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Defence And Military

Tiger Claw' - Indo-US Special Forces Exercise

Introduction and About

- The 'Tiger Claw' is a first-of-its-kind independent Special Forces exercise conducted by the Indian Air Force and U.S Air Force.
- This joint military exercise has occurred across North India.
- It forms a crucial component in the journey towards strengthening partnership between the two Air Forces.

Why in News?

- The exercise concluded successfully at the Garud Regimental Training Centre (GRTC), an essential facility for training India's elite Special Forces unit, the Garud Commandos, located at Air Force Station in Uttar Pradesh.
- The two-week-long joint exercise involved a mutual exchange of best practices in special operations, joint training, and building interoperability capabilities.

The Significance of 'Tiger Claw'

- The name 'Tiger Claw' carries symbolic importance. Tigers are globally recognised as emblems of strength, power, and precision—qualities vital to Special Forces operations.
- The exercise's title aligns with the agility and striking capabilities of the collaborating elite troops.

Objectives of the Exercise

- The exercise's goals were multifaceted; they included expanding partnership, fostering a mutual exchange of best practices in special operations, and collaborative training between the two Air Forces to develop interoperability.
- This joint exercise forms part of a broader tapestry of institutional exchanges and training programmes between the armed forces of the two countries at various levels.

Other Military Exercises between India and the US

- The two air forces conduct multiple air exercises, including the bilateral 'Cope India'.
- They also partake in other multilateral exercises such as 'Tarang Shakti' and 'Red Flag'.

Exercise KHAAN QUEST: A Multinational Military Exercise

Introduction and Background

- Exercise KHAAN QUEST is a multinational military exercise held annually.
- Originated in 2003 as a bilateral exercise between the USA and Mongolia, it became a multinational peacekeeping exercise in 2006.
- The Mongolian Armed Forces host the exercise.
- The 22nd iteration of the event is set to happen in 2025.

Indian Army's Participation in KHAAN QUEST

- An Indian Army contingent, the Kumaon Regiment, has arrived in Ulaanbaatar, Mongolia, to participate in Exercise KHAAN QUEST.

Objectives of KHAAN QUEST

- The primary objective of Exercise KHAAN QUEST is to enhance peacekeeping capabilities, interoperability, and military readiness under Chapter VII of the UN Charter.
- Chapter VII empowers the UN Security Council to act on threats to international peace, breaches of peace, and acts of aggression. It allows for both non-military (e.g., sanctions) and military measures to maintain or restore global peace and security.

Focus Areas of the Exercise

- Exercise KHAAN QUEST encompasses joint planning, tactical drills, physical fitness, and coordination.
- The drills include checkpoints, cordon and search, civilian evacuation, counter-Improvised Explosive Device (IED) and casualty management.

Significance of KHAAN QUEST

- KHAAN QUEST facilitates the exchange of tactics, techniques, and procedures (TTPs) among the participating military entities.
- The exercise also works to strengthen military cooperation and camaraderie among participating nations.

Cyber Suraksha: Boosting National Cyber Resilience

Introduction and About Cyber Suraksha

- The Defence Cyber Agency's 'Cyber Suraksha' is an inclusive cyber security exercise.
- It is organised under the patronage of the Integrated Defence Staff headquarters.
- Designed as a multi-phased proactivity, it aims to strengthen the country's cyber resilience.
- Cyber Suraksha combines structured learning with hands-on challenge environments.

Approach and Methodology of Cyber Suraksha

- Cyber Suraksha organises targeted training sessions with a specific focus on cyber threats.
- The evaluation process tests the analytical and defensive cyber competences of participants.
- An exciting capsule for leadership is also an integral part of the Cyber Suraksha.
- The methodology is designed to empower participants to act effectively in the case of cyber threats.

The Need and Impact of Cyber Suraksha in Real-world

- Cyber Suraksha is designed to simulate real-world cyber threats to improve the participants' cyber defence skills.
- Promoting secure practices among military departments is a primary objective.
- The comprehensive approach to cultivating a security-first culture is crucial in the current environment.
- The exercise aims to prepare military personnel and other security forces, thereby boosting national cyber resilience.

Future Aspects of Cyber Suraksha

- Cyber Suraksha is an initiative of the Defence Cyber Agency.
- The Agency intends to conduct such exercises regularly to maintain a state of readiness.
- This initiative marks a significant step towards cultivating a security-first culture across all military levels.
- The future scope of Cyber Suraksha will significantly contribute to the nationwide battle against cyber attacks.

Economic

Launching of the First All-India Household Income Survey in 2026

Introduction and Overview

- The Ministry of Statistics and Programme Implementation (MoSPI) of India has initiated a landmark project of the

first-ever All-India Household Income Survey to be conducted in 2026.
- A Technical Expert Group (TEG), led by Surjit Bhalla, previous Executive Director at the IMF, will guide the survey operations.
- The survey aims to provide deep insights into income distribution, the influence of technology on wages and fill the gaps in socioeconomic inequality data.

Recent Developments
- News regarding the initiation of the survey is recent and has been confirmed by the Ministry of Statistics.
- This nationwide exercise will be a first-of-its-kind aimed at accurately capturing income data across Indian households.
- This remarkable development has been designed to address the long-standing insufficiencies in data related to income and wage patterns and the impact of technology on earnings.

Objectives and Aims
- The survey aims to capture the income distribution patterns across diverse Indian households.
- It seeks to evaluate the impact of technology adoption on household wages and earnings.
- The survey's data will help in devising better-targeted welfare schemes and align with international best practices of income data collection.

Technical Oversight and Implementation Strategy
- The TEG under Surjit Bhalla will provide significant guidance on survey concepts, definitions, sampling design, and estimation methods.
- National Statistical Office (NSO) of India will conduct the survey incorporating best practices from countries like the US, Canada, South Africa, and Australia.
- The survey will focus on diverse income sources such as wages, self-employment, remittances, and digital earnings.
- Stringent efforts will be made to ensure the data collected is transparent, accurate, and provides granular regional insights.

Significance and Impact
- The All-India Household Income Survey is the first income-oriented survey in independent India.
- This exercise has the potential to bridge gaps in existing economic surveys, which are primarily focused on consumption or employment.
- The data collected will be extremely valuable for policymakers, economists, and planners in addressing income inequality and improving social safety nets.
- The survey can also lead to the restructuring of income-based welfare schemes such as PM-KISAN, subsidy targeting, or Direct Benefit Transfer (DBT) frameworks.

Quick Highlights

- On World Environment Day 2025, Indian Prime Minister Narendra Modi initiated the 'Ek Ped Maa Ke Naam 2.0' campaign in Delhi, with a goal to plant 10 crore trees across India by 30th September. The campaign promotes environmental awareness and encourages individuals to plant a tree in their mother's name. Further aligning with India's sustainability commitments, the Prime Minister also launched 200 electric buses in Delhi to encourage cleaner urban transport and combat air pollution.
- The Indian Government has initiated the SPMEPCI scheme to boost the domestic electric vehicle (EV) industry through import duty concessions and backing local production. The plan, which includes brownfield investments and import restrictions with rollover provisions, is intended to attract global firms and support India's clean mobility objectives. Despite this, Union Minister H.D.Kumaraswamy revealed that Tesla has no plans to manufacture cars in India, highlighting the difficulties in securing foreign investment in the EV sector.
- Amit Shah inaugurated the Bharatiya Bhasha Anubhag (BBA) on June 6, 2025, aimed at integrating Indian languages into administrative and governance processes. Backed by ₹56 crore in funding and the support of C-DAC, the BBA facilitates real-time translation and communication in regional languages, particularly for Region C States. The initiative aligns with the vision of NEP 2020, promoting linguistic inclusivity and bolstering national unity.
- The Delhi government has revealed plans for India's inaugural electronic waste (e-waste) eco park in Holambi Kalan, North Delhi. With a strong focus on cultivating a circular economy and sustainable urban living, Environment Minister Manjinder Singh Sirsa confirmed the upcoming issuance of a global tender for progressive green technology partnerships.
- Maruti Suzuki India has launched the country's largest automobile in-plant railway siding at its Manesar plant, aiming to align with the PM Gati Shakti Master Plan. The £452 crore facility, part of the 126 km Haryana Orbital Rail Corridor, will dispatch 450,000 vehicles annually. The move is set to cut 175,000 tonnes of CO_2 emissions and save 60 million litres of fuel each year. MSIL plans to ramp up rail-based dispatches to 35% by FY2030-31, in line with India's goal of a net-zero emission economy by 2070.
- On 19 June 2025, AIIMS Mangalagiri hosted an awareness rally for World Sickle Cell Day, in collaboration with the Departments of Health and Tribal Welfare. The event saw participation from students, tribal members, and medical professionals. Its objective was to enhance understanding of sickle cell disease, a hereditary blood disorder that notably affects tribal populations in India.
- The Union Public Service Commission (UPSC) has launched "Pratibha Setu", a new platform allowing employers to access details of candidates who cleared UPSC exams but did not make the final merit list. This platform seeks to provide career alternatives to high-level aspirants and enhance the connection between government-selected talent and private sector demand. Verified recruiters get secure login access and candidates can choose to participate in this forward-looking employment reform initiative.
- Canara Bank, established in 1906, has eliminated the Average Monthly Balance requirement for all types of savings bank accounts, including salary and NRI. This move, aimed at promoting financial inclusion, will benefit a diverse range of customers. The bank, with over 9,800 branches worldwide, boasts a robust rural footprint and global presence.
- On 1 June 2025, the Asian Development Bank (ADB) announced a $10 billion urban transformation initiative for India, spread over five years. The project aims to upgrade metro networks, launch new RRTS corridors, and enhance urban infrastructure and services across over 100 cities, funded by sovereign loans, private capital, and the Urban Challenge Fund, which also includes $3 million in technical assistance. The ADB's project aligns with India's Viksit Bharat @ 2047 mission, emphasising skill development, women's empowerment and inclusive urban growth.
- State Bank of India (SBI) increased its dividend contribution to the government's non-tax revenue to ₹8,076.84 crore for FY 2024-25, a notable rise from the previous year's ₹6,959.29 crore. The robust financial performance of SBI was

emphasised upon by the Chairman, C.S. Setty when handing over the cheque to the Finance Minister, Nirmala Sitharaman. This financial boost highlights SBI's pivotal role in the fiscal resource mobilisation, and a dividend of ₹15.90/share.

- The Asian Development Bank (ADB) has authorised a loan of $109.97 million to reinforce Gujarat's Skills Development Program. This initiative aims to boost technical education, foster inclusive employment, and stimulate industrial competitiveness. The programme will achieve this by enhancing training infrastructure, introducing industry-aligned courses, and improving governance at institutions such as Kaushalya: The Skill University, thus creating a future-ready workforce.
- The Reserve Bank of India (RBI) has advanced its liquidity stress testing framework, thereby strengthening the financial system's capability to withstand shocks. This framework encompasses Non-Banking Financial Companies (NBFCs), Urban Cooperative Banks (UCBs), and the RBI's own portfolio in its stress test models, as well as integrating climate transition risk to cultivate a resilient, clear and future-ready financial ecosystem. Moreover, the adoption of a Growth-at-Risk model is set to further coordinate monetary policy with potential macroeconomic vulnerabilities.
- The Reserve Bank of India (RBI) has given in-principle approval to PayPal Payments and Worldline ePayments India to operate as cross-border payment aggregators. This action is in alignment with the October 2024 mandate, compelling such companies to obtain independent authorisation rather than operating under the former OPGSP model. It is believed that India's digital economy will be bolstered by this move, specifically aiding freelancers, SMEs, and exporters.
- Furthermore, the RBI has accomplished the effective withdrawal of ₹2,000 notes with 98.26% having been returned by May 2025. On account of their limited use and aging, these notes, introduced during the 2016 demonetisation, are being phased out under the Clean Note Policy. The move will aid efficient currency management and decrease unaccounted cash holdings.
- The Reserve Bank of India (RBI) imposed 353 penalties worth ₹54.78 crore on varied regulated entities in the fiscal year 2024-2025 for violations including cybersecurity non-compliance and KYC norms failures. The RBI issued a draft proposal outlining revised rules for lending against gold; this included increasing the loan-to-value (LTV) ratio to 85% for loans up to ₹2.5 lakh. Lastly, the RBI launched a scheme promoting original Hindi book writing in economics and banking, offering recognition and rewards to authors.
- The Reserve Bank of India (RBI) will conduct a ₹30,000 crore government securities auction on June 13, 2025, incorporating the re-issuance of ₹5,000 crore Sovereign Green Bonds (SGrBs) set to mature in 2054. This auction, earmarked for environmentally sustainable projects, will be executed through the multiple price method on the e-Kuber platform. This reflects India's commitment towards green financing, climate resilience and achieving net-zero goals under global climate accords.
- The Reserve Bank of India (RBI) has finalised guidelines for project finance provisioning, lessening the load on lenders by mandating a 1% requirement for under-construction loans, a reduction from the previously suggested 5%. These norms will be effective from October 1, 2025, introducing flexibility for commercial real estate and housing loans while maintaining lower provisioning rates for operational projects. The move is consistent with RBI's wider consultative approach, promoting credit availability and infrastructure development.
- The Reserve Bank of India (RBI) has revised the Priority Sector Lending (PSL) norms for Small Finance Banks (SFBs) starting from FY 2025-26, lowering the overall PSL target from 75% to 60% of Adjusted Net Bank Credit (ANBC) or Credit Equivalent of Off-Balance Sheet Exposures (CEOBE). According to the new rules, 40% must be directed to specified PSL sub-sectors such as agriculture, MSMEs, and education. The remaining 20% can be allocated flexibly to any PSL sub-sectors where the SFB demonstrates a competitive advantage.
- The Reserve Bank of India (RBI) disclosed a 3.1% yearly growth in the All-India House Price Index (HPI) for Q4 FY2024–25. The index, representing authentic urban housing trends, is derived from property registration data across 10 major cities. National house prices saw a 0.9% rise quarter-on-quarter, driven by strong demand and urban development in key cities like Bengaluru, Jaipur, Kolkata, and Chennai. Kolkata experienced the highest annual increase of 8.8%, while Kochi was the only city to report a price decline of -2.3%.
- The Reserve Bank of India (RBI) has imposed a monetary penalty of ₹29.6 lakh on Fino Payments Bank Limited due to non-compliance with Licensing Guidelines for Payments Banks. The violation, involving exceeding end-of-day balance limits in customer accounts, was discovered during the Statutory Inspection for Supervisory Evaluation in 2024. This action emphasises RBI's commitment to regulatory enforcement and financial discipline.
- The Reserve Bank of India (RBI) is extending the call money market timings to 7 PM from July 1, 2025. The timings for market repo and Tri-Party Repo (TREP) are set to be extended until 4 PM from August 1, 2025. This decision stems from recommendations by a Working Group led by Radha Shyam Ratho, aiming to enhance liquidity management, align with global market practices, and increase operational flexibility for banks and financial institutions. The trading hours for government securities, foreign exchange, and interest rate derivatives will remain the same.
- SEBI has initiated a settlement scheme for stock brokers implicated in algo trading violations, with the scheme available from June 16 to September 16, 2025. The offenders include over 100 broker firms, such as Zerodha and 5Paisa, caught working with unregulated algo platforms, thereby violating SEBI regulations. While this scheme offers an opportunity to resolve cases at a reduced settlement cost, SEBI simultaneously enforces tighter algo trading regulations, prioritising retail investor protection, the appointment of algo providers, and broker accountability.
- The Securities and Exchange Board of India (SEBI) encourages use of the Centralized Fee Collection Mechanism (CeFCoM) for payments to investment advisers and research analysts to enhance transparency and security. The platform, launched in October 2024 by BSE Ltd. and MF Utilities India Pvt. Ltd., supports multiple digital payment methods. The use of CeFCoM enables investors to distinguish between SEBI-registered advisers and fraudulent entities. From October 1, 2025, SEBI will debut a 'SEBI Check' tool for verifying the authenticity of UPI handles and bank account details before making payments.
- The Securities and Exchange Board of India (SEBI) has launched a validation tool called 'SEBI Check' to vet UPI handles and registered bank accounts, aiming to secure investor payments and prevent market fraud. From 1st October 2025, investors will be able to use this tool to verify UPI IDs and bank account details, including the Indian Financial System Code (IFSC) of the SEBI-registered intermediary. Valid UPI handles will feature a unique identifier, "@valid," which will be exclusively allocated by the National Payments Corporation of India (NPCI). SEBI will also collaborate with online app stores to display only validated payment apps.
- The Securities and Exchange Board of India (SEBI) has

imposed a ₹25 lakh penalty on BSE Limited due to multiple regulatory violations. These violations primarily include the dissemination of price-sensitive corporate information and inadequate supervision of broker trades. The major charge specifies that BSE's system architecture prior to September 2023 allowed select teams and subscribers to access corporate announcements before public availability. BSE is required to pay this penalty within 45 days of receiving the order.

Rank Reports Award

Kerala Sahitya Akademi 2024 Literary Award Winners Announcement

Introduction and About

- The Kerala Sahitya Akademi, the principal literary body of Kerala, has recently announced the winners of its 2024 literary awards.
- These awards hail various talents, both young and seasoned, across the broad spectrum of Malayalam literature.
- The categories of awards encompass a wide range of genre including novels, poetry, plays, biography and translation, thus demonstrating the Akademi's pledge to nurturing the literary culture of Kerala.

Announcement and Significance of the Awards

- The 2024 Kerala Sahitya Akademi Awards were announced formally on 26 June, 2025, in Thrissur, with the aim of recognising the diverse contributions to Malayalam literature.
- These awards are greatly revered in the cultural context and are viewed as some of the most prestigious accolades for writers of Malayalam literature.

Details of the Awardees

- The award for the Best Novel was given to G R Indugopan for 'Aano'.
- Anitha Thampi won the award for Poetry for 'Muringa Vazha Kariveppu'.
- The Short Story category was won by V Shinilal for 'Garisappa Aruvi Athava Oru Jalayathra'.
- The Essay (Sibi Kumar Endowment Award) was presented to M Swaraj for 'Pookkalude Pusthakam'.
- Some notable awardees included K V Ramakrishnan, who was awarded the Akademi Fellowship, and Ezhacheri Ramachandran, who was given the Lifetime Contribution Award.

Lifetime Contribution Awards

- Six additional authors were also recognised for their Lifetime Contribution to literature: P K N Panicker, Payyannur Kunhiraman, M M Narayanan, T K Gangadharan, K E N, and Mallika Yunis.
- Recognitions in Other Categories
- Various other pieces and authors were also recognised in categories such as drama, literary criticism, scientific literature, biography/autobiography, travel writing, translation, children's literature, and humour.

Details of the Awards

- Regular awards comprise a cash prize of ₹25,000, a plaque, and a certificate.
- Fellowship and major lifetime awards consist of a cash prize of ₹50,000, a two-sovereign gold medal, a shawl, a citation, and a plaque.
- Other lifetime awards include a cash prize of ₹30,000, a plaque, a shawl, and a certificate.
- It is important to note that no winner was chosen for the Vilasini Award this year.

Schemes And INitiative

JAIHIND Scheme by Delhi University

Introduction and Overview

- The JAIHIND scheme is an initiative launched by Delhi University.
- The aim of this scheme is to empower Scheduled Tribe (ST) students from remote regions by imparting basic computer skills and providing support for their CUET (Central University Entrance Test) preparation.
- The programme is targeted at school students from Classes 9 to 12.

Purpose and Potential Impact

- The scheme seeks to address various challenges faced by ST students, such as the lack of access to digital platforms and unfamiliarity with online admission procedures.
- By providing computer training and CUET preparation aid, it is anticipated that the scheme will increase the participation of tribal students in higher education.

Implementation

- The first batch of students under the JAIHIND scheme comprises 25 students from a remote region in Manipur, called Ukhrul.
- The scheme is fully funded by the Delhi University and is envisioned as a yearly skill-building initiative.

Significance and Potential Outcomes

- Through the provision of digital literacy and admission-related support, the scheme holds the potential to significantly increase the representation of tribal students in higher education.
- Furthermore, by empowering ST students with basic computer skills, the scheme can also open new avenues for these students, potentially reducing the digital divide.
- On a broader scale, increased participation in higher education can lead to improved socio-economic conditions in the long run.

NAVYA Scheme: A Step Towards Gender Empowerment

Introduction and About NAVYA Scheme

- NAVYA is a pilot skilling initiative launched by the Indian Government aimed at the empowerment of adolescent girls.
- This scheme is a part of the Viksit Bharat@2047 vision, which underlines the Government's forward-looking, inclusive growth strategy.
- The scheme's goal is to provide vocational training in non-traditional job roles to girls aged between 16–18 years who have completed at least Class 10 education.
- The focus on non-traditional job roles indicates a paradigm shift in the Government's approach towards women's economic participation and career development.
- The NAVYA scheme is implemented in 27 districts across 19 states, indicating the widespread reach and impact of this initiative.

Why NAVYA is in the News

- NAVYA has been in the limelight for being a pioneering initiative towards gender empowerment and inclusive growth.

- It's a progressive step in the Government's adolescent girls' development policies, propelling it towards the global spotlight in gender equality.
- The uniqueness of NAVYA lies in its focus on non-traditional job roles for girls, challenging gender stereotypes and opening new avenues for girls' career advancement.
- The scheme is rolled out on a large scale, which is set to have a substantial impact on the socio-economic landscape of the 27 participating districts and beyond.

Inter-departmental Collaboration and Frameworks in NAVYA

- NAVYA Scheme underscores a collaborative effort between the Ministry of Women and Child Development and the Ministry of Skill Development.
- This inter-departmental collaboration stands as a testament to the Government's concerted efforts to bridge the gender gap in job opportunities and skills development.
- The NAVYA scheme utilises the Pradhan Mantri Kaushal Vikas Yojana (PMKVY), an established framework for skill development, ensuring a structured and efficient implementation process.

The Importance and Impact of NAVYA

- The NAVYA scheme is an important milestone in the movement towards gender equality and empowerment.
- By focusing on non-traditional job roles, NAVYA paves the way for girls to explore and enter new fields traditionally dominated by males, fighting ingrained societal gender norms in the process.
- As an integral part of Viksit Bharat@2047 vision, NAVYA signifies the Government's commitment to empowering females and contributing to their socio-economic development, leading to a more balanced and inclusive society by 2047.
- Being rolled out across 27 districts in 19 states, NAVYA is expected to bring about transformative changes, both for the participating girls and for the broader communities they belong to.

SECI's Landmark SIGHT Scheme

Introduction and About

- The Solar Energy Corporation of India (SECI) has launched a major green ammonia tender under the SIGHT Scheme, demonstrating significant progress in green energy initiatives.
- This ambitious project, supported by ₹1,533.4 crore incentives, long-term contracts, and an effective Payment Security Mechanism, seeks to decarbonise India's fertiliser sector, a substantial consumer of fossil-based hydrogen.
- The initiative is designed to foster both market confidence and environmental benefits by enabling a shift from conventional ammonia to green hydrogen-based ammonia.

What's New or Current

- Currently, SECI's SIGHT Scheme is creating significant waves in India's green energy sector, with a landmark green ammonia tender for 724,000 tonnes per year.
- This large-scale project is backed by sizeable investments and strong support mechanisms, showcasing the growing emphasis on renewable energy solutions in India's economic and environmental strategies.
- The unique aspect of this green ammonia tender is its potential to revolutionise one of India's major industrial sectors, the fertiliser industry.

Importance and Impact

- The initiative not only supports India's climate goals by reducing greenhouse gas emissions but also addresses issues of import dependency and industrial sustainability.
- By transitioning from traditional ammonia to green hydrogen-based ammonia, the scheme could herald a new era in India's hydrocarbon sector.
- The project serves to underscore the significant strides being made by India in green energy and sustainability sectors, setting a precedent for other developing nations.

Conclusion and Future Prospect

- The SIGHT Scheme is undoubtedly an exciting development in India's journey towards sustainable growth.
- Its success could usher in a broader trend of sectoral decarbonisation, fostering innovation and responsible industrial practices.
- As the project gains momentum, the benefits of this green initiative could reset standards in the fertiliser industry, with potential far-reaching implications for India's energy security and environmental sustainability.

Understanding the Top National Players Stipend Scheme (TNPSS)

Introduction and About

- The Top National Players Stipend Scheme (TNPSS) is a significant initiative by the All India Chess Federation (AICF).
- Launched on June 25, 2025, the scheme aims to progress grassroots chess in India.
- This scheme is specifically designed to financially support young, top-performing players across different age categories, ranging from Under-7 to Under-19.
- The financial aid under this scheme varies from ₹60,000 to ₹1.5 lakh per quarter, depending entirely on the performance of the player.

Implications of TNPSS and the Crucial Role It Plays

- TNPSS not only promotes the participation of players in national-level chess but also recognises and nurtures young talents.
- The financial assistance provided by the scheme helps in mitigating the financial constraints that potentially affect a player's development.
- The presence of the scheme is indicative of India's rising ambition to establish itself as a world leader in the realm of chess.
- Uniquely, this scheme takes into account gender parity, encouraging equal opportunities and participation from both genders.
- Moreover, the scheme asserts the importance of investing in youth sports, espousing the belief that an early start in competitive sports can shape the development of successful athletes.

Broader Impact and Significance of TNPSS

- The TNPSS can potentially revolutionise chess at grassroots levels, promoting it from a leisurely pastime to a serious skill-based game.
- Recognising and nurturing young talent at an early age may pave the way for India to produce world-class chess players, enhancing the country's image on the international chess platform.
- By financially aiding the development and nurturing of young chess players, the scheme is effectively investing in India's future sports personalities.
- TNPSS holds another significant dimension as it contributes to the promotion of gender parity, a globally coveted ideal, in the field of sports.

SPMEPCI (EV Manufacturing Scheme) Overview

Introduction and Overview

- The SPMEPCI (EV Manufacturing Scheme) is a government policy intended to promote the domestic electric vehicle (EV) industry in the nation.
- This scheme has been implemented with a plan to last for 5 years.
- The primary goal of this policy is to stimulate the domestic EV sector and promote clean mobility in the country.
- H.D. Kumaraswamy serves as the minister in charge of the scheme.

Detailed Framework of the Scheme

- Under the SPMEPCI (EV Manufacturing Scheme), there is a 15% customs duty on EV Completely Built Up units (CBUs) with a value equal to or greater than $35,000 (Cost, Insurance, and Freight - CIF).
- As part of the scheme, an import quota has been set. This limits the importation of EVs to 8,000 units per year. If this quota is not exhausted in a given year, the difference will be rolled over to the next year.
- The scheme permits and encourages both greenfield and brownfield investments to intensify domestic production capacity.

Scheme's Impact

- This scheme is aimed at discouraging the importation of costly and fully-built electric vehicles and emboldening local manufacturing.
- The EV scheme is has the potential to attract long-term foreign investment in the EV sector.
- Notably, the global electric car company, Tesla, has shown interest in setting up showrooms in the country under this scheme but presented no solid intentions on utilising the scheme for manufacturing locally.

Significance of the Scheme

- The SPMEPCI (EV Manufacturing Scheme) bears great significance for the nation's car manufacturing industry and its move towards sustainable and clean mobility.
- The scheme not only advocates for a cleaner environment by encouraging the public's shift to electric vehicles but also hopes to boost local business and economy.
- By fostering a favourable environment for EV manufacturing domestically, this government plan can bolster the country's position in the expanding global electric vehicle market.

Current Status

- The scheme is currently in effect and is being monitored by the central government.
- While some foreign businesses have shown interest, the overall application and implications of the scheme remain to be seen over the upcoming years.
- It's expected that policy adjustments might also take place based on the response and outcomes the scheme generates.

Comprehensive Review of Krishi Nivesh Portal and PM-WANI Tariff Reform

Introduction and About Krishi Nivesh Portal

- The Krishi Nivesh Portal is an innovative agricultural initiative that brings together 17 major schemes across 14 central and 9 state departments.
- This centralized platform offers user-friendly applications, tracking services, and detailed scheme data.
- Its focus is on Public-Private Partnership (PPP), credit-linked schemes, Venture Capital (VC), and startups.
- With an allocation of ₹1.31 lakh crore by FY25, its primary goal is to stimulate private agricultural investment and upgrade infrastructure and value chains in the farming sector.

Importance of Krishi Nivesh Portal

- With an integrated system, the Krishi Nivesh Portal ensures all the major agricultural schemes are accessible and transparent, making it easier for anyone related to the sector to avail.
- It fosters an enabling environment for private investment in agriculture, leading to an improved value chain and infrastructural advancements.
- Its focus on PPPs, credit-linked, VC, and startups presents an opportunity for innovation and growth in the agricultural sector, potentially aiding in modernising Indian farming.

PM-WANI Tariff Reform: Brief Overview

- The PM-WANI Tariff Reform is a key regulation change enacted by the Telecom Regulatory Authority of India (TRAI).
- This reform primarily focuses on capping tariffs for Public Data Offices (PDOs).

Implications and significance of PM-WANI Tariff Reform

- With the implementation of tariff caps for PDOs, the PM-WANI Tariff Reform is an initiative aimed at making internet access more affordable to the Indian masses.
- This tariff reform may pave the way for increased digital inclusion, with a potential boost to digital literacy rates, digital services usage, and overall digital economic growth.

Recap - Key Points

- The Krishi Nivesh Portal is a masterstroke in integrating agricultural schemes for increased transparency and accessibility, whereas the PM-WANI Tariff Reform marks a significant step towards digital inclusion via affordable internet.
- Both initiatives signal the government's commitment to progressive reform, fostering a favourable environment for both agricultural growth and digital advancement.

Analysis of PM-WANI Scheme

Introduction to PM-WANI

- The PM-WANI (Prime Minister Wi-Fi Access Network Interface) scheme is a project initiated by the Indian Government.
- The principal aim of this scheme is to provide affordable and inclusive public Wi-Fi, reducing the digital divide in the country.

Comparative Cost Analysis with FTTH

- Previously, the cost of plans under PM-WANI was approximately twice as expensive as FTTH (Fiber to the Home).
- For example, a plan with 100 Mbps was priced at ₹1,532.82 under PM-WANI, compared to ₹706.82 under FTTH, making it less affordable for a considerable portion of the population.

Legal Amendments

- The 70th amendment was drafted in August 2024, significantly impacting the operation of the PM-WANI scheme.
- Furthermore, the Department of Telecommunications (DoT) amendment in September 2024 eliminated the need for

commercial contracts with Internet Service Providers (ISPs), simplifying the operation further.

Aim and Impact of PM-WANI

- The overarching goal of PM-WANI is to provide cost-effective, inclusive public Wi-Fi access.
- This is poised to significantly expand internet access across the country, significantly lowering the digital divide.
- By making the internet more affordable and accessible, PM-WANI can potentially influence multiple sectors like education, business, and socio-economic development in general.
- The move is also expected to promote a rise in digital literacy and enhance digital empowerment in the country.

Defence And Military

Passage Exercise (PASSEX) 2025: Indo-UK Joint Naval Exercise

About the PASSEX

- PASSEX is a joint naval exercise conducted amongst allied navies whose deployments coincide.
- It emphasises on enhancing interoperability, strategic cooperation, and sound communication at sea.
- The exercise is designed to hone tactical manoeuvres, enhance maritime domain awareness, and reaffirm commitment towards Indo-Pacific maritime security.
- The key features of this exercise include helicopter control drills, fleet manoeuvres, joint Anti-Submarine Warfare (ASW) operations, officer exchanges, real-time data sharing, and testing of communication protocol for seamless coordination.

Participation of Indian Navy in PASSEX

- The Indian Naval fleet participating in PASSEX 2025 consists of the stealth frigate INS Tabar, a conventional submarine, and the P-8I long-range maritime reconnaissance aircraft.

Strategic Vision behind PASSEX

- The PASSEX 2025 aligns with the broader India–UK Comprehensive Strategic Partnership and the projected India–UK 2030 Roadmap.
- The exercise fortifies India's SAGAR vision (Security and Growth for all in the Region) and strategically asserts its presence in the Indo-Pacific region.

Details about INS Tabar

- *INS Tabar, the Indian Navy's stealth frigate, holds a significant role in the exercise.*
- *Commissioned in Russia in April 2004, INS Tabar is the third frigate of the Talwar-class and the first to be equipped with BrahMos missiles.*
- *Stationed with the Western Fleet in Mumbai, the frigate is equipped for air, surface, and sub-surface missions.*
- *It can function independently or as part of a naval task force, and it is outfitted with advanced weaponry like Barak-1 missiles and the most modern sensors.*

The Multinational Military Exercise KHAAN QUEST

Introduction and General Information about Exercise KHAAN QUEST

- Exercise KHAAN QUEST is a multinational peacekeeping training exercise initiated in 2003. It originally began as a bilateral exercise between the USA and Mongolia. However, it evolved into a multinational peacekeeping exercise from 2006 onwards.
- The Indian Army contingent (Kumaon Regiment) has arrived in Ulaanbaatar, Mongolia, to participate in the exercise, highlighting the global military cooperation fostered through this program.
- The 2025 edition marks the 22nd iteration of the exercise.

Host and Objective of Exercise KHAAN QUEST

- The exercise is hosted by the Mongolian Armed Forces.
- The objective of the exercise is to enhance interoperability, peacekeeping capabilities, and military readiness in accordance with Chapter VII of the UN Charter.
- Chapter VII authorises the UN Security Council to take necessary action on threats to international peace, breaches of peace, and acts of aggression. Actions can include both non-military (e.g., sanctions) and military measures.

Scope and Significance

- The key focus areas of the Exercise KHAAN QUEST include joint planning, coordination, physical fitness, and tactical drills.
- Specific exercises include drills such as checkpoints, cordon and search, civilian evacuation, counter-Improvised Explosive Device (IED) activities and casualty management.
- Its significance lies in the exchange of Tactics, Techniques, and Procedures (TTPs) amongst the participating nations. This significantly strengthens the military-to-military relations and camaraderie between these nations.

Conclusion

- *Exercise KHAAN QUEST is not only a crucial military exercise but also a testament to international cooperation and peacekeeping efforts. It serves as a platform for many nations to enhance their peacekeeping capabilities and strengthens the internationally coordinated response to uphold global security.*
- *This training exercise promotes mutual understanding and increases military readiness to act against threats to global peace.*

8th Edition of Exercise Shakti: A Joint Military Exercise between India and France

Introduction and About Exercise Shakti

- The 8th edition of Exercise Shakti has been scheduled between 18th June and 1st July 2025.
- This biennial military training exercise will be conducted at La Cavalerie, France.
- It is a prominent joint military drill between the Indian and French armies.
- The primary aim of this exercise is to sharpen operational coordination, enhance interoperability, and strengthen the military-to-military connection between both participating nations.

Objective and Focus of the 8th Edition of Exercise Shakti

- The 8th edition of Exercise Shakti is specifically designed to concentrate on joint operations in a sub-conventional environment.
- It will operate under the guidelines of Chapter VII of the United Nations Charter.
- Training exercises will be conducted in a semi-urban terrain setting.

Chapter VII of the United Nations Charter

- Chapter VII of the United Nations Charter authorises both military and non-military actions with the objective of international peace enforcement.
- These actions can range from sanctions and blockades to troop deployment.

Other Joint Exercises between India and France

- Apart from Exercise Shakti, India and France conduct

other joint military exercises.
- Exercise Varuna, an initiative by the Indian and French Navies.
- Exercise Garuda, a joint operation between the Indian and French Air forces.
- Exercise Desert Knight, a tripartite exercise involving the participation of India, France, and the United Arab Emirates (UAE).

Importance and Impact of Joint Military Exercises
- These joint military exercises, like Exercise Shakti, signify a strong commitment towards mutual cooperation and international peacekeeping efforts between participating nations.
- Exercise Shakti aids in upgrading their interoperability, enriching military-to-military relations, and escalating operational coordination.
- These exercises also afford an opportunity to understand each other's military structure, strategy, and culture thereby fostering mutual trust and respect.
- Such joint military exercises are effective platforms for sharing expertise and experiences, which can adequately prepare nations for any future collaborative operations.
- It is paramount to understand that the information provided here about Exercise Shakti is not finite; the dynamics, strategies, and executions can change with every edition of the exercise, based on the emerging geopolitical scenario, nations' defense strategies, and international relations.

Operation Sindhu - India's Evacuation from Iran through Armenia

Introduction and About
- Operation Sindhu was launched by India for the evacuation of its nationals from Iran.
- Armenia's geographic position and strong diplomatic ties with India positioned it as an essential route in this operation.

Geographical Context
- Iran is bordered by Armenia, Azerbaijan, Turkmenistan, Afghanistan, Pakistan, Iraq and Turkey, and has southern coastlines along the Persian Gulf and Gulf of Oman.
- Armenia's 44-km border with Iran and the Nurduz-Agarak crossing, linked to the Iranian capital, Tehran, by a 730 km highway, makes it a practical and safe land route for swift Indian evacuation.

Challenges at Other Borders
- Other borders pose various challenges.
- Geopolitical tensions (post-Operation Sindoor) made the Iran-Pakistan border inaccessible to India.
- The support of Turkey & Azerbaijan for Pakistan makes their borders with Iran unfavorable for India.
- India's lack of diplomatic ties with Taliban-ruled Afghanistan.
- The borders with active conflict zone Iraq and remote, underdeveloped Turkmenistan.

Importance of Armenia for Operation Sindhu
- Armenia has shown support for India at international fora such as on issues related to Kashmir and UNSC seat.
- In 2022, India superseded Russia as Armenia's top military supplier, featuring a USD 250 million deal for PINAKA rocket launchers, Akash-1S air defense, and other weapons.
- Armenia is crucial to the International North-South Transport Corridor, aligning with India's broader strategy to secure trade and evacuation routes through the Caucasus region.

Comparison with Other Key Indian Evacuation Operations

Other key Indian Evacuation operations:
- Operation Kaveri in 2023 - Evacuation from Sudan during military clashes
- Operation Ajay in 2023 - Evacuation from Israel during the Israel–Hamas conflict
- Operation Ganga in 2022 - Evacuation from Ukraine during the Russia-Ukraine war
- Operation Devi Shakti in 2021 - Evacuation from Afghanistan post Taliban takeover
- Operation Samudra Setu in 2020 - Evacuation from various countries via sea as part of the Vande Bharat Mission during the Covid-19 pandemic
- Operation Raahat in 2015 - Evacuation from Yemen during the civil conflict
- Operation Safe Homecoming in 2011 - Evacuation from Libya during the civil war in Arab Spring.

Economy

Fiscal Deficit Target Achieved by India for FY25

Introduction and Definition of Fiscal Deficit
- Fiscal Deficit refers to the difference between a government's total expenditure and its total income (excluding borrowings) within a given fiscal year.
- To understand its impact on the overall economy, Fiscal Deficit is usually expressed as a percentage of the GDP.
- It indicates the amount the government requires to borrow to cover expenditure when income is inadequate.

Why in the News?
- India's Government has successfully met its fiscal deficit target of 4.8% of GDP for the fiscal year of 2024-25.
- The provisional data related to this achievement was released by the Controller General of Accounts (CGA).
- CGA, under the Department of Expenditure of the Ministry of Finance, is the Principal Accounting Adviser to the Government of India.

Implications and Fiscal Deficit of India
- A manageable fiscal deficit helps to ensure overall macroeconomic stability. However, an elevated fiscal deficit can lead to a rise in borrowing needs and may spark inflationary pressures.
- For FY 2024-25, India's fiscal deficit reached Rs 15.77 lakh crore, which equals 4.8% of the GDP.

Fiscal Receipts and Expenditure
- Total revenue receipts, including tax, non-tax, and capital revenues, totalled Rs30.78 lakh crore for FY 2024–25.
- Total expenditure for the same fiscal year stood at Rs 46.55 lakh crore.

Types of Deficit
- There are various types of deficits, including Revenue Deficit, Effective Revenue Deficit, and Primary Deficit.
- Twin Deficits refers to a situation where a country simultaneously experiences a fiscal deficit and a current account deficit.

Influencing Factors of Fiscal Deficit

- Factors affecting the fiscal deficit include Fiscal Policy, Economic Cycles, Unexpected Events, Inefficient Tax Collection, and Global Factors.

Indian Efforts for Fiscal Consolidation

- India has taken several measures to achieve fiscal consolidation, including the Fiscal Responsibility and Budget Management Act, 2003; amendment of FRBM Act in 2018; adopting a "glide path" approach for fiscal deficit reduction; and increasing Capital Expenditure.
- Efforts have also been made to enhance revenue collection, such as introducing the Goods and Services Tax and digitizing the tax system.
- State-level fiscal responsibility has also been promoted to complement central government efforts.

Fiscal Consolidation

- Fiscal Consolidation refers to the responsible management of government finances.
- It aims to balance revenue with expenditure, minimizing fiscal deficits and maintaining sustainable public debt. It is crucial for long-term economic stability.

World Economic Situation and Prospects Report 2025

Overview

- The World Economic Situation and Prospects (WESP) report provides global and regional economic outlooks and growth projections for the following years.
- This report is aimed to support equitable growth plans which are focused on Sustainable Development Goals (SDGs).
- It is a collective effort of the United Nations Department of Economic and Social Affairs in partnership with UNCTAD and five regional commissions of the UN.

India's Economic Forecast

- India's GDP growth forecast for 2025 has been revised to 6.3% from the earlier estimate of 6.6%.
- Despite this downgrade, India still holds the top position among major global economies. The growth rate is projected to reach 6.4% in 2026.
- Inflation in India is expected to scale down from 4.9% in 2024 to 4.3% in 2025, indicating efficient monetary management.
- Joblessness seems mostly constant, although disparity persists in labour force participation between genders.

Major Factors Behind India's Growth

- India's manufacturing growth has hit a record value of Rs 27.5 lakh crore (2023-24), and total exports figure reached USD 824.9 billion in 2024-25.
- The nation's growing defence production and export to nearly 100 countries underscores the global faith in Indian defence competencies.

Global Economic Viewpoint

- Global GDP growth is expected to contract to 2.4% in 2025 (from 2.9% in 2024), and 2.5% in 2026.
- This includes both advanced and emerging economies, with the USA projected to witness a decline owing to tariffs and policy uncertainty.
- Economies such as Brazil, Mexico and South Africa are experiencing downgrades caused by lukewarm trade, falling investment, and commodity price instability.

Predominant Global Economic Concerns

- Rising food inflation, which is driven by various factors like climate changes, currency devaluation, trade protectionism, and disruptions in supply chains, is a significant worry.
- At present, around 343 million people worldwide face severe food insecurity, with 1.9 million at risk of famine in conflict regions.
- Rising trade and global risks are escalating due to increased tariffs by the US, causing global trade costs to soar.

About UN Department of Economic and Social Affairs (UNDESA)

- Established in 1948, UNDESA plays a central role in the UN Secretariat and guides nations in implementing the 2030 Agenda for Sustainable Development and attaining the Sustainable Development Goals (SDGs).
- Operating under the UN Secretary-General, UNDESA equips its members with data, analysis, and policy guidance on economic, social, and environmental concerns.
- Key functions include coordinating worldwide efforts in poverty eradication, fostering inclusive growth, environmental conservation, and promoting good governance.

Leading Economic Report Publishers

➢ *Several international entities, including the World Bank, International Monetary Fund (IMF), World Economic Forum (WEF), UN Conference on Trade and Development (UNCTAD), release vital economic reports that guide policy formulation across the globe.*

Flipkart's Acquisition of NBFC Licence

Introduction and About

- Flipkart, a renowned Indian e-commerce company, has recently been granted a Non-Banking Financial Company (NBFC) license from the Reserve Bank of India (RBI).
- This marks their first-of-its-kind recognition as an Indian e-commerce business to receive such a license.
- This license facilitates Flipkart to directly lend funds to its sellers and customers, defying the need for an intermediary financial institution.

What's New

The essential news underscores Flipkart's achievement of obtaining the NBFC licence by RBI, allowing them to provide loans to their customers and sellers directly, thereby bolstering their financial services.

Specific Requirements for Obtaining NBFC Licence

- To be eligible for a Non-Banking Financial Company licence, one has to register under the RBI Act, 1934.
- Such a company must be incorporated following the provisions of either the Companies Act, 1956 or 2013.
- Additionally, the company must maintain a minimum Net Owned Fund (NOF) of Rs 10 crore.

Understanding NBFC

- An NBFC is a company incorporated under the Companies Act, 1956 or 2013, focusing primarily on activities such as lending, investing in securities, and engaging in leasing or hire-purchases.
- Notably, the companies focusing mostly on domains like agriculture, trades in goods/services, industry, or real estate aren't considered as NBFCs.
- Companies primarily drawing deposits through various schemes or arrangements, irrespective of whether as lump sums or installments, fall under the category of Residuary Non-Banking Financial Companies (Residuary NBFCs).

Difference between NBFCs and Banks

- Unlike banks, Non-Banking Financial Companies are not permitted to accept demand deposits.
- NBFCs do not form part of the existing payment and

settlement systems; hence they cannot issue cheques.
- Furthermore, depositors under NBFCs are not safeguarded by the Deposit Insurance and Credit Guarantee Corporation (DICGC), unlike banking customers.

Importance of NBFC Licence for Flipkart
- By ensuring direct lending to its customers and sellers, Flipkart can enhance customer satisfaction and loyalty.
- They can also reduce the time and complexity of transactions, thereby contributing to an improved customer experience.
- The move further strengthens Flipkart's position in India's e-commerce market.

IREDA Earns 'Excellent' Ratings from DPE

Introduction to IREDA's Achievement
- The Indian Renewable Energy Development Agency Ltd. (IREDA) has recently been acknowledged with an 'Excellent' rating for the fourth consecutive year.
- This rating is in recognition of the agency's commendable performance in the Power and Non-Banking Financial Companies (NBFC) sectors.
- The Department of Public Enterprises (DPE) has bestowed this honour upon IREDA.
- IREDA's achievement underlines its leadership in the field of green finance and demonstrates its commitment to promoting sustainable energy solutions for national development.

About IREDA
- Established in 1987, IREDA is a 'Navratna' public sector company managed under the Ministry of New and Renewable Energy (MNRE).
- As a Non-Banking Financial Institution, it stands as the largest green financing NBFC in India.
- The company's principal focus is on promoting, developing, and supporting renewable energy and energy efficiency projects.
- Also, IREDA encourages banks and other financial institutions to adopt lending practices supporting the renewable sector.

The Role of DPE Ratings
- The DPE operates under the Ministry of Finance in India and is responsible for devising policies around Central Public Sector Enterprises' (CPSEs) performance, autonomy, and finances.
- It publishes an annual Public Enterprises Survey to monitor the financial and operational performance of CPSEs.
- On a yearly basis, DPE Ratings assess the performance of CPSEs on Memorandum of Understanding (MoU) targets such as profitability and efficiency.
- These assessments range from 'Poor' to 'Excellent', promoting accountability and transparency within the public sector.

India's Renewable Energy Initiatives
- To further the country's renewable energy initiatives, several schemes and alliances have been set in motion.
- These include the PM-KUSUM scheme and the Production Linked Incentive (PLI) scheme for Solar PV manufacturing.
- India is also part of the International Solar Alliance, reflecting the country's commitment to promoting the worldwide use of solar energy.

Reforming Special Economic Zones in India

Introducing Changes in SEZ Rules
- The Ministry of Commerce & Industry introduced amendments to the SEZ Rules for semiconductor and electronics component manufacturing.
- These changes aim at encouraging capital investment and streamlining operations, thereby facilitating high-tech sector growth.
- Post amendments, Micron and Aequs Group will develop semiconductor and electronics component SEZs in Gujarat and Karnataka respectively.

Details of the Key Changes
- The minimum land requirement for SEZs in this sector has been reduced from 50 Ha to 10 Ha.
- The rules around encumbrance-free land have been relaxed. Boards can now approve if the land is mortgaged/leased to the government or its agencies.
- Free-of-cost goods can now be included in Net Foreign Exchange (NFE) calculations.
- SEZ units can supply to the Domestic Tariff Area (DTA) after paying duties.

About Special Economic Zones (SEZ)
- SEZ is a duty-free enclave treated as foreign territory for the purposes of trade, tariffs, and operations.
- Replacing Export Processing Zones (EPZs), SEZs were introduced in India in 2000.
- Regulated by the SEZ Act, 2005 and SEZ Rules, 2006, operations range from Export Processing Zones (EPZ) to Free Ports, Urban Enterprise Zones and more.
- The Development of Enterprise and Service Hubs (DESH) Bill, 2022 aims to transform SEZs into more flexible and inclusive Development Hubs.

Objectives and Incentives of SEZs
- SEZs aim to generate economic activity, boost exports, create employment, attract investment, and develop infrastructure.
- Incentives include duty-free import/domestic procurement of goods, exemption from certain taxes, single-window clearance, and External Commercial Borrowing (ECB) allowance.

Challenges Faced by SEZs in India
- Challenges include declining cost competitiveness due to rising input costs and OECD tax norms, issues in land acquisition, infrastructure problems, regulatory burdens, limited domestic market access, underutilisation of SEZs, and environmental concerns.

Recommendations by Baba Kalyani Committee
- Proposed measures include renaming SEZs as 3Es – Employment and Economic Enclaves, delinking from Net Foreign Exchange (NFE) Performance, incentivising based on investment and job creation, creating separate frameworks for manufacturing and service SEZs, and infrastructure development.

Measures to Strengthen SEZs in India
- Proposed policy and regulatory reforms, infrastructure, and connectivity upgrades, measures to enhance competitiveness, skill development, and the adoption of global best practices.

Other Key Government Initiatives
- *These are National Investment and Manufacturing Zones (NIMZs), Industrial Parks and the National Industrial Corridor*

Development Programme (NICDP) developed under India's National Manufacturing Policy (NMP), 2011. These initiatives aim to boost manufacturing, create jobs, and enhance global competitiveness.

Revision of GDP Base Year to 2022-23

Introduction and About

- The Ministry of Statistics and Programme Implementation (MoSPI) declared that the GDP base year would be revised. It's set to change from 2011-12 to 2022-23, and the revised data will be released on 27th February 2026.
- In addition to the GDP revision, the Indices for both Industrial Production (IIP) and Consumer Price Index will be updated to 2022-23 and 2023-24, respectively.

Understanding GDP Base Year

- The term "base year" for GDP refers to the year used as a benchmark for calculating economic growth. It currently stands at 2011-12, meaning this year's GDP acts as a benchmark for the years that follow.
- Proper choice of the base year ensures the inclusion of new industries and eradication of defunct ones. It also fosters the adoption of fresh and more accurate data sources and methods.
- The base year is expected to register normal economic activities free from events like pandemics, droughts, and floods. The base year should be updated every 5 to 10 years, which ensures that national accounts reflect the most recent data accurately.

Frequency and History of GDP Base Year Revision

- The upcoming 2026 revision will be the eighth of its kind. We've previously seen seven updates, with the first effective from 1948-49 to 1960-61 in August 1967, and the most recent on 30th January 2015, transitioning from 2004-05 to 2011-12.
- The inaugural national income estimates for India were compiled by the National Income Committee in 1949, chaired by P.C. Mahalanobis.
- Plans to revise the base year to 2017-18 were scrapped due to issues highlighted by the Periodic Labour Force Survey, which revealed a 45-year high unemployment rate, the Consumer Expenditure Survey's indication of increasing poverty, and as the introduction of GST and demonetisation and the COVID-19 pandemic had made the years following 2017 abnormal for economic assessment.

Rationalising GDP Base Year Revision

- The revision to the GDP base year is necessary to reflect the structural changes that the Indian economy has undergone. It ensures that sectors such as digital services, the gig economy, and renewable energy that are picking up pace are factored in, while industries in decline receive appropriate reassessment or removal.
- To ensure GDP growth rates remain comparable over time, a new base year applies updated price weights that separate real growth from inflation effects.
- Accurate GDP data is important for policy and investment decisions as it guides fiscal policies on taxation and expenditure and offers businesses insights into GDP trends for expansion plans.
- A rectified GDP base year will correct anomalies caused by earlier revisions and reflect COVID-19 impacts and policy changes like GST formalisation and Production Linked Initiative schemes.

Challenges in the GDP Base Year Revision

- As many registered companies don't file audited balance sheets, the 2015 GDP base year revision led to under-reporting and issues like overstating big companies' profits while missing smaller enterprises.
- Data discrepancies, credibility, and the technical complexity of revising historical GDP data that aligns with the new base year pose significant challenges to GDP base year revisions.
- Improving India's GDP Base Year Revision
- To make the process robust, a balanced approach is needed, combining MCA-21 with indices such as ASI, IIP and surveys like NSSO.
- The implementation of double deflation and consistently aligning GDP estimation with UN System of National Accounts standards will help in maintaining accuracy during GDP revision.
- - Regular revisions should be institutionalised, and AI-driven GDP tracking should be invested in for timely and accurate estimates. Accuracy of GDP estimation can also be improved by properly weighting emerging areas like digital services and startups while recalibrating traditional industries.

RBI's Monetary Policy and Its Tools

Introduction to RBI's Monetary Policy

- The Reserve Bank of India (RBI) uses monetary policy to regulate the economy's money supply.
- Its main objective is price stability, primarily focused on inflation targeting.
- Other aims include promoting growth, generating employment, and maintaining exchange rate stability.

The June 2025 Monetary Policy Committee (MPC) Meeting

- In June 2025, the MPC met and highlighted the fragility of the global economy.
- Despite 100 bps rate cuts from February 2025, the governor noted that monetary policy has a limited scope to support growth.
- Due to slow inflation reduction and external uncertainties, it was deemed right to shift from an accommodative to a neutral stance.

Accommodative and Neutral Stance

- An accommodative stance means the RBI lowers or keeps low policy rates to encourage growth and investment during slow growth or low inflation periods.
- A neutral stance allows the RBI flexibility to increase or decrease rates based on evolving inflation or growth risks, aiming for a balanced policy approach.

Tools of Monetary Policy

- Quantitative Tools include Reserve Ratios, Open Market Operations, Repo & Reverse Repo Rate, Bank Rate, Marginal Standing Facility, Liquidity Adjustment Facility, and Market Stabilisation Scheme.
- Qualitative Tools include Margin Requirement, Consumer Credit Control, Rationing of credit, Moral Suasion, and Direct Action.

Understanding Monetary Policy Tools

- Reserve Ratios include the Cash Reserve Ratio and the Statutory Liquidity Ratio.
- Repo & Reverse Repo rates concern the rate at which the RBI offers and absorbs overnight liquidity to and from banks.
- Bank Rate is the rate at which the RBI lends long-term funds to banks without any collateral.
- The Marginal Standing Facility allows commercial banks to borrow overnight funds using their SLR portfolio, at a penal

interest rate.
- Liquidity Adjustment Facility includes overnight as well as term repo auctions.
- The Market Stabilisation Scheme includes special bonds issued by the RBI on behalf of the government to absorb excess liquidity.
- Qualitative tools such as Margin Requirement, Consumer Credit Control, and Rationing help control speculative lending and regulate credit.
- Moral Suasion and Direct Action are measures taken by the RBI urging commercial banks to follow certain measures, and actions against banks failing to meet specified conditions respectively.

Geography And Enviorment

World Environment Day 2025 and India's Battle Against Plastic Pollution

Introduction and World Environment Day 2025

- World Environment Day (WED) will be observed globally on 5th June 2025, with South Korea taking the lead as the host country.
- In India, the Prime Minister will plant a Banyan sapling under the 'Ek Ped Maa Ke Naam' initiative as part of the Aravalli Green Wall Project.

About World Environment Day (WED)

- The United Nations General Assembly established WED in 1972 on the opening day of the Stockholm Conference on the Human Environment – the first global summit on environmental issues.
- Since it's beginning in 1973, the United Nations Environment Programme (UNEP) has prominently led WED.
- The theme for 2025, "Beat Plastic Pollution," aims to raise awareness about plastic production, use, and disposal, and encourages implementing solutions like refusing, reducing, reusing, and recycling.

Significance and Impact of Plastic Pollution

- Plastic pollution significantly aggravates global pollution, biodiversity loss, and climate change.
- An estimated 11 million tonnes of plastic enter water bodies annually.
- The global cost of plastic pollution is estimated at USD 300–600 billion per year, with India accounting for nearly 20% of the global total.

'Ek Ped Maa Ke Naam' Campaign and the Aravalli Green Wall Project

- The campaign aims to honour mothers by encouraging tree planting and environmental conservation.
- The Aravalli Green Wall Project seeks to form a green belt buffer along the Aravalli Mountain Range in India, inspired by Africa's Great Green Wall project.
- Both initiatives aim to combat land degradation, enhance biodiversity, and support sustainable development.

Reasons for High Plastic Pollution in India

- Factors such as high plastic consumption, poor waste management, proliferation of single-use plastics, rapid urbanisation, and a lack of sustainable alternatives contribute to India's plastic pollution.

Consequences of Mismanaged Plastic Waste in India

- Mismanaged plastic waste leads to environmental degradation and poses significant public health risks.
- The economic costs are high, with an estimated loss of over USD 133 billion in material value from plastic packaging by 2030.

Regulations and Steps for Plastic Waste Management in India

- Several regulations have been put in place, including the Plastic Waste Management Rules and India Plastics Pact.
- To strengthen plastic waste management, further actions needed include stricter policy enforcement, improved waste management infrastructure, reduction in plastic use, public awareness, and the implementation of innovative solutions.

Conclusion

- *World Environment Day 2025 calls for decisive action against plastic pollution.*
- *While India's initiatives like the 'Ek Ped Maa Ke Naam' campaign and the Aravalli Green Wall Project mark significant steps towards sustainability, stronger policies, public participation, and innovative strategies are crucial for effective management of plastic pollution and environmental conservation.*

Khichan and Menar - New Ramsar Sites

Introduction to Khichan and Menar as Ramsar Sites

- The Khichan wetland, also known as Phalodi, and the Menar wetland, located in Udaipur, are two regions in Rajasthan that have recently been declared as Ramsar Sites.
- This brings the total number of Ramsar Sites in India to 91 which is the highest number of sites in any Asian country.
- Khichan is popular for attracting thousands of migratory Demoiselle cranes when they migrate each year, while Menar, also called Bird Village, is known for its community-led initiatives in bird conservation.
- Along with these two new additions, Rajasthan now totals four Ramsar Sites which include Sambhar Lake, which covers Nagaur and Jaipur districts, and Keoladeo Ghana National Park situated in Bharatpur.

About Wetlands and Ramsar Convention

- Wetlands come under categories such as marsh, fen, peatland, or water bodies which can be natural or artificial, static or flowing, and includes marine areas with a depth never exceeding six metres.
- Ecotonally, wetlands are transitional land between terrestrial and aquatic ecosystems.
- The Ramsar Convention, established in 1971 in Ramsar, Iran, sets a global framework for wetland conservation and encourages their wise use.
- India became a member of this Convention in 1982.

Montreux Record and India's listed Wetlands

- The Montreux Record is a record of Ramsar Sites where the ecological character has been or is likely to be adversely affected by human activities or pollution.
- Currently, there are two wetlands from India that are listed in the Montreux Record: Keoladeo National Park in Rajasthan which has been listed since 1990 and is a UNESCO World Heritage Site, and Loktak Lake in Manipur that got listed in 1993.
- Loktak Lake is the largest freshwater lake in the Northeastern region of India. It is renowned for its Phumdis, floating complexes of vegetation, soil, and decomposed organic matter.

- Chilika Lake, another major wetland in India, was added to the Montreux Record in 1993. However, it was removed from the record in 2002, becoming the first site from Asia to achieve this.

Important Festival

- The Bonalu festival 2025 commenced at the Golconda Fort in Hyderabad with devotees congregating at Sri Jagadamba Mahankali temple to engage in traditional rituals. The Telangana government provided a fund of ₹20 crore to 2,783 temples and the festival was championed by prominent political leaders. The festival, a display of the region's cultural pride, will persist in Secunderabad and Old City over the following weeks.
- The Ambubachi Mela 2025, commemorating the menstrual cycle of Goddess Kamakhya,was held at Kamakhya Temple in Assam from June 22 to 25. This unique festival, which challenges menstrual taboos while celebrating womanhood and promoting menstrual hygiene, signifies Assam's progressive take on menstruation. The temple, considered one of the 51 Shakti Peethas, holds deep mythological roots. With substantial public turnout and governmental backing, the event reinforces both spiritual commitment and societal conversations around feminine strength and respect.
- The 3rd Lavender Festival was held in Bhaderwah, Jammu & Kashmir, from June 1-2, 2025, displaying the ongoing success of the CSIR-Aroma Mission. The event drawn more than 1,200 participants and included field visits, live distillation demonstrations, and farmer and start-up success stories. The festival boasted over ₹10.5 crore turnover from lavender-based products and highlighted the socio-economic advancement, women entrepreneurship, and industrial development stimulated by lavender farming, with over 9,000 trained individuals.
- Sri Lanka is celebrating the Poson Poya festival, a revered event marking over 2,000 years since Arahat Mahinda's first sermon introduced Buddhism to the nation. The festivities, including lantern displays, almsgiving, and cultural programs, are taking place in Mihintale and Anuradhapura. This year, the Indian High Commission participated by presenting an exhibition on Buddhist heritage. President Anura Kumara Dissanayake used this occasion to reiterate values of national unity and moral revival.
- The Kataragama Esala Festival 2025 commenced in Sri Lanka with a flag hoisting ceremony, attracting devotees across diverse faiths and regions. Primarily held at the Maha Devala temple dedicated to Lord Skanda, the festival witnesses participation from Hindus, Buddhists, and Muslims, emphasising its interfaith appeal. The festival features a 500-km long pilgrimage known as the Pada Yatra, culminates with a fire-walking ceremony on July 7 and the Maha Perahera procession on July 10.

Meeting And Summits

International Conference on Glacier's Preservation

Introduction and Overview

- The First UN International Conference on Glaciers' Preservation recently took place in Dushanbe, Tajikistan.
- The event was facilitated by Tajikistan in collaboration with UNESCO and the World Meteorological Organisation (WMO).
- This occasion resulted in the adoption of the Dushanbe Glaciers Declaration as a measure of addressing issues related to glacier preservation.

About Glaciers

- Glaciers are essentially vast bodies of moving ice formed over centuries from compacted snow.
- Predominantly found in polar regions such as Greenland, the Canadian Arctic, and Antarctica, due to low solar insolation.
- Tropical glaciers, although less common, occur at high altitudes near the Equator, like those found in the Andes.

Importance of Glaciers

- Glaciers are a critical source of freshwater, holding about 70% of the world's total freshwater supply, whilst only 3% of Earth's water is freshwater.
- They contribute significantly to the river systems; The Hindu Kush Himalayas (HKH) often called the "Water Tower of Asia," provides about 40% of the Indus River system's water flow.
- Glaciers act as climate archives, preserving climate records dating back to 800,000 years. This allows scientists to study historical warming and cooling patterns.
- The temperature difference between the Himalayan glaciers and the Indian Ocean is crucial in driving the South West monsoon winds.

Glacier Retreat

Glacier retreat is a critical global concern. For instance, Nepal lost the Langtang's Yala Glacier and Venezuela became the 2nd country, following Slovenia, to lose all its glaciers.

Initiatives Taken

- At a national level, India has introduced the National Mission for Sustaining the Himalayan Ecosystem (NMSHE), Centre for Cryosphere and Climate Change Studies, and Glacial Lake Outburst Flood (GLOF) risk mapping.
- - Globally, initiatives include the International Year of Glaciers Preservation (2025), Decade of Action for Cryospheric Sciences (2025–2034), and establishment of the International Centre for Integrated Mountain Development (ICIMOD).

2025 Osaka World Expo: India's Cultural Representation

Introduction and Theme

- India made a striking cultural statement at the 2025 Osaka World Expo in Japan, presenting its civilisational ethos and soft power.
- Under the theme of compassion and inclusivity, India blended ancient wisdom with modern innovation, demonstrating its unique cultural heritage.
- The Osaka World Expo 2025 is themed "Designing Future Society for Our Lives," offering a platform for global innovators to create solutions for future challenges.

The Purpose and Design of Osaka Expo

- The Osaka Expo works as a 'Living Lab,' promoting innovation using shared knowledge and advanced technologies.
- It explicitly aligns with the Sustainable Development Goals (SDGs) set by the United Nations to encourage a sustainable future.

India's Pavilion

- The Indira Gandhi National Centre for the Arts (IGNCA) formed India's Pavilion under the Ministry of Culture's supervision.
- India introduced itself as a modern sutradhar (narrator),

recounting its civilisational story and presenting its cultural assets.

Key Elements of India's Pavilion

- The 'Bodhisattva Padmapani,' symbolising compassion and knowledge in Mahayana Buddhism from the Ajanta Caves, is the primary motif of India's Pavilion.
- The Lotus Courtyard features Bodhisattva forms and frescoes from the 2,000-year-old UNESCO-listed Ajanta Caves.
- Other elements such as the 'Oneness Lounge' with a reimagined Bodhi Tree symbolise spiritual unity. The 'Wall of Life' promotes internal wellness using Yoga and Ayurveda.

Implication of India's Pavilion

- The exposition of India's Pavilion showcases India's use of soft power in its foreign policy.
- By combining spiritual, cultural, and scientific achievements, India aims to foster robust global partnerships.
- Emphasizing its rich history and utilising its cultural fruits, India underscores its significant role in global society and future development.

Updates on the United Nations Security Council

New Non-Permanent Members to the UNSC

- The United Nations General Assembly (UNGA) has elected Bahrain, Colombia, the Democratic Republic of the Congo, Latvia, and Liberia as non-permanent members of the UN Security Council (UNSC) for the 2-year term, from 1st January 2026.
- These countries will unite with Denmark, Greece, Pakistan, Panama, and Somalia elected in 2024 serving through 2026.

Pakistan's Role in UNSC

- Pakistan has been named as the Chair of the UNSC 1988 Taliban Sanctions Committee for 2025.
- Additionally, it will fulfil the role of vice-chair of the UNSC Counter-Terrorism Committee during its 2025–26 tenure as a non-permanent member of the Council.

The Role of the UNSC

- The United Nations Security Council (UNSC), established in 1945 under the UN Charter, is one of the UN's six main bodies, with the primary aim of maintaining international peace and security.
- The council comprises 15 members, including 5 permanent members (P5) (China, France, Russia, the UK, and the US), who have veto power, and 10 non-permanent members, elected for 2-year terms by the UNGA.
- The non-permanent seats on the UNSC are distributed regionally: 5 for African and Asian States, 1 for Eastern European States, 2 for Latin American and Caribbean States, and 2 for Western European and other states.
- Elections are conducted annually through a secret ballot, and a two-thirds majority vote is necessary even if the candidates are unopposed.

India's Participation in the UNSC

- *India's participation in the UNSC as a non-permanent member has been during 1950-51, 1967-68, 1972-73, 1977-78, 1984-85, 1991-92, 2011-12, and 2021-22.*

The 1988 Taliban Sanctions Committee

- The UNSC 1988 Sanctions Committee was instituted under UNSC Resolution 1988 (2011).
- This committee focuses on monitoring and enforcing targeted sanctions against individuals and entities associated with the Taliban that pose a threat to the peace, stability, and security of Afghanistan.
- India chaired this committee until December 2021.

The UNSC Counter-Terrorism Committee (CTC)

- Established after the 9/11 terrorist attacks through Resolution 1373, the UNSC Counter-Terrorism Committee (CTC) is comprised of all 15 UNSC members.
- Its mandate includes promoting the implementation of the Resolution 1373, criminalising terrorism financing, denial of support to terrorists, suppressing safe havens and training for terrorist groups, and encouraging cooperation by sharing information on terrorism activities.
- In 2025, the chair of the CTC will be Algeria, with vice-chairs being France, Russia, and Pakistan.
- India chaired the CTC in 2022, during its 2021–22 UNSC tenure, actively voicing concerns over Pakistan sheltering UN-designated terrorists.

The 3rd United Nations Ocean Conference

Introduction to 3rd UN Ocean Conference

- The 3rd UN Ocean Conference (UNOC3), held in Nice, France in 2025.
- Adoption of the declaration "Our Ocean, Our Future: United for Urgent Action".
- The declaration reaffirms commitment to Sustainable Development Goals (SDG) 14: Life Below Water.
- Indigenous leaders advocated a binding treaty for plastic regulation from production to disposal, supported by 95 countries.
- Aim to address the Triple Planetary Crisis of climate change, biodiversity loss, and pollution threatening the world's oceans.

About United Nations Ocean Conference

- UNOC is a high-level global summit by the UN to hasten action towards SDG 14.
- Its theme focuses on accelerating action and mobilizing all actors for the conservation and sustainable use of the ocean.
- Addressing critical ocean challenges: climate change, marine pollution, overfishing, IUU fishing and biodiversity loss.
- UNOC3 aimed to establish the "Nice Ocean Agreements" and ensure ratification from 60 countries for the BBNJ Agreement.

Major Outcomes of Past Conferences

- The 2017 New York Conference, adopted the "Call for Action" declaration focusing on marine pollution and overfishing.
- The 2022 Lisbon Conference renewed pledges for 30% marine protection by 2030, known as the 30x30 target.

Key Outcomes of UNOC3

- The declaration urged full implementation of key agreements, including the Convention on Biological Diversity.
- It called for enhanced global action against climate change, including ocean acidification.
- The conference registered concern over plastic pollution and its environmental harm.
- Recognition of the economic potential of sustainable ocean activities.
- Importance of scientific research, indigenous knowledge, and ocean mapping.

Ocean Conservation Initiatives Announced at UNOC3

- Notable commitments by the European Commission, French Polynesia, Spain, Indonesia, and the World Bank.
- Formation of High Ambition Coalition for a Quiet Ocean, focused on combating underwater noise pollution.

Impact of the Triple Planetary Crisis on Oceans and Marine Ecosystems

- Climate change impacts causing thermal expansion, increased salinity, and disruption of marine ecosystems.
- Decline of coral reefs due to increased temperature causing coral bleaching.
- Overexploitation of marine resources and the detrimental effects of plastic and chemical pollution.
- Destruction of habitats, such as mangrove forests, due to industrial and recreational activities.

Importance of Safeguarding Oceans

- Ecological and biodiversity significance of the marine ecosystem.
- Climate regulation capabilities of oceans.
- Economic importance and livelihood support provided by the oceans.
- Oceans' contribution to scientific research and medical value.

Actions Needed for Promoting Ocean Sustainability

- For governments & policymakers: Expansion of MPAs, reduce plastic pollution, combat climate change.
- For business & industries: Sustainable fishing practices, green shipping, and tourism, promotion of a circular economy.
- For individuals: Choose sustainable seafood options, ditch single-use plastics, promote beach cleanups.
- Learning and adopting traditional methods from coastal communities to protect fish stocks.

'51st G7 Summit and India's Involvement'

'Introduction and India's Role'

- The 51st G7 Summit saw participation from India's Prime Minister, held in Kananaskis, Canada.
- India, not an official member of the G7, has received an invitation annually for the last six years, counting up to twelve times in total as an outreach country.

'Guests and Invitations'

The European Commission's President was invited to attend the G7 summit for the first time.

'Key Outcomes of the 51st G7 Summit'

- The summit resulted in several important action plans and commitments:
- Kananaskis Wildfire Charter: This commitment prioritises addressing wildfire threats using local actions, science-based and nature-based solutions. The endgoal is to halt and reverse deforestation and land degradation by 2030, with alignment to the Glasgow Leaders' Declaration (2021).
- G7 Critical Minerals Action Plan: The plan aims to diversify critical mineral production, boost investment and local value creation, and encourage innovation. This aligns with the Five-Point Plan for Critical Minerals Security, which is also endorsed by India.
- Strengthening of the World Bank-led Resilient and Inclusive Supply Chain Enhancement (RISE) Partnership was another significant outcome.
- Condemnation of Transnational Repression (TNR): The G7 denounced aggressive foreign interference where states or their representatives attempt to intimidate or harm individuals or communities beyond their own borders.
- Preventing Migrant Smuggling: The G7 members pledged to prevent migrant smuggling through the G7 Coalition to Prevent and Counter the Smuggling of Migrants and a G7 Action Plan due in 2024.

'About G7'

The G7, standing for 'Group of Seven,' represents an informal forum of the world's most developed economies — US, UK, Japan, France, Germany, Italy, and Canada.
While not an enumerated member, the European Union participates in the G7, alongside leaders from the World Bank, International Monetary Fund, and United Nations who are often invited.

'Origin and Evolution of G7'

- The G7 originated in 1975 as the G6 in response to the 1973 oil crisis and ensuing financial instability, with Canada joining a year later.
- Russia's inclusion in 1997 expanded the group to G8, but it regressed back to G7 after Russia's expulsion in 2014 following the annexation of Crimea.
- This grouping is informal, with no formal treaty, permanent secretariat or bureaucracy and decisions occur by consensus, despite the group lacking legislative authority.

'Economic Significance of G7'

- The G7 countries represent 40% of the global economy and 10% of the global population.
- They account for 36% of global power generation capacity, 30% of the global energy demand, and 25% of global energy-related carbon dioxide (CO_2) emissions.

Understanding Zonal Councils in India

Introduction and About Zonal Councils

- Zonal Councils in India are statutory, advisory bodies established under the States Reorganisation Act, 1956. They serve as a platform for fostering cooperative working among states and creating a healthy inter-state and Centre–State environment.
- These councils are not constitutional bodies and were first proposed by former Prime Minister Jawaharlal Nehru in 1956 following debates on the States Reorganisation Commission's Report.
- There are five Zonal Councils established under Sections 15 to 22 of the States Reorganisation Act, 1956, each representing a different geographic area of the country.

Meeting Held Recently

➢ *Recently, the 25th Central Zonal Council meeting was held in Varanasi, Uttar Pradesh. This meeting was chaired by both the Union Home Minister and Minister of Cooperation and was organised by the Inter-State Council Secretariat in cooperation with the Uttar Pradesh Government.*

Organisational Structure

- Each of the five Zonal Councils have the same structure with the Union Home Minister acting as Chairman. This includes the Chief Minister of one of the member states who acts as Vice-Chairman on rotation and the Chief Ministers, Lieutenant Governors, or Administrators from member States and Union Territories.
- Each state also contributes two ministers as members of the Council, as nominated by the Governor of the respective state.
- In addition, the Council includes a nominee from NITI Aayog, Chief Secretaries, and Development Commissioners of the member states.

Functioning and Objectives

- Zonal Councils aim to enhance mutual understanding and cooperation between the Centre and states as well among states. They allow discussions on issues that affect multiple states or both the Centre and states.
- The Councils have had significant impact on enhancing cooperative federalism, having held 61 meetings within the past decade.
- Major issues addressed by the Councils include the swift investigation of sexual offenses, the implementation of Fast Track Special Courts, financial inclusion, implementation of the Emergency Response Support System, and matters such as nutrition, education, health, electricity, urban planning, and cooperative sector development.

Miscellaneous

19th Statistics Day and Contribution of PC Mahalanobis

Introduction and Celebrations

- The 19th Statistics Day was celebrated on 29th June, commemorating the 132nd birth anniversary of Prasanta Chandra Mahalanobis.
- The theme for the year was '75 Years of National Sample Survey', highlighting the key role of NSS in reinforcing the statistical system in India.
- The government marked the occasion by releasing the SDG National Indicator Framework Progress Report 2025, giving the Prof. C.R. Rao Award to Dr Prajamitra Bhuyan, and launching the GoIStat app.

About National Statistics Day and PC Mahalanobis

- National Statistics Day was introduced by the Government of India in 2007 and is celebrated on June 29 each year.
- The day is dedicated to PC Mahalanobis and promotes the importance of statistics in the areas of policy-making, development, and governance.
- PC Mahalanobis was a notable Indian scientist and statistician born in Calcutta, today known as Kolkata.

Contributions of PC Mahalanobis

- Mahalanobis made several significant contributions to the field of statistics, including developing the Mahalanobis Distance formula, a measure for multi-dimensional data.
- He founded the Indian Statistical Institute in 1931 and Sankhya, the first Indian statistical journal, in 1933.
- Mahalanobis played a pivotal role in India's Second Five-Year Plan (1956–61) by advocating for the emphasis on heavy industries.
- He was instrumental in the launching of the National Sample Survey in 1950, which he recommended as the then Statistical Adviser to the Cabinet.

The Feldman-Mahalanobis Model

- *The Feldman-Mahalanobis model is an economic growth strategy adopted by developing nations, primarily focusing on investments in heavy industries to establish a robust industrial base and achieve long-term self-reliance.*

About National Sample Survey (NSS)

- *The NSS has been conducting extensive sample surveys throughout India since 1950.*
- *The National Statistical Office (formerly National Sample Survey Organisation) gathers data through numerous surveys focusing on households, industries, rural and urban prices, and crop estimates.*
- *Additionally, it maintains a sampling frame for urban surveys.*

About Ministry of Statistics and Programme Implementation (MoSPI)

- MoSPI was established as an independent ministry on 15th October 1999 following the amalgamation of the Department of Statistics and the Department of Programme Implementation.
- The ministry oversees the National Statistical Commission and the Indian Statistical Institute, and comprises two wings: Statistics and Programme Implementation.
- The Statistics Wing includes the Central Statistics Office (CSO) and National Sample Survey Office (NSSO), whereas the Programme Implementation Wing comprises the Central Twenty Point Programme (TPP), Infrastructure and Project Monitoring (IPM), and Members of Parliament Local Area Development Scheme (MPLADS).

Birsa Munda Martyr's Day Tribute and Significance

Introduction and About

- Bhagwan Birsa Munda, a tribal leader, religious reformer, and freedom fighter, is commemorated on 9th June, recognized as his Martyr's day.
- Also known as Dharti Abba or Father of the Earth, Birsa Munda is renowned for leading a resistance against British colonial policies and rallying Adivasi communities for land rights, social reform, and spiritual unity.

Early Life and Education

- Born on 15th November 1875 in Ulihatu, Jharkhand, to a Munda tribal family, Birsa was educated at the German Mission School.
- Initially influenced by Christian teachings, he eventually rejected them due to cultural alienation, instead founding the Birsait religion and drawing inspiration from Vaishnavism.

Beliefs, Teachings, and Resistance Against British Rule

- Birsa Munda advocated for monotheism through the worship of Singhbonga, the sun god, denounced societal ills, and promoted hygiene, spiritual unity, tribal identity, and community land ownership.
- His resistance against British land revenue policies which encouraged exploitation of tribal peasants spurred him to campaign for the reclamation of their rights.

The Ulgulan Movement

- After his arrest for rioting in 1895, Birsa spent two years in prison before resuming his efforts in mobilising support for the Ulgulan (The Great Tumult) movement upon release in 1897.
- The movement fought against British authority and promoted the establishment of a self-governed tribal state known as "Birsa Raj"

Aftermath and Legacy

- Although captured in February 1900 and dying in custody months later, Birsa Munda's impact was significant.
- The Chotanagpur Tenancy Act was passed in 1908, recognising tribal land rights, banning land transfer to non-tribals, and abolishing forced labour.
- Since 2021, Birsa Munda's birth date, 15th November, has been observed as Janjatiya Gaurav Divas (Tribal Pride Day).

Key Initiatives Related to Tribal Communities

- Numerous initiatives have been implemented for the welfare of tribal communities including the Dharti Aaba

Janjatiya Gram Utkarsh Abhiyan, targeting integrated development across Scheduled Tribe-majority villages.
- In 2023, PM-JANMAN was introduced to support Particularly Vulnerable Tribal Groups with targeted schemes.
- The Pradhan Mantri Adi Adarsh Gram Yojana (PMAAGY) aims to provide basic infrastructure in villages with a significant tribal population.

Goa Achieves Full Functional Literacy

Full Functional Literacy in Goa

- Goa has been declared fully functionally literate under the Ministry of Education's ULLAS (Understanding of Lifelong Learning for All in Society)-Nav Bharat Saaksharta Karyakram programme, also known as the New India Literacy Programme (NILP).
- While Goa's literacy rate was 93.60% as per PLFS 2023–24, the state-level ULLAS survey confirmed it has surpassed the 95% functional literacy benchmark.
- Earlier, Mizoram became the first state and Ladakh the first UT to achieve full functional literacy.

Understanding Functional Literacy and the ULLAS Scheme

- Functional literacy refers to an individual's capability to read, write, and apply numeracy skills in daily life to promote personal development and community engagement.
- The ULLAS scheme covers not only basic literacy but also empowers learners with significant life skills, nurturing lifelong learning and active citizenship.
- ULLAS is a centrally sponsored scheme, implemented from 2022 to 2027, designed to empower adults (15 years and above) who missed out on formal schooling.
- The scheme aims to achieve Foundational Literacy and Numeracy for 5 crore learners during FY 2022–27.
- Key components of the scheme includes Foundational Literacy and Numeracy, Critical Life Skills, Basic Education, Vocational Skills & Continuing Education.
- The scheme is implemented through volunteerism in hybrid mode to instill social responsibility and a strong sense of duty among citizens.

Key Features of the ULLAS Scheme

- Offers access to learning resources through the DIKSHA platform and ULLAS mobile/web portal, with support for 22 Indian languages.
- Incorporates the Foundational Literacy and Numeracy Assessment Test (FLNAT), held twice every year or as needed for evaluation and certification.

Brief Overview of Goa

- Goa, with its capital at Panaji, is located on the southwestern coast of India in the Konkan region and is geographically separated from the Deccan by the Western Ghats.
- Portugal retained control over its Indian territories despite Indian independence in 1947, until Operation Vijay was launched in 1961.
- The Goa Liberation Day is celebrated on 19th December to commemorate the liberation of Goa.
- On 30th May 1987, Goa attained statehood and this day is commemorated annually as Goa Statehood Day.

Current Administrative Structure of Goa and other UTs

- After attaining statehood, while Daman and Diu remained a Union Territory.
- On 26th January 2020, the UTs of Daman and Diu and Dadra and Nagar Haveli were combined to form a single UT named Dadra and Nagar Haveli and Daman and Diu.

Celebrating the 648th Birth Anniversary of Sant Kabir Das

Remembering the Life and Contributions of Sant Kabir Das

- On 11th June 2025, the country commemorated the 648th birth anniversary of Sant Kabir Das, also known as Kabirdas Jayanti or Kabir Prakat Divas.
- Sant Kabir Das (1440–1518) was an eminent mystic poet, a saint, and a social reformer who was born in Varanasi, Uttar Pradesh.
- Often portraying himself as a "julaha" (weaver) and "kori" (lower-caste identity), Kabir's humility and identification with the less privileged was evident.
- Receiving spiritual guidance from Ramananda, a Bhakti saint, and Sheikh Taqi, a Sufi teacher, he grew to become a significant follower of the Nirguna Bhakti tradition.

The Teachings and Philosophy of Sant Kabir Das

- As a fervent proponent of the Nirguna Bhakti tradition, Kabir emphasized devotion to a formless and attribute-less God (Nirguna Brahman).
- Alongside Ramananda, Kabir made devotional worship accessible to the masses by promoting it in vernacular languages, which was a revolutionary move.
- His teachings challenged the religious and social norms of his time, advocating a universal and inclusive path to God and highlighting the significance of truth, compassion, and equality.

The Role of Sant Kabir Das in the Bhakti Movement

➢ *Kabir played an essential role in the Bhakti movement (between the 7th-15th centuries), promoting devotion, inner purity, and social equality, while simultaneously rejecting rituals and casteism.*

Literary Contributions of Sant Kabir Das

- Kabir composed dohas (couplets) and bhajans (devotional songs) in Brajbhasha, Awadhi, and Sant Bhasha, which significantly impacted the evolution of Hindi literature. His compositions typically featured "ulatbansi", paradoxical verses with reversed meanings, to make readers rethink.
- Some of his renowned compilations include Kabir Bijak, Kabir Parachai, Sakhi Granth, Anurag Sagar, and Kabir Granthawali.
- Many of his verses are enshrined in the Guru Granth Sahib, which was compiled by Guru Arjan Dev, the fifth Sikh Guru, underscoring his influence on Sikhism.

Legacy and Following of Sant Kabir Das

- Kabir is revered by Hindus, Muslims, and Sikhs alike, and his teachings laid the foundation for the Kabir Panth, a spiritual sect. His followers are known as Kabir Panthis.
- His legacy represents communal harmony, moral integrity, and inner spiritual awakening, and continues to be celebrated annually on his birth anniversary.

50 Years of India's Crocodile Conservation Project and World Crocodile Day

Introduction and About

- The 17th of June, known as World Crocodile Day, marks a significant timeline for India as it commemorates 50 years of the Crocodile Conservation Project (CCP) from 1975 to 2025.
- The Indian state of Odisha is pivotal to this ecological initiative, being the only state in the country to host wild populations of all three native crocodilian species.

Crocodile Conservation Project (CCP)

- The CCP was launched by India at Bhitarkanika National Park in Odisha, supported by the United Nations Development Programme and the Food and Agriculture Organisation.
- The project implemented a strategic approach, the "rear and release" method, to increase the crocodile population.
- It also designed protected habitats, including Bhitarkanika and Satkosia Tiger Reserve, and boosted captive breeding alongside community awareness to further its conservation efforts.

Introduction to Crocodiles

- Known as the largest surviving reptiles, crocodiles predominantly dwell in freshwater ecosystems such as swamps, lakes, and rivers, with a single saltwater species exception.
- These nocturnal creatures are also poikilothermic, meaning their body temperature adjusts according to environmental fluctuations which earns them the term 'cold-blooded animals'.
- Despite their adaptive abilities, their existence is threatened by factors such as habitat destruction, egg predation, illegal hunting, dam construction, and sand mining.

Crocodile Population in India

- India is home to almost 80% of the global wild Gharial population, with an estimated count of 3,000 individuals across areas such as the National Chambal Sanctuary, Katarnia Ghat, and Son Gharial Sanctuary.
- The Saltwater crocodile population has seen recovery, with a total count of about 2,500, mainly spotted in zones like Bhitarkanika, the Andaman & Nicobar Islands, and the Sundarbans.

Polity

Digital Personal Data Protection (DPDP) in India

The Digital Personal Data Protection Act, 2023

- The DPDP Act, 2023 is India's maiden comprehensive data protection law that provides a legal structure for handling digital personal data and aims to ensure individual privacy while allowing lawful data processing.
- The Act was legislated almost six years after the landmark Supreme Court judgment in 2017 (KS Puttaswamy case) that recognised privacy as a fundamental right under Article 21. It draws inspiration from global frameworks like the General Data Protection Regulations (GDPR) of the EU.
- The Act applies to all digital personal data processed within India and data processing conducted outside India if it is done for offering goods or services within the country. It does not apply to personal data used for personal uses or data made public by the Data Principal or under a legal obligation.
- Personal data can only be processed for a lawful purpose and with the consent of the Data Principal, which can be withdrawn at any point. For minors under 18, as well as individuals with disabilities, a parent or a legal guardian must grant this consent.

The Rights and Responsibilities of the Data Principal and Data Fiduciairies

- The Data Principals, individuals whose personal data are being processed, hold a right to access the information, request correction or deletion, seek redress for grievances, and nominate a representative in case of death or incapacity.
- Data Fiduciaries, entities or organisations handling individual data must guarantee data accuracy, implement security measures to prevent data breaches, and inform the Data Protection Board of India (DPBI) and concerned individuals in case of any breach.

The DPDP Rules, 2025

- The Draft DPDP Rules, 2025, now under public review, permit the transfer of certain personal data outside India, as authorised by the government.
- The rules propose a "digital by design" Data Protection Board of India (DPBI) for consent mechanisms and grievance redressal, facilitating faster resolution of complaints and grievances online.

Concerns Around the DPDP Act, 2023

- The Act has been criticised for providing excessive state exemptions, potential violation of privacy rights, and allowing unrestricted cross-border data flow raising data security and sovereignty worries.
- Essential rights like the right to data portability are missing from the Act.

Possible Measures for Strengthening DPDP Act, 2023

- The Act might be improved by providing obvious definitions for terms like 'sovereignty' and 'integrity of India', encouraging bilateral data agreements, and adopting global best practices to ensure secure and trusted cross-border data flows.

Evolution of Right to Privacy in India

- India's notion of privacy rights evolved through a series of legal judgments and expert recommendations, culminating in the recognition of privacy as a fundamental right in 2017.

Global Practices on Data Governance

- The EU's GDPR is a comprehensive law safeguarding personal data, while China's Data Security Law and Personal Information Protection Law impose new restrictions on cross-border data transfers. The United States, on the other hand, does not have a comprehensive privacy law similar to GDPR.

Regulation under Article 240 and the Demand of Ladakh for 6th Schedule

Introduction to Article 240 and 6th Schedule demands

- The Centre has instated regulations for Ladakh under Article 240, to address grievances with job reservations, language recognition, and political representation.
- This is in contrast to the wider request for granting Ladakh the Sixth Schedule Status.
- Article 240 grants the President the authority to make regulations to assure peace and good governance of certain Union Territories.

Demands of Ladakh People and Government Regulations

- Post the abrogation of Article 370 and the implementation of the Jammu and Kashmir Reorganisation Act, 2019, Ladakh was declared a Union Territory without a legislature.
- Advocacy groups have been pushing for Ladakh's inclusion in the Sixth Schedule of the Constitution to pacify concerns related to land, jobs, and cultural identity.
- Key demands include constitutional protection, land ownership restrictions, legislative assembly for

representative governance, and Article 371-like protections.
- Government regulations for Ladakh include domicile-based job reservations, reservations for vulnerable groups, the preservation of native languages and one-third seat reservation for women in the LAHDC.

Reasoning behind 6th Schedule Status Demand
- The 6th Schedule status is being demanded due to its constitutional protection, safeguarding autonomy and security.
- It can additionally protect the fragile ecosystem of Ladakh from the hazards of mass tourism and unrestrained infrastructural growth.
- 6th Schedule status also provides legislative autonomy essential for preserving local culture and languages.

Understanding the 6th Schedule of the Indian Constitution
- The 6th Schedule of the Indian Constitution provides for the administration of tribal areas in Assam, Meghalaya, Tripura, and Mizoram—states where tribes have largely preserved traditional lifestyles.
- These tribal areas are constituted as autonomous districts under the executive authority of the respective states.
- The Governor has the power to create Autonomous District Councils (ADCs) and Autonomous Regional Councils (ARCs) in these four states, with legislative, judicial, and administrative powers.

Potential Measures for Addressing Ladakh's Unique Needs
- If 6th Schedule inclusion is not feasible, a Ladakh-specific framework can be brought into effect through a constitutional safeguard.
- Restrictions resembling those in Jammu & Kashmir, Sikkim, or Himachal Pradesh need to be put into place to prevent outsider land acquisition.
- Empowering Ladakh Autonomous Hill Development Councils (LAHDCs) can aid in resolving land, water, forest, education, and culture management issues.
- Implementing ecotourism policies can help maintain the ecological balance of the region.

Conclusion
- *While job reservations and language recognition are addressed to some extent through the new regulations under Article 240, Ladakh's demands for land rights and legislative autonomy aren't met yet.*
- *A customised constitutional safeguard, specific restrictions on land ownership, and the empowerment of LAHDCs are essential measures for achieving tribal rights, development, and ecological sustainability in Ladakh.*

Trust-Based Regulation and the Jan Vishwas (Amendment of Provisions) Act, 2023

Introduction to the Trust-Based Regulation and Jan Vishwas Act

The Jan Vishwas (Amendment of Provisions Act) 2023, in force from August 2023, replaces criminal penalties with fines for minor infractions.

The Act decriminalises 183 provisions across 42 Central Acts to facilitate ease of living, conducting business, and promote a trust-based regulatory approach.

About the Jan Vishwas Act and its Objective
- The Act is a key legislative change aimed at enhancing the ease of business activities and advancing trust-based regulation in India.
- It covers laws under 19 ministries including environment, agriculture, and corporate affairs, shifting from punishing to reformative legal mechanisms for minor, non-malicious violations.
- The Act reduces legal uncertainty from outdated provisions, especially beneficial for MSMEs, through ease of compliance.
- The Act moves toward a trust-based governance model that replaces colonial-era, fear-induced laws criminalising minor violations.
- Future steps include the proposed Jan Vishwas Bill 2.0 in the Union Budget 2025-26 to decriminalise over 100 more provisions and strengthen the trust-based regulatory system.

Trust-Based Regulatory Approach and its Importance
- The trust-based regulatory approach assumes individuals and businesses will comply with the law in good faith and not treat them as potential offenders.
- It aims to reduce excessive legal burdens while retaining strict measures for severe violations.
- The focus is on a partnership model promoting voluntary compliance, replacing strict penalties for minor violations.
- Notable features include replacement of jail terms with fines for minor offenses, risk-based enforcement, simplified compliance, self-declaration and transparency, and minimised government interferences.

Why India Needs a Trust-Based Regulatory Approach?
- The Act reduces colonial-era punitive measures that disproportionately impact small businesses.
- It simplifies regulations and makes compliance easier, is supportive of entrepreneurship, particularly on Digital Compliance and the GST Invoice Management System.
- The Act aims at decongesting the judiciary, reducing corruption, and promotes economic growth.
- The Act aligns with India's Amrit Kaal vision that encourages minimum government and maximum governance.

Challenges in Shifting to a Trust-Based Regulation in India
- Challenges include colonial legacy of suspicion and bureaucracy, overlapping regulatory frameworks, resistance to decentralisation and autonomy, and lack of trust metrics.

Strengthening Trust-Based Regulation in India
- Trust-based regulation can be enhanced through the adoption of 'One Nation, One Business' identity system.
- Harmonising laws notably through Jan Vishwas 2.0 and establishment of a Deregulation Commission is central to the reforms.
- Institutionalising risk-based enforcement, enhancing transparency, and reducing discretion can pave the way for trust-based governance.
- The establishment of metrics to measure trust and compliance ease, citizen feedback, and regular industry-regulator dialogue can assess the impact of reforms and refine policies continuously.

Recapitulating the Indira Nehru Gandhi v. Shri Raj Narain Case and National Emergency

Highlights of the Indira Nehru Gandhi v. Shri Raj Narain Case, 1975
- The case revolves around the 1971 general elections where Prime Minister Indira Gandhi was opposed by socialist leader Raj Narain.
- Allegations of electoral malpractices and misuse of government resources led to Raj Narain filing a petition against Indira Gandhi.
- The Allahabad High Court found her guilty of misusing government machinery, resulting in the nullification of her

election.
- On appeal to the Supreme Court, amidst political unrest, a national emergency was declared on 25th June 1975.

Key Details about National Emergency
- A National Emergency (NE) is proclaimed by the President under Article 352 in situations threatening India's security.
- NE can extend to the whole country or only a part of it, as stipulated by the 42nd Amendment Act, 1976.
- The 38th Amendment Act, 1975 gave the President power to issue Emergency proclamations based on several grounds.
- This was altered by the 44th Amendment Act, 1978, replacing "internal disturbance" with "armed rebellion".
- A National Emergency can continue for six months and be extended indefinitely with Parliament's approval every six months.
- National Emergency can be revoked anytime by the president without Parliament's approval.
- A resolution disapproving the continuation of a National Emergency can be passed by the Lok Sabha.
- The 38th Amendment Act, 1975 initially made the Emergency declaration inconceivable to judicial review, but the 44th Amendment Act, 1978 reversed it.

Impacts of National Emergency on the Constitutional Framework
- The imposition of a National Emergency can drastically reshape Centre-State Relations.
- In executive matters, the Centre can issue directions to any state, bringing them under its total control.
- Legislative changes can be made with Parliament gaining power to legislate on any subject in the State List.
- The President obtains power to modify revenue distribution between the Centre and the states.
- The tenures of Lok Sabha and State Legislative Assembly may be extended by Parliament.
- In regards to Fundamental Rights, Article 358 suspends Article 19 for the duration of a National Emergency on grounds of war or external aggression.
- A Presidential Order is required under Article 359 to suspend Fundamental Rights, excluding Articles 20 and 21. It may extend to the entire country or part of it during Emergency.

Parliamentary Committees in India

Introduction and About
- Parliamentary Committees are essentially an appendage of Parliament, considered mini legislatures.
- Consistently constituted by the Lok Sabha or Rajya Sabha or the Speaker/Chairman, these committees execute delegated functions of the Parliament.
- Their work is overseen by the presiding officer and their reports are presented directly to the House or the Speaker/Chairman.
- These committees are serviced by their respective secretariats.
- Deriving their power from the Indian Constitution under Article 105 and 118, these originate from the British Parliament.

Types of Parliamentary Committees
- Standing Committees, consistent and reconstituted annually, partook of the regular and ongoing tasks of Parliament with primary divisions into Financial Committees, Departmentally Related Standing Committees (DRSCs) and other committees, such as those on petitions, government assurances, etc.
- Ad hoc Committees, temporary in nature, are set up for the accomplishment of specific tasks after which they dissolve; an example can be the Select Committee on GST.

Importance of Parliamentary Committees
- Ensuring Executive Accountability through public records and opinion, improving legislative quality and democratic legitimacy.
- Facilitating Informed & Inclusive Lawmaking through interaction with experts, civil society, and officials.
- Constructive provision for capacity building and governance reform offering value-added recommendations.

Challenges Faced by Parliamentary Committees
- Committees have limited enforcement powers and lack an institutional follow-up mechanism.
- Constraints in resources and research hamper in-depth scrutiny and evidence-based analysis.
- Low attendance of MPs results in reduced quality of deliberations.
- Insufficient Parliamentary Time means that key legislations and budgetary proposals often bypass in-depth scrutiny.
- Political interference and external pressures often compromise their impartiality.
- DRSCs handle multiple ministries, resulting in limited subject-specific focus and hampered development of expertise due to their broad mandate and short tenures.

Measures to Strengthen Parliamentary Committees
- Provision of well-equipped research support and secretariat.
- Institutionalisation of Accountability Mechanisms mandating ministries to submit Action Taken Reports.
- Amendment of Rules of Procedure making referral of all non-finance bills to committees mandatory.
- Need to improve MP participation and capacity building with targeted measures.
- Promotion of transparency and citizen engagement, to further public trust, transparency, and participation in the legislative process.

Conclusion
- *Parliamentary Committees play a crucial role in enhancing participatory governance, democratic accountability, and legislative oversight.*
- *The call from the Speakers for greater responsiveness and respect to committee recommendations underlines the urgency to revitalise these institutions.*
- *As India progresses towards transparent governance driven by data, committees must evolve into engines of reformation and accountability at both Union and State levels, ensuring effective policy implementation.*

Quick Highlights

- The Securities and Exchange Board of India (SEBI) has greenlit the initiation of electricity derivatives on the Multi Commodity Exchange (MCX) to bolster electricity price risk management and facilitate integration of renewable energy. These financial instruments, which include futures contracts, options, and swaps, will help electricity generators, distributors, and large industrial consumers hedge against power price fluctuations. This initiative aligns with India's clean energy ambitions, aiming for over 50% of installed capacity from renewable energy by 2030 and net-zero emissions by 2070. An estimated USD 250 billion annual investment will be required until 2047 to realise these objectives.
- The 11th International Yoga Day (IYD) was observed globally on 21st June 2025 under the theme 'Yoga for One Earth, One Health'. The day, celebrated to increase awareness about the benefits of yoga for health, peace and well-being, was first

declared by the UN in 2014 following a proposal by India. The 21st of June was selected to coincide with the Summer Solstice, the longest day in the Northern Hemisphere, which is traditionally linked to spiritual awakening. The practice of yoga, originating from the Indus Valley Civilization and documented in ancient Indian scriptures, is globally recognised by UNESCO and the World Health Organisation for its contributions to holistic health and combating non-communicable diseases.

- In 2026, the Ministry of Statistics and Programme Implementation (MoSPI) will carry out India's first comprehensive Household Income Survey through the National Sample Survey (NSS). This large-scale statistical exercise, tasked with collecting reliable income data from various sources, aims to resolve historical income-consumption mismatches and assess the impact of technology on earnings. The data will be used to assist in economic policymaking and welfare planning. The National Statistical Office (NSO) organises the survey, and it stands as the premier statistical agency under MoSPI.
- The Indian Farmers Fertiliser Cooperative (IFFCO) is launching its first international nano fertiliser plant in Brazil, after successful exports to over 40 countries. The plant, with an annual production capacity of 4.5 million litres will produce fertilisers coated with nanomaterials, improving the availability of nutrients to crops over a longer period. This move responds to the increasing interest from Brazilian farmers to enhance productivity and reduce fertiliser usage; nano fertilisers usage has already led to a 20% cut in urea and DAP usage in Brazil and a consequent rise in crop yields. Despite potential adoption challenges, nano fertilisers could provide a more sustainable and efficient alternative to conventional fertilisers, crucial in a country like India dealing with a mounting subsidy burden.
- Sagarmala Finance Corporation Limited (SMFCL) is India's first maritime sector-focused Non-Banking Financial Company (NBFC) which aims to bolster financial access across the country's maritime ecosystem. As a Mini Ratna (Category-I) Central Public Sector Undertaking under the Ministry of Ports, Shipping and Waterways, it offers customized financing to an array of stakeholders within the sector. The NBFC's mission aligns with the Maritime Amrit Kaal Vision 2047, which envisions India as a global maritime power, and it also supports the National Blue Economy Strategy. Unlike banks, these financial entities do not possess a banking license and cannot accept demand deposits.

Rank Reports Awards

National Florence Nightingale Awards 2025

Introduction and About

- The National Florence Nightingale Awards are prestigious recognitions that acknowledge the unparalleled efforts and contributions of nursing professionals in healthcare and public service.
- The awards for the year 2025 were presented by the President of India to 15 deserving recipients hailing from the field of nursing.
- The Ministry of Health and Family Welfare instituted these awards in the year 1973.
- The awardees are selected from diverse fields, including Central and State Governments, Union Territories, and Voluntary Organisations.

Award Categories and Eligibility

- The National Florence Nightingale Awards are presented across three categories: Registered Nurses and Midwives (RN & RM), Registered Auxiliary Nurses and Midwives (RANM), and Registered Lady Visitors.
- Eligible nominees encompass quite a spectrum, including nurses serving in hospitals, community settings, educational institutions, and administrative roles.

Award Recognition

Each award entails a Certificate of Merit, a medal, and a cash prize of Rs. 1,00,000, serving as a tangible acknowledgment of the professionals' exemplary service in the healthcare industry.

Florence Nightingale and her Contributions

Florence Nightingale - The Pioneer of Modern Nursing

- Florence Nightingale, the eponymous inspiration behind these awards, was an eminent English social reformer, statistician, and is widely regarded as the founder of modern nursing.
- Nightingale's pivotal contributions were witnessed during the Crimean War, where she organised care for wounded soldiers and significantly slashed mortality rates by effecting improvements in hygiene standards.
- A landmark in her career, she established the Nightingale School of Nursing at St. Thomas' Hospital in London, thereby laying the bedrock for modern nursing education. This marked a pivotal moment in history, revolutionising nursing into a respectable profession for women.

World Energy Investment Report 2025 Overview

Introduction

- The International Energy Agency (IEA) has released the 10th edition of its World Energy Investment Report.
- The report provides crucial insights into global energy investment trends.

Key Highlights of the Report

- Global energy investment is anticipated to reach a record USD 3.3 trillion.
- Of the total, clean energy technologies will receive an investment of USD 2.2 trillion which is double the investment in fossil fuels (USD 1.1 trillion).
- Clean energy's investment surge reflects the global effort to cut emissions, improve energy security, and utilise the cost competitiveness of electricity-based solutions.
- Investment in low-emissions power generation has nearly doubled in the last five years, spearheaded by solar PV.
- Solar investment is projected to reach USD 450 billion in 2025.
- Nuclear power investment has witnessed 50% growth and is projected to reach USD 75 billion in 2025.

Indian Energy Investment Scenario

- Investment in India's renewable power rose from USD 13 billion in 2015 to USD 37 billion expected in 2025.
- Fossil fuel investments have also grown from USD 41 billion to a projected USD 49 billion.
- Investment in grid and storage declined from USD 31 billion to USD 25 billion.

Regional Investment Patterns

- China dominates global energy investments, accounting for over 25% in 2025.
- Total energy spending in China equals that of the US and EU combined.
- Africa, home to 20% of the world's population, accounts for only 2% of global clean energy investment.

Overview of Fossil Fuel Investments

- Investment in oil exploration and production is predicted to fall by 6% in 2025.
- LNG investments are experiencing a surge due to

significant projects in the US, Qatar, and Canada.
- Investment in coal continues to be strong, powered by China's initiation of 100 GW of new coal power in 2024.

Grid Infrastructure Investment
- The generation investment is set to reach USD 1 trillion in 2025, while grid spending trails at just USD 400 billion.
- This widening gap is due to soaring demand and the consequent doubling of material costs for grid infrastructure over five years.

The International Energy Agency (IEA)
- IEA, founded in 1974, is a Paris-based intergovernmental organisation set up by OECD countries.
- It plays the role of a global energy policy advisor, providing data, analysis, and policy recommendations to ensure affordable, sustainable, and secure energy.
- The IEA has four primary areas of focus: energy security, economic development, environmental awareness, and worldwide engagement.
- The IEA comprises 32 Member countries and 13 Association countries, including India. Chile, Colombia, Israel, and Costa Rica are currently seeking membership.
- The applicant country must be a member of the OECD to join IEA.
- Major Publications of IEA are the World Energy Outlook Report, India Energy Outlook Report, and World Energy Investment Report.

UNFPA State of World Population Report 2025 and its Implications for India

Overview and Key Highlights
- The United Nations Population Fund (UNFPA) released its State of World Population (SOWP) 2025 report titled "The Real Fertility Crisis".
- The report confirmed India as the world's most populous country, expected to peak at 170 crores in the early 2060s.
- Key shifts in fertility, ageing, and reproductive autonomy were highlighted, urging a focus on meeting people's unmet fertility goals.
- As of April 2025, India's population is estimated to be highest globally at 146.39 crore.

Important Statistics and Trends Related to India
- Life expectancy in India is projected at 71 years for men and 74 years for women.
- India's Total Fertility Rate (TFR) stands at 1.9, below the replacement level of 2.1.
- Regional inequality in fertility rates persists, with high-fertility states like Bihar, Uttar Pradesh, and Jharkhand contrasting with low-fertility ones like Kerala, Delhi, and Tamil Nadu.
- 68% of India's population belongs to the working-age group (15–64 years).
- Barriers that hinder reproductive choices in India include financial, housing, job, and childcare constraints, among others.

Recommendations and Measures for India
- The UNFPA report recommends India prioritise reproductive rights over population control.
- Policy suggestions include ensuring universal access to contraceptives, maternal and infertility care, safe abortion, and addressing structural barriers like housing, job insecurity, etc.
- It also stresses on extending services to marginalized groups, improving data on unmet needs, and promoting gender equality and social changes through community initiatives.

Key Demographic Statistics for India
- The median age of India's population is 28.2 years, with 68% being of working-age.
- Literacy and Labour Force Participation Rates among adults are 87.4% and 78.8% for men, 71.5% and 41.7% for women, respectively.
- The overall literacy rate for individuals aged 15 and above is 77%.
- The dependency ratio stands at 47%, implying 47 dependents per 100 working-age individuals.
- Over 80% of India's population resides in areas vulnerable to climate change.

About United Nations Population Fund
- *UNFPA is a subsidiary body of the UN General Assembly operating in over 150 countries.*
- *The organization was established in 1969 and renamed as United Nations Population Fund in 1987.*
- *UNFPA aims to achieve zero unmet need for family planning, zero preventable maternal deaths, and zero gender-based violence by 2030.*
- *Their work aligns with the UN's SDGs, particularly SDG 3 (Good Health and Well-being), SDG 4 (Quality Education), and SDG 5 (Gender Equality).*
- *UNFPA's operations are supported entirely through voluntary contributions from governments, the private sector, and civil society.*

'Global Gender Gap Report 2025: A Perspective on India'

'About the Global Gender Gap Report'
- Published by the World Economic Forum since 2006
- A global index assessing gender equality across 148 countries
- Measures countries' progress in closing gender gaps across 4 key dimensions: Economic Participation and Opportunity, Educational Attainment, Health & Survival, and Political Empowerment
- Rating mechanism ranges from 0 (complete inequality) to 1 (full gender parity)
- This index serves as a strategic benchmarking tool to assess and compare gender disparities

'India's Performance in the Report 2025'
- Ranked 131st out of 148 in 2025, a decline from the 129th spot in 2024
- Positive gains made in Economic Participation and Educational Attainment
- Health and Survival improved, though there's reduced women's representation in Political Empowerment
- In South Asia, Bangladesh ranked as the top performer, while Pakistan lagged at the lowest

'Key Strides by India towards Bridging Gender Gap'
- Progressive policy and legislative reforms like Nari Shakti Vandan Adhiniyam
- Education and Skill Development Programs like Beti Bachao Beti Padhao and Vigyan Jyoti have enhanced girls' education
- The increase in female labour force participation and encouragement of women entrepreneurship through schemes like Stand-Up India
- Positive shifts in social norms alongside health initiatives for better maternal care

'Challenges in Bridging India's Gender Gap'
- Low Female Labour Force Participation with women occupying informal and undervalued roles
- Considerable gender disparities in education and literacy

rates
- Economic Participation and Wage Inequality with women performing unpaid domestic work
- Implementation gaps in government schemes targeting gender equity

'Government's Initiatives to Reduce Gender Gap'
- Incitation of programs like Beti Bachao Beti Padhao, Mahila Shakti Kendra, and Mahila Police Volunteers
- Political reservation for women in Panchayati Raj Institutions and legislative assemblies
- Encouragement of female entrepreneurship via Stand-Up India and Mahila-e-Haat

'Proposed Measures to Boost Gender Parity in India'
- Strengthening enforcement of gender-related protection laws
- Enhancing economic inclusion of females through workplace reforms
- Education, digital access support, and skilling through initiatives like Digital India and Skill India
- Infrastructure revamp for health, nutrition & safety
- Inclusive governance and data-driven policy for targeted intervention.

GFW 2024 Report on Indian Forests

Introduction to GFW Report
- The Global Forest Watch is an open-source forest monitoring platform developed by the World Resources Institute (WRI), a research organization based in the US.
- GFW recently released data illustrating the deforestation and forest degradation trends in India from 2001 to 2024.

Key Findings of the GFW Report
- From 2001 to 2024, India has lost 2.31 million hectares of tree cover, marking a decline of 7.1% since the year 2000. This loss created 1.29 gigatonnes of CO_2 emissions.
- In 2024 alone, India lost around 150,000 hectares of natural forest, resulting in approximately 68 million tonnes of CO_2 emissions.
- Primary forest loss increased from 17,700 hectares in 2023 to 18,200 hectares in 2024, and from 2002 to 2024, 348,000 hectares (5.4%) of humid primary forests were lost.
- Loss of tree cover due to fires accounted for 36,200 hectares of trees from 2001 to 2024. The largest single year loss to fire was 2,770 hectares in 2008.
- Despite the losses, 1.78 million hectares of tree cover were gained between 2000 and 2020 in India which contributed to 1.4% of global net gains. The highest tree cover gains were made by Russia, followed by Canada and the US.

Primary Causes of Deforestation in India
- Shifting cultivation, logging, and infrastructure projects were the leading causes of forest loss in the North-Eastern states.
- Mining activities contributed significantly to deforestation in Central India.
- In the Western Ghats, forest loss was primarily due to the pressures of road development, tourism, and plantation cultivation.
- Globally, between 2015 and 2020, India ranked second in deforestation, losing an average of 668,000 hectares of forest per year according to the Food and Agriculture Organization (FAO).

Understanding the Performance Grading Index 2.0 in School Education

Introduction and Overview
- The Performance Grading Index (PGI) 2.0 is a data-driven assessment tool designed by the Ministry of Education.
- The objective is to evaluate the school education system across all States and Union Territories (UTs), using an evidence-based framework.
- The initiative was first launched in 2017 and was revamped in 2021 as PGI 2.0.

Key Elements of Performance Grading Index (PGI) 2.0
- The PGI 2.0 aligns with the National Education Policy (NEP) 2020 and Sustainable Development Goals (SDGs).
- The performance is measured using 73 indicators across 2 categories (Outcomes and Governance & Management), divided into 6 domains.
- It operates on a 1,000-point grading scale, ranked into 10 performance levels, from Daksh (highest) to Akanshi-3 (lowest).
- The data sources include the National Achievement Survey (NAS) 2021, UDISE+, and information on the mid-day meal programme (PM-POSHAN).

Key Findings and Trends from PGI 2.0 Reports
- The report for the years 2022–23 and 2023–24 reveals various trends and findings.
- Top performers include Chandigarh, Punjab, and Delhi, whereas Meghalaya and Arunachal Pradesh were bottom-ranking states.
- No State or UT reached the top grade (761–1,000 points).
- A consistent improvement trend was observed with 25 out of 36 States/UTs improving their PGI scores in 2023–24 compared to 2022–23.
- However, a significant inter-state disparity was noted in school education performance, indicated by the wide gap in points between top and bottom-ranking states.
- The domains of Access to Education and Infrastructure & Facilities notably improved in several states.

Government Initiatives Concerning School Education
- The study acknowledges various government initiatives enhancing School Education such as the National Education Policy 2020, Samagra Shiksha, Mid Day Meal Scheme, among others.
- Other schemes like the Eklavya Model School, Rajiv Gandhi National Fellowship Scheme, and National Programme on Technology Enhanced Learning are also in place.
- The Sarva Shiksha Abhiyan, PRAGYATA, and PM SHRI Schools demonstrate the government's commitment to boosting school education across States and UTs.

Sahitya Akademi Yuva & Bal Sahitya Puraskar 2025

Sahitya Akademi Yuva Puraskar Overview
- Sahitya Akademi, India's National Academy of Letters, has announced the winners of their annual awards, Yuva Puraskar and Bal Sahitya Puraskar, in 24 Indian languages, for 2025.
- The Yuva Puraskar was instituted in 2011 to reward young Indian writers, aged 35 or below, for their original literary works across the 24 Indian languages recognised by the Akademi, including English.
- The prize includes Rs 50,000 cash along with an engraved copper plaque, and a citation.

- To be eligible, the work must be an original (either creative or critical), published within the last five years, and of a minimum length of 49 pages. It can only be awarded once per language, per author.
- The selection process includes a public call for entries, preliminary assessment by referees, final selection by a three-member language jury, validation by the Executive Board, and eventual announcement of winners at a special function.

Sahitya Akademi Bal Sahitya Puraskar Overview

- The Bal Sahitya Puraskar, instituted in 2010, honours outstanding contributions to children's literature meant for readers aged between 9 and 16 years, across the 24 Indian languages recognised by the Akademi.
- Award components include a cash prize of Rs 50,000, an engraved plaque, a shawl, and a citation for the winner.
- For the award to be considered, a minimum of three eligible books in a language must be published within the preceding 5 years. Adaptations from myths and posthumous works (provided the author passed away within the previous 5-year window) are accepted.

About Sahitya Akademi and Its Awards

- Sahitya Akademi, an autonomous organisation formed in 1952 and officially inaugurated in 1954, aims to promote literature in India's languages. Registered as a society in 1956, it has its head office in Delhi, and regional offices in several major Indian cities.
- The Akademi aims to promote inter-lingual literary dialogue and mutual translations between Indian languages, apart from its publishing activities.
- The Akademi confers 24 annual literary awards and translation awards in each recognised language, and also recognises contributions to unrecognised languages and classical/medieval literature through the Bhasha Samman.
- It established the Sahitya Akademi Awards in 1954 to recognise outstanding literary books in 22 languages listed in the 8th Schedule of the Constitution, as well as in English and Rajasthani. This award is the second-highest literary honour by the Government of India, after the Jnanpith award.

10th Sustainable Development Report 2025 and India's Progress in Sustainable Development Goals

Introduction of the Report and India's Ranking

- The 10th Sustainable Development Report (2025) presented by the UN Sustainable Development Solutions Network places India in the 99th position in the Sustainable Development Goals (SDG) Index.
- This is the first time India has made it into the top 100 of 167 nations, with a score of 67.
- The ranking reflects significant progression in comparison to its prior positions (109th in 2024, 112th in 2023).

Key Highlights of the 10th Sustainable Development Report

- The global SDG progress is slacking, with only 17% of SDG targets predicted to be achieved by 2030.
- The standstill is predominantly driven by conflicts, structural issues, and limited fiscal space.
- Nordic nations - Finland, Sweden, Denmark lead the SDG rankings, with 19 of the top 20 countries being European.
- South and East Asia have shown the swiftest regional advancements since 2015.
- The report identifies certain areas where most countries have made substantial improvements, including mobile broadband and internet use, electricity access, and reduction in under-five and neonatal mortality.
- Nevertheless, there have been significant deteriorations in objectives related to obesity, press freedom, nitrogen management, Red List Index, and corruption perception.
- Nations showing the highest commitment to UN multilateralism include Barbados, Jamaica, and Trinidad & Tobago, while the US has consistently ranked last due to its opposition to the SDGs.

About Sustainable Development Goals

- The SDGs comprise 17 interconnected objectives aimed at addressing critical global problems, for instance, poverty, climatic variations, and environmental degradation.
- They were adopted in 2015 by 193 UN Member States as part of the 2030 Agenda for Sustainable Development.
- The primary objective is to foster peace, prosperity, and sustainability in the world by 2030 through cooperative efforts.

Historical Background

- Sustainable development was first defined in 1987 by the Brundtland Commission Report.
- Subsequently, the Millennium Development Goals (MDGs) were adopted in 2000 to eliminate a range of global woes.
- The Rio+20 Summit in 2012 laid the groundwork for the currently existing SDGs.

Factors Slowing down SDG Progress

- Ongoing global conflicts, climate finance deficit, the Covid-19 pandemic, environmental pressures, and frequent natural disasters are among the chief factors impeding the achievement of SDGs.

Strategies for Achieving SDGs

- Strengthening global governance, increasing finances for SDGs, endorsing sustainable agriculture, and localizing the SDGs are recommended strategies for successful accomplishment of SDGs.

The State of Climate in Asia 2024: WMO Report

Report Overview

- The State of Climate in Asia 2024 report was released by the World Meteorological Organisation (WMO).
- Surprisingly, it was found that Asia warmed almost twice as rapidly as the world's average in 2024.
- The year broke records as it was Asia's hottest, or at least the second hottest, year recorded.

Record Breaking Warming

- Asia's temperature in 2024 was 1.04°C higher than the average from 1991–2020.
- There was a significant increase in warming rates which doubled since the period 1961–1990.
- This rate of warming marks an unprecedented trend, which is a significant concern for the continent.

Extreme Weather Events

- Extended heatwaves in India resulted in temperatures soaring between 45–50°C.
- These extreme heatwaves took over 450 lives.
- A combination of violent storms and heatwaves led to around 1,300 fatalities due to lightning.
- Tropical cyclones also battered Asia, with a total count of 29 in 2024.
- Cyclone Yagi was the most devastating, hitting several

countries including the Philippines, Vietnam, Hong Kong, Macau, China, Laos, Thailand, and Myanmar.
- The Indian subcontinent was significantly affected by Cyclones Remal, Fengal, Dana, and Asna.

Marine Impact and Glacial Retreat
- Marine heatwaves affected approximately 15 million sq km, especially the northern Indian Ocean, and seas near Japan, China.
- The report mentions a concerning continuation of glacial mass loss.
- Of the 24 glaciers in High Mountain Asia, 23 displayed a decline.
- Urumqi Glacier No. 1 in Tian Shan recorded its highest melt since 1959.

WMO Details and History
- WMO is an intergovernmental body with its headquarters in Geneva and a total of 193 Member States and Territories, including India.
- The organisation evolved from the International Meteorological Organisation (IMO), which was established after the 1873 Vienna Congress.

Schemes And Initiative

Dharti Aaba Janbhagidari Abhiyan: Empowering Tribal Communities

Introduction and About
- Dharti Aaba Janbhagidari Abhiyan (DAJA) is an extensive tribal empowerment campaign initiated by the Ministry of Tribal Affairs.
- It is set to impact over 1 lakh tribal villages across 31 States/Union Territories including those in 207 Particularly Vulnerable Tribal Group (PVTG) districts.
- The campaign involves a camp-based, community-driven model with district administrations, youth volunteers, CSOs, and tribal leaders participating.

The DAJA in Recent News
- The campaign is a recent intervention and forms an integral part of broader tribal celebrations.
- November 15th was designated as Janjatiya Gaurav Divas in 2021, honouring tribal freedom fighter Birsa Munda on his 150th birth anniversary.
- The year-long celebration of tribal pride, identity, and progress, termed as Janjatiya Gaurav Varsh (15th November 2024–15th November 2025) encompasses the DAJA campaign.

Five Pillars of DAJA
- Janbhagidari: The element of community-led participation is integral to the DAJA.
- Saturation: The objective is to ensure universal coverage of entitlements.
- Cultural Inclusion: It promotes the integration of tribal languages, arts, and traditions.
- Convergence: The initiative encourages coordination among ministries, CSOs, youth groups.
- Last-Mile Delivery: It aims at providing support to remote tribal habitations.

Objectives and Cultural Emphasis
- One of the key objectives of DAJA is to saturate all central government welfare schemes like Aadhaar, Ayushman Bharat, PM-Kisan, PM Ujjwala Yojana, Jan Dhan, and several tribal-specific entitlements across tribal territories.
- It also aids major ventures like PM-JANMAN and Dharti Aaba Janjatiya Gram Utkarsh Abhiyan (DAJGUA).
- The campaign celebration includes a significant cultural element, commemorating tribal heritage, and honouring Birsa Munda, an emblem of tribal pride and resistance.

Other Schemes for Tribal Welfare
- Apart from DAJA, the government offers other tribal welfare schemes, including:
- Eklavya Model Residential Schools (EMRS)
- Janjatiya Gaurav Diwas
- Van Dhan Vikas Kendras.

PM-PRANAM Scheme - Successes, Implementation and Impact

Introduction and About the PM-PRANAM Scheme
- The PM-PRANAM scheme, Programme for Restoration, Awareness, Nourishment, and Amelioration of Mother Earth, was approved in June 2023.
- The scheme primarily aims to reduce chemical fertilisers' use by incentivising states to consider alternative fertilisers.
- This project is set to run for a 3 year period, from the financial year 2023-24 up till 2025-26.
- The scheme targets a ₹20,000 crore reduction in fertiliser expenditures, reflecting a strategic effort to minimise dependency on chemical fertilisers while promoting sustainable agricultural practices.

Recent Achievements and Regional Contributions
- The PM-PRANAM scheme has demonstrated initial success with a noted decrease in synthetic fertilisers' use by 15.14 lakh tonnes during 2023-24, leading to significant subsidy savings.
- Karnataka is leading by example, having contributed 30% of the total savings.
- Other significant contributors are Maharashtra, West Bengal, and Andhra Pradesh combined, contributing to an additional 58% of the total savings.

Implementation of the PM-PRANAM Scheme
- The scheme encourages the balanced usage of chemical fertilisers in combination with biofertilisers and organic fertilisers through employing organic and natural farming practices.
- To efficiently track fertilisers use, the Integrated Fertilisers Management System (iFMS) is being utilised.

Contribution of the PM-PRANAM Scheme towards Sustainable Agricultural Practices
- PM-PRANAM encourages states to reduce excessive use of chemical inputs such as urea, DAP, NPK, and MOP to minimise environmental risks.
- The reduction in a state's urea consumption is measured against a three-year average to assess eligibility for subsidy savings and grants.
- Sustainable resource conservation technologies are rewarded, with the centre giving 50% of subsidy savings to states.
- The scheme motivates the shift towards organic farming, hence increasing soil health and reducing dependency on synthetic fertilisers.

Positive Environmental Impact of the PM-PRANAM Scheme
- PM-PRANAM is financed by savings from existing fertiliser subsidies from the Ministry of Chemicals & Fertilizers, hence eliminating the need for a separate budget allocation.
- It plays a significant role in mitigating issues like water

contamination, soil salinity, and biodiversity loss linked with electricity subsidies given to farmers.

Unnat Bharat Abhiyan: A Decade of Efforts Towards Rural Development

Introduction and About

- Unnat Bharat Abhiyan (UBA) is a major initiative of the Ministry of Education that recently completed a decade.
- Commencing in 2014, the main objective of UBA is to bring about transformational change within rural Indian areas, utilising the widespread influence and resources of Higher Educational Institutions (HEIs).
- HEIs are encouraged to take up the challenge of resolving local developmental issues through sustainable and inclusive practices.

UBA: The Critical Catalyst for Rural Development

- With almost 70% of the Indian population residing in rural areas, the UBA programme has proved to be vital in promoting development.
- Statistics indicate the pressing need for comprehensive rural enhancement, as agriculture, engaged by over 50% of the workforce, contributes to only 15-18% of the country's GDP.

Implementation & Wide Reach of UBA

- The Indian Institute of Technology Delhi has been in charge of overseeing all operations, functioning as the National Coordinating Institute.
- So far, the reach of UBA has expanded across 19,000+ villages in 35 states and union territories, with 4,000+ institutions working in collaboration.

Key Focus Areas

- UBA is designed to addresses several focus areas, including organic agriculture, water and energy systems, healthcare and sanitation, rural crafts, housing, e-governance, and basic amenities.
- It emphasises Village Adhyayan or Participatory Learning approach, encouraging solutions to emerge from a bottom-up planning process, rather than top-down imposition.

Unnat Bharat Abhiyan: Success Stories

- A multitude of success stories have marked UBA's journey. For instance, IIT Delhi's initiative on lemongrass cultivation and oil extraction substantially increased farmer income rates.
- On the other hand, NIT Manipur's water purifier provided clean drinking water to over 2,000 villagers.

UBA 2.0: Moving Ahead with a New Perspective

- Introduced in 2018, UBA 2.0 directs all HEIs to voluntarily adopt at least 5 villages in contrast to UBA 1.0 where institutions were simply invited to participate. This new approach is a testament to the programme's adaptive and evolving nature.

About the Chenab Rail Bridge

- The Chenab Rail Bridge is located in the Reasi district of Jammu and Kashmir.
- It holds the title of being the world's highest railway arch bridge with a height of 359 metres, which is 35 metres taller than the Eiffel Tower.
- The bridge was constructed by the Konkan Railway Corporation. The design of the foundation was carried out by IISc Bengaluru, while seismic analysis was performed by IIT Delhi and IIT Roorkee. The DRDO ensured the bridge's resistance against explosions.

Design and Safety Features of the Chenab Rail Bridge

- The bridge is built with high safety standards, being capable of withstanding earthquakes of magnitude 8, explosions of up to 40 tonnes of TNT, temperatures dropping to -20°C, and wind speeds reaching up to 266 km/h.
- A unique feature of this construction is its resilience, allowing trains to operate even if one of its eight piers fail, albeit at a reduced speed.

About the Anji Khad Bridge

- The Anji Khad Bridge, also in Jammu and Kashmir, is India's first cable-stayed rail bridge.
- It is the second-highest railway bridge in the country after the recently inaugurated Chenab Rail Bridge.

Importance of the Bridges

- Both the Chenab Rail Bridge and the Anji Khad Bridge are integral components of the Udhampur-Srinagar-Baramulla Rail Link (USBRL) project.
- They provide an all-weather rail connectivity between Kashmir and the rest of India, greatly enhancing the transportation infrastructure in the region.

About the Chenab River

- *The Chenab River, also known as the Chandrabhaga river, is the largest tributary of the Indus River.*
- *It originates from the confluence of the Chandra and Bhaga rivers at Tandi, in Himachal Pradesh. This river is significant for the region's hydrological cycle as well as its cultural significance in local folklore and history.*

The Amrit Bharat Station Scheme

Introduction and About

- Introduced by the Ministry of Railways in December 2022, the Amrit Bharat Station Scheme (ABSS) aims to transform 1,309 railway stations across India into modern integrated transport hubs.
- The overarching goal of the ABSS is not only to enhance passenger amenities and support urban development, but also to celebrate regional architecture through its customised and culturally integrated redevelopment approach.
- The inauguration of 103 redeveloped railway stations across 86 districts in 18 States/UTs under ABSS was recently done by the Prime Minister.

Unique Features of the Scheme

- One of the distinguishing aspects of the ABSS is its location-specific, phase-based redevelopment approach. This encourages preservation and promotion of regional architectural themes through modern amenities. Examples include the integration of the Dwarkadheesh Temple design in Dwarka station, Chola style in Kumbakonam station, and the Modhera Sun Temple design in Ahmedabad station.
- Passenger amenities form a core part of the scheme, with significant upgrades made to waiting halls, toilet facilities, platform roofs, and access points. Additional features include Wi-Fi, escalators, lifts, executive lounges, business areas, and improved signage to ensure an uncomplicated travel experience.

Inclusive Design and Sustainability

- Aligned with the Accessible India Campaign (Sugamya Bharat Abhiyan), the ABSS places importance on inclusive and accessible design features. These range from ramps, lifts, and Braille signage to tactile paths, accessible toilets,

and lift-equipped pedestrian subways and Foot Over Bridges (FOBs).
- A key component of the ABSS includes a focus on urban development. Redeveloped stations not only act as transport hubs but are also developed as multimodal city centres integrated with local bus and metro systems. The implementation of eco-friendly, noise-reducing infrastructure further supports sustainable urban mobility and connects both sides of cities.

Launch of the NeVA Digital Platform in Puducherry

About the NeVA Platform

- NeVA stands for National e-Vidhan Application, a digital platform based on a workflow model.
- Launched under the "One Nation, One Application" initiative, this platform aims to digitise legislative functioning in an efficient and transparent manner while reducing the reliance on paper.
- The NeVA platform is funded entirely by the Ministry of Parliamentary Affairs, and is hosted on NIC Cloud – MeghRaj.

Implementation of the NeVA Platform

- Nagaland was the first Indian state to implement the NeVA platform in 2022.
- Recently, the Union Minister of State for Information & Broadcasting & Parliamentary Affairs inaugurated the platform for the Puducherry Legislative Assembly.

Key Features of the NeVA Platform

- NeVA is a device-neutral, member-centric platform that can be accessed via tablets and handheld devices.
- It provides real-time access to various legislative documents, including rules, notices, business lists, bills, bulletins, questions, reports, and more.
- The platform offers a secure portal for legislators to submit questions and notices.
- It supports live-streaming to enhance transparency and public access.
- NeVA serves as a unified digital repository of legislative data across all states and Union Territories, eliminating the need for multiple redundant platforms.
- A mobile app called mNeVA, available on both Android and iOS, provides 24x7 access to legislative data.

Significance of the NeVA Platform

- The implementation of the NeVA platform could lead to an annual reduction of 3–5 tonnes of paper usage.
- This aligns with the objectives of the Digital India, Go Green, and Good Governance initiatives.
- The platform also supports the United Nations Sustainable Development Goals (SDGs) by promoting a more efficient and transparent legislative process.

NISHAD's Global Rinderpest Holding Facility Designation

Introduction and Role of NISHAD

- The National Institute of High Security Animal Diseases (NISHAD), based in Bhopal, is India's leading facility for research on exotic and emerging animal pathogens.
- It operates as a Biosafety Level-3 (BSL-3) lab, which allows for high-containment of high-risk organisms.
- Established in 1984 as the High Security Animal Disease Laboratory (HSADL), it was later renamed and now functions under the Indian Council of Agricultural Research (ICAR), part of the Ministry of Agriculture and Farmers' Welfare.
- In addition to research and bio-containment, NISHAD plays a critical role as a reference lab for specific transboundary and zoonotic diseases, most notably avian influenza and Newcastle disease, as part of the One Health framework.

Designation by WOAH and FAO

- NISHAD has recently received a significant designation, being recognised as a Category A Rinderpest Holding Facility by the World Organisation for Animal Health (WOAH) and the Food and Agriculture Organization (FAO).
- This makes India one of only six countries worldwide that have been entrusted with the secure storage of Rinderpest Virus-Containing Material.

Understanding Rinderpest

- Rinderpest, also known as cattle plague, was a highly contagious and fatal viral disease that affected cattle, buffalo, and some wild ruminants.
- It spread through contact with infected secretions or contaminated feed and water, and symptoms included high fever, mouth ulcers, diarrhoea, and swift death.
- Notably, this disease was globally eradicated in 2011 after causing substantial livestock losses across Africa, Asia, and Europe, leading to economic collapse and food insecurity.

Relevance of Rinderpest Holding Facility

- The virus responsible for this disease is still stored in only a few high-security laboratories around the world.
- An unintentional or deliberate release could lead to its re-emergence, hence the strict regulation of storage and handling of Rinderpest Virus-Containing Material (RVCM) by the FAO and the WOAH.
- This highlights the importance and security responsibilities of the holding facilities, including NISHAD, endowed with this task.

The PM-WANI Scheme

Introduction to PM-WANI Scheme

- The Prime Minister's Wi-Fi Access Network Interface (PM-WANI) was launched by the Department of Telecommunications (DoT) in 2020.
- It is a significant initiative that aims to expand the availability of public Wi-Fi hotspots across India, especially in rural and underserved areas.
- The scheme is designed to provide affordable internet access to the urban poor and rural population, while also generating employment for small and micro-entrepreneurs via the establishment of Wi-Fi service outlets.

Access Mechanism and Ecosystem for PM-WANI

- Users can access PM-WANI services by downloading the PM Wani application on their mobile phone, selecting a listed hotspot, and making a digital payment to use the internet.
- The PM-WANI Ecosystem comprises four key stakeholders: Public Data Office (PDO), Public Data Office Aggregator (PDOA), App Provider and the Central Registry maintained by the Centre for Development of Telematics (C-DoT).

Major Features and Benefits of PM-WANI

- Specific features include no licence or registration fee requirement for Public Data Offices (PDOs), stimulating participation from small vendors and entrepreneurs and utilising local infrastructure to enable last-mile internet

connectivity.
- The system enhances digital inclusion, decreases the urban-rural digital divide, provides affordable internet access and boosts the Digital India mission, stimulates employment generation in the informal sector.

Government Initiatives for Enhancing Broadband Connectivity
- Different initiatives include the National Broadband Mission, Gati Shakti Sanchar Portal, Telecommunications Act, 2023 & Right of Way Rules, 2024, the Amended BharatNet Program, and Submarine OFC Connectivity.
- These policies focus on strengthening the digital infrastructure and enhancing global competitiveness, streamlining the process for laying Optical Fiber Cable (OFC), simplifying and expediting the deployment of broadband infrastructure.

Understanding Telecom Regulatory Authority of India (TRAI)
- The Telecom Regulatory Authority of India (TRAI) is an independent statutory body established in 1997 to regulate the telecommunications sector.
- It has a chairperson, not more than two whole-time Members, and not more than two part-time Members.
- Its key functions include regulation of telecom services, ensuring quality of service, fair competition and consumer protection, promoting transparency and efficiency in telecom operations.
- The Telecommunications Dispute Settlement and Appellate Tribunal (TDSAT) handles adjudicatory and dispute resolution functions, which were earlier under the purview of TRAI.

India's First 3nm Chip Design Centres and Related Initiatives

Introduction and Details
- India's first 3-nanometre (3nm) chip design centres have been launched in the cities of Noida and Bengaluru by the Union Minister for Electronics and Information Technology.
- These centres place India among a handful of countries leading in the field of advanced chip technology.
- In a separate development, the Union Cabinet has given approval for setting up a display driver chip manufacturing unit in Jewar, Uttar Pradesh (UP).

Significance and Role of the Indian Semiconductor Mission
- The proposed chip manufacturing unit is the first semiconductor fabrication unit in Uttar Pradesh and falls under the Indian Semiconductor Mission (ISM). It is the 6th such unit approved under Phase I of the ISM.
- Production in this unit is projected to commence by the year 2027.
- Over 270 academic institutions that have already gained access to advanced Electronic Design Automation (EDA) software tools through the ISM are set to receive the newly unveiled semiconductor learning kits aimed at boosting practical hardware skills among engineering students.

Other Noteworthy Initiatives
- In line with the goal of fostering growth in this sector, certain initiatives have been put in place. These include the Chips to Startup (C2S) Programme, the Production Linked Incentive scheme (PLI), the Digital RISC-V (DIR-V) program, and the Modified Special Incentive Package Scheme (M-SIPS) intended specifically for Semiconductors.

Importance and Features of 3nm Chip Technology
- The 3nm chip technology surpasses the 5nm and 7nm chips in terms of the number of incorporated transistors. This results in higher performance, improved energy efficiency, and reduced heat generation.
- These features make 3nm chips pivotal for advanced computing, artificial intelligence and mobile devices, further highlighting the significance of these design centres in India.

Integration of Rare Donor Registry with e-Rakt Kosh

Introduction to Rare Donor Registry of India (RDRI)
- The Rare Donor Registry of India (RDRI) is a national database designed to catalogue rare blood group donors.
- Developed by the Indian Council of Medical Research–National Institute of Immunohaematology (ICMR-NIIH), along with leading medical institutes, RDRI has significantly contributed to blood transfusion services.

Purpose and Significance of RDRI
- RDRI primarily aids patients in need of special blood transfusions, particularly those afflicted with rare conditions such as thalassemia and sickle cell disease.
- The registry includes over 4,000 donors screened for more than 300 rare blood markers, focusing mainly on either high-frequency-antigen-lacking blood groups or those with uncommon antigen combinations.
- Crucially for people with rare blood types, RDRI plays a significant role as rare blood groups are hard to match, making transfusion a challenging process. The risk of alloimmunisation, a condition where a patient develops antibodies against the transfused blood, complicates future treatments.

Introduction to e-Rakt Kosh
- Designed by CDAC under the National Health Mission, e-Rakt Kosh is a centralized digital system for managing blood banks.
- This ground-breaking platform provides real-time information on blood availability, donation camps, and blood banks across India, thereby connecting donors, hospitals, and blood banks.

Importance of Blood
- As a crucial physiological fluid, blood performs multiple roles in the human body, including transporting oxygen, nutrients, hormones, and waste.
- Produced in the bone marrow, blood is a key player in immunity, healing, and the process of waste removal via the liver and kidneys.
- It comprises 45% cells (red blood cells, white blood cells, and platelets) and 55% plasma, a fluid that carries essential substances such as proteins, vitamins, and minerals.
- Given these numerous roles, an efficient and safe distribution of blood is crucial for healthcare systems, which the integration of RDRI and e-Rakt Kosh aims to enhance.

Integration of RDRI with e-Rakt Kosh
- The Union Health Ministry's move to integrate RDRI and e-Rakt Kosh is aimed at streamlining access to rare blood types and enhancing nationwide blood bank coordination.
- The integration will enable real-time accessibility to unusual blood types like Bombay, Rh-null, P-Null, thus improving the efficiency of blood transfusion services.

NAVYA Initiative: Nurturing Young Adolescent Girls for Future Job Roles

Introduction and About NAVYA Initiative

- NAVYA (Nurturing Aspirations through Vocational Training for Young Adolescent Girls) is an initiative launched by the Government of India.
- Aimed at adolescent girls aged 16–18 years with a minimum qualification of Class 10, the focus is on providing vocational training especially in non-traditional job roles.
- It isn't an independent initiative, but is rather a joint pilot effort by the Ministry of Women and Child Development (MWCD) and the Ministry of Skill Development and Entrepreneurship (MSDE).

Coverage and Convergence of NAVYA Initiative

- NAVYA is designed to provide a broad-based coverage, benefiting 27 districts across 19 States, inclusive of Aspirational Districts and those in the North-Eastern region of India.
- The crux of NAVYA lies in its successful implementation of inter-ministerial coordination. It draws on schemes like the Pradhan Mantri Kaushal Vikas Yojana (PMKVY) and PM Vishwakarma Yojana.

Significance of NAVYA Initiative

- NAVYA carries deep significance in aligning with the Viksit Bharat@2047 vision encapsulating women-led development.
- The initiative underlines the Government's commitment to building a skilled, self-reliant, and inclusive workforce, focusing especially on young girls as key players in socio-economic transformation.

Other Initiatives for Adolescent Girls in India

Alongside NAVYA, India has seen several other similar initiatives targeting the development of young adolescent girls. Such schemes include:

- Beti Bachao Beti Padhao (BBBP)
- Mahila Shakti Kendra (MSK)
- Sukanya Samriddhi Yojna (SSY)
- Nirbhaya Fund Framework
- One Stop Centres (OSCs)
- Apart from these initiatives, legislative changes like the Constitution (106th Amendment) Act, 2023 are also significant contributions to the cause of women empowerment and development.

In conclusion, the NAVYA Initiative signifies a laudable move towards understanding the importance of adolescent girls' development in India, recognizing their integral role as future workforce contributors in bringing about countrywide transformation.

Science And Tech

India's BioE3 Mission for Life Sustainability in Space

Introduction and About

- The BioE3 Mission, led by the Indian Space Research Organisation (ISRO) in collaboration with the Department of Biotechnology (DBT), aims to conduct India's first biological experiments on the International Space Station (ISS).
- India will investigate the possibility of sustainable human life in space.
- The minister of State for Science & Technology announced the mission.

BioE3 Mission in the News

- The mission is part of the ISS's upcoming AXIOM-4 programme, which is a private spaceflight operated by U.S. based company, Axiom Space.
- Slated for launch in June 2025, the mission will send two Indian astronauts from ISRO to the ISS.

Proposed Experiments under BioE3Mission

- The BioE3 mission will investigate how microgravity affects the growth of edible microalgae, which are nutrient-rich and can potentially serve as food in space.
- The mission will also study how the microalgae cleanse air by taking in CO_2 and emitting O_2.
- Additionally, the experiment will research the growth of cyanobacteria like Spirulina in space using two nutrients-urea and nitrate in an attempt to understand how to recycle waste (carbon and nitrogen) from humans to sustain life in space.
- Spirulina, known as a "superfood" due to its protein-rich and antioxidant qualities, is also under study.

BioE3 Policy (2024)

- The policy advocates for advanced biomanufacturing to facilitate a circular bioeconomy and aid India's Net Zero objectives.
- The focus of the policy is on innovation, Bio-AI hubs, the development of skilled workforces, and creating sustainable biotech solutions.

India's First Indigenous Polar Research Vessel

Introduction and Background

- India's first indigenously built Polar Research Vessel (PRV) is being developed by Garden Reach Shipbuilders and Engineers Limited (GRSE), a Government of India undertaking.
- The project is a collaboration with Kongsberg, a Norwegian firm specialising in marine engineering and technology. The partnership indicates a significant step in India's shipbuilding industry.

Purpose and Usage of the Polar Research Vessel

- The Polar Research Vessel's function is to aid research in the polar regions, which are the areas around the North and South Poles, as well as other ocean regions.
- The studies will be geared towards the requirements of the National Centre for Polar and Ocean Research.
- The vessel will support India's research missions in both polar and oceanic regions.
- Advanced scientific instruments will be fitted onto the vessel, facilitating exploration of marine ecosystems and deep-sea biodiversity in polar and southern ocean realms.

Reinforcing India's Commitment to Research and Maritime Leadership

- This establishment of the polar research vessel will strengthen India's already active three research stations: Bharati and Maitri in Antarctica, and Himadri in the Arctic.
- The project represents India's commitment to MAHASAGAR (Mutual and Holistic Advancement for Security Across the Regions), a comprehensive security programme.
- Under the maritime programme Sagarmala 2.0, India aspires to become a global maritime leader by addressing infrastructure shortcomings and augmenting shipbuilding, repair, and recycling activities.

Aligning with 'Make in India' and Atmanirbhar Bharat Initiatives

- This breakthrough collaboration with Norway also lines up with India's 'Make in India' and Atmanirbhar Bharat initiatives.
- The project aims to enhance India's indigenous shipbuilding capability, thereby boosting the nation's self-reliance and fostering domestic talent.

BharatGen: India's First AI Multimodal LLM

Introduction and About BharatGen

- BharatGen is India's first indigenously developed, government-funded Multimodal Large Language Model (LLM).
- It supports a wide variety of 22 Indian languages.
- This was launched at the BharatGen Summit 2025 by the Union Minister of State (IC) for Science & Technology.
- Multimodal LLMs are large language models that are trained on diverse data types such as text, audio, video, and images.

The Technology behind BharatGen

- They are built with advanced AI capabilities to understand and interpret the complexity of human language and multimedia content.
- BharatGen surpasses the limitations of unimodal models like earlier versions of ChatGPT by generating cohesive responses across multiple data forms.
- It includes AI models trained on large text data, AI models with two networks (Generator & Discriminator), and models predicting the next value/token based on past sequences.

Development

- BharatGen was developed under the banner of the National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS).
- The program is implemented by the TIH Foundation for IoT and IoE at IIT Bombay.
- NM-ICPS was launched in 2018 by the Ministry of Science and Technology to promote innovation and R&D in Cyber-Physical Systems (CPS) and new-age technologies.

Objectives and Importance of BharatGen

- The main objective of BharatGen is to promote ethical, inclusive, multilingual AI that is rooted in Indian values.
- It aims to provide region-specific solutions in sectors such as healthcare, agriculture, education, and governance.
- Another primary objective is to boost rural telemedicine with AI doctors who can speak in native languages.
- This makes it a pivotal resource in providing tech-oriented, linguistically inclusive solutions, particularly in regions lacking traditional linguistic resources.

Tardigrades Aboard Axiom-4 Mission and the Exploration of Space Resilience

Introduction

- Indian astronaut, Shubhanshu Shukla, is piloting the Axiom-4 mission to the International Space Station (ISS).
- The commanding authority of the mission is Peggy Whitson from the USA.
- ISRO is dispatching tardigrades, also known as water bears, to ISS as part of this mission to study life's resilience in extreme space conditions.

About Axiom-4 Mission

- The initiative is the fourth private spaceflight to ISS operated by the US-based Axiom Space using the SpaceX Crew Dragon spacecraft.
- Shubhanshu Shukla is set to become the second Indian, after Rakesh Sharma in 1984, to visit space and the first to set foot on the ISS.
- The aim of the Axiom Space's 14-day mission is to conduct scientific experiments, technological demonstrations, and educational outreach.
- The mission features an international crew from the United States, India, Poland, and Hungary.

Key Experiments during the Mission

- The mission will explore the physical and cognitive impact of using computer screens in microgravity.
- Behaviour and response of tardigrades in space will be studied.
- The impact of spaceflight on six types of crops specifically on moong dal will be investigated.
- Growth rate, cellular responses, and biochemical activity of cyanobacteria will be observed.

Importance of the Mission for India

- The mission strengthens the Indo-US space collaboration through the ISRO-NASA partnership.
- The mission is also expected to boost the success of the future Gaganyaan mission by providing hands-on training experience for the Gaganyaan crew.
- The mission aims to position India as a key player in future commercial space stations.

Knowledge Points on Tardigrades

- Tardigrades are microscopic eight-legged organisms, about 0.5 mm long, that feed on plant and algae fluids.
- These creatures have existed for approximately 600 million years and survived all five mass extinctions, making them one of the most resilient life forms on Earth.
- They can survive extreme conditions, such as temperatures from –272.95°C to 150°C, intense UV radiation, and pressures up to 40,000 kilopascals.
- Studies of tardigrades could pave the way to climate-resilient crops, advanced UV-protective sunscreens, and improved organ preservation techniques for transplants.
- Tardigrades made history in 2007 as the first animals to survive direct exposure to space during ESA's Foton-M3 mission.

Noteworthy Point

- The zero-G indicator for the Axiom-4 mission is a swan plushie named 'Joy', which will alert astronauts of their transition into a state of weightlessness.

Unique Tardigrades Species

- Batillipes chandrayaani is a newly discovered species of marine tardigrade found along India's southeast coast of Tamil Nadu. It is named after India's Chandrayaan-3 moon mission, symbolically connecting India's advancements in space exploration and marine biology.

The NISAR Mission and Synthetic Aperture Radar (SAR)

Introduction to NISAR and SAR:

- The NASA-ISRO SAR (NISAR) satellite is currently at ISRO's spaceport in Sriharikota, preparing for its launch.
- It has been designed to scan almost all land and ice surfaces twice every 12 days, collecting unprecedented data regarding Earth's environment.
- NISAR is a joint Earth-observation mission between NASA and ISRO, aimed at observing Earth's land and ice surfaces in unparalleled detail.

About the NISAR Mission:

- The NISAR Mission is a collaborative project between NASA (US) and ISRO (India).
- It intends to provide intricate monitoring of Earth's land and ice surfaces.
- The satellite consists of two advanced radar systems—NASA's L-band radar and ISRO's S-band radar—marking it as the first satellite to carry both the radars.

Understanding Synthetic Aperture Radar (SAR):

- Synthetic Aperture Radar (SAR) is an active remote-sensing technology that transmits microwave pulses and records the echoes to create images.
- SAR works effectively during day and night, and under any weather conditions, as microwaves can penetrate clouds, smoke, and light rain.
- It does not depend on sunlight like optical cameras for its functionality.

The Working of SAR:

- SAR operates by sending microwave pulses and recording the echoes from Earth's surface.
- It uses the movement of the platform (e.g., satellite or aircraft) to simulate a large antenna, assisting in producing high-resolution images.

Applications of SAR:

- SAR has multiple applications in environmental monitoring, like mapping wetlands and tracking oil spills in marshes.
- It plays a crucial role in Cryosphere studies by monitoring icebergs and ice sheets, examples include regions like Antarctica.
- SAR technology is employed in disaster management to detect floods, landslides, and terrain changes.
- It is also used in agriculture & forestry to assess soil moisture, track vegetation health, and monitor deforestation.

Ultra-Secure Communication Using Quantum Technology

Introduction and Overview

- Use of light particles (photons) and the principle of quantum entanglement to transmit information is a novel approach by scientists at IIT Delhi and DRDO.
- The method ensures that any attempt to intercept the communication is immediately detectable, marking a significant advancement for India under the National Quantum Mission (2023–2031).

Key Highlights of the Quantum Communication Breakthrough

- The Quantum Key Distribution (QKD) demonstrated over a 1 km free-space link, transmitting quantum keys with a secure key rate of 240 bps (bits per second).
- The method shows resilience to atmospheric turbulence, detector noise, and artificial lighting.
- India's first intercity quantum link was set up in 2022 between Vindhyachal and Prayagraj, using commercial-grade fibre.
- By 2024, QKD was extended to 380 km over standard telecom fibre and a 100 km demo followed.

Concept of Quantum Communication and Quantum Entanglement

- Quantum communication refers to the transmission of secure information using the principles of quantum mechanics, including Quantum Key Distribution, Quantum teleportation, and dense coding.
- Quantum entanglement is a complex phenomenon where the state of one particle instantly determines the state of another, regardless of the distance between them, allowing for applications such as quantum communication, quantum cryptography, and quantum computing.

Understanding Quantum Key Distribution (QKD)

- Quantum Key Distribution is a secure method that uses quantum mechanics principles to generate and share cryptographic keys between two parties.
- Photons are utilized, which are highly sensitive to disturbance, to securely exchange encryption keys.
- If an eavesdropper tries to intercept the communication, it causes transmission errors that alert the legitimate users, ensuring tamper-evident encryption.

National Quantum Mission (NQM)

- The National Quantum Mission is a strategic national initiative aimed at advancing India's capabilities in quantum technologies.
- The mission has applications in defence, cybersecurity, space, banking, and telecommunications, and is key in advancing India's position in the global quantum race.
- Key objectives of the mission include the development of intermediate-scale quantum computers and enabling satellite-based quantum communication between Indian ground stations over vast distances.

Thematic Hubs and Key Initiatives Under NQM

- Four T-Hubs focusing on quantum computation, quantum communication, Quantum Sensing & Metrology, and Quantum Materials & Devices are to be established at premier academic and national R&D institutions.
- DRDO is working on quantum-resilient security protocols, and quantum-safe symmetric and asymmetric cryptographic algorithms to secure defence and strategic communications.
- Under the Principal Scientific Adviser (PSA), SETS works on Post-Quantum Cryptography (PQC) research for FIDO authentication and IoT security applications.
- Centre for Development of Telematics (C-DoT), under the Department of Telecommunications (DoT), provides solutions like Quantum Key Distribution, Post-Quantum Cryptography, and Quantum-Secure Video IP Phones.
- India's Entry into Human Spaceflight: Group Captain Shubhanshu Shukla and Axiom-4

Introduction and About

- Setting a significant landmark in India's space journey, Group Captain Shubhanshu Shukla becomes the second Indian to travel to space after Rakesh Sharma in 1984.
- Marking another first, he is also the first Indian to set foot on the International Space Station (ISS).
- Shukla is part of the Axiom-4 (Ax-4) mission, a commercial spaceflight to the ISS.

Details on the Axiom-4 Mission

- The Ax-4 is the fourth private spaceflight to the ISS, conducted by Axiom Space, a US-based company.
- The crew comprises Peggy Whitson (Commander), Shubhanshu Shukla, Sławosz Uznański-Wiśniewski, and Tibor Kapu.
- The mission aims to boost space tourism and private research in Low Earth Orbit (LEO).
- This mission also enables experimentation with microgravity in areas such as materials science, biology, space agriculture, and earth observation.
- Participating in 60 experiments from 31 countries, this mission sets the record for being the most research-intensive Axiom mission and is a testament to international

cooperation in space science.

Significance of Axiom-4 for India

- This mission serves as a pivotal foundation for Gaganyaan, India's planned manned space mission.
- By participating in Ax-4, India reinforces its global space stronghold, aligning with its long-term goals of an Indian space station by 2035 and a human lunar mission by 2040.
- Through active partnership in mission planning and execution, India bolstered its international standing and demonstrated its technological prowess.
- The mission opens up new corridors for private sector involvement and overseas investments, enhancing India's share in the global space economy.
- By inspiring the youth and promoting STEM education, the mission helps to create an expert workforce for India's evolving space sector, ensuring continuous innovation and national capacity building.

Key Facts on the International Space Station (ISS)

- The ISS is the largest habitable artificial satellite in LEO, acting as a unique space laboratory for scientific research and international cooperation.
- It's an international collaboration of 15 countries, led by five space agencies: NASA, Roscosmos, European Space Agency, JAXA, and Canadian Space Agency.
- Hosting over 3,000 experiments from more than 108 countries, the ISS aids in research in science, medicine, and Earth observation related studies. Its microgravity setting allows for studying human adaptation and generating Earth-relevant innovations.

CRISPR Technology for Climate-Resilient Crops

Introduction to CRISPR-dCas9-Based Molecular Tool

- The Bose Institute researchers, funded by the Department of Science and Technology (DST), have produced a new tool based on CR-9ISPR-dCas9 that improves plant resilience to heat stress and attacks from pathogens.
- CRISPR-dCas9, an altered version of the CRISPR-Cas9 gene-editing technology, has been engineered to make the Cas9 protein dormant, preventing it from cutting DNA.
- Despite not being active, the Cas9 protein still uses guide RNA to locate and bind to specific DNA sequences.

Working Mechanism of CRISPR-dCas9

- The conventional CRISPR-Cas9 technology functions by slicing DNA to make alterations in the gene. Simultaneously, CRISPR-dCas9 does not cut the DNA, but operates like a switch for genes, activating or deactivating specific genes without modifying the DNA.
- This is particularly beneficial in safely controlling when particular genes, like those responding to stress in plants, are activated. This makes the process energy-efficient and improves overall effectiveness.
- Plants frequently face stress stemming from extreme weather conditions or attacks by pathogens which can reduce their productivity and growth.
- By using a tomato protein's transmembrane (TM) domain, CRISPR-dCas9 helps plants respond only when under stress by keeping a modified protein, dCas9, outside the nucleus under normal conditions.

CRISPR-dCas9 in Action under Stress Conditions

- When a plant is under stress due to heat or an attack from a pathogen, the TM domain releases dCas9, which subsequently enters the nucleus and stimulates the release of specific defence genes.
- Under attack from a pathogen (for instance, Pseudomonas syringae), it stimulates the CBP60g and SARD1 immune response genes which boost immune responses.
- Under heat stress, it stimulates the NAC2 and HSFA6b genes, improving the plant's water retention, leaf's greenness, and its ability to withstand heat.

Application and Efficacy

- Tests on various plants, including tomatoes, potatoes, and tobacco, have shown this technology to be most effective in tomato plants. This novel tool can bolster their resilience to heat stress and pathogenic attacks, while potentially improving their productivity and efficiency.

Sports Current

Major Updates in Cricket (2025)

Player Retirements

- Australian all-rounder Glenn Maxwell announces retirement from One Day Internationals (ODIs) after the 2025 Champions Trophy citing health concerns and room for new talent. He confirms his continued participation in T20 Internationals (T20Is).
- South African wicketkeeper-batter Heinrich Klaasen retires from international cricket after the 2025 Champions Trophy, concluding a successful seven-year career with over 3000 white-ball runs.
- West Indian cricketer Nicholas Pooran retires from international cricket at age 29, after 106 T20Is and 61 ODIs, securing his position as West Indies' most capped T20I player.

IPL and Test Series

- In a first, the Royal Challengers Bangalore (RCB) win the 2025 Indian Premier League (IPL) by defeating the Punjab Kings by 6 runs.
- The Test series between India and England is renamed as the Anderson-Tendulkar Trophy, replacing the former Pataudi and de Mello trophies.

Notable Achievements and Honours

- Indian cricketer MS Dhoni is inducted into the International Cricket Council (ICC) Hall of Fame, along with other cricket luminaries like Matthew Hayden, Daniel Vettori, Hashim Amla, Graeme Smith, Sana Mir, and Sarah Taylor.
- Indian bowler Jasprit Bumrah achieves a historic milestone, becoming the first Asian bowler to take 150 Test wickets in SENA countries.
- Indian wicketkeeper-batter Rishabh Pant achieves a remarkable feat by scoring twin centuries at Headingley, thereby accumulating 252 runs and becoming the highest-scoring Indian wicketkeeper in a Test.

Laws and Changes

- MCC updates Law 19.5.2 on boundary catches, thereby outlawing the "bunny hop" catch & allowing only one airborne touch from outside the boundary before landing inside to complete a legal catch.
- The introduction of four-day Tests is announced starting from the 2027-29 World Test Championship cycle.
- A 'Stop Clock' is introduced in Test cricket during the 2025-2027 WTC cycle with a new rule of a 60-second timer set in place between overs. Violations of these norms can result in a penalty.

Events and Tournaments

- The 2025 Women's One Day International (ODI) World Cup schedule is announced to be held in India and Sri

Lanka from September 30th to November 2nd.
- Additionally, the matches featuring Pakistan will be conducted in Sri Lanka due to significant political tensions.
- Rinku Singh, Indian cricketer, is set to be appointed as a District Basic Education Officer in Uttar Pradesh. The event is being postponed to February 2026 due to his involvement in cricket.

Updates on Global Badminton, Tennis and Chess 2025

Overview of Tennis Victories and Highlights for 2025

- Carlos Alcaraz clinched the French Open 2025 by defeating Jannik Sinner in a dramatic five-hour game. This win marks his second French Open and fifth Grand Slam title.
- The Stuttgart Open 2025 witnessed Taylor Fritz defeating Zverev in straight sets, achieving his ninth career title and moving up to rank 4th in the world.
- The Wimbledon 2025 tournament has increased the total prize money to 53.5 million pounds. Each singles champion will now receive 3 million pounds.

2025 Badminton Achievements and Highlights

- The Indonesia Open 2025 marked important victories for Denmark's Anders Antonsen and Korea's An Se-young in the singles category. France secured its first Super 1000 mixed doubles title.

Chess Triumphs and Celebrations in 2025

- In the Norway Chess 2025, D Gukesh defeated world champion Magnus Carlsen in a classical game, recording his first-ever win against him.
- Despite this setback, Magnus Carlsen emerged victorious at Norway Chess 2025, securing his seventh title with 16 points, and narrowly outranking Fabiano Caruana and Gukesh.
- Aravindh Chithambaram won the 6th Stepan Avagyan Memorial title in Armenia, edging out fellow Indian player Praggnanandhaa on tiebreaks.
- Praggnanandhaa showed his prowess by winning the UzChess Cup Masters, marking his third classical title of the year and moving him up to World No. 4 in live ratings.

Recent Developments in Sports

Hockey

- India has initiated its Women's Asia Cup 2025 campaign, aiming for the title and qualification for the 2026 World Cup. The initial face-off is with Thailand, on September 5, in Hangzhou.
- Chennai was the host city for the Hockey India Masters Cup 2025, this year. The event assembled veteran players across both men's and women's categories, promoting the idea of active aging and recognising the contributions of hockey legends.
- Olympian Lalit Upadhyay, with over 179 caps under his name and noteworthy contributions to India's hockey advancements, has announced his retirement from international hockey.

Football and Athletics

- Portugal is the champion of the UEFA Nations League 2025, having defeated Spain on penalties after a 2–2 draw, making them the first team to win the title twice.
- Noted footballer Cristiano Ronaldo has been appointed as the global ambassador for the Esports World Cup 2025 in Riyadh and has been included as a playable character in the game FATAL FURY.
- Following a major shake-up, the FIFA Club World Cup 2025 is now a larger, 32-team event held in the United States. However, concerns over player fatigue and scheduling issues have been raised.
- The Spanish Grand Prix 2025 was won by Oscar Piastri, a McLaren driver. This victory marked his fifth win of the season.

Athletics

- Armand Duplantis has again broken the pole vault world record, successfully clearing 6.28 meters at the Stockholm Diamond League and setting a personal and global record.
- The Paris Diamond League saw Neeraj Chopra take the top spot with an 88.16-meter throw. This victory has put him back in good form and created momentum for the approaching championships.
- Neeraj Chopra also won the Ostrava Golden Spike with a throw of 85.29 meters in the Czech Republic, marking his fifth successful outing of the season.

Other Sports Events

- Carlos Alcaraz won the Queen's Club title again, after defeating Jiri Lehecka in three sets, extending his grass-court winning streak to 18 matches.
- The NBA Finals 2025 saw the Oklahoma City Thunder emerge victorious over Indiana Pacers in Game 7. Shai Gilgeous-Alexander was named the Finals MVP.
- The World Para Athletics Championships 2025 will be hosted by India in New Delhi, from September 27 to October 5. The mascot for the event, 'Viraaj', symbolises resilience.
- In 2029, India is set to host the World Police and Fire Games in the state of Gujarat, in the cities of Ahmedabad, Gandhinagar, and Ekta Nagar, with participation expected from over 70 nations.

LIVE CLASSES + TEST SERIES

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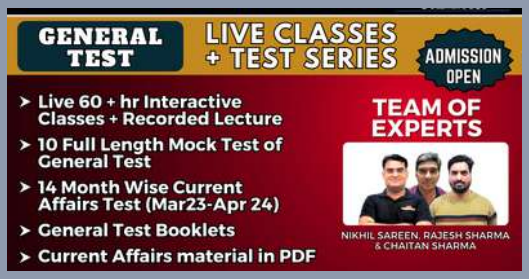

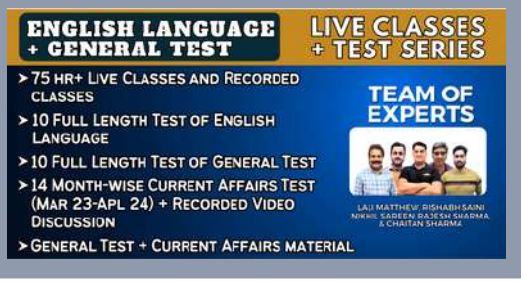

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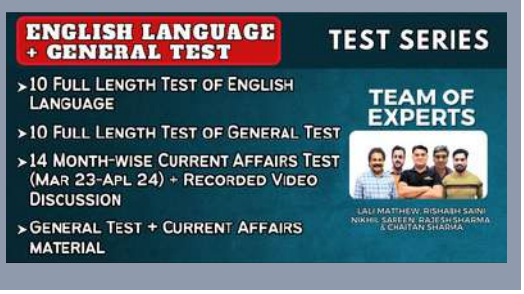

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