

APRIL 2025 SNIPPETS

FOR KAS 2024

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KARNATAKA ISSUES

- The state government's recent notification aims to resolve the long-standing boundary rationalisation of the Shettihalli Wildlife Sanctuary by adding 27.95 sq km of forest area to the buffer zone of the Bhadra Tiger Reserve. This decision comes in response to errors in the sanctuary's original notification, which incorrectly inflated its size from 395.60 sq km to 695.60 sq km, thereby including parts of Shivamogga city. As urbanisation threatens conservation efforts, conservationists have pushed for the establishment of a buffer zone, which was approved in 2023 by the National Board of Wildlife, linking Bhadra Tiger Reserve and Shettihalli Sanctuary. The newly designated buffer zone will not include revenue villages or lands, and activists are now urging authorities to transfer an additional 16 sq km of territory from the Bhadravati division to the tiger reserve, as this area is essential for wildlife management.
- In Karnataka, Police Flag Day is celebrated on April 2nd every year. This day is significant because it marks the unification of police forces in the state under a single umbrella. On April 2, 1965, uniform Acts were brought in to unify the police forces, and since then, this day has been celebrated as Police Flag Day. The day is also observed as Welfare Day for retired Police officials, with one of its primary objectives being to raise funds for the benefit of retired police personnel. In addition, the Karnataka State Police distributes the Chief Minister's Medal on this day.
- A recent discovery in Bengaluru has shed new light on Karnataka's rich history, as Falcon coins gallery unveiled three sets of copper plates, one of which has been deciphered by the Archaeological Survey of India (ASI) to reveal previously unknown details about the Vijayanagar empire, including the coronation ceremony of King Devaraya I of the Sangama dynasty on November 5, 1406, and his donation of the village of Gudipalli to Brahmins, with the copper plates bearing the seal of Vamana, an avatar of Vishnu, instead of the Varaha seal, the royal insignia of the Vijayanagar empire.
- Power Forward Services, headquartered in Maryland, USA, has launched the Orienting Academy in Bengaluru, India, offering structured coaching and mentoring for children aged four and above. The academy operates in four locations in Bengaluru - Kammanahalli, RR Nagar, Shantinagar, and Jayanagar - and provides training in cricket and Olympic sports such as hockey, fencing, and equestrian sports, as well as arts and academics. The academy aims to provide structured pathways for children to develop competencies through hands-on learning and expert coaching. Since its founding in 2017, Power Forward Services has integrated with existing programmes, focusing on experiential learning, mentoring, and talent development. The launch of the Orienting Academy was attended by former international athlete Arjun Devaiah and Kannan Krishnamurthy, secretary of the Karnataka State Hockey Association.
- The Bangalore Water Supply and Sewerage Board (BWSSB) has launched an innovative online initiative, Sanchari Cauvery 'Cauvery on Wheels,' to ensure a continuous supply of drinking water to every household in Bengaluru. This program allows citizens to book Bureau of Indian Standards-certified water online, which will be sourced from Cauvery Connect Centres. To address water scarcity issues, especially during summer, the BWSSB aims to regulate private water tankers and prevent indiscriminate pricing. Private tanker owners must register on the Sanchari Cauvery app or website by April 10 to participate in the program.
- Unit-1 of the Kaiga Nuclear Power Plant, located in the Uttara Kannada district of Karnataka, will undergo a year-long shutdown for the replacement of over 300 pipelines and overhaul of key reactor equipment, a move necessitated by high operating temperatures that have weakened the pipes over the past 25–30 years. Operated by the Nuclear Power Corporation of India Limited (NPCIL), Kaiga Unit-1, commissioned in 1999 with a capacity of 220 MW, holds the world record for 962 days of continuous operation, surpassing the UK's Heysham II plant. The unit employs pressurised heavy water reactor (PHWR) technology, using natural uranium and heavy water. The Kaiga Generating Station (KGS) has four units with a combined capacity of 880 MW and ranks as India's third-largest nuclear power station after Tarapur and Rawatbhata. The commissioning of the fourth unit in 2011 elevated India's status in the global nuclear landscape, making it the sixth

- country worldwide with such capacity, joining the ranks of the USA, France, Japan, Russia, and South Korea. This addition also increased India's nuclear capacity from 4,560 MW to 4,780 MW.
- A government-appointed panel of medical experts audited 464 maternal deaths in Karnataka between April and December 2024, following a spike in deaths in Ballari in November 2023. The audit, triggered by the suspected contamination of Ringer Lactate IV fluid from Paschim Banga Pharmaceuticals (now blacklisted), revealed possible endotoxin-related links to 18 of the deaths. The report, aimed at identifying gaps in maternal healthcare and suggesting preventive measures, resulted in 27 key recommendations. These include enhanced antenatal care (ANC) with a structured visit schedule, early identification and telephonic monitoring of high-risk pregnancies, mandatory postnatal hospital stays, and strengthened planning by PHC teams. Anaemia management through iron sucrose or Ferric Carboxymaltose (FCM) was also emphasized. Health Minister Dinesh Gundu Rao confirmed several recommendations are being implemented, with high-risk referrals and procurement of FCM and testing kits already underway.
 - Leopard-related conflicts are on the rise in Karnataka, making them the third most concerning wildlife conflict after elephants and wild boars. From 2022–23 to 2024–25, the state reported an average of 4,500 leopard conflict cases annually, primarily involving livestock predation and attacks on stray dogs in peri-urban areas. While wild boars cause more incidents, leopards incite greater fear and economic loss. The absence of official leopard population data in Karnataka is seen as a major flaw in wildlife management, as conservation efforts remain focused on tigers and elephants. Rapid urbanization, poor waste disposal, and an increase in stray dog populations—especially in cities like Mysuru and Bengaluru—are drawing leopards closer to human settlements, escalating conflict cases further.
 - Karnataka-based writer, activist and lawyer Banu Mushtaq's short story collection 'Heart Lamp', translated from Kannada to English by Deepa Bhasthi, was shortlisted for the International Booker Prize 2025 in London
 - The Finance Ministry has announced that from May 1, 2025, Karnataka will have a single Regional Rural Bank (RRB) under the Centre's 'One State, One RRB' policy. This will involve the merger of Karnataka Vikas Grameena Bank (KVGB), headquartered in Dharwad, and Karnataka Gramin Bank (KGB), headquartered in Ballari. The new entity will retain the name Karnataka Grameena Bank and will be sponsored by Canara Bank. The move aims to improve operational efficiency and cost rationalisation. KVGB has a business size of ₹30,748 crore with 629 branches, while KGB has a business size of ₹63,697 crore and 1,122 branches across 19 districts. After the merger, the unified RRB will be headquartered in Ballari. This development is part of a broader amalgamation plan approved by the Department of Financial Services (DFS), which seeks to reduce the total number of RRBs in India from 43 to 28. RRBs are governed by the RRB Act of 1976 and are jointly owned by the Centre (50%), the sponsor bank (35%), and the State Government (15%).
 - The state government has announced the Dr. B.R. Ambedkar Awards for 2023, 2024, and 2025, honoring 15 outstanding achievers from various fields. For 2023, the winners include Hariharananda Swamy (Social Service), Indudhara Honnapura (Journalism), Rudrappa Hanagawadi (Administration), Seetavva Jodatti (Eradication of Devadasi practice), and K. Pundalikarao Shettiba (Social Service and Politics). In 2024, the awards go to Sridhara Kaliveera (Activism), Mallajamma (Social Service and Politics), Ramdev Raake (Journalism), Y.B. Himmadi (Literature and Social Service), and Lakshmipathy Kolar (Literature and Organisation). Finally, the 2025 winners include Dattatreya Ikkalagi (Publication), Mavalli Shankar (Activist), F.H. Jakkappanavar (Activism), Honnur Gowamma (Folk Art), and Eerappa (Dalit Activism).
 - Terminal 2 (T2) of Kempegowda International Airport (KIA) in Bengaluru has become India's first airport terminal to receive the prestigious 5-star rating from Skytrax, a globally recognized benchmark for airport excellence. This achievement places T2 among a select group of top-rated terminals worldwide. The rating was awarded based on a thorough audit of over 800 passenger touchpoints across 30+ categories, such as design, hygiene, digital services, and customer care. T2 was also named the Best Regional Airport in India and South Asia. Key features behind this

recognition include its biophilic “Terminal in a Garden” design, DigiYatra biometric entry, the AI-powered BLR Pulse App, advanced queue and immigration systems, and inclusive amenities like a dedicated sensory room. Furthermore, the terminal has demonstrated a strong commitment to environmental sustainability, earning Platinum LEED pre-certification and ACI Level 5 Carbon Accreditation, along with providing curated retail, dining, and premium lounge facilities.

- Karnataka is set to become the first Indian state to establish a Cyber Command Unit (CCU), a specialized body under the Home Department, aimed at overhauling cybercrime investigations. Headed by DGP Pronab Mohanty, the CCU involves no additional expenditure and will lead efforts in cybersecurity threat response, data breach investigations, and future crime prevention through its Quick Response Team (QRT). Investigators are carefully selected based on technical expertise, with targeted training provided. A strong emphasis is placed on eliminating corruption, especially in financial crime handling. The CCU will oversee 45 CEN police stations and the DGP will act as Chief Information Security Officer. Integration with RBI, payment gateways, and other institutions, alongside managing fake news, is also planned. A key goal is to standardize cybercrime investigation procedures through clear SOPs and ensure coordination among departments.
- A new campaign has been launched in Bengaluru by the Electronics City Industries Association (ELCIA), Namma Metro, and the Bengaluru Metropolitan Transport Corporation (BMTTC) in collaboration with the Toyota Mobility Foundation and WRI India to enhance public transport usage among corporate employees in Electronics City. Named the Station Access and Mobility Program (STAMP 3.0), the initiative aims to encourage startups and tech companies to develop innovative solutions for first- and last-mile connectivity challenges, especially ahead of the upcoming Yellow Line metro opening in 2025. The program emphasizes sustainable transport options, including metro feeder buses, to reduce emissions and congestion while making public transport appealing to high-income groups.
- Karnataka government forms an expert committee to re-identify non-notified forests within six months as per the Supreme Court's directive, aiming to finalize the areas under the Forest (Conservation) Act under Meenakshi negi
- Karnataka is set to embark on an ambitious renewable energy initiative aiming to generate nearly 19,000 MW of solar and wind power by 2030, integrating common battery storage and transmission infrastructure. This hybrid energy model will combine solar, which peaks in the morning, with wind power, stronger in the evenings, to optimize output. Battery and pumped storage systems will manage peak demand and excess generation. A majority of the capacity—around 15,000 MW—will be located in north Karnataka, including districts like Belagavi, Koppal, and Raichur, with land already identified and farmer negotiations mostly completed. Some of these projects will operate under a Public-Private Partnership (PPP) model. According to studies by the National Institute of Wind Energy (NIWE) and the National Institute of Solar Energy (NISE), Karnataka has immense renewable potential—1.24 lakh MW for wind and 25,000 MW for solar—though currently only a fraction has been commissioned. Despite challenges such as lengthy implementation timelines and regulatory hurdles, Karnataka remains among India's top five renewable energy-producing states.
- Kempegowda International Airport launches Airport Truck Management Facility (ATMF) with Shell Mobility. ATMF streamlines truck flow and enhances operational efficiency at the Greenfield Domestic Cargo Terminal. The facility handles 1,600 trucks daily, addressing congestion and delays effectively. ATMF features over 250 parking bays and utilizes digital processing for automated approvals. India's first fully automated, paperless truck management facility improves truck entry and exit. New tech reduces truck turnaround time from 4 hours to 1 hour, with 78% waiting under 20 minutes. 24/7 CCTV monitoring bolsters security while app-based approvals speed up clearances.
- - Chief Minister Siddaramaiah announced that an Ambedkar Museum would be established in Bengaluru, while a ‘Constitution Chair’ would be set up at the University of Mysore.

- The Bruhat Bengaluru Mahanagara Palike (BBMP) collected ₹4,930 crore in property tax in the financial year 2024-25, making it the highest ever collected by the civic body. This marks a significant increase of around ₹1,000 crore compared to 2023-24. While BBMP's total target for this year was ₹5,210.47 crore, it achieved 94.62% collection. Yelahanka zone achieved a 104.36% tax collection amounting to ₹464.66 crore, followed by Mahadevapura zone which achieved a 100.12% collection with ₹1,310.58 crore, which is also the highest amount collected among all the zones. With ₹733.65 crore, South zone achieved 95.34% collection, East zone achieved 93.52% with ₹843.14 crore and Dasarahalli zone collected ₹152.94 crore achieving 92.72% collection.
- Kannada Sahitya Parishat president Dr M Mahesh Joshi said that the 88th Akhila Bharata Kannada Sammelana will be organised in December after taking note of the prevailing climatic conditions in Ballari
- The Karnataka Platform-Based Gig Workers (Social Security and Welfare) Bill, 2024 aims to provide social security and welfare protections to the growing gig workforce, particularly those associated with platforms such as Swiggy, Zomato, Ola, Uber, Amazon, and Flipkart. With nearly two lakh gig workers in Bengaluru alone and traditional labour laws not covering them, the Bill seeks to introduce structured protections including mandatory welfare fees (1%-5%) per transaction, creation of a welfare board, transparent contracts, protection against arbitrary termination, and rest/safety provisions. The Bill introduces a Welfare Fee Verification System (WFVS) to ensure proper tracking of contributions. Despite initial opposition from industry bodies like NASSCOM and IAMAI regarding issues such as definition ambiguity, algorithm transparency, and state overreach, the Bill was cleared by the Karnataka Cabinet in April 2025 following revisions. Key amendments include removal of Industrial Disputes Act references, decriminalization of non-compliance, clarity on welfare fee collection, and introduction of a sunset clause to prevent duplication with the still-pending Central Code on Social Security, 2020. The Bill balances platform accountability with worker rights without altering the employer-employee status.
- Karnataka state government has relaxed the minimum age for admission to class 1 in the 2025-26 academic year, reducing it to 5 years and 5 months from the 6 years mandated earlier.
- A recent study conducted by the Hampi Archaeological Survey of India (ASI) Circle and Goa-based Samvardhan Heritage Solutions has revealed that almost all ASI-protected monuments within the World Heritage Site of Hampi are vulnerable and require urgent restoration. The study, aimed at outlining conservation priorities over the next decade, involved photographic documentation and structural assessments of each monument. Hampi, once the capital of the Vijayanagara Empire and spread across 4,187 hectares in the Tungabhadra basin, houses around 1,600 monuments, with 57 protected by the ASI. The monuments were categorized into three levels of concern: "Major Concern" for nine highly unstable structures such as the Vijaya Vittala Temple and Lotus Mahal; "Moderate Concern" for 11 monuments showing signs of decay; and "Minor Concern" for those needing periodic attention. The two-month study included environmental impact analysis and found threats from human activities like mining and tourism, natural factors such as rainfall and vegetation, and financial constraints noted in a June 2024 report, which highlighted funding shortages impeding restoration efforts.
- The Karnataka Prakashakara Sangha B M Shri Prathishtana has announced its 2025 awardees, to be honored on World Book and Copyright Day, April 23, at an event at 11 am at MVC Auditorium, B M Shri Smaraka Prathishtana, N R Colony. The M Gopalakrishna Adiga Pustaka Paricharaka Award will be awarded to Akshata Humchadkatte of Aharnishi Prakashana, known for publishing over 90 books aimed at first-time writers, particularly women, while the Nanjanagudu Tirumalamba Prakashana Prashasti will go to Renuka Kodagunti of Bandara Prakashana, who teaches Kannada to non-speakers and collects folk riddles. Additionally, honorary awards will be presented to Raghuveer of Sahityaloka Publication, Krishna Chengadi of Amulya Pustaka, Anantha Kunigal of Avva Pustakalaya, Nagesh of Kadamba Prakashana, and Srinath of Book Circle.
- Due to a shortage of manual labour, farmers in Karnataka are increasingly adopting agricultural machinery, with over 7.5 lakh machines sold under government schemes in the past five years.

These include a range of equipment from rotavators and power weeders to high-end combine harvesters, used across soil preparation to post-harvest operations. Tractors are vital for operating many of these tools. Government schemes, particularly the High-Tech Harvester Hub Scheme, cover up to 50% of costs and have facilitated the establishment of 344 harvester hubs at a cost of ₹130 crore. Mechanisation has led to a rise in the area under crops like ragi, with many farmers switching to less labour-intensive crops. Women farmers benefit significantly through reduced physical effort and increased productivity. However, challenges remain, including high machinery costs without subsidies, low awareness of schemes, and a backlog of subsidy applications worth ₹200 crore, signaling the need for broader outreach and support.

- On World Earth Day (April 22), the focus is on long-term sustainable environmental action through diverse and impactful initiatives. Bengaluru-based startup DrinkPrime addresses the issue of excessive plastic waste by providing a closed-loop water purification system, reducing around 7.5 lakh kg of plastic waste monthly and serving over 2.5 lakh users. The “Wake the Lake” initiative by United Way has rejuvenated 80 polluted lakes in Bengaluru, improving biodiversity and urban water security. The One Billion Drops campaign promotes rainwater harvesting, installing over 8,200 wells and conserving 10.4 million litres of water. Meanwhile, EY GDS has established 21 insect cafes in major public parks using sustainable materials to provide habitats for pollinators, thus boosting urban biodiversity and ecological balance.
- For the first time in Karnataka, the Forensic Psychological Autopsy (FPA) was employed in a legal investigation, marking a significant step in integrating mental health assessments into forensic procedures. Initiated by a Special Investigation Team (SIT) formed by the Karnataka High Court, and supported by experts from NIMHANS, the FPA aimed to evaluate whether the investigation itself contributed to the suicide of a person named Jeeva. This method, previously used in high-profile cases such as the Sushant Singh Rajput case and the Burari deaths, involves collecting psychological, social, and behavioral data from multiple sources to understand the deceased's mental state before death. Techniques such as video analysis of interrogations, behavioral observations, and a review of social interactions and communication patterns were used. This case sets a legal precedent in Karnataka and underscores the growing importance of psycho-legal tools in cases involving potential abetment to suicide.
- The Yeshasvini Health Insurance Scheme is a community-based initiative in Karnataka aimed at providing affordable healthcare for cooperative society members, especially in rural and semi-urban areas. It offers an annual coverage of up to ₹5 lakh per family for over 2,191 medical procedures, including 69 newly added advanced treatments like interventional radiology, CTVS, and cancer care. Premiums vary based on location—₹500/year for rural families of four and ₹1,000/year for urban—with access to 786 empanelled hospitals. The scheme targets low-income households, including self-help groups and cooperative workers such as beedi workers and fishermen, and covers emergencies like snake bites and farming injuries. Eligibility requires a minimum 90-day co-op membership, age below 75, and a family income under ₹30,000/month. While it excludes certain treatments like dialysis, transplants, and pre-existing conditions, it remains a vital health support system with proposed funding from government grants and enrolments. Rate revisions are underway to attract more hospitals, addressing unchanged procedure costs since 2017-18.
- The Centre for Study of Science, Technology and Policy (CSTEP) launched "Namma Safari", a low-carbon development model tailored to Karnataka's needs, aiming to promote sustainable growth across key sectors while tracking resource use and greenhouse gas emissions. The initiative was launched by former MP Rajeev Gowda, who emphasized the importance of modelling studies in informing policy decisions. Experts discussed the challenges and opportunities in transitioning to a low-carbon economy, including the need for renewable energy, green construction materials, and energy-efficient buildings. According to CSTEP, Karnataka's electricity demand is projected to increase, but a green shift is possible if renewables are ramped up and no new coal plants are built, potentially reducing GHG emissions from 400 MT to 50 MT by 2050.

- A recent study conducted over 12 months by the National Centre for Promotion of Employment for Disabled People (NCPEDP) and NGO Astha reveals stark health disparities among people with disabilities in Bengaluru Rural and Tumakuru districts. Covering 758 respondents (388 from Bengaluru Rural and 370 from Tumakuru), the study found that 96% of people with disabilities in Tumakuru and 88% in Bengaluru Rural lack health insurance, and over 90% had not accessed health services or assistive aids in the past year. Locomotor disabilities were the most common, with a significant number of respondents being unemployed and fully dependent on family, and literacy rates were particularly low—47% illiteracy in Bengaluru Rural and 24% in Tumakuru. The majority of families earned less than ₹1 lakh annually. While most individuals in Bengaluru Rural had UDID cards, half of those in Tumakuru did not, citing lack of awareness, disinterest, and documentation issues. The report highlights deep economic, educational, and social exclusion, increased vulnerability to climate-related health issues, and a significant impact on life opportunities. Recommendations include promoting disability-friendly public services, subsidised healthcare, better insurance access, timely updating of UDID cards, community-based healthcare models involving NGOs and private sectors, and caregiver training through self-help groups, aligning efforts with the RPwD Act, 2016.
- India Ratings & Research (Ind-Ra) expects Karnataka's nominal GSDP growth for FY26 to be around 11.5%, notably higher than the 6.5% projected in the state's budget, supported by an average growth rate of 11.6% during FY19–FY24 and a revised FY25 growth estimate of 12.8%. With this strong growth, Karnataka's fiscal deficit for FY26 is likely to align with the budget estimate, and the debt burden could be slightly lower than the projected 24.9% of GSDP. Including state guarantees, combined liabilities stood at 25.3% of GSDP in FY24, expected to reduce to 23.8% in FY25 RE. Revenue receipts for FY26 are budgeted to grow by 13.5%, and revenue expenditure by 9.8%, with the state's own tax revenue—making up 70% of revenue receipts—projected to grow 15.4%, meeting the Rs 2.08 lakh crore target. Fiscal performance in FY25 showed a revenue deficit of Rs 26,130 crore (0.9% of GSDP), lower than the budgeted Rs 27,350 crore (1.0%), due to lower-than-expected revenue expenditure, while nominal GSDP growth stood at 12.7% against a projected 12.3%, slightly improving deficit ratios. Government guarantees rose 15.4% in FY24 to around Rs 44,250 crore, impacting the state's overall debt profile.
- Governor Thaawarchand Gehlot has given assent to the Greater Bengaluru Governance (GBG) Bill, 2024, which proposes a new three-tier governance structure consisting of the Greater Bengaluru Authority (GBA) headed by the Chief Minister, City Corporations (maximum of seven), and Ward Committees at the grassroots level. The Act allows the government to redefine city boundaries beyond current BBMP limits and create new corporations like Bengaluru North, South, and East. The GBA will receive grants from the central and state governments, with an expected annual budget of ₹3,000 crore, while City Corporations will generate ₹3,500–₹4,500 crore each through property tax, advertisement charges, and building approval fees. The GBA will have 19 members, including representatives from parastatal agencies and elected officials, and an IAS officer will serve as Chief Commissioner. The GBA must be formed within four months and will handle major citywide planning and projects. Historically, Bengaluru's urban governance evolved through the KMC Act (1976), BBMP Act (2008), BBMP Restructuring (2020), and now the GBG Act (2024), which replaces the BBMP framework.
- According to the 2nd edition (2025) of the CareEdge Ratings State Ranking Report, Karnataka ranked 3rd among larger Indian states (Group A), following Maharashtra (1st) and Gujarat (2nd). The rankings, based on 50 parameters across economic, fiscal, and social pillars, aim to assess sustainable and equitable growth and help gauge states' investment attractiveness. Western states performed strongly in fiscal and economic aspects, while southern states excelled in environment and governance. In Group B (North-East, Hilly, and Small States), Goa topped the list due to its performance across financial, infrastructure, social, and economic indicators. Union Territories were excluded from the analysis. The report, published by CareEdge Ratings under

Chief Economist Rajani Sinha, is not comparable to the previous 2023 edition due to methodological changes.

POLITY

- Guwahati, Assam's principal city, will host a meeting of the Chief Information Commissioners of the country
- The Waqf (Amendment) Act, 2025 seeks to modernize the Waqf Act of 1995 by addressing inefficiencies, improving governance, and eliminating outdated provisions. It redefines waqf formation by removing "waqf by user," requiring donors to be practicing Muslims for over five years and property owners, and ensures female heirs cannot be denied inheritance in waqf-alal-aulad. Government land can no longer be declared waqf, and disputes over such claims will be handled by the Collector. The Act removes the power of Waqf Boards to unilaterally determine waqf status and transfers survey authority to District Collectors under state revenue laws. The composition of the Central Waqf Council and State Waqf Boards has been revised to include non-Muslims and broaden representation across sects like Shias, Sunnis, Bohras, and Agakhanis, with mandatory inclusion of Muslim women. The amendment also replaces the Muslim law expert in tribunals with a District Judge and a Joint Secretary, and allows appeals on tribunal decisions in High Courts within 90 days. The Central Government is empowered to frame rules for registration, oversee audits through the CAG, and ensure better transparency. In parallel, the Mussalman Wakf (Repeal) Bill, 2025 repeals the 1923 Act to establish a uniform and updated legal framework, addressing misuse, legal disputes, and constitutional concerns around exclusivity of waqf laws.
- In a key ruling, the Supreme Court held that a Governor cannot reserve a Bill for the President's consideration under Article 200 of the Constitution after it has been re-passed by the State Legislature. This ruling came in a case involving the Tamil Nadu Governor, who had initially withheld assent to ten Bills. After the State Legislature re-passed these Bills, the Governor chose to refer them to the President, which the Court deemed not bona fide. The Court clarified that if the Governor wished to reserve the Bills, it should have been done in the first instance. Upon reconsideration and re-passage of a Bill, the Governor is constitutionally bound to grant assent without delay, ideally within one month. The Court emphasized that the use of the phrase "shall not withhold assent" imposes a clear obligation, leaving no scope for discretion. Furthermore, the omission of the discretionary phrase "in his discretion" from Section 75 of the Government of India Act, 1935, in the framing of Article 200 underlines the constitutional intent to limit the Governor's power in this regard.
- Lok Sabha Speaker recently delivered the keynote address on 'Parliamentary Action for Social Development and Justice' at the 150th Assembly of Inter-Parliamentary Union in Tashkent.
- Telangana has become the first state in the country to implement the contentious Scheduled Caste sub-categorisation, with a Government Order (GO) coinciding with BR Ambedkar's birth anniversary.
- The 4th edition of the India Justice Report, released by Tata Trusts, highlights significant gaps in India's justice system. The country has only 15 judges per million people, far below the Law Commission's 1987 benchmark of 50 per million, resulting in judicial delays. High Court vacancies stand at 33%, while the district judiciary has a 21% staffing gap, burdening judges with an average of 2,200 cases each. Police forces also face officer (28%) and constabulary (21%) level vacancies, while prisons report a 28% shortfall in both officer and cadre staff, and an alarming 44% vacancy in correctional staff and 43% in medical officers. Paralegal volunteer numbers have dropped by 43%, limiting community legal outreach. However, improvements like CCTV in police stations, video conferencing in courts, and prison legal clinics were noted. Overcrowding remains critical, with prisons operating at 131% capacity and projected to reach 6.8 lakh inmates by 2030, surpassing the expected 5.15 lakh capacity. Justice continues to remain inaccessible, with Justice Madan B Lokur observing that the burden of justice lies on the individual rather than the state. Among states, Karnataka leads in justice delivery, fulfilling SC/ST/OBC quotas in policing, followed

by Andhra Pradesh, Telangana, and Kerala, though no state has met its own targets for women's reservation in police forces.

- Justice Dinesh Maheshwari, former judge of the Supreme Court of India, has been appointed as the Chairperson of the 23rd Law Commission of India. The Law Commission is a non-statutory, advisory body constituted by the Union Government and functions under the Ministry of Law and Justice. Although not defined under the Constitution, it aligns with Article 39A which promotes equal justice and free legal aid. It is an ad hoc body, set up for a specific purpose and tenure. The first Law Commission in India was established in 1834 during British rule under the Charter Act of 1833, chaired by Lord Macaulay. Post-independence, the first Law Commission was formed in 1955, headed by M.C. Setalvad, India's first Attorney General. Since then, 22 commissions have been formed, with the 22nd chaired by Justice Ritu Raj Awasthi. A new Law Commission is constituted by a government resolution, requiring Presidential assent, and its Chairperson is typically a retired Supreme Court judge. The Commission includes legal experts, academicians, senior advocates, and sometimes former bureaucrats, appointed for a three-year term. Its primary functions include reviewing existing laws to identify obsolete ones, proposing new legislation, simplifying legal processes, and recommending judicial reforms to improve the delivery of justice and reduce delays in the system.
- Chief Justice of India (CJI) Sanjiv Khanna has nominated Justice B R Gavai as his successor, recommending him to become the 52nd Chief Justice of India. Currently the second senior-most judge in the Supreme Court, Justice Gavai is expected to take oath on May 14, 2025, a day after Justice Khanna's retirement on May 13, and would serve until November 23, 2025. If appointed, he would become the second Dalit Chief Justice of India, after Justice K G Balakrishnan. Born on November 24, 1960, in Amravati, he is the son of R S Gavai, a former Governor of Bihar, Sikkim, and Kerala, and a former Rajya Sabha MP. Justice Gavai joined the Bar in 1985, initially working with Barrister Raja S Bhonsale, and began independent practice at the Bombay High Court in 1987, later focusing on Constitutional and Administrative Law at the Nagpur Bench. He has served as Standing Counsel for various municipal bodies and universities and held roles such as Assistant Government Pleader and Additional Public Prosecutor (1992–1993), and Government Pleader and Public Prosecutor (2000). He was appointed as an Additional Judge of the Bombay High Court in 2003, became a Permanent Judge in 2005, and was elevated to the Supreme Court in 2019.

SCHEME

- India has revamped its Domestically Manufactured Iron & Steel Products Policy - 2025, focusing on prioritizing Indian steel in government contracts and curbing rising steel imports that threaten domestic market stability. The policy mandates that all government contracts use domestically manufactured iron & steel, including products like flat-rolled steel, bars, rods, and railway materials. A key feature is the 'Melt & Pour' condition, requiring steel to be melted and solidified in India to qualify as domestic. Additionally, a reciprocal clause prohibits suppliers from countries that restrict Indian firms from their government tenders, with China being a primary target. The policy bans Global Tender Enquiries (GTE) for iron & steel products, restricting them for capital goods up to ₹200 crore unless approved by the Department of Expenditure. The policy aims to protect domestic manufacturers from foreign competition, ensuring greater stability for Indian steel producers. It also enforces a 50% domestic value addition requirement for capital goods like furnaces and rolling mills, further strengthening India's steel industry against foreign dependence.
- The Union Cabinet has approved Vibrant Villages Programme-II (VVP-II) for the period 2024–2029, with a total outlay of ₹6,839 crore, fully funded by the Central Government. Originally launched in 2023 as a centrally sponsored scheme, the programme focuses on the holistic development of remote and strategic villages along the India-China border and other international borders. The objectives include improving living standards, creating livelihood opportunities, enhancing border security, preventing migration, and integrating remote border communities. While VVP-I covered

border villages in Arunachal Pradesh, Himachal Pradesh, Sikkim, Uttarakhand, and Ladakh, VVP-II expands its coverage to 16 states including Assam, Gujarat, Rajasthan, and West Bengal, and Union Territories like Jammu & Kashmir and Ladakh, strengthening India's presence in strategic rural areas and acting as a buffer against border encroachments.

- The Ministry of Electronics and Information Technology has announced a ₹22,919-crore Electronics Component Manufacturing Scheme to boost local production of electronic parts. Approved by the Union Cabinet, this six-year scheme offers capital expenditure and turnover-linked incentives for companies producing passive components, with rewards based on incremental investments and turnover ranging from 1% to 10%. The initiative follows the success of domestic smartphone assembly and aims to increase the domestic value added in electronics manufacturing, which currently stands at 18%, compared to advanced economies like China at 38%. The government aims to double this value by 2030.
- The Government of India launched the National Critical Mineral Mission (NCMM) in 2025 to enhance self-reliance in the critical minerals sector and support the country's clean energy transition and net-zero emission goals. This mission is strategically aligned with India's climate targets of achieving net-zero emissions by 2070 and reducing emissions intensity of GDP by 45% by 2030 (from 2005 levels). Critical minerals like lithium, cobalt, nickel, rare earth elements (REEs), and graphite are vital for clean technologies, national security, and industrial development, but they face high supply chain risks due to geographical concentration. To address this, 30 critical minerals were identified in 2022, with 24 added to Part D of Schedule I of the MMDR Act, 1957, giving exclusive auction powers to the Central Government. A Centre of Excellence for Critical Minerals (CECM) was also established for policy guidance. Key institutions such as the Geological Survey of India (GSI), IREL (India) Ltd, and the Department of Atomic Energy play major roles in exploration and processing. Internationally, KABIL (Khanij Bidesh India Ltd) has signed MoUs with Argentina and Australia to secure overseas lithium and cobalt resources. Major global producers include Chile, China, Indonesia, Congo, Australia, and South Africa.
- The Consumer Affairs Ministry has framed draft rules for gas meters under the Legal Metrology (General) Rules, 2011, which make it mandatory for all gas meters used for domestic, commercial, and industrial purposes to undergo testing, verification, and stamping prior to their use in trade and commerce.

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SOCIAL ISSUES

- The Union Cabinet approved "Modernisation of Command Area Development and Water Management (M-CADWM)" as a sub-scheme of the Pradhan Mantri Krishi Sinchayee Yojana (PMKSY). This initiative, with an initial outlay of ₹1,600 crore, is set to run from 2025-26 and is designed to enhance the irrigation infrastructure in India. Its key goal is to modernise the irrigation water supply network, ensuring that water reaches the designated farming clusters from existing canals or other water sources. This will help farmers, a note from the Jal Shakti Ministry said, with small land-holdings, by improving water-use efficiency through the use of advanced technologies such as Supervisory Control and Data Acquisition and the Internet of Things. In addition to modernising the irrigation systems, the scheme aims to build sustainable farming practices in the country.
- The Pradhan Mantri Poshan Shakti Nirman (PM-POSHAN) scheme, launched in September 2021 to replace the Mid-Day Meal Scheme, aims to provide nutritious meals to students of Bal Vatikas (pre-primary), primary (classes 1–5), and upper primary (classes 6–8). Covering 11.2 crore students in over 10.36 lakh schools, the scheme ensures a minimum of 700 calories per student per day. For the financial year 2025–26, the Centre has raised its contribution due to inflation, resulting in a 9.5% hike in cooking costs, increasing the daily per-student cost to ₹6.78 for Bal Vatikas & Primary, and ₹10.17 for Upper Primary. The Centre will bear an additional ₹954 crore, while continuing to cover 100% of foodgrain and transportation costs, supplying 26 lakh tonnes annually via FCI. Meals are designed with specific quantities of pulses, vegetables, and oil per age

group. The scheme also emphasizes nutritional gardens, involvement of FPOs and women SHGs, Tithi Bhojan (community meals on festivals), and supplementary nutrition (milk, eggs) for aspirational districts. The adoption of Direct Benefit Transfer (DBT) ensures payments to cooks and helpers, while nutrition experts monitor students' health metrics. A social audit is mandated for accountability and better implementation.

ECONOMY

- With the beginning of the new financial year, several tax and financial reforms have come into effect, impacting individuals and businesses nationwide. The updated income tax structure exempts individuals earning up to ₹12 lakh from taxation, with an additional standard deduction of ₹75,000 extending the tax-free limit to ₹12.75 lakh. These changes, announced in the Union Budget 2025 by Finance Minister Nirmala Sitharaman and approved by Parliament, apply to the financial year 2025-26, with taxpayers reflecting them in returns filed from April 2026. The Unified Pension Scheme (UPS), introduced in August 2024 and notified by the Pension Fund Regulatory and Development Authority (PFRDA) on March 19, is now active, covering central government employees who joined on or after January 1, 2004, with the option to continue with the National Pension Scheme (NPS). In digital finance, the National Payments Corporation of India (NPCI) has enforced new UPI security protocols, mandating payment apps like Paytm and Google Pay to deactivate inactive mobile numbers linked to accounts. Goods and Services Tax (GST) reforms include mandatory multi-factor authentication for portal logins, new regulations on E-Way Bill generation, and revised GST rates for luxury hotels and restaurants, where those with room tariffs above ₹7,500 per day will be classified as 'Specified Premises' and subject to 18% GST. Additionally, major banks like SBI and PNB have revised minimum balance requirements, while PAN-Aadhaar linkage is now crucial to avoid higher TDS rates and dividend payout restrictions. The National Highways Authority of India (NHAI) has also increased toll tax, affecting highways in northern and eastern regions. These reforms collectively aim to enhance financial security, streamline taxation, and improve regulatory compliance across sectors.
- The central government has appointed Poonam Gupta, who is a part-time member of the Economic Advisory Council to the Prime Minister, as a new deputy governor of the Reserve Bank of India (RBI)
- The Reserve Bank of India (RBI) has reduced the repo rate by 25 basis points to 6%, aiming to stimulate economic growth and ease borrowing costs, though it may reduce interest income for savers. This decision, made unanimously by the Monetary Policy Committee (MPC), comes amid global economic uncertainty driven by trade tensions, especially U.S. tariff policies. Consequently, the GDP growth forecast for 2025–26 has been revised downward from 6.7% to 6.5%, with risks flagged due to global volatility. The RBI has shifted its policy stance from neutral to accommodative, indicating a pro-growth approach and potential future rate cuts. While inflation is expected to remain manageable, the RBI is monitoring both upward risks (e.g., currency pressures) and downward risks (e.g., falling global commodity prices). Following the repo rate cut, the Standing Deposit Facility (SDF) is now at 5.75%, while the Marginal Standing Facility (MSF) and Bank Rate are at 6.25%. The repo rate, the interest rate at which RBI lends to commercial banks, directly impacts lending and deposit rates, influencing consumer spending, business investment, and overall economic activity.
- The Central Bureau of Investigation (CBI) executed a major operation dubbed 'Operation Chakra-V' to clamp down on digital arrest scams, resulting in the arrest of four individuals.
- On April 11, 2025, the CEA launched the STELLAR Model for advanced electricity planning in India. The STELLAR Model aids states in resource adequacy planning per 2023 Ministry of Power guidelines. It ensures optimal generation, transmission, and storage planning for future electricity demand. The model supports integrated planning with demand response as a core feature. It helps states comply with dynamic resource adequacy requirements. Developed in India, it's user-friendly, transparent, and regularly updated based on feedback. The software is free for all states

and discoms, ensuring uniform access. Collaboration with TLG and ADB enhances the model's development.

ENVIRONMENT

- A magnitude 7.7 earthquake struck central Myanmar on March 28, 2025, with its epicenter located 20 km from Mandalay, near the Sagaing fault. The quake was followed by aftershocks, including one of magnitude 6.4. The impact was devastating, causing thousands of deaths and severe infrastructure damage, particularly in Mandalay, where pagodas, mosques, and bridges were destroyed. The tremors reached Bangkok, Thailand, leading to structural damage, a building collapse, and water overflow from a rooftop swimming pool. However, neighboring India and China's Yunnan province faced minimal damage due to the direction of seismic energy dispersion. Southeast Asia is highly earthquake-prone due to its tectonic activity, which includes the Himalayas, Shillong Plateau, Indo-Burman Range, and Andaman-Nicobar subduction zone. The Sagaing fault, a 1,400-km-long Ridge-Trench Transform Fault, plays a significant role in Myanmar's seismic activity, accommodating 50-55% of regional plate motion and producing shallow earthquakes at 10-15 km depth. Notable past earthquakes along this fault include the 1839 Ava Earthquake (Magnitude 7.8), 1927, 1946, and the 2016 Bagan earthquake. The 2025 Mandalay earthquake serves as a warning for India, highlighting the need for earthquake-resistant infrastructure, better disaster preparedness, and stronger safety measures to minimize casualties in future seismic events.
- A new species of damselfly, *Euphaea wayanadensis*, has been discovered in the Wayanad region of the Western Ghats, Kerala.
- A rare Binturong, also known as the bearcat and the largest civet in India, was recently recorded by a camera trap set up by the Wildlife Trust of India's Garo Green Spine project team in the Narang Wari Village Reserve Forest, adjacent to Balpakram National Park in Meghalaya. The Binturong (*Arctictis binturong*) is distinguished by its long, shaggy hair, tufted ears, and bushy prehensile tail, measuring between 60–95 cm in body length and weighing between 9 to 14 kg. This nocturnal creature is native to Southeast Asia, inhabiting dense forests from Nepal to Indonesia. Its conservation status is deemed Vulnerable under the IUCN, and it is protected under India's Wildlife Protection Act. Balpakram National Park, known as the "Land of Perpetual Winds," is located about 134 km from Shillong, covering over 200 sq. km at nearly 3,000 ft. altitude and home to diverse flora and fauna, including rare species and flagship animals like elephants and tigers.
- The Warangal Chapata Chilli, recently awarded a Geographical Indication (GI) tag, is a distinctive variety of chilli cultivated in the central agro-climatic zone of Telangana, particularly across 6,700 acres in Warangal, Hanumakonda, Mulugu, and Bhupalapalli districts. Often referred to as the "tomato chilli" due to its blocky, tomato-like shape, it is recognized for its natural red colouring, high moisture retention, vibrant hue, low brittleness, and minimal pungency. Cultivation of this chilli dates back about 80 years, with origins in Nagaram and Nadikuda villages. Telangana's 18th GI-tagged product, it supports over 20,500 farmers, and its recognition is expected to significantly boost market value and export potential, raising prices from Rs 300/kg to as much as Rs 500/kg. The chilli is primarily available in three variants: Single Patti, Double Patti, and Odalu.
- Biologists at the Dudhwa Tiger Reserve in Uttar Pradesh's Lakhimpur-Kheri district have rediscovered the rare long-snouted vine snake (*Ahaetulla longirostris*), marking its first documented sighting in the state. Previously spotted in Bihar and Meghalaya in 2024, this elusive species was found in the Kakrah, RRA-1 (South Sonaripur Range) during a free-ranging rhino operation. The sub-adult snake's distinctive features, including its elongated snout and vibrant green coloration, were confirmed by experts. This rediscovery highlights Dudhwa's exceptional biodiversity and emphasizes the need for habitat conservation to protect such species. The snake was safely released into a suitable environment, ensuring its protection.

- Kannadippaya, meaning 'mirror mat', is a traditional tribal handicraft from Kerala recently granted the Geographical Indication (GI) tag. Crafted by tribal communities such as Oorali, Mannan, Muthuva, Malayan, Kadar, Ulladan, Malayarayan, and Hill Pulaya, it is made from the soft inner layers of reed bamboo, offering thermal comfort—warm in winters and cool in summers. The finest quality mats use *Teinostachyum wightii* (locally known as Njoonjileetta, Ponneetta, Neytheetta, etc.), while other bamboo species like *Ochlandra* sp. (Kareetta, Pereetta, Chitoora) are also used. The GI tag, an Intellectual Property Right (IPR), denotes products with unique qualities linked to a specific region and provides legal protection, exclusive usage rights, and safeguards against imitation. In India, GI registration is managed by the Geographical Indications Registry under the Ministry of Commerce and DPIIT, and globally, GI protection is supported by conventions like the Paris Convention (1883), Lisbon Agreement (1958), and the Madrid System. The GI Act, 1999 governs GI registration in India, ensuring long-term protection and recognition of regional products.
- Pakistan has reportedly discovered a massive cache of antimony in the conflict-torn region of Balochistan, a significant find given the element's diverse applications. Antimony, represented by the chemical symbol Sb and atomic number 51, is classified as a metalloid and exists as a solid at room temperature, known for its poor electrical and heat conductivity. Commercial forms of antimony are typically found in the form of ingots, broken pieces, granular material, or cast cake, and it occurs in deposits associated with volcanic rocks or in deeper veins formed under specific temperature and pressure conditions, with stibnite being the chief ore. China dominates global production, accounting for 88% of antimony supply, while other notable producers include Bolivia, Russia, and Tajikistan. Antimony plays a crucial role in the electronics industry, being used in semiconductor devices such as infrared detectors and diodes, and is alloyed with lead or other metals to enhance their hardness and strength, including applications in batteries, type metal for printing presses, bullets, and cable sheathing. Furthermore, antimony compounds are employed to manufacture flame-retardant materials, paints, enamels, glass, and pottery.
- The New Pamban Rail Bridge, inaugurated by Prime Minister Narendra Modi, connects Rameswaram Island to Ramanathapuram in Tamil Nadu. Built by Rail Vikas Nigam Limited at a cost of ₹531 crore, the 2.07 km bridge features a 72.5-meter vertical lift span that rises up to 17 meters to allow ship passage. Replacing the historic 1914 Pamban Bridge—the first sea bridge in India—the new structure boasts modern engineering with stainless steel reinforcements, dual track provisions, and marine corrosion-resistant materials. Designed for a lifespan of 100 years, it can support speeds of up to 160 km/h, though operational speed is limited to 80 km/h due to track curvature. Construction began in 2019 and was completed in November 2024, despite delays from COVID-19 and sea conditions. This bridge enhances pilgrimage tourism to Rameswaram and boosts regional connectivity, trade, and disaster resilience, while elements of the old bridge are being preserved as a tribute to India's engineering legacy.
- Indira Gandhi Memorial Tulip Garden, the largest tulip garden in Asia, set against the Zabbarwan hills in Srinagar
- The Greater One-Horned Rhinoceros (*Rhinoceros unicornis*), found mainly in India and Nepal along the Himalayan foothills, is currently classified as Vulnerable on the IUCN Red List. India's major populations reside in Kaziranga National Park and Pobitora Wildlife Sanctuary in Assam, and Jaldapara National Park in West Bengal. Due to overpopulation and genetic stagnation in key areas, a new conservation action plan has been developed by the Wildlife Institute of India alongside rhino experts. The plan includes translocating rhinos to less populated sanctuaries across Arunachal Pradesh, Bihar, Uttar Pradesh, Uttarakhand, and Assam to enhance genetic diversity, reduce habitat pressure, and minimize territorial aggression. Kaziranga, with the largest rhino population (2,613 as per 2022 census), is expected to contribute significantly to the translocation, while Pobitora, known for having the highest rhino density globally, will also donate rhinos to ease population stress and reduce conflict and inbreeding. The translocation strategy includes moving rhinos from Kaziranga to Jaldapara and from Pobitora to Gorumara. These efforts

- aim to ensure long-term sustainability and resilience of rhino populations through habitat expansion and improved conservation practices.
- Tiruvallur district in Tamil Nadu is making inroads in cultivating *Adenium obesum*, more popularly known as 'desert rose', a unique flowering plant that has drawn major attention for its novelty as an ornamental houseplant.
 - The Central Pollution Control Board (CPCB) has established a new 'Blue Category' of industries within Essential Environmental Services (EES), which has led to 'Blue Washing'—the reclassification of highly polluting Waste-to-Energy (WTE) incineration plants from the 'Red Category' to the 'Blue Category,' suggesting they are environmentally friendly despite their pollution levels. The 'Blue Category' includes less harmful activities like composting, biogas plants, sewage treatment, and material recovery facilities.
 - The International Maritime Organization (IMO), a United Nations agency, has approved a global carbon pricing system aimed at reducing greenhouse gas emissions from the shipping industry, with full implementation expected by 2028. The system introduces annual fees for ships that exceed emission limits, pushing the sector toward carbon neutrality by 2050. Revenues collected will be used to support the adoption of zero or near-zero emission technologies and assist developing nations in transitioning to low-emission maritime operations. The measure was backed by 63 member states, including the EU, India, China, Brazil, and Japan, while 16 countries, mostly fossil fuel exporters like Saudi Arabia, Russia, and the UAE, opposed it. Pacific Island nations abstained, calling the plan insufficiently ambitious, while the U.S. did not participate in the vote. Environmental groups hailed the decision as a significant step but cautioned that it may fall short of delivering strong climate action. The move comes amid growing concern as the shipping industry accounts for nearly 3% of global emissions, with the potential to rise further without regulatory intervention.
 - BatEchoMon (Bat Echolocation Monitoring) is India's first fully automated system for detecting and analysing bat echolocation calls in real time. It was developed by Kadambari Deshpande (Postdoctoral Fellow, IIHS) and Vedant Barje (WildTech Project Lead, Wildlife Conservation Trust), under the guidance of Jagdish Krishnaswamy at IIHS, Bengaluru. Traditional bat monitoring was slow and labour-intensive, taking months to analyse data from just a few nights due to large recording volumes. BatEchoMon uses a combination of an ultrasonic detector (AudioMoth), Raspberry Pi microprocessor, and a CNN-based algorithm to identify bat species from echolocation calls. It generates spectrograms, recordings, and statistics on bat activity, automatically activating at sunset and operating in real time. The system is solar-powered, WiFi-enabled, modular, and can function for up to eight days without sunlight. It costs about a third of traditional detectors and currently recognises 6–7 common Indian bat species, with plans to expand through national collaborations. This innovation aims to shift researchers' focus from data processing to ecological insights and foster deeper bat research across India.
 - In 2025, UK sightings of the Asian hornet surge, indicating breeding and overwintering confirmed by DNA. The Asian hornet (*Vespa velutina*) is an invasive species from Southeast Asia, not to be confused with the giant hornet. It preys primarily on crucial pollinators like honeybees, posing an ecological threat. Using specialized hunting tactics, Asian hornets can decimate honeybee colonies at hive entrances. Introduced to Europe in 2004 via a shipment of pottery, the Asian hornet has spread to 15 countries. France currently hosts over 500,000 nests of the Asian hornet. The first Asian hornet detection in Britain was officially recorded in 2016.
 - According to the Indian Meteorological Department (IMD), India is projected to receive above-normal monsoon rainfall in 2025, estimated at 105% of the Long Period Average (LPA), which is based on the 1971–2020 average of 87 cm. The forecast comes with a $\pm 5\%$ model error margin, and there is a strong likelihood of the monsoon being either "above normal" or "excess". Certain regions like North Karnataka, Marathwada, Rayalaseema, North Andhra Pradesh, and Bastar (Chhattisgarh) are likely to experience copious rainfall. In contrast, Tamil Nadu, Ladakh, North-East India, and Eastern Bihar including parts of North Bengal may witness deficient rains. The

monsoon is crucial for India's \$3.5 trillion economy, particularly for agriculture, as it directly impacts the production of paddy, pulses, oilseeds, and jute. Favorable climate conditions such as neutral ENSO and IOD, along with reduced Eurasian snow cover, are supporting a positive monsoon outlook. However, regional disparities are emerging. Notably, North-East India has shown a long-term decline in rainfall, while Rajasthan's Thar Desert is receiving more precipitation—a phenomenon under ongoing study. The IMD is expected to release further updates, including the onset forecast by mid-May and a seasonal update by the end of May.

- The International Big Cat Alliance (IBCA) recently signed an official agreement with the Government of India, establishing India as the headquarters and secretariat of the alliance. Launched by Prime Minister Narendra Modi in April 2023 during the 50th anniversary of Project Tiger and formally approved by the Union Cabinet in February 2024, the IBCA aims to conserve seven major big cat species—Tiger, Lion, Leopard, Snow Leopard, Puma, Jaguar, and Cheetah. It is implemented through the National Tiger Conservation Authority (NTCA) under the Ministry of Environment, Forest and Climate Change (MoEFCC). The alliance currently has five ratifying members: India, Nicaragua, Eswatini, Somalia, and Liberia. Membership is open to all UN member states, including range countries where big cats naturally occur, and non-range countries interested in supporting global big cat conservation. India formally joined the IBCA in September 2023 by ratifying the framework agreement, and with five ratifications, the IBCA gained status as a treaty-based intergovernmental organization. India has also committed ₹150 crore for the period 2023–2028 to support the alliance's operations, including creating a corpus fund, building infrastructure, and covering recurring expenses.
- In 2025, scientists detected the presence of either dimethyl sulphide (DMS) or dimethyl disulphide (DMDS) in the atmosphere of K2-18b.
- On April 20, 2025, Nepal marked its inaugural National Yak Day to honor the yak's cultural, ecological, and economic significance in Himalayan regions. Spearheaded by the International Centre for Integrated Mountain Development (ICIMOD), the initiative emphasized integrating yaks into sustainable development plans for the Hindu Kush Himalaya (HKH), while recognizing the vital role of indigenous communities like the Sherpa, Tamang, Thakali, Rai, and Limbu in yak herding. Yaks—classified as *Bos mutus* (wild) and *Bos grunniens* (domesticated)—inhabit high-altitude alpine zones across the Himalayas, Tibetan Plateau, Mongolia, and parts of India. Adapted for extreme environments, they possess unique physical traits such as thick hair, high lung capacity, and specialized red blood cells. Domesticated yaks are central to local livelihoods, providing milk, meat, and transportation, and are also used in trekking. Crossbreeding with cattle produces hybrids like dzo or chauri gai, essential for agropastoral systems. As wild yaks are classified as 'Vulnerable' by the IUCN, there is a growing call for conservation efforts to protect habitats, maintain genetic diversity, and promote sustainable yak management.
- Labeo uru and Labeo chekida, two new species of freshwater Rohu fish, have been discovered in the Western Ghats region of India.
- The 2025 Conferences of the Parties (COPs) to the Basel, Rotterdam, and Stockholm Conventions are being held in Geneva from April 28 to May 9 to address hazardous chemicals like chlorpyrifos. Chlorpyrifos, labeled as "moderately hazardous" by the WHO, remains approved for use on 18 crops in India despite being banned in over 40 countries and is linked to neurotoxicity, reproductive toxicity, irreversible brain damage in unborn children, and environmental contamination. Pesticide Action Network (PAN) India advocates for listing chlorpyrifos under Annex III of the Rotterdam Convention for prior informed consent before trade and under Annex A of the Stockholm Convention for a global ban, citing the availability of safer alternatives. A 2022 report revealed illegal use of chlorpyrifos and other agrochemicals like paraquat, indicating regulatory gaps in India. The Central Insecticides Board & Registration Committee (CIBRC), established in 1970 under the Ministry of Agriculture & Farmers Welfare and governed by the Insecticides Act, 1968, is responsible for the safe regulation, registration, and oversight of insecticides to protect human, animal, and environmental health.

- Two years after countries adopted the high seas treaty, delegates recently gathered at the first session of the Preparatory Commission meeting in New York, to develop rules needed to implement the agreement and set the stage for the first Conference of Parties (COP1).
- Mahuadanr Wolf Sanctuary - located in Latehar district of Jharkhand, holds the distinction of being India's first and only wolf sanctuary
- A "breathing" cap of magma has been discovered inside the Yellowstone supervolcano, and it might help determine when the volcano will next erupt, a new study has found.

SCIENCE AND TECHNOLOGY

- Centrifuges are essential for uranium enrichment, a process crucial for both nuclear power generation and weapons development. Natural uranium contains 3% U-238 and only 0.7% U-235, the fissile component needed for nuclear reactions. To be used in nuclear reactors, uranium must be enriched to 3-20% U-235, while weapons-grade uranium requires 90% U-235. The enrichment process begins with converting uranium into uranium hexafluoride (UF₆) gas, which is then introduced into high-speed centrifuges spinning at around 50,000 RPM. These centrifuges use centrifugal force to separate isotopes by weight, pushing heavier U-238 outward while concentrating the lighter U-235 at the center. The U-235-rich fraction is then repeatedly processed through multiple centrifuge stages until the desired enrichment level is achieved. Centrifuges are composed of key components such as a rotor, which creates the necessary centrifugal force, and a chamber that holds the uranium gas. Made from strong, lightweight materials like carbon fiber, these centrifuges withstand extreme speeds necessary for the enrichment process. Iran's uranium enrichment program has drawn international scrutiny due to the deployment of thousands of advanced centrifuges, raising concerns over potential nuclear weapons development.
- Researchers at the Indian Institute of Science (IISc) have developed a bacteria-based technique to repair bricks made from lunar soil, which can be used to build lunar habitats. The technique uses a soil bacterium called *sporosarcina pasteurii* to create calcium carbonate crystals that glue soil particles together, repairing cracks and defects in the bricks, making it a potential solution for building sustainable structures on the lunar surface.
- The Indian Naval Sailing Vessel (INSV) Tarini has reached Cape Town, South Africa, marking the fourth and final international stop in its global circumnavigation expedition, Navika Sagar Parikrama II.
- SpaceX successfully launched a private astronaut crew aboard a Falcon 9 rocket from NASA's Kennedy Space Center in Florida. This mission is historic because it follows a polar orbit, which is a rare trajectory for human spaceflight. A polar orbit is a type of Low Earth Orbit (LEO), ranging between 200 km to 1,000 km in altitude, where satellites travel from one pole to another instead of moving west to east. These orbits provide global coverage, making them ideal for Earth observation, climate monitoring, and reconnaissance missions. The Fram2 mission is the first human spaceflight to use a polar orbit, marking a major milestone in space exploration. Unlike most human missions, which use equatorial orbits, this mission allows astronauts to observe Earth from pole to pole, enabling new scientific research and Earth monitoring possibilities. As SpaceX's sixth private astronaut mission, Fram2 reinforces the commercialization of space travel and demonstrates the growing role of private companies in space exploration. The mission used Crew Dragon, a reusable spacecraft, emphasizing the cost-effectiveness and sustainability of modern space missions. With 16 crewed missions completed using Crew Dragon, SpaceX continues to push the boundaries of human spaceflight and commercial space innovation.
- The White Tiger Division of the Indian Army's Air Defence unit successfully conducted a live missile-firing exercise using the 9K33 Osa-AK missile system, showcasing its operational readiness and technical capabilities. The 9K33 Osa-AK is a Russian-built tactical surface-to-air defence missile system, designed for low-altitude, short-range air defence. It was developed in the 1960s and fielded by the Soviet Union in 1972. The system is also used by multiple countries, including India,

and is known in the West by its NATO reporting name, SA-8 Gecko. The Osa-AK features an integrated transporter-erector-launcher and radar (TELAR) system, allowing it to detect, track, and engage aerial threats independently. It has a length of 9.1 meters, width of 2.78 meters, and weighs up to 18 tonnes. The system carries six ready-to-fire missiles with a maximum engagement range of 12 km. It is highly mobile, fully amphibious, air transportable, and can operate in various terrain conditions. With a road range of 500 km, it can be quickly relocated for strategic deployment. The vehicle accommodates up to five crew members and is equipped with a Nuclear, Biological, and Chemical (NBC) protection system.

- The Uttar Pradesh Jal Nigam has reported excessive fluoride levels in 120 hamlets, affecting around 200,000 people, with some villages exceeding the safe limit of 1-1.5 mg/L. Fluoride, a naturally occurring element, poses health risks like skeletal fluorosis and dental decay, especially in children. Rajasthan is the most affected state, with other regions such as Telangana and parts of Andhra Pradesh and Karnataka also facing issues, particularly during dry periods when contamination levels rise. In addition to fluoride, groundwater in India is contaminated by arsenic, uranium, and iron, which can lead to severe health problems. Various legislative measures, including the Water (Prevention and Control of Pollution) Act and the Environment Protection Act, have been implemented to tackle water contamination. The Central Ground Water Authority (CGWA) plays a crucial role in regulating and managing these resources to prevent over-extraction and promote conservation through several government initiatives.
- The Indian Navy's INS Tarkash, a state-of-the-art stealth frigate, recently intercepted and seized over 2500 kg of narcotics in the Western Indian Ocean during maritime security operations. Part of the Western Fleet, INS Tarkash is a Talwar-class guided missile frigate, modified from Russia's Krivak III-class. Commissioned on November 9, 2012, at Kaliningrad, it features advanced stealth technologies, a length of 124.8 m, and a top speed of 32 knots. Equipped with sophisticated weapon systems, including the supersonic BrahMos missile and electronics for comprehensive threat response, it can also carry one antisubmarine or early warning helicopter.
- ChaSTE (Chandrayaan-3's Surface Thermophysical Experiment) became the first instrument to measure in situ temperatures near the Moon's south pole, marking a significant achievement by ISRO. As part of the Chandrayaan-3 mission, it was deployed by the Vikram lander on August 23, 2023. ChaSTE features a thermal probe with 10 sensors spaced 1 cm apart, inserted into the lunar regolith using a rotation-based mechanism rather than a hammering one. The probe successfully reached a depth of 10 cm and collected temperature data until September 2, 2023, providing crucial insights into the Moon's thermal properties and supporting evidence of water ice deposits. Unlike previous missions—ESA's Philae (2014), which failed due to an unstable landing, and NASA's InSight HP3 (2018), which could not burrow deep enough due to low soil friction—ChaSTE achieved full deployment and successful data collection.
- After nearly three decades of development, India's first fully indigenous civil aircraft, the Hansa 3 (NG), is now ready for commercial production. Developed by the National Aerospace Laboratories (NAL) in Bengaluru under CSIR, the twin-seater aircraft is designed for cost-effective pilot training and is priced at approximately ₹3 crore, nearly half the cost of imported counterparts (~₹6 crore). Marking a major milestone, the aircraft has been handed over to a private industry partner for production—this is the first time a civil aircraft designed in India is being manufactured by a private company. This advancement supports the Make-in-India initiative and reduces dependency on expensive, time-consuming imports. With India's civil aviation sector expanding rapidly—currently having 37 Flight Training Organisations (FTOs) across 54 bases and plans for 50 more FTOs—there is a rising demand for trainer aircraft, with each FTO requiring at least three such planes.
- Diabetes management should extend beyond merely monitoring blood sugar levels to include the protection of cardiac and renal health, according to a recent study that demonstrates daily oral semaglutide, an anti-diabetic and anti-obesity medication, can reduce the risk of heart attacks, strokes, and cardiovascular death by 14%. The Phase 3 SOUL trial tested Rybelsus, Novo Nordisk's

oral diabetes drug, against a placebo in participants already on standard medications, aiming to show that oral semaglutide lowers the risk of major adverse cardiovascular events—comprising cardiovascular death, non-fatal myocardial infarction, and non-fatal stroke—specifically in patients with type 2 diabetes and established cardiovascular disease (CVD) or chronic kidney disease (CKD). Initiated in 2019, the trial confirmed significant reductions in these events, marking oral semaglutide as the first and only approved oral glucagon-like peptide-1 receptor agonist (GLP-1 RA) to achieve substantial cardiovascular risk reduction in this high-risk demographic .

- With drones used in several districts of Gujarat for policing activities in recent months, DGP Vikas Sahay (April 4) announced Phase I of the Gujarat Police – Drone Response and Aerial Surveillance Tactical Interventions. Gujarat police have employed quadcopter drones to track fugitives and find missing children, and under the GP-DRASTI program, they will now be actively used at the police station level, especially for crimes related to bodily harm and violence on the streets of major cities.
- China has recently launched the "Three Gorges Antarctic Eye," a 3.2-metre aperture radio/millimetre-wave telescope, at the Zhongshan Station in Antarctica
- The United Nations has declared 2025 as the International Year of Quantum Science and Technology, marking 100 years since quantum theory began to revolutionise science.
- The GenomeIndia Project is a groundbreaking initiative led by the Department of Biotechnology, Government of India, in collaboration with a consortium of 20 institutions including IISc, NIMHANS, and NCBS. It has successfully created a genomic database of 9,772 sequenced genomes from over 20,000 blood samples, representing 83 diverse Indian population groups. The project identified more than 180 million unique DNA variations, about 60% of which are rare, capturing India's rich genetic diversity that has been historically underrepresented in global genomics. This database serves as a foundational reference for scientific and medical research, enabling India-specific precision medicine, personalized treatments, improved disease diagnostics, and better understanding of population-specific genetic mutations. By addressing the Euro-centric bias in global datasets, the project aims to enhance healthcare delivery, predict drug responses, reduce health disparities, and foster genome-based research tailored to India's population.
- According to the Digital Threat Report-2024 by Cert-In and SISA, artificial intelligence (AI)-driven cyberattacks are on the rise, posing a major threat to India's Banking, Financial Services, and Insurance (BFSI) sector. These attacks are expected to become highly scalable and adaptable by 2025, surpassing traditional cybersecurity defenses. Both attackers and defenders are leveraging AI, with the BFSI sector facing immediate risk due to its interconnected infrastructure, high-value financial data, and complex technologies. There has been a 175% surge in phishing attacks in the first half of 2024 compared to the same period in 2023. AI is being used to exploit identity vulnerabilities, enhancing social engineering techniques and enabling deepfake-driven impersonation scams such as Business Email Compromise (BEC). India faces a disproportionately high increase in deepfake identity fraud, making it increasingly difficult to maintain digital trust in critical financial systems.
- The Biomass satellite, developed by the European Space Agency (ESA), is set to launch on 29 April 2025 aboard the Vega-C rocket from Europe's Spaceport in French Guiana. It is the first satellite equipped with a long-wavelength P-band radar, allowing it to penetrate dense forest canopies and create detailed 3D maps of tropical forests. Its two-phased mission involves mapping global forest structures and estimating above-ground biomass and forest height on a global scale. By detecting how much carbon forests absorb and store, the mission supports research on the global carbon cycle, deforestation, and climate change mitigation. The P-band radar technology is particularly important because it offers unprecedented insight into forest density and health, which has traditionally been hard to measure from the ground. The satellite, which arrived at the launch site in March 2025, is currently undergoing final health checks.
- A recent study discovered that electrically charging a water droplet can prevent it from splashing when it hits a hard surface. In the experiment, researchers used a syringe needle and a copper

hoop to charge the droplet. High-speed video recordings revealed that while the charged drop still formed a thin sheet called a lamella, it did not lift off the surface to cause a splash. Interestingly, the researchers noted that after surpassing a certain charge level, the droplet made no splash at all. However, this anti-splashing effect only worked on insulating surfaces, not on conducting ones. This finding could have practical applications in industries where splash control is important, such as inkjet printing, agriculture, and microfabrication.

- Recently, physicists at CERN's Large Hadron Collider beauty (LHCb) experiment reported the first confirmed evidence of Charge-Parity (CP) violation in baryons, specifically in lambda-b (Λ_b) baryons, marking a critical milestone in understanding the asymmetry between matter and antimatter. Matter, which constitutes the physical universe, is made of atoms and molecules, whereas antimatter is composed of particles with opposite charges to their matter counterparts—like positrons instead of electrons. Both were created in equal amounts during the Big Bang, yet today, the universe is dominated by matter. The CP symmetry, which combines Charge Conjugation (C) and Parity Transformation (P), is expected to be conserved between matter and antimatter. However, CP violation occurs when this symmetry is broken—leading to differences in behavior between matter and antimatter, a crucial key to solving the mystery of matter's dominance. The LHCb experiment observed statistically significant CP violation in the decay of Λ_b baryons, crossing the five-sigma threshold, which is the standard benchmark for a confirmed discovery in physics. This reinforces CERN's pivotal role in advancing our understanding of the fundamental forces shaping the universe.
- India has recently offered the indigenously developed Akash Air Defence Missile System to the United Arab Emirates (UAE), reflecting India's rising prominence in the global defence export market. The Akash is a Short-Range Surface-to-Air Missile (SRSAM) developed by the Defence Research and Development Organisation (DRDO) and manufactured by Bharat Dynamics Ltd (BDL), Hyderabad. It was inducted into the Indian Air Force in 2014 and the Indian Army in 2015, while Armenia became its first foreign buyer in 2022. The missile system, which operates in the 4.5 to 25 km range and up to 20 km altitude, is capable of engaging multiple aerial targets such as fighter jets, helicopters, and UAVs using command guidance. It incorporates advanced Electronic Counter-Counter Measures (ECCM), is deployed on mobile platforms, and uses an open system architecture for future adaptability. A critical component is the Rajendra 3D passive electronically scanned array (PESA) radar, which enables high-precision tracking and missile guidance. The Akash system underlines India's self-reliance in defence, supports the Atmanirbhar Bharat mission, and enhances strategic ties with partner nations.
- Researchers at Bengaluru's Raman Research Institute develop a portable, affordable device to screen for sickle cell disease using an electro-fluidic micropore system to measure red blood cell stiffness to treat sickle cell anaemia
- KATRIN stands for Karlsruhe Tritium Neutrino experiment, and it is located in Karlsruhe, Germany. Its primary aim is to precisely measure the mass of the electron antineutrino, a type of neutrino produced in beta decay. The experiment focuses on studying the decay of tritium, a radioactive isotope of hydrogen, which emits both an electron and an electron antineutrino. The energy of the emitted electron is affected by the mass of the neutrino — hence, measuring electron energies helps infer the upper limit of the neutrino's mass.
- India has successfully test-fired its indigenous Laser Directed Energy Weapon (DEW) system, marking a significant milestone in advanced defence capabilities. The test, conducted by the DRDO's Centre for High Energy Systems & Sciences (CHESS) at Kurnool, Andhra Pradesh, involved the land-based, vehicle-mounted DEW MK-II (A). The system effectively engaged and destroyed fixed-wing UAVs and swarm drones, causing structural damage and disabling onboard surveillance sensors. Operating at the speed of light, the laser weapon demonstrated pinpoint accuracy and was guided by radar or electro-optic (EO) systems for target detection. Its high-powered laser beam is capable of inflicting structural failure and neutralizing warheads. With this successful trial, India joins a select group of global powers—such as the US, China, and Russia—with comparable

DEW technology. This test highlights India's growing indigenous capabilities and aligns with strategic government priorities focused on directed energy and hypersonic weapons for future warfare.

- The Defence Research and Development Organisation (DRDO) has successfully carried out the release trials of the Long-Range Glide Bomb (LRGB) named 'Gaurav'. This 1,000-kg class air-launched bomb has been indigenously designed and developed by DRDO's Research Centre Imarat (RCI) in Hyderabad with collaboration from Indian private players like Adani Defence Systems & Technologies, Bharat Forge, and various MSMEs. Unlike conventional bombs, 'Gaurav' is a glide bomb that features aerodynamic surfaces such as wings and fins, enabling it to glide forward without an engine, relying solely on momentum from high-altitude drops and aerodynamic lift. This design allows it to be launched from beyond enemy radar and air defence range, increasing pilot safety while maintaining strike accuracy. The bomb measures 4 metres in length, 0.6 metres in diameter, with a wingspan of 3.4 metres. It can glide over 100 km when released from altitudes above 40,000 feet and is equipped with a dual guidance system combining Inertial Navigation System (INS) and satellite-based GPS for high-precision targeting.
- The Kerala State Electricity Board (KSEB) has partnered with IIT Bombay to launch a pilot Vehicle-to-Grid (V2G) project aimed at evaluating the technology's feasibility. V2G technology allows Electric Vehicles (EVs) to send stored electricity back to the grid when not in use, utilizing bi-directional chargers for two-way energy flow. During charging, EVs serve as a load on the grid, with energy consumption managed through Time of Use (ToU) tariffs to alleviate peak demand. Conversely, during discharging, they can provide energy to the grid during high-demand periods or when renewable energy generation is low. While V2G is part of a broader framework that includes Vehicle to Home (V2H) and Vehicle to Vehicle (V2V) applications, it remains the most extensively explored aspect of this technology.
- A recent study commissioned by the Principal Scientific Adviser has recommended that the Union Environment Ministry reconsider its 2015 policy requiring all 537 coal-fired power plants in India to install Flue Gas Desulphurisation (FGD) equipment. FGD systems are designed to remove sulfur compounds, particularly sulfur dioxide (SO₂), from the exhaust of fossil-fueled power stations, achieving up to 95% removal efficiency through industrial processes that use absorbents. The predominant method employed in large power plants is the wet process, where flue gases are treated with an aqueous absorbent solution, commonly involving lime or limestone slurry. The need for FGD arises from the fact that many fossil fuels, including coal, contain sulfur, which is released into the atmosphere during combustion; some coals can have sulfur content as high as 4%, leading to substantial emissions, particularly in facilities that burn over 5,000 tonnes of coal daily.
- Recent research by University of Texas (UT) Health San Antonio has found that transposon activation may be a key factor in the progression of Alzheimer's disease.
- Farmers growing 'pichi poo' (red jasmine) in Tiruchy, Tamil Nadu, are facing major losses due to a fungal infection causing root rot, a disease that attacks plant roots, leading to wilting and death. Caused by overwatering or soil-borne pathogens like Fusarium, Phytophthora, and Pythium, the infection can also affect stems and young plants. It spreads easily through soil water. Prevention includes using well-drained soil, resistant plant varieties, raised beds, and removing infected plants. Fungal soil treatments can also help control the disease.
- Recently, scientists have developed a water-based, non-toxic recycling method for Perovskite Solar Cells (PSCs), eliminating the need for hazardous solvents. PSCs are a type of photovoltaic technology that utilizes perovskite crystal structures—typically with the formula ABX₃, where 'A' and 'B' are cations and 'X' is an anion—for converting sunlight into electricity. These crystals mimic the structure of calcium titanium oxide (CaTiO₃) and offer high power conversion efficiency at a lower cost than traditional silicon-based solar cells, though they face challenges related to lifespan and stability. In India, Carbon-Based Perovskite Solar Cells (CPSCs) represent the first indigenously developed perovskite product, designed for better stability and lower fabrication costs. Indian

researchers have improved CPSC performance by using Guanidinium iodide (Gul) to enhance thermal stability and 5-amino valeric acid iodide (5-AVAI) for moisture resistance through surface passivation. The new recycling process begins with sodium acetate, whose acetate ions bind with lead ions to form water-soluble lead acetate. Sodium iodide is then used to regenerate the degraded perovskite crystals, while hypophosphorous acid stabilizes the water-based solution over time. Ethanol and ethyl acetate are also used to dissolve other components of the solar cell, allowing each layer to be effectively recycled and reassembled.

- The Bullseye Galaxy (LEDA 1313424) was recently discovered by an international team using the Hubble Space Telescope and W.M. Keck Observatory. Its unique structure, featuring eight confirmed rings and a ninth observed through the Keck Observatory, formed approximately 50 million years ago from a collision with a blue dwarf galaxy, resulting in star formation in ring-like patterns. Spanning 250,000 light-years in diameter, nearly five times larger than the Milky Way, it retains a gas connection to the dwarf galaxy despite the current separation of 130,000 light-years. The Bullseye Galaxy may evolve into a Giant Low Surface Brightness (GLSB) Galaxy, a rare type believed to offer insights into dark matter, characterized by diffuse stellar disks, large amounts of neutral hydrogen, and low star formation rates, challenging current cosmological models.
- The Space Docking Experiment (SpaDeX), conducted by the Indian Space Research Organisation (ISRO), achieved its second successful docking between two Indian satellites—SDX01 (Chaser) and SDX02 (Target), each weighing approximately 220 kg. Launched aboard PSLV-C60 into a 460 km circular orbit with a 45-degree inclination, the mission's primary goal was to demonstrate autonomous rendezvous, docking, and undocking in low-Earth orbit. It also aimed to test electric power transfer between docked satellites, develop composite control systems, and verify payload operations after undocking. With this milestone, India became the fourth nation to accomplish successful satellite docking in space, after the United States, Russia, and China.
- A recent study led by the Indian Institute of Astrophysics focused on galaxy NGC 1052-DF2, which appears to lack dark matter, a hypothetical form of matter that constitutes 27% of the universe's mass-energy content and plays a crucial role in galaxy formation and structure. Dark matter is invisible and detectable only through its gravitational effects, and its leading candidates include Weakly Interacting Massive Particles (WIMPs), axions, and Massive astrophysical compact halo objects (MACHOs). In contrast, dark energy makes up 68% of the universe, is distributed evenly throughout space and time, and accelerates the universe's expansion through a repulsive force. While dark matter provides cosmic "scaffolding" for galaxies, dark energy has a global effect on the universe, driving its expansion and acceleration.
- Indian scientists from the Indian Institute of Astrophysics have developed a novel method to estimate the abundance of Helium in the Sun's photosphere using indirect spectral analysis. Since Helium spectral lines are not visible in the Sun's photosphere, the scientists used spectral lines of neutral Magnesium and Carbon, as well as molecular lines of MgH, CH, and C₂, to estimate the Helium abundance. By matching the atomic and molecular abundances of Magnesium and Carbon for different Helium-to-Hydrogen ratios, the researchers confirmed that the Helium-to-Hydrogen ratio in the Sun's photosphere is approximately 0.1, validating the assumed solar value. This method provides a more precise estimate of Helium abundance in the Sun's photosphere than traditional methods.
- BRIC-inStem, Bengaluru, in collaboration with CMC Vellore, has successfully conducted India's first-in-human gene therapy trial for Haemophilia, a rare genetic bleeding disorder. Gene therapy involves modifying or replacing faulty genes to treat or prevent diseases, and this trial marks a significant milestone in India's biomedical research. Haemophilia affects about 1 in 10,000 people, with India having a substantial patient load. BRIC-inStem, a national umbrella organization integrating 14 autonomous research institutions, has been pioneering translational and regenerative research, including gene therapy, and has made notable contributions to biomedical innovation, such as developing anti-viral germicidal masks and a pesticide shield for farmers.

- The Measles-Rubella Elimination Campaign 2025-26 aims to achieve 100% immunization coverage by administering two doses of the M-R vaccine to all eligible children, targeting the prevention of measles and rubella. Measles is a highly contagious viral disease that can lead to serious complications or death in young children, especially those who are malnourished or immunocompromised. Rubella, while generally mild, poses a significant risk during pregnancy, potentially causing Congenital Rubella Syndrome with irreversible birth defects. The campaign seeks to eliminate these vaccine-preventable diseases through comprehensive immunization efforts.
- The Indian Navy's guided missile destroyer INS Surat recently successfully test-fired a medium-range surface-to-air missile in the Arabian Sea. INS Surat, the fourth and final ship of the Project 15B Visakhapatnam-class destroyers, is one of the largest and most sophisticated destroyers in the world, with 75% indigenous content. Commissioned in January 2025, it features advanced network-centric capabilities, state-of-the-art weapon-sensor packages, and artificial intelligence (AI) solutions to enhance operational efficiency. With a displacement of 7,400 tonnes and a length of 164 meters, INS Surat is equipped with surface-to-air missiles, anti-ship missiles, and torpedoes, and has speeds exceeding 30 knots. Designed by the Navy's Warship Design Bureau and built by Mazagon Dock Shipbuilders, INS Surat is a potent and versatile warship.
- For the first time, the Indian Army's Department of Ophthalmology at Army Hospital (Research and Referral), New Delhi, has successfully performed Minimally Invasive Glaucoma Surgery (MIGS) using a 3D microscope. A microscope is an instrument that magnifies small objects by refracting light through curved lenses, making them visible to the naked eye, with optical microscopes being the most commonly used type. Unlike traditional microscopes that provide flat, 2D images, a 3D microscope captures and reconstructs three-dimensional data (X, Y, and Z axes) using advanced optical, electron, or computational techniques, offering detailed visualization of complex biological structures. The 3D microscope used in surgeries features advanced three-dimensional visualization, aiding in treatments for squint, cataract, corneal diseases, glaucoma, and retinal conditions, and employs special 3D polarization glasses for surgeons along with a 55-inch 4K ultra-HD display. Key advantages of this technology include reduced surgical time, lower complication rates, decreased endoillumination power requirements minimizing photo-toxicity risks, and greater ease in handling complex and rare surgical cases.
- Recently, the Defence Research and Development Laboratory (DRDL) under DRDO successfully conducted a ground test of a Scramjet Engine for over 1,000 seconds in Hyderabad. A Scramjet (Supersonic Combustion Ramjet) is an air-breathing engine designed for efficient operation at hypersonic speeds (Mach 5 and above). Unlike traditional jet engines, it does not use rotating compressors; instead, it relies on the vehicle's high speed to compress incoming air. Scramjets enable supersonic combustion and are primarily used in Hypersonic Cruise Missiles (HCMs). The engine operates by allowing a vehicle already flying at supersonic speeds (Mach 3+) to intake and compress air through its motion, inject and ignite hydrogen fuel while the airflow remains supersonic, and generate thrust through the expansion of combustion gases, following Newton's Third Law. However, Scramjets cannot generate thrust from a standstill and thus require rocket-assisted takeoff.
- Group Captain Shubhanshu Shukla of the Indian Air Force is set to become India's second astronaut in space after Rakesh Sharma, as part of the Axiom-4 (Ax-4) mission launching on May 29 from Kennedy Space Centre, Florida. Shukla will serve as the mission pilot alongside an international crew: Poland's Sławosz Uznanski (ESA astronaut), Hungary's Tibor Kapu, and the USA's Peggy Whitson, who holds the U.S. record for the longest time in space. For the first time in over 40 years, Poland and Hungary are sending government-backed astronauts to the ISS. As part of this mission, ISRO is conducting 7 experiments, including 3 related to food and 2 related to astronaut health. A key focus is developing Indian dietary options and studying the feasibility of space farming. Notably, ISRO will study the sprouting behavior of moong and methi in microgravity through the "Sprouting Salad Seeds in Space" experiment, designed by the University of

Agricultural Sciences and IIT Dharwad. Another experiment involves exposing various crop seeds to microgravity and testing their yield potential on Earth over generations. The Ax-4 crew will stay for up to 14 days aboard the International Space Station.

INTERNATIONAL ISSUES

- The fourth iteration of the India-U.S. tri-service Humanitarian Assistance and Disaster Relief (HADR) Exercise, named Tiger Triumph, is scheduled to take place from April 1 to 13.
- Aiming to hone skills against a dozen other counterparts, including the US, Israel, and France, the Indian Air Force (IAF) will be participating in biennial multinational air exercise INIOCHOS-25.
- India and Thailand are set to discuss India's potential participation in Thailand's ambitious Land Bridge Project, which involves constructing an 87-km highway and railway link across the Malay Peninsula. The project aims to connect the Andaman Sea to the Gulf of Thailand, offering a faster and more cost-effective trade route as an alternative to the Strait of Malacca, a critical global shipping lane. Estimated at \$29 billion, the project has attracted significant global interest. China views it as a crucial strategic route for energy imports, while India and the US are concerned about potential security implications. For India, participation in the project could enhance its economic influence in Southeast Asia by creating new trade and investment opportunities. Additionally, from a geopolitical perspective, India's involvement could serve as a counterbalance to China's growing dominance in the region and strengthen India's strategic position in the Indo-Pacific.
- At the recent BIMSTEC Ministerial Meeting held in Bangkok on April 3, External Affairs Minister S. Jaishankar emphasized the need for greater self-sufficiency and regional cooperation among member states, particularly in areas like food, fuel, fertilizers, vaccines, and disaster response. The meeting also set the stage for the upcoming 6th BIMSTEC Summit, where Prime Minister Narendra Modi is expected to oversee the signing of a Maritime Cooperation Agreement aimed at strengthening collaboration in the Bay of Bengal region. BIMSTEC, or the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation, was originally formed in 1997 as BIST-EC and evolved to include seven member countries: Bangladesh, India, Myanmar, Sri Lanka, Thailand, Nepal, and Bhutan. It serves as a strategic link between South and Southeast Asia, particularly gaining prominence after India's 2016 policy shift post the Uri attack. The grouping offers landlocked nations access to the Bay of Bengal and presents a strategic counter to China's Belt and Road Initiative by promoting an open and peaceful maritime space. Despite its potential, BIMSTEC faces significant challenges, including internal instability in Myanmar and geopolitical tensions among member states like Bangladesh and India.
- At the 6th BIMSTEC Summit held in Bangkok, Prime Minister Narendra Modi proposed a comprehensive 21-point action plan under the theme "BIMSTEC: Prosperous, Resilient and Open" to enhance regional cooperation. Hosted by Thai PM Paetongtarn Shinawatra, the summit marked the first in-person gathering in seven years and saw the chairmanship pass from Thailand to Bangladesh. Modi's roadmap includes integrating India's UPI with BIMSTEC nations, launching youth-focused initiatives like the BIMSTEC Games (2027) and Athletics Meet (2025), enhancing economic ties through a BIMSTEC Chamber of Commerce, and bolstering science, education, and disaster management with initiatives like nano-satellite support, cancer care training, and a Centre of Excellence for Disaster Management. He emphasized cultural diplomacy through traditional music festivals and envisioned BIMSTEC as a vital bridge between South and Southeast Asia, advocating for regional peace, security, and a free, open Indian Ocean, in alignment with the newly adopted Bangkok Vision 2030.
- NATO members Poland, Finland, and all three Baltic states have recently expressed intentions to withdraw from the Ottawa Convention, which is also known as the Mine Ban Treaty. This treaty prohibits the use, stockpiling, production, and transfer of anti-personnel landmines (APLs) and mandates that states-parties destroy their stockpiled APLs within four years and eliminate all APL holdings, including existing landmines, within a decade, with the possibility of requesting renewable extensions of up to 10 years. Furthermore, member states are required to report

annually on their APL stockpiles, technical specifications, mined areas, and the status of destruction efforts. The convention, which has no expiration date and is open for adherence by all nations, came into force on March 1, 1999, and has been ratified by 164 countries, although some significant producers and users of landmines, including the United States, China, India, Pakistan, and Russia, have yet to sign the treaty.

- Recently, the European Union Naval Force (EUNAVFOR) under Operation ATALANTA has proposed a joint naval exercise with the Indian Navy.
- The Indus Waters Treaty, signed between India and Pakistan on September 19, 1960, with the World Bank's mediation, allocates the waters of the Indus River system between the two countries. The treaty grants Pakistan unrestricted use of the western rivers (Indus, Jhelum, and Chenab), while India has exclusive use of the eastern rivers (Ravi, Beas, and Sutlej). India is allowed limited, non-consumptive uses of the western rivers for domestic, agricultural, and hydroelectric purposes. The treaty establishes a Permanent Indus Commission to manage its implementation, facilitate data exchange, and resolve technical matters through annual meetings. The treaty allocates around 80% of the total water volume to Pakistan and 20% to India.
- The 6th Joint Group of Customs (JGC) Meeting between India and Bhutan was recently held in Thimphu, the capital and largest city of Bhutan. Bhutan, a landlocked Himalayan kingdom bordered by India on three sides and China to the north, shares borders with Indian states like Sikkim, West Bengal, Assam, and Arunachal Pradesh. A parliamentary monarchy since its democratic transition in 2008, Bhutan remains under the ceremonial leadership of its King and is locally known as Druk Gyal Khap or "Land of the Thunder Dragon." Its key trade hub, Phuntsholing, lies on the India-Bhutan border, and the Manas River, Bhutan's longest, serves as an important ecological and trade corridor. The India-Bhutan customs relationship is crucial, as India is Bhutan's largest trading partner, accounting for nearly 80% of its trade. Bhutan relies heavily on 10 Land Customs Stations (6 in West Bengal and 4 in Assam) for trade operations. The JGC serves as an annual bilateral platform to enhance customs cooperation, streamline border procedures, and align practices with global standards, ensuring smooth and efficient cross-border trade.

MISCELLEANEOUS

- IFS officer Nidhi Tewari has been appointed private secretary to Prime Minister Narendra Modi,
- Francesco Bagnaia won an eventful Grand Prix of the Americas in Austin on Sunday to end crash-victim Marc Marquez's perfect start to the MotoGP season
- Mangaluru's Jason Saldanha and Kodagu's Thimmanna Uddapanda won the first round of the Thailand National Rally Championship (RAAT) in RC 2.1 class, at Nakhon Ratchasima in Bangkok
- Sarhul is one of the most significant Adivasi festivals, primarily celebrated in Jharkhand and the Chhotanagpur region. The festival, which means "worship of the Sal tree," symbolizes the union of the Sun and Earth, representing the deep connection between nature and the community's survival. It is rooted in nature worship, where the Sal tree (*Shorea robusta*) is considered sacred and is believed to house Sarna Maa, the village deity. During the festival, a village priest, known as the pahan, symbolizes the Sun, while his wife, the pahen, represents the Earth. Celebrated by various tribes, including Oraon, Munda, Santal, Khadia, and Ho, Sarhul was originally an agricultural festival but evolved from its hunting roots. The festival gained political significance in the 1960s when Adivasi leader Baba Karthik Oraon initiated a Sarhul procession in Ranchi, which became an expression of Adivasi identity. The debate surrounding Sarna religion versus Hinduism is also linked to this festival, as Adivasi groups continue to demand recognition of a separate Sarna religion in official censuses. Sarhul has thus transformed into both a cultural and political symbol for Adivasi communities, continuing to reflect their traditional beliefs and modern identity struggles.
- Akarsh Shroff from Bengaluru was honored with the prestigious National Youth Award on Thursday for his dedication to enhancing early childhood education at anganwadi centres across India, with the award presented by Union Minister of Youth Affairs and Sports Mansukh Mandaviya in Delhi. This recognition, part of an initiative by the Ministry of Youth Affairs, highlights the contributions of young

individuals under 30 in various fields, including health, culture, education, and community service, with a total of 22 youths receiving accolades. Shroff, who founded YuvaSpark at the age of 17 in 2018, has developed technology platforms that have successfully digitized learning at over 600 anganwadi centres, reflecting his commitment to national development and social service.

- India and Russia have commenced a six-day naval exercise, 'Indra', off the coast of Chennai, involving sophisticated maritime drills and live weapon firings.
- Sudarshan Pattnaik becomes the first Indian to receive the Fred Darrington Sand Master Award. Pattnaik creates a 10-foot-high sculpture of Lord Ganesha carrying the message of "World Peace". The award commemorates the 100th birth anniversary of legendary British sculptor Fred Darrington. Sudarshan Pattnaik is a Padma Shri awardee and has participated in over 65 international sand art festivals. Pattnaik's sculpture leaves a deep impression on visitors at the Sandworld exhibition in Dorset, England.
- The Kaliyattam festival is an annual Theyyam celebration held in the temples of Kerala's Malabar region, particularly in the North Malabar area, which includes present-day Kannur, Kasargod, Vadakara, Koyilandy, and Mananthavady Taluks. Theyyam is a grand dance festival rooted in ancient rituals, traditions, and customs, comprising around 456 distinct varieties, most of which are performed by men, except for the Devakoothu Theyyam, which is uniquely performed by women at the Thekkumbad Kulom temple. The festival serves as a channel for devotees to connect with the divine, seeking blessings from the gods. The performance usually takes place in front of village shrines and may also involve ancestor worship in homes, without any stage or curtain setup; instead, devotees gather around the sacred tree at the shrine. The rituals are immersive, lasting between 12 to 24 hours, depending on the deity's significance, with the chief dancer embodying the worship of the shrine's central deity throughout the rites.
- Hitesh won the 70kg gold medal after England's Odel Kamara did not fight in the final due to an injury, at the World Boxing Cup Brazil 2025 in Foz do Iguacu. Abhinash Jamwal, the other Indian to reach the final, was beaten 5-0 by local favourite Yuri Reis in the 65kg title clash. M. Jadumani Singh (50kg), Manish Rathore (55kg), Sachin (60kg) and Vishal (90kg) bagged bronze as India finished with six medals.
- PM Modi awarded Sri Lanka Mitra Vibhushana. The Sri Lanka Mitra Vibhushana honours Heads of State and government heads with whom Sri Lanka has cordial relations. It appreciates "their friendship towards and solidarity with the people of Sri Lanka".
- During his visit to Sri Lanka on April 6, 2025, Prime Minister Narendra Modi visited the sacred Jaya Sri Maha Bodhi tree in Anuradhapura, describing it as a "living symbol of peace, enlightenment and spiritual continuity." This revered Pipal tree, believed to be the oldest living cultivated tree in the world, grew from a branch of the original Bodhi tree under which Lord Buddha attained enlightenment in Bodhgaya, India. The branch was brought to Sri Lanka by Sanghamitta, daughter of Emperor Ashoka, following the successful Buddhist mission of her brother Mahinda. Anuradhapura, once a political and religious capital of Sri Lanka for over 1,300 years and now a UNESCO World Heritage Site, holds deep historical significance. The tree has survived for over two millennia due to its natural resilience and the devotion of monks and pilgrims, despite facing threats including a vandalism attempt in 1929 and an LTTE attack in 1985. The visit underscores the spiritual and cultural ties between India and Sri Lanka, and highlights India's foundational role in the spread of Buddhism.
- The United Nations Conference on Trade and Development (UNCTAD) released its Technology and Innovation Report 2025, titled "Inclusive Artificial Intelligence for Development." The report emphasizes the need for inclusive science, technology, and innovation (STI) policies in developing countries, with a focus on Artificial Intelligence (AI). It highlights the concentration of AI investments, where 100 companies—mainly from the US and China—account for 40% of global private R&D spending. It also warns that up to 40% of global jobs could be impacted by AI, while 118 countries, mostly from the Global South, are excluded from AI governance discussions. The report identifies infrastructure, data, and skills as critical leverage points for developing nations. India ranked 10th globally in AI private investment in 2023, attracting USD 1.4 billion, and is one of only two developing

nations with substantial AI investment, alongside China. In terms of Readiness for Frontier Technologies, India ranked 36th out of 170 countries in 2024, improving from 48th in 2022, showcasing significant progress in adapting to emerging technologies.

- Suruchi Singh asserted her undisputed class as she defeated three Chinese, with a 2.4 point margin for the women's air pistol gold, in the shooting World Cup in Buenos Aires
- Recently, ancient relics estimated to be 2,000 years old from the Megalithic Period were discovered in Manimoola village, Bandadukka, Kerala. Megaliths, large stones used to build prehistoric monuments, can serve various functions, including burial (sepulchral) and commemorative (non-sepulchral) purposes. Most Indian megaliths date back to the Iron Age (1500 BCE to 500 BCE), but some sites are believed to be as old as 2000 BCE.
- Vijayveer Sidhu defeated Riccardo Mazzetti of Italy 29-28 for the 25m rapid fire pistol gold in the shooting World Cup in Buenos Aires
- President Droupadi Murmu was conferred an Honorary Doctorate by Constantine The Philosopher University here for her "distinguished career in public service".
- Inaugural Africa India Key Maritime Engagement (AIKEYME) exercise begins off Tanzania coast. Naval exercise began on April 13, 2023, in Dar-es-Salaam. INS Chennai and INS Kesari arrived ahead of the exercise; INS Sunayna carrying 44 personnel from nine nations also present. AIKEYME aims to address regional maritime challenges and enhance interoperability among partner nations. Participating countries include Comoros, Djibouti, Kenya, Madagascar, Mauritius, Mozambique, Seychelles, South Africa, India, and Tanzania. The initiative supports PM Modi's vision for regional security and growth (MAHASAGAR).
- Kohli becomes second batter to score 100 fifties in T20 cricket
- Renowned Kathak dancer Kumudini Lakhia passed away recently at the age of 94.
- China's state-run defence firm Norinco recently said that it has developed the world's first close-in anti-drone barrage weapon, dubbed the Bullet Curtain
- India wrapped up their campaign at the Archery World Cup Stage 1 with a creditable four medals, including a silver in the men's recurve team event and a bronze by rising star Dhiraj Bommadevara in the individual recurve category in USA
- M.S. Dhoni pulled level with Virat Kohli by winning the Player-of-the-Match award for the 18th time in the IPL. Among Indians, Rohit Sharma tops the charts with 19 while Yusuf Pathan (16) and Ravindra Jadeja (16) share the third spot. Dhoni had last won a PoM award in 2019 against Delhi Capitals in Chennai.
- Olympic silver medallist Mirabai Chanu and Commonwealth Games gold medallist S. Sathish Kumar have been elected as the chairperson and vice-chairman, respectively
- In a first, the Railways has initiated trials of an automated teller machine (ATM) aboard the Panchvati Express, in coordination with the Bank of Maharashtra. Under the initiative by the Central Railway's Bhusawal division, an ATM kiosk was installed in an unutilised space in one of the coaches on the Manmad-Mumbai train. The move is also aimed at generating non-fare revenue
- The Anti-Piracy Challenge is a key initiative under the "Create in India" initiative, aimed at promoting indigenous innovation in Digital Content Security. This flagship challenge is part of the upcoming WAVES (World Audio Visual and Entertainment Summit) 2025, organized by the Ministry of Information and Broadcasting, set to take place from May 1–4, 2025, in Mumbai, Maharashtra. The challenge focuses on advancing technologies such as fingerprinting and watermarking to address the growing issue of digital piracy in India. WAVES 2025 is a global summit that positions India as a hub for media innovation, intellectual property creation, and content development, encompassing sectors like broadcasting, films, TV, radio, animation, gaming, comics, advertising, and emerging technologies such as Generative AI and AR/VR/XR. The event supports India's \$30 billion Creative Economy, which employs nearly 8% of the workforce, and contributes to the growth of the Media and Entertainment (M&E) sector, projected to reach \$44.2 billion by 2028, making India the fifth largest globally in this field.

- The Indian Navy recently hosted the 3rd Meteorological and Oceanological Symposium, Meghayan-25, to commemorate the formation of the World Meteorological Organization (WMO) and celebrate World Meteorological Day 2025, centered on the theme “Closing the Early Warning Gap Together.” The symposium launched the MOSDAC-IN Web Services, a collaborative effort between the Directorate of Naval Oceanology and Meteorology (DNOM) and SAC-ISRO, providing customized satellite-derived weather products with secure log-ins for Naval Meteorological Offices. Additionally, the Navy relaunched its professional journal, “Sagarmanthan,” after a decade-long hiatus. The WMO, a specialized UN agency established in 1950, focuses on meteorology and climate science, coordinating global efforts in weather monitoring and data exchange among its 193 member countries and territories.
- The ancient Indian texts Bhagavad Gita and Natyashastra have been inscribed in UNESCO’s Memory of the World Register, acknowledging India’s deep intellectual and artistic legacy. The register preserves valuable documentary heritage such as books, manuscripts, and recordings. The Bhagavad Gita, part of the Mahabharata and dating to the 2nd or 1st century BCE, consists of 700 verses in the form of a dialogue between Arjuna and Lord Krishna. It explores concepts such as duty (Dharma), righteous action (Karma), devotion (Bhakti), and knowledge (Jnana), offering practical spiritual wisdom. The Natyashastra, authored by Bharatmuni, is a foundational Sanskrit text on the performing arts with 36 chapters and over 6,000 verses. It serves as a manual for dramatists, actors, dancers, and musicians, focusing on performance techniques, audience impact, and the emotional essence of art through the concept of Rasa. Together, these texts reflect India’s significant contributions to global culture, spirituality, and artistic expression.
- Kami Rita, a 55-year-old renowned Sherpa guide, is gearing up to climb Mount Everest for the 31st time, potentially making it his 32nd ascent as well, to break his own record. He has successfully summited the world’s highest peak 30 times already and recently flew to the Everest region to lead a group of climbers
- McLaren’s Oscar Piastri won the Saudi Arabian Grand Prix from Red Bull polesitter Max Verstappen to lead the world championship for the first time in his career.
- Indian shooters finished third at the ISSF World Cup, concluding the event with seven medals, including two gold, four silver, and one bronze. The final medal came from Simranpreet Kaur Brar in the women’s 25m pistol event, while the trap mixed team of Prithviraj Tondaiman and Pragati Dubey failed to reach the medal rounds, finishing eighth. The USA matched India’s seven medals but secured second place due to a higher gold count. China topped the standings with four golds, three silvers, and six bronzes. Notably, 18-year-old Suruchi Inder Singh was India’s standout performer, claiming both golds in the 10m air pistol and the mixed team events.
- India’s premier pacer Jasprit Bumrah was named as Leading Men’s Cricketer in the World while prolific batter Smriti Mandhana grabbed the honour in the women’s category in the 2025 edition of Wisden Cricketers’ Almanack.
- Bengal swimmer Sayoni Das became the first Asian woman to swim across the Strait of Gibraltar. This body of water, 58 km long and connecting the Atlantic Ocean to the Mediterranean Sea, separates Europe (Spain, Gibraltar) from Africa (Morocco, Ceuta). It’s a crucial waterway with significant depth variations and unique water currents due to differences in salinity between the Atlantic and Mediterranean.
- A four-year study (2021–2024) by Respirer Living Sciences analyzed PM10 pollutant levels across Indian cities, aiming to identify critical areas, key contributors, and suggest data-driven solutions. All 11 cities surveyed exceeded the national PM10 annual standard of 60 $\mu\text{g}/\text{m}^3$, with Delhi (214.3 $\mu\text{g}/\text{m}^3$), Patna (189.1 $\mu\text{g}/\text{m}^3$), and Chandigarh (136.9 $\mu\text{g}/\text{m}^3$) being the worst-affected. Despite interventions, no significant reduction in pollution was observed, and PM10 remains a persistent hazard. Seasonal variations showed winter spikes due to temperature inversions and biomass burning, while summer had lower levels due to better atmospheric dispersion. Southern cities like Bengaluru (71.3 $\mu\text{g}/\text{m}^3$), Chennai (63.2 $\mu\text{g}/\text{m}^3$), and Hyderabad (75.8 $\mu\text{g}/\text{m}^3$) also exceeded limits but were comparatively less affected than northern counterparts. In Bengaluru, major contributors included traffic congestion,

construction, open waste burning, and dry weather, with hotspots like Silk Board, RVCE-Mailasandra, City Railway Station, Kasturi Nagar, and residential areas like BTM Layout and Hombegowda Nagar being worst-hit.

- India has recently expanded its maritime claim in the Central Arabian Sea by nearly 10,000 square kilometers, carefully modifying its earlier submission to avoid triggering maritime disputes with Pakistan. In April 2025, India submitted its revised documentation to the United Nations Commission on the Limits of the Continental Shelf (CLCS). Under international law, coastal countries enjoy exclusive rights to explore and exploit marine resources within their Exclusive Economic Zone (EEZ), extending up to 200 nautical miles from their coastlines. Beyond this, a country can also claim an Extended Continental Shelf (ECS) if it proves the seabed is a natural extension of its landmass, thus gaining rights to extract valuable minerals, oil, and polymetallic nodules. The continental shelf itself is the submerged edge of a continent, formed over millions of years from sediment accumulation, and supports diverse marine ecosystems due to its nutrient-rich and sunlit waters. India's new claim not only enhances its access to valuable seabed resources but also strengthens its strategic and economic influence in the Arabian Sea while avoiding direct conflict with Pakistan.

