is currently in an extended mission phase.
- TESS follows a high Earth orbit, completing its cycle every 12 to 15 days, strategically inclined to minimize

obstructions from Earth and the Moon, ensuring an unimpeded view of the sky.

- During its primary mission, TESS's four cameras scanned over 200,000 nearby and bright stars, covering 75% of the sky.
- TESS discovers planets using the transit technique, which involves detecting regular dips in the brightness of stars as planets pass in front of them. The size of the dip in brightness corresponds to the size of the planet, and the duration of the transit helps determine the shape and size of the planet's orbit.
- TESS has uncovered a wide variety of planets, ranging from small rocky ones to giant gas planets, showcasing the diversity of planets within the galaxy.

20. The Healthy Indian Project (THIP)

Why is it in the news?

- The Healthy Indian Project (THIP) has recently joined the World Health Organization's Vaccine Safety Net (VSN) as a member, enhancing its role as a trusted health information platform in India.

More about the news

- The primary goal of THIP is to enhance health literacy among Indians by providing credible and evidence-based health information.
- THIP is available in five major Indian languages: English, Hindi, Bengali, Punjabi, and Gujarati.
- Being included in the World Health Organization's Vaccine Safety Net (VSN) since 2023 signifies THIP's commitment to upholding high standards of accuracy and reliability in vaccine related information.
- The fact that THIP is privately funded and not affiliated with any political institution highlights its independence and integrity.

Initiatives includes:

- THIP conducts fact checking activities to dispel misinformation surrounding vaccines.
- The THIP Care app simplifies individualized health and vaccine record keeping for citizens of India.
- THIP BOT (RAKSHA): This chatbot serves as a valuable resource for citizens to cross-check any misinformation regarding vaccines. By leveraging artificial intelligence and natural language processing technologies, THIP BOT enables users to access accurate and reliable information in realtime.

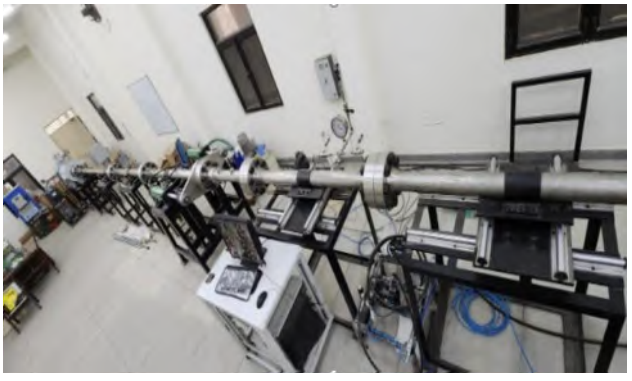
Vaccine Safety Net (VSN)

- The VSN was established in 2003 through collaboration between various non-governmental organizations, UNICEF, and the World Health Organization.
- As the leading global health authority, the World Health Organization oversees the VSN, ensuring that its member websites adhere to strict standards of accuracy and reliability.
- The primary objective of the VSN is to provide scientifically based information on vaccine safety in multiple languages.
- With 110 websites from 45 countries offering information in 43 languages, the VSN represents a diverse and comprehensive network of organizations committed to vaccine safety.

21. India's First Hypervelocity Test Facility

Why is it in the news?

- The Indian Institute of Technology Kanpur (IIT-K) has recently achieved the successful establishment and testing of India's first Hypervelocity Expansion Tunnel Test Facili-ty, known as S2 or 'Jigarthanda.'



More about the news

- The hypervelocity test facility, is situated at the Hypersonic Experimental Aerodynamics Laboratory (HEAL) within the Department of Aerospace Engineering at IIT Kanpur.
- This facility was designed and developed indigenously over a period of three years by the collaborative efforts of the Department of Science and Technology (DST) and IIT Kanpur.
- The development of this facility received financial support from the Fund for Improvement in S&T Infrastructure (FIST) of the Department of Science &

Technology (DST), with an allocation of Rs 4.5 Crores in 2018.

- Capable of generating flight speeds ranging between 3-10 km/s, the facility can simulate hy-personic conditions encountered during various scenarios such as atmospheric entry of vehicles, asteroid entry, scramjet flights, and ballistic missiles.

Significance of India's First Hypervelocity Test Facility

- The facility serves as a vital asset for organizations like the Indian Space Research Organisation (ISRO) and the Defence Research and Development Organisation (DRDO), providing them with a platform to test and validate advanced aerospace technologies.
- It acts as a testing ground for ongoing missions such as Gaganyaan (India's human spaceflight program), Reusable Launch Vehicles (RLV), and hypersonic cruise missiles, enabling the development of more advanced and reliable aerospace technologies.
- India's possession of such advanced hypersonic testing capabilities places it among a select few countries globally, showcasing its prowess in aerospace technology and research.
- The establishment of this facility signifies a significant capacity boost for India's space and defence sectors, empowering them to develop cutting edge hypersonic technologies and stay at the forefront of aerospace innovation.

Aeronautical Research and Development Board (ARDB)

- The Aeronautical Research and Development Board (ARDB) was established by the Government of India in 1971, following the recommendation of the Subramanian Committee report.
- ARDB serves as the national body responsible for coordinating and funding futuristic research and development programs in the field of Aeronautics. It plays a crucial role in driving innovation and advancements in aerospace technology in India.

22. Study on Methane Emission Hotspots in India

Why is it in the news?

- A groundbreaking study utilized satellite data, including NASA's Earth Surface Mineral Dust Source Investigation (EMIT) and the European Space Agency's Sentinel-5P TROPOMI, to identify methane emission hotspots across India.

Key Findings

- The study revealed an increase in methane emissions over various urban centres in India, indicating the presence of methane point sources.
- Methane emissions were found to contribute significantly to India's carbon emissions, accounting for approximately 14.43% of the total emissions in the country.
- Among the identified hotspots, notable locations include a sewage outlet in Central Mumbai, Ahmedabad's Pirana landfill, and Surat's Khajod landfill, highlighting areas with high methane concentrations.

About Methane

- Methane (CH_4) is a potent greenhouse gas with a global warming potential 28 times higher than carbon dioxide (CO_2) over a 100-year period.
- It ranks as the second largest contributor to climate change after CO_2 and is categorized as a Short-Lived Climate Pollutant (SLCP), exerting an immediate and intense warming effect on the atmosphere.

Sources of Methane:

- Approximately 20% of India's anthropogenic methane emissions originate from solid waste and landfills, highlighting the significance of waste management in methane miti-gation efforts.
- Leakage from natural gas, oil and gas fields, and oil refineries contributes to methane emissions, emphasizing the importance of controlling fossil fuel extraction and processing activities.
- Methane emissions from agriculture stem from enteric fermentation in livestock rearing and rice cultivation, indicating the need for sustainable agricultural practices.
- Other sources include wetlands and industrial activities such as textile production.

Initiatives to Reduce Methane Emissions

Global Initiatives:

- **UNEP Global Methane Initiative:** Aims to advance cost-effective methane abatement strategies through international cooperation and knowledge sharing.
- **Global Methane Pledge:** Seeks to reduce methane emissions by at least 30% by 2030 from 2020 levels. However, India has not signed this pledge.

India's Initiatives:

- **Gobar Dhan Scheme:** Promotes the conversion of organic waste into resources, reducing methane emissions from waste decomposition.
- **National Biogas and Manure Management Program**: Facilitates the capture and uti-lization of methane emissions from organic waste sources, promoting sustainable waste management practices across the country.

23. Nuclear Battery

Why is it in the news?

- Chinese startup Betavolt has recently developed a **'Nuclear Battery'** that has gained attention for its remarkable capabilities.

More about the news

- The nuclear battery is smaller than a coin and consists of 63 nuclear isotopes.
- Its functionality involves the conversion of radioisotope energy into electrical energy.
- These batteries harness energy from the decay of a radioactive isotope, such as nickel-63, to generate electricity.
- With the capacity to provide 100 microwatts of power at 3V, the nuclear battery is fire-resistant, jerk-proof, and operational in temperatures ranging from -60°C to 120°C.
- The Betavolt claims that its nuclear battery is the world's first to miniaturize atomic energy production, challenging traditional perceptions about the non-miniaturization of nuclear technology.
- The battery holds a competitive edge due to its elevated energy density compared to other conventional batteries.
- The envisioned applications for Betavolt's nuclear battery include aerospace, AI equipment, medical devices, microprocessors, sensors, drones, and micro-robots.
- Further, the Betavolt aims to scale up its technology, with plans to manufacture batteries capable of generating 1 watt of power by the year 2025.

5 ENVIRONMENT AND BIODIVERSITY

1. COP14 to the Convention on the Conservation of Migratory Species of Wild Animals (CMS)

Why is it in the news?

- The Fourteenth Meeting of the Conference of Parties (COP14) to the Convention on the Conservation of Migratory Species of Wild Animals (CMS) took place in Samar-kand, Uzbekistan.
- COP14 resulted in the adoption of various measures and initiatives aimed at safeguarding migratory species worldwide.

Key Outcomes

Samarkand Strategic Plan for Migratory Species (2024-2032):

- One of the key outcomes of COP14 was the establishment of the Samarkand Strategic Plan for Migratory Species, which outlines conservation goals and strategies for the period from 2024 to 2032.
- This strategic plan serves as a roadmap for CMS member countries to guide their efforts in conserving migratory species over the next decade.

Global Guidelines on Light Pollution:

- COP14 introduced new global guidelines addressing the impacts of light pollution on migratory species.
- Light pollution, caused by artificial lighting, can disrupt migratory patterns, navigation, and breeding behaviours of various species. These guidelines aim to mitigate these negative effects.

Species-Specific Mandates:

- COP14 saw the addition of 14 new species to the CMS Appendices, including the Eurasian Lynx, Pallas's Cat, and Sand Tiger Shark.
- Concerted actions were initiated for six species, such as the Chimpanzee, Straw-coloured Fruit Bat, and Blue Shark, focusing on targeted conservation efforts to address specific threats and challenges faced by these species.
- Additionally, three new action plans were developed for aquatic species, including the Atlantic Humpback Dolphin, the Hawksbill Turtle, and the Angelshark, outlining specific measures for their conservation and management.

Migratory Birds Agreement:

- COP14 achieved an agreement on the Central Asian Flyway (CAF), covering 30 Range States of migratory birds.
- This agreement involves the establishment of a coordinating unit in India to facilitate collabo-rative efforts among Range States in conserving migratory bird species along the Central Asian Flyway.

Scientific Reports:

- A significant milestone of COP14 was the release of the first-ever State of the World's Migrato-ry Species report.
- This report provides comprehensive insights into the current status, trends, and conservation needs of migratory species globally, serving as a valuable resource for policymakers, conservationists, and researchers.

Global Initiative - Global Partnership on Ecological Connectivity (GPEC):

- COP14 witnessed the launch of a new global initiative, the Global Partnership on Ecological Connectivity (GPEC).
- GPEC aims to ensure the maintenance, enhancement, and restoration of ecological connectivity in critical areas for migratory species worldwide.
- Several CMS Parties, including Belgium, France, Monaco, and Uzbekistan, are supporting this initiative, underscoring the importance of international

cooperation in conserving migratory species and their habitats.

CMS (Bonn Convention)

- The Convention on the Conservation of Migratory Species of Wild Animals (CMS), also known as the Bonn Convention, is the only global treaty specifically dedicated to the conservation of migratory species.
- CMS aims to conserve migratory species and their habitats through international cooperation and coordination.
- The convention consists of two main appendices: Appendix I lists migratory species threat-ened with extinction, while Appendix II lists species that would significantly benefit from international cooperation.
- India is a party to the CMS, demonstrating its commitment to conserving migratory species and their habitats, both within its borders and globally.

2. Ramsar Sites

Why is it in the news?

- On World Wetlands Day, the Ramsar Convention designated Khijadia Bird Sanctuary in Gujarat and Bakhira Wildlife Sanctuary in Uttar Pradesh as internationally important wetlands.

About Khijadiya Bird Sanctuary

- Located in Gujarat, the Khijadiya Bird Sanctuary is a freshwater wetland near the Gulf of Kutch coast.
- It provides a habitat for endangered and vulnerable bird species, including the Pallas's fish-eagle and the Dalmatian pelican.
- The sanctuary is now part of the Marine National Park in Jamnagar and serves as a crucial site within the Central Asian Flyway.

About Bakhira Wildlife Sanctuary

- Situated in Uttar Pradesh, the Bakhira Wildlife Sanctuary is a freshwater marsh, considered the largest natural floodplain wetland in eastern Uttar Pradesh.
- It is a vital habitat for the state bird, the Sarus crane, and serves as a wintering ground for numerous migratory bird species.
- The sanctuary supports a diverse aquatic fauna, including vulnerable fish species like the European carp and Wallago attu catfish.

About Wetland

- Wetlands are defined by the Ramsar Convention as areas of marsh, fen, peatland, or water, whether natural or artificial.
- They encompass static or flowing water bodies, including marine areas, with a maximum depth at low tide not exceeding six meters.
- However, the Indian government's definition excludes certain areas like river channels, paddy fields, and zones of commercial activity.

Wetlands in India

- Wetlands cover approximately 4.63% of India's total geographical area.
- Inland-natural wetlands constitute about 43.4%, while coastalnatural wetlands account for approximately 24.3%.
- Gujarat holds the highest share of wetlands in India, with 22.7% of the total area, followed by Andhra Pradesh, Uttar Pradesh, and West Bengal. (as of 2022 feb)

Ramsar Sites

- Ramsar Sites, also known as Wetlands of International Importance, are designated areas under the Ramsar Convention on Wetlands.
- The Ramsar Convention is an international treaty established in 1971 in Ramsar, Iran.
- There are over 2,400 Ramsar Sites covering 2.5 million sq km on the territories of 171 Ramsar Contracting Parties across the world.
- The world's first site was the Cobourg Peninsula in Australia, designated in 1974.
- The countries with the most Ramsar Sites are the United Kingdom with 175 and Mexico with 142.
- The objective of Ramsar Sites is to promote the conservation and sustainable use of wetlands, recognizing their ecological importance.

Ramsar Sites in India

- India has increased its tally of Ramsar sites to 80 (covering an area of 1.33 million hectares) by designating five more wetlands as Ramsar sites, bringing the total up from 75 to 80.
- Latest Additions to Ramsar Sites in India:
  1) Karaivetti Bird Sanctuary (Tamil Nadu): Centred around a large freshwater lake, crucial habitat for a variety of bird species including Black-headed iblis and oriental Darter.

2) **Magadi Kere Conservation Reserve (Karnataka):** Attracts migratory birds such as the bar-headed goose.

3) **Longwood Shola Reserve Forest (Tamil Nadu):** Home to the threatened Nilgiri marten and other rare fauna and flora, helps maintain hydrological regime.

4) **Ankasamudra Bird Conservation Reserve (Karnataka):** Unique habitat where Great Indian Bustard can be found.

5) **Aghanashini Estuary (Karnataka):** Provides diverse ecosystem services includ-ing flood and erosion risk mitigation, biodiversity conservation, and livelihood support.

States with Largest Number of Ramsar Sites:

- Tamil Nadu : 16 Ramsar sites
- Uttar Pradesh : 10 Ramsar sites
- Odisha : 6 Ramsar sites
- Punjab : 6 Ramsar sites.

Significance of Ramsar Listing :

- Ramsar designation acts as a form of certification for wetland management, akin to ISO certification, ensuring internationally recognized standards are met. It strengthens protection measures for designated sites, even if they are not formally designated as protected areas under wildlife laws.

3. Largest Deep-Sea Coral Reef Discovered off Atlantic Coast of the US

Why is it in the news?

- Researchers in the USA have recently made a groundbreaking discovery by mapping the **largest deep-sea coral reef off the Atlantic coast of the United States,** spanning an impressive 310 miles (499 kilometres) from Florida to South Carolina.
- Ranging from 200 meters to 1000 meters, the depth of the reef surpasses the reach of sunlight, creating a unique ecosystem in the ocean's depths.

About Coral Reefs

- Coral reefs are structures formed by **coral polyps** held together by calcium carbonate, creating intricate underwater ecosystems.
- Often referred to as the tropical rainforests of the sea, coral reefs cover only 0.1% of the ocean's surface but provide habitats for 25% of marine species.
- The **Great Barrier Reef in Australia** is known as the world's largest tropical coral reef system.

Differences Between Deep and Shallow Water Coral Reefs:

Charact-eristics	Shallow or Tropical Water Coral Reef	Deep Water Coral Reef
Sunlight Requir-ement	Require sunlight for growth	Do not require sunlight for growth
Access-ibility	More accessible and known to scientists	Less known to scientists; only about 75% of the world's ocean floor mapped in high reso-lution
Area Coverage	Cover less area of the ocean floor	Cover more areas of the ocean floor
Habitats Provided	Provide habitats to various sponges, crabs, and sea stars	Provide habitats for sharks, swordfish, sea stars, etc.

Threats to Coral Reefs:

- Both shallow and deep-sea coral reefs face threats from climate change, including rising sea temperatures and ocean acidification.
- Oil spills and other forms of pollution pose significant risks to coral reefs, affecting their health and the marine life they support.

Conclusion

- The discovery contributes to our understanding of deep-sea biodiversity and the interconnectedness of marine ecosystems.
- It highlights the need for conservation efforts to protect these vulnerable ecosystems from environmental threats.

4. Mosquitofish

Why is it in the news?

- Andhra Pradesh, Odisha, and Punjab have recently released mosquitofish into local water bodies to address mosquito menace.

More about the news

- Mosquitofish, specifically Gambusia affinis and Gambusia holbrooki, are often introduced for biological control of mosquitoes in freshwater ecosystems.

- This method is considered an alternative to chemical solutions like pesticides, which have adverse effects on human health and the ecosystem.
- The introduction of Gambusia in India dates back to 1928 during British rule.
- The initial intention was for these species to prey on or compete with mosquito larvae, reducing their population.
- However, this well intentioned strategy led to unintended ecological and environmental problems.
- However, mosquitofish populations proliferated and spread beyond their original habitats. Originally from the U.S., these fish have become global inhabitants with detrimental ecological impacts.
- They displace and prey on native fauna, leading to the extinction of native fish, amphibians, and various freshwater communities.
- Investigations on the diversity of haplotypes and genotypes within Gambusia species in India classify mosquitofish among the hundred most detrimental invasive alien species.
- The fish's resilience, voracious feeding habits, and aggressive behaviour in new habitats con-tribute to their harmful impact. Studies in other countries, like Australia, show local extinction of endemic fish species due to introduced mosquitofish.
- Reports in India suggest a decline in Microhyla tadpoles following the introduction of Gambusia.

Steps Taken

- The World Health Organisation stopped recommending Gambusia as a mosquito control agent in 1982.
- In 2018, the National Biodiversity Authority of the Government of India designated G. affinis and G. holbrooki as invasive alien species.

5. Elusive Binturong and Small-Clawed Otter

Why is it in the news?

- Recently, **Kaziranga National Park in Assam, India,** has seen the addition of two new mammalian species: the elusive binturong and the small clawed otter.

About the Binturong

- Also known as the bearcat, the binturong is native to South and Southeast Asia.
- Long and heavy with short, stout legs. It possesses a prehensile tail, a feature shared only with the kinkajou among carnivores.
- Belongs to the same family as other small carnivores like civets, genets, mongooses, and fossa.
- Active during both day and night.
- It is an omnivorous, feeding on small mammals, birds, fish, earthworms, insects, and fruits.
- **Conservation Status:** Vulnerable (IUCN), Schedule I (Wildlife Protection Act of 1972), Appendix III (CITES).
- Found across China, India, Thailand, Cambodia, Laos, Malaysia, Indonesia, the Philippines, and Borneo.
- Threats includes the habitat loss due to logging and agribusiness, hunting for bushmeat, traditional medicine, and the pet trade.

About the Small-Clawed Otter

- Also known as the Asian small clawed otter or Oriental small-clawed otter, it is native to South and Southeast Asia.
- Body length ranges from 730 to 960 mm, with a maximum weight of 5 kg. It has short claws that do not extend beyond the pads of its webbed digits, making it the smallest otter species.
- Nocturnal in nature, mainly active after dark.
- Feeds mainly on crabs, mudskippers, and Trichogaster fish.
- **Conservation Status:** Vulnerable (IUCN), Schedule I (Wildlife Protection Act of 1972), Appendix I (CITES). Found across Southeast Asia, including parts of India, Sumatra, Java, Borneo, and Palawan.
- Threats includes the habitat destruction, deforestation, and illegal pet trade.

6. Investment Forum for Advancing Climate Resilient Agrifood Systems in India

Why is it in the news?

- The 'Investment Forum for Advancing Climate-Resilient Agrifood Systems in India' was recently launched in New Delhi.

About the Initiative

- The primary goal of this initiative is to develop a comprehensive strategy for advancing climate resilient Agrifood systems in India. This strategy will be achieved through targeted investments and collaborative partnerships involving key stakeholders such as the Indian government, private sectors, farmers' organizations, and financial institutions.
- The Investment Forum is a collaborative effort led by prestigious entities including NITI Aayog, the Ministry of Agriculture & Farmers' Welfare, and the Food and Agriculture Organi-zation (FAO).
- The Forum will facilitate discussions and considerations across six crucial domains:
  1) Climate-resilient agriculture, focusing on sharing experiences and identifying pathways for adaptation.
  2) Digital infrastructure and solutions, exploring innovative technologies to enhance cli-mate resilience.
  3) Financing climate-resilient agrifood systems, both at domestic and global levels.
  4) Climate-resilient value chains, emphasizing the importance of resilient supply chains from production to consumption.
  5) Production practices and inputs for climate resilience, identifying sustainable farming techniques and resilient crop varieties.
  6) Gender mainstreaming and social inclusion for climate resilience, ensuring that climate adaptation strategies are inclusive and benefit all sections of society.

Significance:

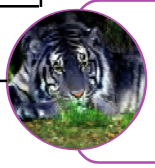
- Climate change poses significant challenges to India's agriculture, particularly impacting the economically vulnerable rural population. Further, agriculture faces risks from extreme weather events such as droughts, floods, cyclones, and soil salinity, necessitating urgent adap-tation measures.
- Integrating climate considerations into agrifood systems requires substantial investments from various sources, including global climate finance, domestic budgets, and the private sector.
- The Investment Forum will play a crucial role in identifying national priorities and policy platforms for financing climate-resilient agrifood systems, ensuring coordinated efforts towards adaptation.
- By enabling key stakeholders to share insights and opportunities through regional collaboration, the Forum will contribute to the development of climate-smart food system initiatives.

7. World's First Melanistic Tiger Safari

Why is it in the news?

- The Odisha government has announced the establishment of the world's first melanistic tiger safari near Baripada, aiming to showcase and conserve the rare black Bengal tigers found exclusively in the Similipal Tiger Reserve.

ABOUT MELANISTIC TIGERS



Black tigers, also known as Melanistic Royal Bengal Tigers, are a rare colour variant of the Bengal tiger.

They are not considered a distinct species or geographic subspecies but represent a colour variation within the Bengal tiger population.

Melanistic tigers have been recorded exclusively in the Similipal Tiger Reserve in Odisha.

In the 2022 All India Tiger Estimation, conducted in the Similipal Tiger Reserve, a total of 10 melanistic tigers were reported out of the 16 tigers present in the reserve.

IUCN Contributions for Nature Platform

Its International Union for Conservation of Nature (IUCN) Status is endangered.

The melanistic tigers, like other Bengal tigers, face significant threats to their population due to habitat loss, poaching, and other human-induced factors.

8. Laughing Gull

Why is it in the news?

- The laughing gull, originating from North America, was spotted for the first time in India at the Chittari estuary in Kerala's Kasaragod district.

More about the news :

- The laughing gull (Leucophaeus atricilla) is a bird species belonging to the family Laridae.
- It derives its name from its distinctive call, which resembles laughter.
- These birds are typically found along the Atlantic and Gulf coasts of North America, as well as in the Caribbean and parts of Central America.
- The laughing gull is classified as **Least Concern** by the IUCN in terms of conservation status.
- It is a medium-sized gull with a black head, black legs, long drooping bill, white body, and long wings.
- The birds take 2-3 years to reach adult plumage and often nest in colonies on beaches, islands, and marshes.
- Known for their adaptability and opportunistic feeding habits, laughing gulls feed on a variety of prey, including fish, insects, and scavenged food.

About the Chittari Estuary

- The Chittari estuary is a coastal area where a river meets the sea, forming a brackish water environment.
- It is situated in the Kasaragod district of Kerala, India.
- The estuary is home to a diverse range of bird species, including the lesser black-backed gull, slender-billed gull, brown-headed gull, great crested tern, lesser crested tern, Caspian tern, and others.
- The discovery of the laughing gull at the Chittari estuary has increased the total count of bird species discovered in India to 1,367, with the Kasaragod district contributing 400 species to the state's total count of 554.

9. Dalma Wildlife Sanctuary

Why is it in the news?

- **Dalma Wildlife Sanctuary** is establishing a canopy walk facility to promote ecotourism and enhance visitor experiences.

About Dalma Wildlife Sanctuary

- The sanctuary derives its name from **"Dalma mai,"** a local goddess venerated by the indigenous population.
- Situated on the Chota Nagpur Plateau in **Jharkhand,** the sanctuary encompasses the Dalma hills and is contiguous with the industrial city of Jamshedpur.
- Dalma Wildlife Sanctuary features two primary types of forests: "Dry Peninsular Sal" and "Northern Dry Mixed Deciduous Forest." These forest types contribute to the rich biodiversity found within the sanctuary's boundaries.

Flora and Fauna:

- The sanctuary boasts a diverse array of flora, comprising both indigenous and exotic plant species. Medicinal plants like Anantmula, Satavari, Sarpgandha, among others, are found abundantly within the sanctuary.
- Dalma Wildlife Sanctuary is renowned for its elephant population, which constitutes a signifi-cant part of its wildlife. Apart from elephants, the sanctuary harbours various other wildlife species, including barking deer, wild boar, giant squirrel, sloth bear, and numerous avian spe-cies.

Issues:

- Despite its ecological importance and biodiversity, Dalma Wildlife Sanctuary faces challenges, primarily related to human-wildlife conflict.
- The sanctuary's elephant population often migrates to neighbouring villages and towns during certain seasons, leading to conflicts with local communities.

About Wildlife Sanctuaries

- Wildlife sanctuaries are designated by state governments under the **Wild Life (Protection) Act of 1972**, recognizing their ecological, geomorphological, and natural value.
- Across India, wildlife sanctuaries cover approximately 122,564.86 square kilometres, representing 3.73% of the country's total land area.
- The country is home to a vast network of 567 wildlife sanctuaries, each playing a crucial role in biodiversity conservation and ecosystem preservation.
- Wildlife sanctuaries are classified as IUCN Category IV protected areas, signifying their importance for the conservation of biological diversity and natural habitats.

10. World Sustainable Development Summit (WSDS) 2024

Why is it in the news?

- The Vice-President of India inaugurated the World Sustainable Development Summit in Delhi in February 2024.

About World Sustainable Development Summit (WSDS)

- The World Sustainable Development Summit (WSDS) is an annual event that brings together stakeholders from various sectors to discuss and address issues related to sustainable development and climate change.
- It was previously known as the Delhi Sustainable Development Summit (DSDS).
- WSDS was established in 2001 with the aim of fostering dialogue and collaboration on sustainable development goals.
- The summit involves collaboration with government ministries such as the Ministries of Earth Sciences, New and Renewable Energy, and Environment, Forests, and Climate Change (MoEFCC).
- The primary objective of WSDS is to mobilize opinion-makers, policymakers, experts, and stakeholders to collectively address the pressing issues related to sustainable development and climate change.
- WSDS stands out as the only independently convened international summit on sustainable development and environment based in the Global South.
- The theme for WSDS 2024 is "Leadership for Sustainable Development and Climate Justice," emphasizing the need for proactive leadership and equitable solutions to address the challenges posed by climate change and promote sustainable development.
- The summit covers a wide range of topics, including integrating sustainable development goals, nature-based solutions, adaptation and resilience strategies, promoting sustainable consumption and lifestyles, addressing the energy trilemma (balancing energy security, af-fordability, and sustainability), and enhancing climate action efforts.
- WSDS introduces the "Vasundhara Magazine" during the summit, with its 14th edition titled 'EquiClimate'. This edition focuses on the theme 'Climate Injustice: Vulnerabilities of the Vulnerable,' shedding light on the disproportionate impacts of climate change on vulnera-ble communities and the need for inclusive and equitable climate action.
- As part of its outreach efforts, WSDS organizes the "Cool it for the climate" campaign, which includes activities such as a postermaking competition for school students.

About The Energy and Resources Institute (TERI)

- TERI was established in 1974 as an information centre focusing on energy issues. Over the years, it has evolved into a prominent research organization dedicated to sustainable development.
- TERI is a leading think tank recognized for its expertise in conducting research, providing policy recommendations, offering consultancy services, and implementing sustainable development projects.
- TERI's work spans multiple dimensions of sustainable development, including energy, environment, climate change, water resources, agriculture, and more.
- TERI's overarching objectives include promoting the efficient use of resources, increasing access to sustainable inputs and practices, and reducing the environmental and climate impacts of human activities.
- TERI is headquartered in New Delhi, India, strategically located in the country's capital, where it can engage with policymakers, government agencies, and other stakeholders to drive sustainable development initiatives effectively.

11. Parasite Creeper preys on Chengalpet Forests and Vedanthangal Bird Sanctuary

Why is it in the news?

- An invasive weed, Cuscuta dodder has spread extensively in the Chengalpet forests and Vedanthangal Bird Sanctuary.
- It competes with native vegetation for resources and can ultimately lead to the decline or extinction of native plant species.

About Cuscuta Dodder :

- Cuscuta dodder is native to North America and belongs to the genus Cuscuta, commonly known as dodder or devil's guts.
- It is a parasitic vine that lacks roots of its own. Instead, it wraps itself around host plants and extracts nutrients and water from them.
- Within the Vedanthangal sanctuary, Cuscuta dodder has been observed particularly on Barringtonia trees, which are favoured nesting sites for migratory water birds. The presence of this invasive weed on these trees jeopardizes the nesting habitat and breeding success of these birds.
- Beyond the sanctuary, Cuscuta dodder is known to pose a serious problem in agricultural regions. It parasitizes oilseeds, pulses, and fodder crops, affecting crop yields and agricultural productivity.
- The severity of the threat posed by Cuscuta dodder is reflected in its classification as a 'declared noxious weed' in 25 countries.
- Cuscuta seeds have a remarkable ability to survive adverse conditions. With their spheroid shape and hard coat, they can remain viable for up to 50 years in dry storage and at least 10 years in the field.
- Unlike root parasites, Cuscuta seeds do not require a specific stimulant to germinate. This trait contributes to the weed's ability to establish and spread rapidly in new environments.

12. New Species of the 'World's Heaviest Snake' Discovered

Why is it in the news?

- Scientists shocked to discover new species of green anaconda, the world's biggest snake.

Recent Findings about Green Anacondas

- Recent research has upended previous scientific understanding by revealing that what was once thought to be a single species of green anaconda is actually two genetically distinct species.

- The identification of substantial genetic differences between the two species highlights the necessity of tailored conservation efforts. Threats such as climate change, habitat degradation, and pollution affect each species differently, necessitating specific conservation approaches.
- The discovery emphasizes the critical necessity of understanding the diversity of Earth's flora and fauna.

Untangling Anaconda Genes

- **Southern Green Anaconda (Eunectes murinus)**: This known species is found in Peru, Bolivia, French Guiana, and Brazil. It has been recognized as the southern green anaconda.
- **Northern Green Anaconda (Eunectes akayima):** The newly identified species inhabits Ecuador, Colombia, Venezuela, Trinidad, Guyana, Suriname, and French Guiana. It has been named the northern green anaconda.
- **Genetic Divergence:** Genetic analysis revealed a significant divergence between the two species, estimated to have occurred nearly 10 million years ago. The genetic difference between them is

approximately 5.5%, a substantial variation compared to the genetic difference between humans and apes, which is about 2%.

- **Appearance:** Despite their genetic differences, the two species appear almost identical, making visual identification challenging.

About Green Anacondas

- Green anacondas are known as the world's heaviest and among the longest snakes. They are native to the rivers and wetlands of South America.
- Historically, green anacondas were recognized as one of four species of anaconda, also known as the giant anaconda.
- Females of the species can exceed seven meters in length and weigh over 250 kilograms. They are well-adapted for aquatic life, with nostrils and eyes positioned atop their heads to facilitate breathing and vision while submerged.
- Green anacondas are apex predators known for their speed and ability to capture and consume large prey such as capybaras, caimans, and deer. They use their camouflage, stealth, patience, and agility to ambush prey in their habitats.
- Unlike venomous snakes, green anacondas employ their powerful bodies and large jaws to constrict and swallow their prey whole.

Their Ecological Role

- Green anacondas play a crucial role in maintaining ecological balance in their habitats. Their presence influences the behaviour of various species, affecting where and how they forage, breed, and migrate.
- Healthy anaconda populations indicate vibrant ecosystems with ample food resources and clean water. Declining anaconda numbers may serve as indicators of environmental distress, highlighting the importance of monitoring their populations and habitats for ecosystem health.

6 INTERNAL SECURITY

1. Border Security Force (BSF)

Why is it in the news?

- The Supreme Court will adjudicate on the dispute regarding the expansion of Border Security Force (BSF) jurisdiction in Punjab.

Background

- In October 2021, the Ministry of Home Affairs expanded the **Border Security Force's (BSF)** jurisdiction in Punjab, West Bengal, and Assam from 15 km to 50 km.
- This extension was accompanied by a reduction in jurisdiction in Gujarat from 80 km to 50 km, while the 50 km limit was already in place in Rajasthan.

Reasons for Expanding BSF's Jurisdiction:

- Addressing crossborder infiltration, particularly concerning drones with long-range capabilities.
- Enhancing the effectiveness of combating transborder crimes such as arms smuggling, counterfeit currency, and cattle smuggling.
- Ensuring uniformity in BSF operations across states.

Reasons for Judicial Challenge by Punjab:

- According to Punjab government, legislative powers regarding public order and police are in the State List of the 7th Schedule of the Constitution.
- Punjab government alleges lack of consultation before issuing the notification, asserting it contradicts the federal spirit.
- Unlike sparsely populated areas in Gujarat and Rajasthan, many cities and towns in Punjab fall within the 50-kilometer jurisdiction.
- Punjab Government has challenged the notification under Article 131 (original jurisdiction of the Supreme Court) of the Constitution. However, the Supreme Court will decide whether such notifications can be challenged under Article 131, along with other related issues.

About BSF

- The Border Security Force (BSF) is one of the seven Central Armed Police Forces (CAPF) and is known as the 1st line of defence.
- Mandated to guard the Indo-Pakistan and Indo-Bangladesh borders, BSF has distinct roles during war-time and peace-time.
- Under Section 139 (1) of the BSF Act 1968, the Centre has the authority to publish orders regarding BSF's jurisdiction in areas adjacent to India's borders.

2. Exercise Desert Knight

Why is it in the news?

- **Exercise Desert Knight,** was conducted recently by the Indian Air Force (IAF) in collabora-tion with the French Air and Space Force (FASF) and the United Arab Emirates (UAE) Air Force.

More about the news

- The trilateral exercise took place within the Indian Flight Information Region (FIR) over the Arabian Sea.
- The French contingent included Rafale fighter aircraft, which are among the most advanced and capable fighter jets in the world. Additionally, a Multi-Role Tanker Transport was part of the French contingent, enhancing the air-to-air refuelling capabilities during the exercise.
- The UAE Air Force fielded the F-16, a versatile and widely used multirole fighter aircraft known for its agility and performance.
- The IAF contingent comprised a diverse array of aircraft, showcasing India's air power capabilities. It included the Su-30 MKI, MiG-29, Jaguar, AWACS (Airborne Warning and Control System), C-130-J (a tactical airlift aircraft), and Air to Air Refueler aircraft.

3. Vijay Raghavan Committee

Why is it in the news?

- An expert committee spearheaded by the former principal scientific advisor, Prof K Vijay Raghavan, has recently recommended a defence upgrade roadmap.
- It is established in 2023 by the government to review the functioning of the Defence Research and Development Organisation (DRDO).

Reasons for Setting up the Committee

- Multiple DRDO projects has faced significant delays.
- Many concerns raised by the Parliamentary Standing Committee on Defence and the Comptroller and Auditor General (CAG) regarding project delays.
- 67% of projects scrutinized by CAG failed to adhere to initially proposed timelines.

Major Suggestions Made by the Committee

- DRDO should focus on R&D for defence and avoid involvement in productization and produc-tion cycles.
- DRDO should concentrate on selected sectors and avoid unnecessary involvement in areas like drone development.
- There is a necessity to identify expertise within India and internationally for various technologies.
- Proposal to establish the Department of Defence Science, Technology, and Innovation under the Defence Ministry, headed by a technocrat.

Defence Technology Council

- Chaired by the Prime Minister of India, with the Defence Minister and National Security Advisor as Vice Presidents.
- Mandate to determine the country's defence technology roadmap and decide on major projects and their execution.
- Executive committee chaired by the Chief of Defence Staff, with representation from academia and industry.

4. Indo - Myanmar Border Management

Why is it in the news?

- The government's decision to construct a fence along the entire 1643 kilometer long Indo-Myanmar border aims to enhance surveillance and security measures.
- Further, it aims to curb illegal activities such as smuggling, human trafficking, and infiltration of armed groups.
- It utilizes a Hybrid Surveillance System (HSS) reflecting the adoption of modern technology to bolster traditional border management methods, facilitating more effective monitoring of border movements.
- The timeline for completing the fencing project within the next four and ahalf years highlights the government's prioritization of border security measures.

About Free Movement Regime (FMR)

- FMR serves as a mechanism to foster goodwill and facilitate the movement of border communities for cultural, social, and economic purposes.
- Allowing tribes residing along the border to travel up to 16 kilometres into each other's territory without the need for visas promotes people to people interactions and strengthens cultural ties.
- The issuance of border passes with a one-year validity further streamlines the process, enabling eligible individuals to cross the border for shortterm visits.

India-Myanmar Relations

- **Geographical Significance:** The long land border and maritime boundary shared between India and Myanmar provide the foundation for multifaceted bilateral cooperation.
- **Diplomatic Relations:** High-level visits and engagements between the two countries demonstrate a commitment to maintaining strong diplomatic ties and addressing mutual concerns.
- **Historical and Cultural Ties:** Deep-rooted historical and cultural connections, influenced by shared traditions, religions, and historical interactions, form the bedrock of the relationship.
- **Geopolitical Importance:** Myanmar's strategic location as a gateway between South Asia and Southeast Asia aligns with India's broader geopolitical interests, contributing to regional stability and connectivity.
- **Economic Cooperation:** Bilateral trade continues to grow, supported by trade agreements and initiatives, bolstering economic ties and mutual prosperity.
- **Security Cooperation:** Collaboration on security issues, including intelligence sharing and joint border patrolling, underscores the commitment to addressing common security challenges.
- **Connectivity Projects:** Infrastructure projects such as the Kaladan Multi-Modal Transit Transport Project and the India-Myanmar-Thailand Trilateral Highway aim to enhance connectivity and facilitate trade and investment flows.
- **Development Assistance:** India's developmental assistance to Myanmar spans various sectors, reflecting a commitment to supporting Myanmar's socio-economic development and capacity building.

Borders in India :

- India has over 15,000 kilometres of land borders and more than 7,500 kilometres of maritime borders, making effective border management crucial for national security.
- The country shares borders with seven neighbouring countries, including Afghanistan, Pakistan, China, Nepal, Bhutan, Bangladesh, and Myanmar.
- Initially, post-independence, border guarding responsibility rested with state forces, but it was found inadequate to address emerging challenges and threats.
- Later, Central Armed Police Forces (CAPFs) were subsequently raised under the Ministry of Home Affairs (MHA) to guard India's borders, operating under the ministry's control.
- In times of active hostilities or heightened security concerns, the Indian Army assumes responsibility for border defence, working in coordination with CAPFs to ensure border security and integrity.

Need for border management in India

India-Pakistan Border:

- Marked by historical conflicts and ongoing tensions, with Pakistan engaging in conventional wars and proxy warfare, notably in Jammu and Kashmir (J&K) and Punjab.
- Active Line of Control (LoC) deployment by the Indian Army alongside the Border Security Force (BSF) to manage security challenges.

India-China Border:

- Disputed territories in Ladakh, Middle Sector, and Arunachal Pradesh, with minimal progress in resolution despite multiple diplomatic talks.
- Tensions persist, necessitating continuous vigilance and defence measures, particularly following the Doklam standoff in 2017.

India-Bangladesh Border:

- Relations fluctuate based on political leadership, with current ties relatively stable but susceptible to disruption due to external influences like Pakistan's attempts to exploit religious divides and Chinese involvement.
- Border security remains a priority due to historical issues and the potential for external interference.

India-Bhutan Border:

- India's defence responsibility includes safeguarding Bhutan against external threats, such as Chinese aggression as seen in the Doklam standoff.
- Ongoing Chinese threats underscore the importance of securing this border to preserve Bhutan's sovereignty and security.

India-Nepal Border:

- Close ties with Nepal present unique challenges, including porous borders facilitating the movement of people and illicit activities.
- Increasing Chinese influence and infrastructure developments near the border, coupled with Pakistan's ISI exploiting vulnerabilities, pose security concerns.

India-Myanmar Border:

- A large land boundary with porous sections, enabling insurgent activities and refugee influxes into northeastern states like Manipur.
- Local communities divided across borders and insurgent camps in Myanmar's jungles highlight the need for enhanced border security measures and cooperation with Myanmar.

Challenges in Border Management

Porosity of Borders:

- Many parts of India's borders are porous, allowing for illegal crossings of people, goods, and contraband. Factors such as difficult terrains, dense forests, and riverine areas make it challenging for border security forces to monitor and prevent such activities.
- Porous borders facilitate activities like smuggling, human trafficking, and infiltration by militants, necessitating constant vigilance and investment in surveillance technology and manpower.

Cross-Border Terrorism:

- India faces threats of cross-border terrorism, particularly from Pakistan based militant groups operating in Jammu and Kashmir. These groups exploit porous borders to infiltrate Indian ter-ritory and carry out attacks, leading to security concerns and tensions between the two countries.
- Effectively combating crossborder terrorism requires not only robust border security measures but also intelligence cooperation and diplomatic efforts to address the root causes of terrorism.

Transnational Crime:

- Transnational criminal activities, including smuggling of narcotics, arms, and counterfeit currency, thrive along India's borders due to porous stretches and inadequate surveillance.
- Such criminal activities pose serious security and socio-economic challenges, undermining national security and fuelling organized crime networks. Combating transnational crime requires enhanced cooperation with neighbouring countries and improved law enforcement mechanisms.

Ethnic and Tribal Dynamics:

- Border regions in India are often inhabited by diverse ethnic and tribal communities with historical ties across borders. Managing the aspirations and grievances of these communities, while preventing their exploitation by external forces, requires a nuanced approach to border management.
- Engaging with local communities through development programs, cultural exchanges, and dialogue can foster trust and cooperation, strengthening border security efforts.

Dispute over Borders:

- India has unresolved border disputes with neighbouring countries, notably China and Pakistan, leading to occasional tensions and confrontations. These disputes pose challenges to border management and require constant vigilance and diplomatic efforts to maintain peace and stability.
- Resolving border disputes through dialogue and confidence building measures is essential for fostering trust and cooperation among neighbouring countries.

Infrastructure Development:

- Many border areas in India lack basic infrastructure such as roads, communication networks, and border outposts, hampering the effectiveness of border management efforts.
- Developing infrastructure in remote and inhospitable border regions is crucial for enhancing surveillance capabilities, facilitating rapid response to security threats, and improving the quality of life for border communities.

Humanitarian Concerns:

- India shares borders with countries experiencing political instability, humanitarian crises, and refugee influxes, posing humanitarian challenges.
- Managing refugee influxes while upholding humanitarian principles and international obligations requires coordination with humanitarian organizations, neighbouring countries, and in-ternational partners.

Conclusion

- Addressing India's border challenges necessitates a comprehensive strategy, incorporating robust surveillance, security measures, and diplomatic initiatives for conflict resolution, alongside the development of border infrastructure and community engagement to address local concerns and aspirations.
- A multi-pronged approach ensures a holistic and effective response to the diverse complexities of border management.

7 SOCIETY AND SOCIAL JUSTICE

1. AISHE Report (2021-22)

Why is it in the news?

- The **Ministry of Education** has released the All-India Survey of Higher Education (AISHE), 2021-22
- The **All-India Survey of Higher Education (AISHE)** is a comprehensive survey conducted by the Ministry of Education since 2011.
- It covers all **Higher Educational Institutions (HEIs) registered with AISHE,** collecting detailed data on various parameters to provide insights into the higher education landscape in India.

Key Findings of the Report

- **Total Enrolment:** The total enrolment in higher education has increased to nearly 4.33 crore in 2021-22, indicating growth in the accessibility and popularity of higher education institutions.
- **Demographics:** The report provides a breakdown of enrolment by demographic categories such as Scheduled Caste, Scheduled Tribe, Other Backward Class, and others, reflecting the diversity within the student population.
- **Female Enrolment:** The significant increase of 32% in female enrolment from 2014-15 to 2021-22 is a positive indicator of progress towards gender parity in higher education.
- **Minority Enrolment:** The 38% increase in minority enrolment underscores the importance of inclusive policies and initiatives to cater to the educational needs of minority communities.
- **Gross Enrolment Ratio (GER):** The increase in GER to 28.4 in 2021-22 for the age group 18-23 years indicates an improvement in the proportion of eligible students accessing higher education.
- **Top States in Enrolment:** The enrolment data for top states such as Uttar Pradesh, Maharashtra, Tamil Nadu, Madhya Pradesh, West Bengal, and Rajasthan provides insights into regional disparities and educational priorities.
- **Foreign Students:** The data on foreign students' enrolment reflects India's attractiveness as an education destination for students from neighbouring countries as well as globally.
- **Top five engineering sub-streams by enrolment:** Computer Engineering (CE), Electronics Engineering, Mechanical Engineering (ME), Civil Engineering, and Electrical Engineering. However, only Computer Engineering (CE) and Electrical Engineering (EE) witnessed an in-crease in enrollments, while Mechanical Engineering (ME), Electronics Engineering, and Civil Engineering experienced a decrease.
- **Total number of Universities/University level institutions: 1,168; Colleges:** 45,473; Standalone Institutions: 12,002. Since 2014-15, 341 Universities/ University level institutions have been established. Further, the 17 Universities (14 State Public Universities) and 4,470 Colleges are exclusively for women.
- **Total number of faculty/teachers in 2021-22:** 15.98 lakh, with 56.6% male and 43.4% female. Further, the female faculty / teachers increased from 5.69 lakh in 2014-15 to 6.94 lakh in 2021-22, marking a 22% increase since 2014-15.

2. PM Young Achievers Scholarship Award Scheme for Vibrant India (YASASVI)

Why is it in the news?

- The government has allocated Rs 32.44 Crore for Pre-matric Scholarship and Rs 387.27 Crore for Post-

Matric Scholarship to States/UTs under the PM Young Achievers Scholarship Award Scheme for Vibrant India (PM YASASVI).

PM YASASVI

About:

- It is a Scholarship scheme aimed at benefiting Other Backward Class (OBC), Econom-ically Backward Class (EBC), and De-notified Nomadic Tribes (DNT) Students.
- The scheme falls under the purview of the Ministry of Social Justice and Empowerment, Government of India.
- Its primary objective is to provide financial assistance to OBC, EBC, and DNT students studying at post-matriculation or post-secondary stages to help them complete their education.

Eligibility Criteria:

- Applicants must be permanent residents of India.
- They should belong to any one of the specified categories: OBC, EBC, Denotified Tribes (DNT), Notified Tribe (NT), or SNT community.
- Only students studying in class 9 or class 11 are considered eligible for this scholarship.
- The family annual income of the applicant students should not exceed Rs. 2.5 lakh.
- Students of all genders are eligible for the benefits under the PM YASASVI Scheme 2023.

Benefits:

- Eligible class 9 students receive financial assistance of Rs. 75,000 per year in the form of a scholarship.
- Class 11 students receive an amount of Rs. 125,000 per year as financial assistance.

Selection Process:

- Students need to pass a computer based entrance test to qualify for the scheme's benefits.
- The National Testing Agency is responsible for conducting the YASASVI ENTRANCE TEST.

Sub-schemes under PM YASASVI:

1) Pre-Matric Scholarship for OBC, EBC, and DNT Students:

- For students studying in class IX and X in Government Schools on a full-time basis.
- Students receive a consolidated academic allowance of Rs. 4,000 per annum.

2) Post-Matric Scholarship for OBC, EBC, and DNT Students:

- For students studying at post-matriculation or post-secondary stages.
- Allowance ranging from Rs. 5,000 to Rs. 20,000 is awarded to students as per the category of the course.

3) Top Class School Education for OBC, EBC, and DNT Students:

- Meritorious students belonging to the specified categories from Class 9 onwards till they complete Class 12.
- Scholarship is awarded for tuition fee, hostel fee, and other charges subject to a maximum amount per annum per student.

4) Top Class College Education for OBC, EBC, and DNT Students:

- For students belonging to the specified categories.
- Full financial support, including tuition fee, living expenses, books, and stationeries, etc., is provided.

5) Construction of Hostel for OBC Boys and Girls:

- To provide hostel facilities to students belonging to socially and educationally backward classes, particularly from rural areas.
- To enable them to pursue secondary and higher education in Government schools, universities, institutions, and institutes located at a reasonable distance.

3. NHRC on Idate Commission Report

Why is it in the news?

- The National Human Rights Commission emphasizes the necessity of implementing the Idate Commission report.

About Idate Commission (National Commission for Denotified Nomadic and Semi-Nomadic Tribes)

- Constituted in 2014 under Bhiku Ramji Idate.
- Mandated to address the issues of Denotified Nomadic and Semi-Nomadic Tribes (DNTs).

Major Recommendations of Idate Commission

- Advocate for establishing a permanent commission for DNTs, SNTs, and NTs with statutory status.
- Recommend the creation of a separate department for their welfare in states with significant populations.
- Suggest conducting a detailed survey of DNT families to estimate population and concentra-tion.

- Emphasize the need for legal and Constitutional protection, including a third schedule in the Prevention of Atrocities Act, 1989.
- Propose that DNTs not included in SCs/STs/OBCs lists should be listed as OBCs.

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4. New Treatment Regimen for Leprosy

Why is it in the news?

- Ministry of Health and Family Welfare announced a shift to a three drug regimen for Pauci Bacillary (PB) cases of leprosy, replacing the previous two-drug regimen for six months.
- The three drugs are dapsone, rifampicin, and clofazimine.

About Leprosy

- Caused by Mycobacterium leprae, affecting skin, peripheral nerves, mucosa of upper respir-atory tract, and eyes.
- Transmitted via droplets from the nose and mouth through close contact with untreated cases.
- It is curable with multidrug therapy (MDT) consisting of dapsone, rifampicin, and clofazimine.
- Classified into Pauci-Bacillary (PB) and Multibacillary (MB) for treatment purposes.

Recent Steps Taken

- Implementation of the **National Strategic Plan (NSP) & Roadmap for Leprosy (2023-27)** aimed at achieving zero transmission of leprosy by 2027.
- Operation of the **National Leprosy Eradication Programme,** a centrally sponsored scheme under the National Health Mission.
- Introduction of the **Nikusth 2.0 Portal,** an integrated portal for leprosy case management.

Status of Leprosy in India :

- India achieved elimination of leprosy as a public health problem according to WHO criteria in 2005 (less than 1 case per 10,000 population).
- Prevalence rate at the national level decreased to 0.45 per 10,000 population in 2021-22 from 0.69 per 10,000 population in 2014-15.

5. ASHA and Anganwadi Staff to Receive Health Cover

Why is it in the news?

- The Central government has expanded the coverage of the Ayushman Bharat health in-surance scheme to include Accredited Social Health Activist (ASHA) workers and An-ganwadi workers.

About ASHA

- ASHA workers play a crucial role in community health education and promotion. They provide information on various aspects of health and hygiene, including nutrition, sanitation, and hygienic practices.
- They offer counselling to women on birth preparedness, safe delivery practices, breastfeeding, complementary feeding, and immunization.
- ASHA workers mobilize communities and facilitate access to health services available at Anganwadi centres, subcentres, and primary health centres, thereby bridging the gap between the community and healthcare facilities.
- ASHA workers are selected through a systematic process involving various stakeholders such as community groups, selfhelp groups, block and district nodal officers, village health committees, and Gram Sabhas.

- The selection criteria prioritize women residents of villages who are married, widowed, or divorced, preferably in the age group of 25 to 45 years.
- The ASHA program was launched in 2005-06 as part of the National Rural Health Mission (NRHM) with a focus on rural areas. It was later extended to urban areas with the in-troduction of the National Urban Health Mission in 2013, thereby expanding its reach and impact.

Mission Indradhanush

- Mission Indradhanush is a flagship initiative aimed at immunizing all children against vaccine preventable diseases under India's Universal Immunization Programme (UIP).
- The program provides free vaccines against 12 life-threatening diseases, including Tuberculosis, Diphtheria, Pertussis, Tetanus, Polio, Hepatitis B, Pneumonia, Meningitis, Measles, Rubella, Japanese Encephalitis, and Rotavirus diarrhoea.
- Mission Indradhanush targets children who are either unvaccinated or partially vaccinated, with the goal of achieving full immunization coverage and reducing the burden of vaccine-preventable illnesses.

6. Kilkari Program

Why is it in the news?

- The Health Ministry has launched the Mobile Health Service 'Kilkari' and Mobile Academy in Maharashtra and Gujarat to enhance healthcare services and empower frontline health workers.

About Kilkari Program

- The term "Kilkari" translates to "a baby's gurgle," signifying the innocence and vitality of infants.
- Its primary aim is to enhance families' understanding and adoption of essential preventive health practices, particularly concerning pregnancy, childbirth, and childcare.
- The Kilkari program operates under the auspices of the Ministry of Health and Family Welfare (MoHFW) and is entirely financed by the central government.
- It is seamlessly integrated into the Reproductive Child Health (RCH) portal, ensuring efficient delivery and monitoring of services.

Key Features:

- Kilkari delivers 72 free, weekly, and time-relevant audio messages directly to the mobile phones of enrolled families.

- The program initiates message dissemination from the second trimester of pregnancy, extending until the child reaches one year of age.
- Women registered in the RCH portal receive additional weekly calls containing pre-recorded audio content tailored to their stage of pregnancy or child's age.
- The messages are conveyed through the persona of Dr. Anita, a fictional doctor character, lending credibility and authority to the information disseminated.
- The program is operational in 18 States/Union Territories across India, reflecting its wide-spread reach and impact on maternal and child health.

About Mobile Academy

- The Mobile Academy serves as a platform for delivering audio training courses designed to enhance the knowledge and communication skills of Accredited Social Health Activists (ASHAs).
- It facilitates anytime, anywhere learning, allowing thousands of ASHAs to undergo training simultaneously via their mobile phones.
- ASHAs can access the training content conveniently, irrespective of their location or working hours.
- The course materials are available in six languages, namely Hindi, Bhojpuri, Oriya, Assamese, Bengali, and Telugu, catering to the linguistic diversity of the ASHA workforce.
- The Mobile Academy is currently operational in 17 States/Union Territories, excluding Chandigarh, demonstrating its extensive coverage and effectiveness in capacity building among ASHAs.

7. Law Commission Report on Epidemic Diseases Act, 1897

Why is it in the news?

- The 22nd Law Commission of India presented Report No. 286 titled "A Comprehensive Review of the Epidemic Diseases Act, 1897" to the Government of India.
- This report addresses concerns regarding the effectiveness and adequacy of the Epidemic Diseases Act (EDA) of 1897, particularly in light of modern challenges and emerging infectious diseases.

About Epidemic Diseases Act, 1897 (EDA)

- The EDA was enacted during the preindependence era primarily to tackle the outbreak of plague.
- It empowers the central government to prescribe regulations for the prevention and control of the spread of dangerous epidemic diseases.
- The Act includes provisions for detaining individuals or vessels from international shores if they are suspected of carrying contagious diseases.
- Disobedience of regulations under the Act is considered an offence punishable under Section 188 of the Indian Penal Code.
- Section 4 of the Act provides immunity from legal proceedings for actions taken in good faith under the Act.

Highlights of the Law Commission Report :

- The report identifies shortcomings in the existing legislation concerning the management and containment of future epidemics, considering the emergence of new infectious diseases and novel strains of pathogens.
- Recommendations from the report include the creation of an Epidemic Plan and Standard Operating Procedure (SOP) to address future epidemic outbreaks effectively.
- The Epidemic Plan is envisioned to encompass strategies and protocols for quarantine, isolation, and lockdown measures, ensuring fair implementation while safeguarding citizens' fundamental rights.
- The SOP is proposed to ensure a coordinated response to epidemics, defining roles and powers during public health emergencies. The SOP outlines three stages of infectious disease spread:
  1) In the first stage, states are empowered to take necessary measures aligned with the Epidemic Plan.
  2) During the second stage of inter-state spread, the Central government should frame regula-tions, and states must comply with these regulations.
  3) In situations of extreme threat from infectious diseases (third stage), similar recommenda-tions as the second stage apply, with the Central government taking the lead in regulatory actions.

8. SWATI Portal

Why is it in the news?

- The SWATI portal, launched by a panel representing India's science academies, aims to comprehensively include every woman in science across the country.

SWATI Portal

About:

- **The SWATI portal, short for "Science for Women:** A Technology & Innovation" portal, is a digital platform designed with the aim of advancing the representation and recognition of Indian women and girls in the fields of Science, Technology, Engineering, Mathematics, and Medicine (STEMM).
- The SWATI portal is developed, hosted, and maintained by the National Institute of Plant Genome Research (NIPGR) located in New Delhi, India.
- The initiative to create the SWATI portal is led by the Inter Academy Panel (IAP) on Women in Science, Technology, Engineering, Mathematics & Medicine (STEMM).

Features:

- The portal contains a comprehensive database profiling Indian women across various STEMM disciplines, providing information about their backgrounds, areas of expertise, achievements, and contributions.
- It includes a separate section that highlights women scientists working in different sectors such as academia (universities, research institutes), industry, entrepreneurship, and other career paths within the STEMM fields.
- The SWATI portal also showcases profiles of iconic women scientists from India who have received prestigious honours and awards such as the Padma awards, Shanti Swarup Bhatnagar awards, or Stree Shakti Science Samman, recognizing their significant contributions to science and society.

8 GEOGRAPHY AND DISASTER MANAGEMENT

1. Hindu Kush Himalaya (HKH) Region

Why is it in the news?

- The International Centre for Integrated Mountain Development (ICIMOD) has urged for 'bold action' and 'urgent finance' to avert the collapse of nature in the Hindu Kush Himalaya (HKH) region.

About Hindu Kush Himalaya (HKH) :

- The HKH region spans across eight countries - Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal, and Pakistan. Stretching over 3,500 kilometres, it is renowned for its ecological, geographical, and socio-economic significance.
- The HKH region harbours the largest volume of ice outside the polar regions, earning it the moniker "Third Pole." Its glaciers, snowfields, and permafrost are crucial sources of fresh-water for downstream regions.
- The region's complex topography influences weather patterns, climate systems, and water cycles across South Asia and beyond.
- It is home to a remarkable array of ecosystems, ranging from lush forests to alpine meadows and barren highlands. These diverse habitats support rich biodiversity, including numerous endemic and endangered species.
- The HKH region hosts four of the world's 36 global biodiversity hotspots and encompasses several globally significant ecoregions and protected areas.
- Approximately 241 million people reside in the HKH region, many of whom rely directly on its natural resources for their livelihoods. These communities depend on the region's forests, rivers, and pastures for food, water, fuel, and fodder.
- The rivers originating from the HKH, such as the Indus, Ganges, Brahmaputra, and Yangtze, are lifelines for millions of people downstream, supporting agriculture, hydropower generation, and urban water supply.

Despite its ecological and socio-economic importance, the HKH region is confronted with numerous challenges that threaten its sustainability

1) Climate Change:

- The HKH region is highly vulnerable to climate change, experiencing rapid warming, glacial retreat, altered precipitation patterns, and increased frequency of extreme weather events.
- These changes have profound implications for water availability, food security, biodiversity, and the livelihoods of mountain communities.

2) Biodiversity Loss:

- Anthropogenic activities such as deforestation, habitat fragmentation, overgrazing, and poaching have led to the loss of biodiversity in the HKH region.
- Many species, including iconic wildlife such as snow leopards, Himalayan tahr, and red pandas, are at risk of extinction due to habitat degradation and climate change.

3) Water Scarcity:

- Changes in precipitation patterns and glacial melt pose challenges to water availability in the HKH region, affecting both upstream and downstream communities.
- Increasing water demand for agriculture, industry, and domestic use exacerbates water stress in many areas, leading to conflicts over water resources.

Despite these challenges, efforts are underway to promote sustainable development and resilience in the HKH region:

1) International Collaboration:

- Organizations like the International Centre for Integrated Mountain Development (ICIMOD) facilitate regional cooperation and knowledge sharing among HKH countries.
- Collaborative initiatives focus on climate change adaptation, biodiversity conservation, disaster risk reduction, and sustainable livelihoods.

2) Policy Interventions:

- National governments have formulated policies and strategies to address the unique challenges faced by mountain communities and ecosystems.
- These policies often emphasize ecosystem conservation, sustainable resource management, disaster preparedness, and climate resilience.

3) Community Engagement:

- Local communities play a crucial role in conservation efforts, often serving as stewards of natural resources and traditional knowledge holders.
- Community-based conservation initiatives empower local people to participate in decision making processes and implement sustainable practices.

2. Mekong River

Why is it in the news?

- The proposed multibillion dollar dam project on the Mekong River in Laos's Luang Prabang city raises concerns of potential environmental impact, risking the city's UNESCO World Heritage status.

About Mekong River

- The Mekong River is a significant transboundary river in East Asia and Southeast Asia, playing a crucial role in the region's geography, ecology, and socio-economic dynamics.
- It ranks as the world's twelfth-longest river and the third-longest in Asia, spanning approximately 4,350 kilometres in length.
- Originating from the Sanjianyuang in the Tibetan Plateau in China, it flows through six Asian countries: China, Myanmar, Laos, Thailand, Cambodia, and Vietnam.
- The river eventually drains into the South China Sea, making it a vital waterway for trade and transportation in the region.
- The Mekong River basin is renowned for its exceptional biodiversity, making it the second most biodiverse river basin in the world, following the Amazon River Basin.
- It supports a staggering array of plant and animal species, including approximately 20,000 plant species, 1,200 bird species, 430 mammal species, 800 amphibian and reptile species, and 850 fish species.
- The river basin's rich biodiversity sustains diverse ecosystems and provides vital ecosystem services to millions of people living along its banks.
- Several major cities and capitals are situated along the Mekong River, including Vientiane, the capital of Laos, and Phnom Penh, the capital of Cambodia. These cities serve as important cultural, political, and economic hubs in their respective countries, with the Mekong River playing a central role in shaping their identities and livelihoods.

Significance for India :

- India's engagement with the Mekong River basin is facilitated through initiatives such as the Mekong Ganga Cooperation (MGC).
- The MGC is a cooperative framework involving India and five ASEAN countries (Cambodia, Laos, Myanmar, Thailand, and Vietnam), aimed at enhancing cultural, economic, and political ties between the regions.
- India's interest in the Mekong River basin stems from its strategic location and economic potential, as well as shared concerns about environmental conservation and sustainable de-velopment in the region.

Concerns Regarding Dam Projects

- The proliferation of dam projects along the Mekong River, particularly in Laos, has raised significant environmental and socio-economic concerns.
- These dam projects have the potential to alter the river's flow, disrupt ecosystems, and impact the livelihoods of communities dependent on the river for fishing, agriculture, and transportation.

Luang Prabang :

- Luang Prabang holds immense cultural and historical significance as a UNESCO World Heritage Site, renowned for its well-preserved architectural and cultural heritage.
- According to legend, Luang Prabang is believed to be a location where Buddha once rested during his travels, adding to its spiritual and cultural importance.

9 CULTURE AND HISTORY

1. Madhika Language and Chakaliya Community

Why is it in the news?

- The Madhika language, spoken by the Chakaliya community, is rapidly declining towards extinction, as the younger generation increasingly adopts Malayalam as their preferred language.

More about the news

- Madhika is a language spoken by the Chakaliya community in Kookanam, Kerala. It shares similarities with Kannada and encompasses elements of Telugu, Tulu, Kannada, and Malayalam.
- The Chakaliya community, once nomadic, were devoted worshipers of Thiruvenkatramana and Mariamma. Originating from the hilly regions of Karnataka, they migrated to northern Malabar in Kerala.
- Initially recognized as a Scheduled Tribe, the Chakaliya community was later included in the Scheduled Caste category in Kerala.
- However, Madhika is struggling for survival, with only two speakers expressing fear that the language may be lost to the world.
- The younger generation within the Chakaliya community exhibits little interest in preserving Madhika, and opting for Malayalam instead. Further, lack of a script further compounds the challenges in preserving the Madhika language.
- Moreover, the Government of India has initiated the 'Scheme for Protection and Preservation of Endangered Languages of India' which aims to safeguard languages like Madhika, prevent-ing them from fading into oblivion.
- Endangered Language- As per UNESCO, any language spoken by less than 10,000 persons is considered "potentially endangered".

Important constitutional provisions for protection of language

- Article 29- Any section of the citizens residing in the territory of India or any part thereof having a distinct language, script or culture of its own shall have the right to conserve the same.
- Article 350B-It provides for a **Special Officer for Linguistic Minorities** to investigate all the matters relating to the Safeguards provided for the linguistic minorities.
- **International Initiatives:** UNESCO's flagship activity in safeguarding endangered languages is the Atlas of the World's Languages in danger.

2. Medaram Jatara: Asia's Largest Tribal Festival

Why is it in the news?

- Prime Minister Narendra Modi extended greetings on the commencement of the Sammak-ka-Sarakka Medaram Jathara, and paid tribute to Sammakka-Sarakka, recognizing their embodiment of unity and valor in tribal folklore.

More about the news

- The festival's roots lie in the legend of Sammakka and Sarakka, who are revered as goddesses among the local tribal community in Telangana.
- Sammakka and Sarakka are believed to be a mother-daughter duo who fought against the un-just taxation imposed by the Kakatiya rulers in the 13th century.
- Their bravery and sacrifice in standing up against oppression are commemorated through this festival, which has become a significant cultural event for the tribal communities in the region.

About the Festival :

- Medaram Jatara takes place in Mulugu, a district in the state of Telangana, India.
- It is a biennial festival, occurring once every two years, and draws devotees from far and wide to participate in the celebrations.
- The festival attracts an astounding number of devotees, estimated to be around 1.5 crore, from various tribal and non-tribal communities.
- People from states like Telangana, Andhra Pradesh, Madhya Pradesh, Jharkhand, Chhattisgarh, and Maharashtra participate in the event.
- The gathering showcases the cultural diversity of the region and fosters a sense of unity among different communities.
- Recognizing its cultural and historical significance, Medaram Jatara was declared a State Festival in 1996.
- The festival receives active support from both the Ministry of Tribal Affairs and the Telangana state government, signifying its importance in the socio-political landscape of the region.
- Medaram Jatara is part of the larger tribal circuit development initiative undertaken by the Ministry of Tourism.

About Koya tribe

- The Koya tribe is the largest Adivasi tribe in Telangana and is listed as a Scheduled Tribe in the state.
- They are also found in the Telugu-speaking states of Telangana and Andhra Pradesh.
- The Koyas refer to themselves as Dorala Sattam (Lords group) and Putta Dora (original lords). In their dialect, they are known as "Koitur," similar to the Gonds.
- The Godavari and Sabari rivers, which flow through their area of habitation, greatly influ-ence the economic, social, and cultural life of the Koya tribe.
- Primarily settled cultivators, they grow crops such as Jowar, Ragi, Bajra, and other millets.
- While many Koya people have adopted Telugu as their mother tongue, some still speak the Koya dialect, albeit in smaller numbers.
- Important deities for the Koyas include Lord Bhima, Korra Rajulu, Mamili, and Potaraju.
- Their main festivals are Vijji Pandum (seeds charming festival) and Kondala Kolupu (festival to appease hill deities).
- During festivals and marriage ceremonies, the Koyas perform a robust and colourful dance known as Permakok ata or Bison horn dance.

10 MISCELLANEOUS

Defence

1. P-75I Procurement Program

Why is it in the news?

- Germany has proposed a government-to-government deal to sell six advanced conventional submarines to India under the P-75I procurement program.

More about the news

- The deal was discussed at the highest level during the visit of the German Defence Minister in 2023.
- Only Germany and Spain meet the technical criteria to submit bids for the P-75I deadline.

- The deal is being pursued under the strategic partnership of the defence procurement proce-dure.
- Mazagon Dock Shipbuilders Limited (MDL) and Larsen & Toubro (L&T) Limited have been shortlisted to partner with foreign submarine manufacturers for indigenous production in India.

What is Project-75I ?

- **Project-75 (India), or P-75(I),** is a military acquisition initiative by the Ministry of Defence (MoD).
- It aims to procure dieselelectric attack submarines with fuel cells and Air Independent Propulsion System (AIP) to bolster India's naval strength and develop in-digenous submarine building capabilities.
- P-75I improves upon the design and technology of its predecessor, Project 75.
- Project 75 submarines, like the Scorpene, possess enhanced stealth features but require re-charging every 48 hours due to battery powered operation.
- P-75I submarines will incorporate AIP technology, allowing for extended submerged durations of up to two weeks and potentially larger sizes.
- The budget for P-75I is nearly double that of Project 75, starting at Rs 43,000 crore compared to Rs 23,000 crore.

India's Need for Increased Submarine Fleet

- **National Security and Maritime Dominance:** India aims to enhance maritime domi-nance in the Indian Ocean region.
- **Aging Fleet:** With most submarines over 30 years old, there's a need for modernization and replenishment.
- **Patrolling IOR:** India currently falls short of the desired minimum of 24 conventional submarines for effective **Indian Ocean Region (IOR)** patrolling, possessing only 16.
- **Modernization and Technological Advancements:** To maintain naval superiority, India requires modern and technologically advanced submarines amid rapid global advancements.

Conclusion

- India, part of the Quad grouping with Japan, the US, and Australia, advocates for technology sharing to build submarines.
- However, reluctance persists among potential partners due to India's proximity to Russia and its "Make in India" policy, prioritizing local manufacturing and job creation.

2. Exercise 'SADA TANSEEQ'

Why is it in the news?

- The exercise 'SADA TANSEEQ' marks the inaugural edition of a joint military exercise between India and Saudi Arabia.

More about the news :

- It is specifically designed to enhance the capabilities and preparedness of troops from both nations for joint operations in semi-desert terrain, as outlined under Chapter VII of the United Nations Charter.

Troops from both nations will participate in a series of training activities, including:

- Setting up Mobile Vehicle Check Posts: This involves establishing checkpoints to monitor and control the movement of vehicles in the designated area.
- Conducting Cordon & Search Operations: Teams will practice surrounding and searching designated areas to locate and neutralize potential threats.
- House Intervention Drills: Training in entering and clearing buildings or structures occupied by hostile forces.
- Reflex Shooting: Practice sessions focusing on quick and accurate shooting in response to sudden threats or targets.
- Sniper Firing: Sharpshooting training to engage targets accurately over long distances.

Awards

3. Latest Awardees of Bharat Ratna

Why is it in the news?

- M.S. Swaminathan, P.V. Narasimha Rao, and Choudhary Charan Singh were recently announced by the Prime Minister of India as recipients of the Bharat Ratna award.

- Karpoori Thakur and Lal Krishna Advani were conferred with the Bharat Ratna in early 2024.

M.S. Swaminathan :

- M.S. Swaminathan is a renowned agricultural scientist and a pivotal figure in India's agricultural revolution.
- He played a crucial role in spearheading the 'Green Revolution' in India. His work focused on developing and introducing highyielding varieties of wheat and rice, which significantly increased agricultural productivity in the country.
- Swaminathan collaborated with other eminent scientists, including Norman Borlaug, to implement agricultural innovations that helped India achieve self-sufficiency in food production.
- He served as the Director General of the Indian Council of Agricultural Research (ICAR) and also held leadership positions at the International Rice Research Institute (IRRI) in the Philippines.
- Swaminathan was the inaugural recipient of the World Food Prize in 1987 for his contributions to improving global food security.

P.V. Narasimha Rao :

- P.V. Narasimha Rao served as the 9th Prime Minister of India from 1991 to 1996.
- He is widely credited for introducing significant economic reforms, including liberalization and globalization policies, which transformed India's economy and accelerated its growth trajectory.
- Rao hailed from a non-Hindispeaking region (Telugu) and was the first Prime Minister from South India, specifically from United Andhra Pradesh.
- He earned the moniker of the 'Chanakya of Indian Politics' for his strategic acumen and adept handling of economic reforms during his tenure.
- Rao also contributed to India's foreign policy and enriched its cultural and intellectual heritage during his leadership.

Choudhary Charan Singh

- Choudhary Charan Singh was an Indian politician and a prominent figure in the Indian Independence Movement. He was inspired by Mahatma Gandhi's principles and actively participated in the freedom struggle.
- He entered politics and was elected to the United Provinces Assembly from Chhaprauli in 1937.

- Singh served as the 5th Chief Minister of Uttar Pradesh and later as the 5th Prime Minister of India.
- He was known for his unwavering dedication to championing the rights and welfare of farm-ers. Singh's policies aimed at addressing agrarian issues and improving the socio-economic conditions of farmers in India.

About Jan Nayak Karpoori Thakur :

Before Independence

- Thakur's ideological foundation was shaped by the principles of Mahatma Gandhi and the guidance of Satyanarayan Sinha.
- Inspired by the call for independence, Thakur actively participated in the Quit India Move-ment of 1942, demonstrating his commitment to the cause of freedom from colonial rule.
- After India gained independence, Thakur transitioned into active politics. His initial foray into the political arena began with his victory in the Bihar Legislative Assembly elections of 1952, representing the Tajpur constituency.

After Independence

Champion of Social Justice:

- Thakur's political philosophy was deeply rooted in the principles of social justice. Throughout his career, he tirelessly advocated for the equitable distribution of resources and opportunities, aiming to eradicate systemic inequalities entrenched in Indian society.
- Thakur emerged as a pioneering figure in OBC politics in Bihar. Recognizing the marginalized status of backward classes, he spearheaded efforts to implement quotas for their representation in various spheres of public life.
- Thakur's establishment of the Mungeri Lal Commission in 1970 was a watershed moment in the history of affirmative action in Bihar. The commission's findings and recommendations paved the way for significant reservations for backward and most backward communities, ensuring their socio-political empowerment.

Affirmative Action and Representation:

- Thakur recognized the importance of affirmative action in ensuring the representation and upliftment of marginalized communities. His advocacy for stronger affirmative action policies aimed to provide backward classes with the opportunities they rightfully deserved, thereby fostering inclusivity and social mobility.
- Thakur played a pivotal role in the implementation of the Mandal Commission recommendations, which aimed to provide reservations for OBCs in government jobs and educational institutions.

Selflessness and Integrity:

- Thakur's integrity and selflessness were exemplary. Despite holding positions of power and influence, he remained steadfast in his commitment to serving the public good. His refusal to benefit personally from schemes, such as the decision to forgo land or money from a political leaders' colony, underscored his unwavering principles and ethical conduct.
- Thakur's decision to implement a complete ban on alcohol in Bihar in 1970 exemplified his prioritization of public welfare over potential revenue.

Education and Development:

- His efforts in establishing numerous schools and colleges, particularly in underdeveloped regions of Bihar, underscored his commitment to expanding access to quality education for historically marginalized communities.

About Lal Krishna Advani

- Advani through the years has served as the 7th Deputy Prime Minister of India (1999-2004) and as the President of the Bharatiya Janata Party for the longest period since its inception in 1980.
- Advani is widely regarded as an individual of great intellectual ability, strong principles, and unwavering support for the idea of a strong and prosperous India.

4. Grammy Awards

Why is it in the news?

- The fusion band, Shakti, bagged the Global Music Album Winner at the Grammy Awards.

Grammy Awards

About:

- The Grammy Awards, also known simply as the Grammys, stand as one of the most es-teemed honours in the music industry.
- Established in 1959 by the Recording Academy, the awards aim to recognize and celebrate outstanding achievements in various facets of music production, including artistic and technical excellence across a diverse range of genres.

- The Grammy Awards were conceived to acknowledge excellence in music performance, recording, and production.
- The name "Grammy" is derived from "gramophone," reflecting the original trophy's design resembling a gramophone.
- Over the years, the Grammys have become a symbol of recognition and prestige within the music industry, influencing trends and shaping careers.
- The Grammy Awards encompass a wide array of categories covering virtually every music genre imaginable, including pop, rock, rap, country, classical, jazz, and more.
- There are four major categories known as the "General Field," which are not restricted by genre: Album of the Year; Record of the Year; Song of the Year; and Best New Artist. In addition to these, there are numerous genre-specific awards recognizing excellence with-in each musical genre.
- The Grammy Awards ceremony is held annually in Los Angeles, California, typically in January or February.
- In 2024, the Grammy Awards introduced three new categories to recognize African Music, pop dance, and alternative jazz, reflecting the evolving landscape of the music industry.
- The 2024 Grammy Awards saw notable winners such as the fusion band Shakti, Zakir Hussain, and Shankar Mahadevan, who received awards for their outstanding musical achievements.

Nomination and Selection Process:

- The nomination process begins with submissions by record companies, artists, and other industry professionals. A screening committee then reviews the submissions and determines the final list of nominees. The nominees are voted upon by members of the Recording Academy, which comprises music professionals from various fields, including artists, engineers, producers, and songwriters.
- Winners are selected through a voting process conducted by Recording Academy members.

Map pointing

5. Iceland

Why is it in the news?

- Recently, Iceland experienced a volcanic eruption.

About Iceland

- Capital: Reykjavik
- Iceland is an island country located in the North Atlantic Ocean. It is part of the Nordic Countries, along with Denmark, Finland, Norway, and Sweden.
- Bounded by Greenland Sea to the North, Norwegian Sea to the East, Atlantic Ocean to the South and West, and Denmark Strait to the Northwest.
- Underlain by basalt, a dark rock of igneous origin.
- Positioned on the Mid Atlantic Ridge, formed at a divergent plate boundary where the North American Plate and the Eurasian Plate are moving away from each other.
- Highest Peak : Hvannadals Peak
- Major River : Thjors River

Personalities

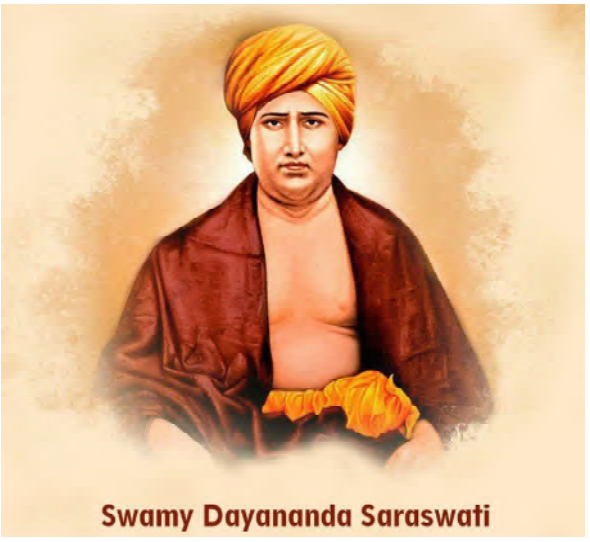
6. Swami Dayanand Saraswati

Why is it in the news?

- The Prime Minister delivered a virtual address commemorating the 200th birth anniver-sary celebrations of Swami Dayanand Saraswati.

About Dayanand Saraswati :

- Maharishi Dayanand Saraswati was born on February 12, 1824, in Tankara, Gujarat, India.
- Dayanand Saraswati founded Arya Samaj in 1875 as a response to the prevalent social and religious issues of his time.


Swamy Dayananda Saraswati

- Arya Samaj translates to "Society of Nobles" and was established with the aim of reforming Hindu society and revitalizing Vedic teachings.

Social Reforms :

- **Rejection of Idolatry and Ritualism:** Dayanand Saraswati vehemently opposed idol worship and ritualistic practices that he believed had crept into Hinduism over time. He emphasized returning to the pure teachings of the Vedas and advocated for the worship of a formless, attributeless God.
- **Shuddhi Movement:** Dayanand Saraswati initiated the Shuddhi Movement, which aimed to bring back individuals who had converted to other religions, whether voluntarily or involuntarily, back into the Hindu fold.
- **Back to Vedas:** He emphasized the importance of understanding and following the Vedas, considering them the ultimate source of knowledge and guidance. He believed that the revival of Vedic teachings was crucial for the social and spiritual upliftment of society.
- **Women's Rights**: Dayanand Saraswati was a staunch advocate for women's rights and empowerment. He encouraged women to receive education and participate in social and religious activities on an equal footing with men.
- **Opposition to Child Marriage and Sati:** He strongly opposed practices such as child marriage and sati (the practice of a widow immolating herself on her husband's funeral pyre), viewing them as harmful to society and against Vedic principles.

Educational Reforms :

- Dayanand Saraswati established Gurukuls (traditional schools) to impart Vedic education to his followers. These Gurukuls served as centres for learning and disseminating Vedic knowledge.
- His disciples established the Dayanand Anglo Vedic (DAV) College Trust and Management Society to further promote education based on his teachings. The first DAV High School was founded in Lahore on June 1, 1886, with Mahatma Hans Raj as its headmaster.

Arya Samaj :

- Arya Samaj was founded by Dayanand Saraswati in Bombay in 1875. It was established as a Hindu reform movement aimed at purifying Hinduism and promoting Vedic principles.
- The motto of Arya Samaj, "Krinvanto Vishwam Aryam," translates to "Make this world noble," reflecting its mission to create a just and virtuous society.
- Arya Samaj condemned ritualistic practices such as idol worship, pilgrimage, animal sacrifice, and offering in temples. It emphasized the importance of personal righteousness and moral conduct.
- The Samaj actively supported widow remarriage and campaigned against social evils preva-lent in society.

Literary Work :

- Dayanand Saraswati's philosophical ideas and teachings are reflected in his literary works. Three of his notable contributions are:
  1) "Satyartha Prakash" (The Light of Truth): A comprehensive exposition of his philoso-phy and beliefs.
  2) "Veda Bhashya Bhumika" and "Veda Bhashya": Commentaries on the Vedas elucidating their true meanings and significance.
  3) He also edited the journal "Arya Patrika," which served as a platform for disseminating his thoughts and ideas.

Legacy :

- Arya Samaj continues to be active not only in India but also in other parts of the world, promoting Vedic teachings and social reforms.
- The life and teachings of Dayanand Saraswati have had a significant impact on several prominent personalities, including freedom fighters, social reformers, and nationalist leaders. Some of these include Lala Lajpat Rai, Vinayak Damodar Savarkar, Madam Cama, Ram Prasad Bismil, Mahadev Govind Ranade, Madan Lal Dhingra, and Subhash Chandra Bose.

7. Satyendra Nath Bose (1894-1974)

Why is it in the news?

- Satyendra Nath Bose (1894-1974), an eminent physicist, was commemorated on his 50th death anniversary.

- Alongside Meghnad Saha, he established modern theoretical physics in India.
- Bose made significant contributions in statistical mechanics and Quantum statistics.

- He deduced Planck's Black body radiation law independently of classical electrodynamics.
- His work, titled "Planck's Law and Light Quantum Hypothesis," was translated into German by Einstein, leading to the emergence of Quantum statistics.
- Einstein applied Bose's method to develop the theory of an ideal quantum gas, predicting the phenomenon of Bose-Einstein Condensation (BEC). BEC is a state of matter where cooled atoms or particles coalesce into a single quantum entity described by a wave func-tion.
- Bose's contributions laid the groundwork for the contemporary understanding of the Stand-ard Model of Physics.
- He played a significant role in fostering scientific collaboration and exchange of ideas be-tween Indian and Western scientists.
- Satyendra Nath Bose was awarded the Padma Vibhushan in 1954 and fundamental particles with integer spin are named "Bosons" after him.
- Rabindranath Tagore dedicated his only book on science, "Vishwa Parichay," to SN Bose.
- During 1956-58, Bose served as the Vice-Chancellor of Visva-Bharati.

Others

8. Khelo India Youth Games (KIYG) 2023

Why is it in the news?

- In Chennai, Tamil Nadu, the Prime Minister inaugurated the opening ceremony of the Khelo India Youth Games 2023.
- The 2023 event is the 6th edition of Khelo India Youth Games, signifying its consistent growth and impact.

More about the news

- VeeraMangai Velu Nachiyar, the first Indian queen to wage war with the East India Company in India, is the mascot for KIYG 2023.
- The games logo integrates the image of the revered poet Thiruvalluvar, adding a cultural and literary dimension.
- KIYG 2023 will feature a diverse array of sports with 26 disciplines, offering a comprehensive platform for various talents.
- The event introduces archery, athletics, badminton, and squash for the first time, broadening the scope and participation.

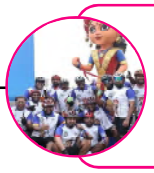
ABOUT KHELO INDIA YOUTH GAMES (KIYG)

Khelo India Youth Games (KIYG) are annual national-level sports events that bring together young athletes from various parts of India.

KIYG is an integral part of the **Khelo India Programme**, a nationwide initiative aimed at rejuvenating India's grassroots sports culture.

By providing a platform for young talents, KIYG aims to build a robust framework for all sports in the country and establish India as a great sporting nation.

The first edition of KIYG took place in 2018 in Delhi, marking the beginning of an annual tradition.



KIYG is inclusive, featuring two age categories: under-17 for school students and under-21 for college students.

Talented players identified by the High-Powered Committee receive financial support of INR 5 lakh annually for a duration of 8 years.

- Silambam, a traditional martial art sport of Tamil Nadu, is introduced as a demo sport for the first time in the history of KIYG.

9. Parakram Diwas 2024 at Red Fort

Why is it in the news?

- Prime Minister Narendra Modi to inaugurate Parakram Diwas 2024 at Red Fort on the evening of January 23 and the celebration to be continued till January 31.

More about the news

- It's a national event commemorating Netaji Subhash Chandra Bose's birth anniversary on January 23.
- It's being celebrated annually since 2021, with the inaugural event at Victoria Memorial Hall, Kolkata.

More about Parakram Diwas

Government Initiatives to Commemorate Parakram Diwas:

- Unveiling of a hologram statue of Netaji at India Gate.
- Renaming of the 21 largest unnamed islands in Andaman & Nicobar after the 21 Param Vir Chakra awardees.
- Unveiling of a model of the National Memorial dedicated to Netaji on Netaji Subhas Chandra Bose Dweep.

Key Events of Parakram Diwas 2024:

- Organized by Ministry of Culture, in collaboration with institutions like Archaeological Survey of India, National School of Drama, Sahitya Akademi, and National Archives of India.

The various activities include:

- Exploration of Netaji Subhash Chandra Bose's legacy and the Azad Hind Fauj.
- Digital launch of 'Bharat Parv' by Ministry of Tourism, featuring Republic Day Tableaux and cultural exhibits showcasing national diversity.
- Projection mapping show at Red Fort by artists from National School of Drama.
- Special recognition for Indian National Army veterans.
- Showcase of citizen centric initiatives by 26 Ministries and departments.

About Red Fort

- Red Fort is pivotal in Netaji Subhash Chandra Bose's saga and the Azad Hind Fauj.
- It houses a museum inaugurated by Prime Minister Modi in 2019 honoring Bose and the INA on Netaji's birthday.
- Colonel Prem Sahgal, Colonel Gurbaksh Singh Dhillon, and Colonel Shahnawaz Khan made history in the Red Fort Trials. It symbolizes Azad Hind Fauj's resolute commitment to India's freedom.

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PRELIMS

1) **Consider the following statements: (2009)**

1) Between Census 1951 and Census 2001, the density of the population of India has increased more than three times.
2) Between Census 1951 and Census 2001, the annual growth rate (exponential) of the population of India has doubled.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

Ans: (d)

2) **Which of the following gives 'Global Gender Gap Index' ranking to the countries of the world? (2017)**

(a) World Economic Forum
(b) UN Human Rights Council
(c) UN Women
(d) World Health Organization

Ans: (a)

3) **A decrease in tax to GDP ratio of a country indicates which of the following? (2015)**

1) Slowing economic growth rate
2) Less equitable distribution of national income

Select the correct answer using the code given below:

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

Ans: (a)

4) **The terms 'WannaCry, Petya and EternalBlue' sometimes mentioned in the news recently are related to (2018)**

(a) Exoplanets (b) Cryptocurrency
(c) Cyber-attacks (d) Mini satellites

Ans: (c)

5) **"Biorock technology" is talked about in which one of the following situations? (2022)**

(a) Restoration of damaged coral reefs
(b) Development of building materials using plant residue
(c) Identification of areas for exploration/extraction of shale gas
(d) Providing salt licks for wild animals in forests/ protected areas

Ans: (a)

6) **Consider the following provisions under the Directive Principles of State Policy as enshrined in the Constitution of India: (2012)**

1) Securing for citizens of India a uniform civil code
2) Organising village Panchayats
3) Promoting cottage industries in rural areas
4) Securing for all the workers reasonable leisure and cultural opportunities

Which of the above are the Gandhian Principles that are reflected in the Directive Principles of State Policy?

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

Ans: (b)

7) **Consider the following statements: (2018)**

1) Aadhaar card can be used as a proof of citizenship or domicile.
2) Once issued, Aadhaar number cannot be deactivated or omitted by the Issuing Authority.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

Ans: (d)

8) **Recently, scientists observed the merger of giant 'blackholes' billions of light-years away from the Earth. What is the significance of this observation? (2019)**

(a) 'Higgs boson particles' were detected.
(b) 'Gravitational waves' were detected.
(c) Possibility of inter-galactic space travel through 'wormhole' was confirmed.
(d) It enabled the scientists to understand 'singularity'

Ans: (b)

9) **In the Mekong-Ganga Cooperation, an initiative of six countries, which of the following is/are not a participant/participants?**

1) Bangladesh 2) Cambodia
3) China 4) Myanmar
5) Thailand

Select the correct answer using the code given below:

(a) 1 only (b) 2, 3 and 4
(c) 1 and 3 (d) 1, 2 and 5

Ans: (c)

10) In the context of governance, consider the following: (2010)

1) Encouraging Foreign Direct Investment inflows
2) Privatization of higher educational Institutions
3) Down-sizing of bureaucracy
4) Selling/offloading the shares of Public Sector Undertakings

Which of the above can be used as measures to control the fiscal deficit in India?

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

Ans: (d)

11) The term 'Goldilocks Zone' is often seen in the news in the context of (2015)

(a) the limits of habitable zone above the surface of the Earth
(b) regions inside the Earth where shale gas is available
(c) search for the Earth-like planets in outer space
(d) search for meteorites containing precious metals

Ans: (c)

12) Consider the following statements in respect of Bharat Ratna and Padma Awards: (2021)

1) Bharat Ratna and Padma Awards are titles under the Article 18(1) of the Constitution of India.
2) Padma Awards, which were instituted in the year 1954, were suspended only once.
3) The number of Bharat Ratna Awards is restricted to a maximum of five in a particular year.

Which of the above statements are not correct?

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

Ans: (d)

13) There has been a persistent deficit budget year after year. Which action/actions of the following can be taken by the Government to reduce the deficit? (2016)

1) Reducing revenue expenditure
2) Introducing new welfare schemes
3) Rationalizing subsidies
4) Reducing import duty

Select the correct answer using the code given below:

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

Ans: (c)

14) With reference to 'Changpa' community of India, consider the following state-ments: (2014)

1) They live mainly in the State of Uttarakhand.
2) They rear the Pashmina goats that yield a fine wool.
3) They are kept in the category of Scheduled Tribes.

Which of the statements given above is/are correct?

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

Ans: (b)

15) Consider the following statements: (2023)

1) The Government of India provides Minimum Support Price for niger (Guizotia abyssinica) seeds.
2) Niger is cultivated as a Kharif crop.
3) Some tribal people in India use niger seed oil for cooking.

How many of the above statements are correct?

(a) Only one (b) Only two
(c) All three (d) None

Ans: (c)

16) 'Mission Indradhanush' launched by the Government of India pertains to (2016)

(a) Immunization of children and pregnant women?
(b) Construction of smart cities across the country?
(c) India's own search for the Earth-like planets in outer space?
(d) New Educational Policy?

Ans: (a)

17) A Company marketing food products advertises that its items do not contain trans-fats. What does this campaign signify to the customers? (2011)

1) The food products are not made out of hydrogenated oils.
2) The food products are not made out of animal fats/ oils.
3) The oils used are not likely to damage the cardiovascular health of the consumers.

Which of the statements given above is/are correct?

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

Ans: (c)

18) If a wetland of international importance is brought under the 'Montreux Record', what does it imply? (2014)

(a) Changes in ecological character have occurred, are occurring or are likely to occur in the wet-land as a result of human interference.
(b) The country in which the wetland is located should enact a law to prohibit any human activity within five kilometres from the edge of the wetland.
(c) The survival of the wetland depends on the cultural practices and traditions of certain communities living in its vicinity and therefore the cultural diversity therein should not be destroyed.
(d) It is given the status of 'World Heritage Site.'

Ans: (a)

19) Consider the following statements in respect of the Laureus World Sports Award which was instituted in the year 2000: (2021)

1) American golfer Tiger Woods was the first winner of this award.
2) The award was received mostly by 'Formula One' players so far.
3) Roger Federer received this award maximum number of times compared to others.

Which of the above statements are correct?

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

Ans: C

20) Department of Border Management is a Department of which one of the follow-ing Union Ministries? (2008)

(a) Ministry of Defence
(b) Ministry of Home Affairs
(c) Ministry of Shipping, Road Transport and Highways
(d) Ministry of Environment and Forests

Ans: (b)

MAINS QUESTIONS

1) Distinguish between Capital Budget and Revenue Budget. Explain the components of both these Budgets. (2021)
2) Discuss the possible factors that inhibit India from enacting for its citizens a uniform civil code as provided for in the Directive Principles of State Policy. (2015)
3) The Right to Information Act is not all about citizens' empowerment alone, it essentially rede-fines the concept of accountability." Discuss. (2018)
4) To what extent, in your view, the Parliament is able to ensure accountability of the executive in India? (2021)
5) What are the major challenges of Public Distribution System (PDS) in India? How can it be made effective and transparent? (2022)
6) Do you agree with the view that steady GDP growth and low inflation have left the Indian economy in good shape? Give reasons in support of your arguments. (2019)
7) What is wetland? Explain the Ramsar concept of 'wise use' in the context of wetland conserva-tion. Cite two examples of Ramsar sites from India. (2018)
8) What are the two major legal initiatives by the State since Independence addressing discrimi-nation against Scheduled Tribes (STs). (2017)
9) An athlete participates in Olympics for personal triumph and nation's glory; victors are show-ered with cash incentives by various agencies, on their return. Discuss the merit of state spon-sored talent hunt and its cultivation as against the rationale of a reward mechanism as encour-agement. (2014)
10) Analyze the multidimensional challenges posed by external state and non-state actors, to the internal security of India. Also, discuss measures required to be taken to combat these threats. (2021)