

TNPSC THERVUPETTAGAM CURRENT AFFAIRS MAY 2024

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TNPSC BITS

- ❖ India took part along with 164 other member nations of the World Trade Organisation in the 13th Ministerial Conference of WTO in Abu Dhabi (MC13) of UAE.
- ❖ SJVN Ltd has inaugurated the India's first multipurpose Green Hydrogen Pilot Project at its 1,500 MW Nathpa Jhakri Hydro Power Station (NJHPS) in Himachal Pradesh's Jhakri.
- ❖ Adani Group's Vizhinjam Port in Kerala has received approval from the shipping ministry to operate as India's first transshipment port.
- ❖ The Indian Historical Records Commission (IHRC) has adopted a new logo and motto.
 - The new motto is 'Yatra Itihasam Bhavishyaam Prasakshantah'.
- ❖ Microsoft unveiled the latest version of its 'lightweight' AI model – the Phi-3-Mini.
 - It is a family of open AI models that are the most capable and cost-effective small language models (SLMs) available.
- ❖ Writer and poet Bama, who is well-known for literary works such as Karukku, Sangati and Manushi, received the Verchol Dalit Literary Award.
- ❖ The Indian Renewable Energy Development Agency was granted 'Navratna status' from the department of public enterprises.
- ❖ Dubai announced the start of building on the "world's largest" airport terminal, which will cost \$35 billion and have 400 gates and five parallel runways.
- ❖ The 'Critical Minerals Summit: Enhancing Beneficiation and Processing Capabilities' was held in New Delhi.
- ❖ Alok Shukla, convenor of the Chhattisgarh Bachao Andolan and founding member of the Hasdeo Aranya Bachao Sangharsh Samiti, has been awarded the 2024 Goldman Prize from Asia.
- ❖ The Indian Railways plans to set up an additional 200 Gati Shakti Cargo Terminals (GCTs) to boost freight revenue, decongest rail networks, and enable faster passenger train movement.
 - This expansion follows the successful implementation of the first 100 GCTs announced in the Union Budget 2022-23.
- ❖ The 6th edition of the International Conference on Disaster Resilient Infrastructure (ICDRI) was held in New Delhi.
 - Theme of the event is 'Investing today for a more resilient tomorrow.'
- ❖ The Tata group company signed a memorandum of understanding (MoU) with the Tamil Nadu government to establish the production facility in Ranipet.



- This is Tata Motor's first investment in Tamilnadu and will be Tata Motors' second plant in southern India, after Dharwad in Karnataka.
- ❖ The Supreme Court has reiterated that the stridhan is an “absolute property” of a woman, and the husband has no control over the same.
- ❖ The 26th edition of the World Energy Congress was held in Rotterdam, Netherlands.
- ❖ Scotland's First Minister, Hamza Yousaf, was resigned from First Minister post and the leadership of the Scottish National Party (SNP).
- ❖ The Indian Vaccine Manufacturers Association (IVMA) announced Dr. Krishna M Ella, Co-Founder and Executive Chairman of Bharat Biotech, as the association's new president for a two-year period from April 2024-2026.
- ❖ Rockwell Automation, an American company into industrial automation and digital transformation, has announced its plans to open a new manufacturing facility in Chennai.
- ❖ The United Nations recently launched a new panel on “Critical Energy Transition Minerals”.
 - It aims to address the challenges of the “material-energy nexus” and promote responsible and fair value chains.
- ❖ The European Society for Clinical Microbiology and Infectious Diseases (ESCMID) and the Global Leaders Group (GLG) on AMR jointly organised a high-level event, ‘Forging partnerships between science and policy’.
 - It aims to position research, science and implementation on antimicrobial resistance (AMR) into the political agenda.
- ❖ Indian playback singer Uma Ramanan, who predominantly sang in Tamil passed away recently.
- ❖ Gina Justus, Indian Teacher from UAE, wins Prestigious Cambridge Teacher Award of Sharjah, UAE.
- ❖ The Tamil Nadu government has issued an advisory banning the use of liquid nitrogen in food and warned of stringent action against violators.
- ❖ ICICI Bank has risen to the top five of India's market capitalization, exceeding the Rs 8 trillion a threshold.
- ❖ India's First Constitution Park, jointly developed by Indian Army and Punit Balan Group, was inaugurated in Pune.
- ❖ India will host the prestigious 2025 BWF World Junior Championships at the National Centre of Excellence in Guwahati.
- ❖ Dr. Bina Modi was honoured for Outstanding Contributions to Corporate Social Responsibility by the Vice President of India.



- ❖ Micron India is aiming to release the initial set of chips packaged at its Sanand facility in Gujarat by the beginning of next year.
- ❖ The Ministry of Earth Sciences (MoES) through the National Centre for Polar and Ocean Research (NCPOR), will host the 46th Antarctic Treaty Consultative Meeting (ATCM 46) and the 26th Meeting of the Committee for Environmental Protection (CEP 26) in Kochi, Kerala.
- ❖ The air quality in Kathmandu was at the top of the list of cities with 'unhealthy air' in the world.
 - In terms of pollution, New Delhi, Chiang Mai in Thailand, Hanoi in Vietnam, Bangkok in Thailand and Dhaka in Bangladesh are ranked second, third, fourth and fifth respectively.
- ❖ India is likely to host a delegation of Kenyan officials to explore the possibility of sourcing cheetahs from the east African country for the next phase of Project Cheetah.
 - The Gandhi Sagar wildlife sanctuary in Madhya Pradesh was chosen as the second site for reintroduction of cheetahs
- ❖ Bhavi Mehta won the 9th Oxford Bookstore Book Cover Prize 2024 for 'The Book Beautiful' by Pradeep Sebastian.
- ❖ Recently, the fourth session of the Intergovernmental Negotiating Committee (INC-4) of the United Nations Environment Agency was held in Ottawa, Canada.
- ❖ May 5th is observed as an African World Heritage Day annually.
- ❖ Assam's wildlife conservationist, Dr. Purnima Devi Barman has been conferred the Whitley Gold Award for this year.
- ❖ The Uttarakhand Tourism Development Board and Starscapes, have partnered to launch Nakshatra Sabha, an initiative designed to offer a comprehensive Astro Tourism experience.
- ❖ The first true copy of the painting Indulekha by legendary artist Raja Ravi Varma has unveiled at the Kilimanoor Palace, Kerala.
- ❖ The renowned textile craft Ajrakh, primarily practised in the western part of Gujarat, has been granted GI tag.
- ❖ National Payments Corporation of India (NPCI) has signed a pact with the Bank of Namibia for developing a UPI -like instant payment system for Namibia.
- ❖ Palestinian journalists covering Gaza have been named as laureates of the 2024 UNESCO/Guillermo Cano World Press Freedom Prize.
- ❖ The United Nation's First International Conference on Digital Public Infrastructure was held under India's leadership.
- ❖ China's Chang'e 6 mission is the world's first attempt to retrieve substances from the moon's far side – the side which is not visible from the Earth.



- ❖ The event titled “Localizing the SDGs: Women in Local Governance in India Lead the Way” is organized during the 57th Session of the Commission on Population and Development (CPD57) in New York, USA.
 - It was organized by the Permanent Mission of India to the UN and the Ministry of Panchayati Raj, in collaboration with the United Nations Population Fund (UNFPA).
- ❖ World Portuguese Language Day has been celebrated on May 5th each year.
- ❖ The Hindu’s explainer page has won three awards at the 6th International Newspaper Design Competition organised by newspaperdesign.in.
- ❖ The Pension Department has launched an online portal called Bhavishya for tracking pension payments and sanctions for government retirees. The
- ❖ A series of COVID-19 variants within the Omicron JN.1 lineage, known as FLiRT, including the KP.2 and KP 1.1 variants, is rapidly spreading in the United States.
- ❖ The European Union has recently pledged \$1 billion in aid to Lebanon.
- ❖ World Laughter Day is celebrated annually on the first Sunday of May (May 05) to promote the joy of laughter and its many health benefits.
- ❖ State-owned Bharat Sanchar Nigam Limited (BSNL) is set to deploy 4G services nationally starting August 2024.
- ❖ The Spanish football club Real Madrid has been crowned the La Liga 2023-24 season title after beating Cadiz.
- ❖ For the first time in history, Ukraine's foreign ministry has introduced a virtual artificial intelligence spokesperson - Victoria Shi.
 - It aims to give updates on various issues, including the ongoing war with Russia.
- ❖ May 6 marks International No Diet Day to raise awareness about weight discrimination and fatphobia.
 - This year’s theme is “Embrace Yourself: Reject Diet Culture, Love You.”
- ❖ The Indian Space Research Organisation (ISRO) has successfully completed the first ignition test on the Semi Cryogenic Pre-Burner Ignition Test article at ISRO propulsion complex, Mahendragiri, Tamilnadu.
- ❖ Indian Army's Kharga Corps, under the aegis of Western Command, successfully conducted a three-day joint exercise - Gagan Strike-II with the IAF at multiple locations in Punjab.
- ❖ Bajaj Auto is gearing up for the much-anticipated launch of its CNG-powered motorcycle.
- ❖ The Supreme Court reserved one-third of the seats in the executive committee of the Supreme Court Bar Association (SCBA) for women.



- ❖ A damaged idol of Lord Vishnu and a Nandi statue of Chola period idols have been found partially buried at Chithrakudi village near Budalur in Thanjavur district.
- ❖ A century-old granite idol of goddess Maheshwari was found near a check dam in Pullar village in Tirupattur on the Tamil Nadu - Andhra Pradesh border.
- ❖ Yuzvendra Chahal achieved a remarkable milestone by becoming the first Indian bowler to take 350 wickets in T20 cricket history.
- ❖ Indian fintech Setu, unveiled Sesame, India's first Large Language Model (LLM) specifically designed for the banking, financial services, and insurance (BFSI) sector.
- ❖ The 126th Annual Flower Show in Udhagamandalam was inaugurated recently.
- ❖ The Tamil Nadu Animal Husbandry Department banned any import, breeding, or sale of 33 breeds of dogs that have been termed "dangerous" for people.
- ❖ Dubai has launched an innovative Gaming Visa, to transform the city into a global gaming hub by attracting 30,000 game developers by 2033.
- ❖ Social worker Mr. Pawan Sindhi was bestowed with the prestigious Global Pride of Sindhi Award 2024.
- ❖ The 19th Session of the United Nations Forum on Forests (UNFF19) was held in New York, United States.
- ❖ Researchers at Google DeepMind have developed AlphaFold 3, an AI model that can predict the structure of and interactions between biological molecules including proteins, DNA and RNA, and small molecules that could function as drugs.
- ❖ The Time of Remembrance and Reconciliation for Those Who Lost Their Lives during the Second World War was observed on May 08-09.
- ❖ Russia observed the Victory Day on May 09th that commemorates the Soviet Union victory over Nazi Germany in 1945.
- ❖ Idashisha Nongrang, a member of Khasi community, has been appointed the first woman Director General of Police (DGP) of Meghalaya.
 - She is the first tribal woman chief of police.
- ❖ The 7th edition of the joint military exercise 'Shakti' between India and France is kick off in Meghalaya state's Umroi district.
- ❖ The Russian President Vladimir Putin reappointed his former Prime Minister Mikhail Mishustin to the post.
- ❖ Every year on May 10, the International Day of Argania or International Day of the Argan Tree is observed to promote awareness and understanding of its environmental importance worldwide.



- ❖ Mother's Day is celebrated on the second Sunday of May and this year the day falls on May 12.
- ❖ The Indian Army is set to receive the first Hermes-900 Starliner drone soon.
 - The Hermes-900 known as the Drishti-10 drone is being supplied to Indian Army and Navy by Adani Defence Systems.
- ❖ The United Nations General Assembly has overwhelmingly voted to support a Palestinian bid to become a full UN member by recognising it as qualified to join and recommending the UN Security Council.
- ❖ Nepali Sherpa climber Kami Rita has scaled Mt Everest for the 29th time, surpassing his own record of 28 ascents.
 - He now holds the record for the most ascents of the world's tallest peak in its 71-year climbing history.
- ❖ The UK announced the completion of half a million whole-genome sequences, almost 0.7% of its population.
 - Such data-sets are transformative, with far-reaching implications for both immediate and long-term advancements in the biological sciences.
- ❖ The International Day of Plant Health (IDPH) is observed on 12 May to raise awareness about the necessity of protecting plant health in order to prevent hunger, reduce poverty, safeguard biodiversity, and promote economic development.
 - The theme of 2024 is 'Plant Health, Safe Trade, Digital Technology.'
- ❖ Infosys has received ISO 42001:2023 Certification for Artificial Intelligence Management System.
- ❖ WHO's Chief Scientist Dr Soumya Swaminathan, has been named among the 10 exceptional individuals who will receive honorary degrees from Canada's McGill University.
- ❖ N Chandrasekaran, Tata Sons chairman, will assume the role of chairman of Tata Electronics.
- ❖ The Eminent English author Ruskin Bond was awarded the prestigious Sahitya Akademi Fellowship.
- ❖ Richard “Rick” Slayman (62) of USA, who made history as the first person to undergo a pig kidney transplant, has passed away.
- ❖ Former Bihar Deputy Chief Minister, Sushil Kumar Modi, passed away.
 - He served as the Deputy Chief Minister of Bihar from 2005 to 2013 and again from 2017 to 2020.
- ❖ P Shyaam Nikhil from Tamil Nadu become the country's 85th Chess Grand master.



- ❖ The United Nations General Assembly has proclaimed 25th May as the World Football Day.
- ❖ Indian government's public service broadcaster, Prasar Bharati, will soon be launching its own over-the-top platform.
- ❖ Chandrakant Satija, CEO of Chandra Admission Consultants, wins the Global Excellence Award 2024 for being the "Most Trusted Admission Consultant in Vidarbha Region".
- ❖ SBI become the first trading-cum-clearing member at the India International Bullion Exchange (IIBX) – the country's first bullion exchange in GIFT City Gandhinagar.
- ❖ The International Day of Living Together in Peace is observed on May 16 every year across the globe.
- ❖ The seventh edition of the Indo-U.S. joint counter terrorism exercise Tarkash was held between the National Security Guard (NSG) and the U.S. Special Operations Forces (SOF) in Kolkata.
- ❖ TATA AIG announced the launch of India's first Satellite In-Orbit Third-Party Liability Insurance policy.
- ❖ HDFC Bank launched its first virtual credit card -PIXEL, with Visa's network.
- ❖ Alice Munro of Canada, the Nobel Prize-winning author known for her mastery of the short story, has died recently.
 - She was awarded the Nobel Prize in Literature in 2013 and the International Booker Prize for her body of work in 2009.
- ❖ A Japanese consortium recently unveiled the world's first high-speed 6G proto type device.
 - It can transmit data at a whopping 100 gigabits per second (Gbps), covering more than 300 feet.
- ❖ Dubai's DP World, a global provider of supply chain solutions is going to launch the company's largest of the three free trade warehouse zone (FTWZ) at Manali, Chennai.
- ❖ The World Hydrogen Summit 2024 was held in Rotterdam, Netherlands.
- ❖ The Indian Army has established two of the world's highest tank repair facilities in Ladakh near the Line of Actual Control (LAC).
- ❖ India's football paragon Sunil Chhetri announced retirement from international football.
- ❖ The International Institute of Information Technology of Bangalore (IIITB) have developed 'XoRehab' an Internet of Things (IoT) enabled wheelchair device to help in the rehabilitation of stroke patients' post-surgery.



- ❖ The third Friday of May (May 17) is observed as the United States National Endangered Species Day.
- ❖ The UAE has launched a long-term residency program for environmental champions, known as the 'Blue Residency'.
 - This 10-year visa is specifically tailored for individuals who have exhibited exceptional dedication and efforts towards environmental protection.
- ❖ The inaugural Summit on Clean Cooking in Africa was held in Paris.
 - It aimed at address the critical health and climate impacts associated with traditional cooking methods prevalent in Africa.
- ❖ Indian National Space Promotion and Authorisation Centre (IN-SPACe), has won the Geospatial World Leadership Award 2024 under “Enabling Public Policy” category.
- ❖ Senior advocate Kapil Sibal has been elected as the president of the Supreme Court Bar Association (SCBA).
- ❖ Brazil was declared the host of the 2027 Women's World Cup at the FIFA Congress.
- ❖ Marble mined in Gujarat's Ambaji has recently been awarded the Geographical Indication Tag.
 - It is also known as Amba White Marble and Ambe White Marble.
- ❖ The all-weather accessible Sela Tunnel in Arunachal Pradesh has been officially recognised as the highest tunnel in the country by the International Book of Honour, England.
 - It is located at over 13,000 feet above the sea level.
- ❖ A M4 chip introduced by Apple in the iPad Pro includes a 16-core Neural Engine, referred to by Apple as the Neural Processing Unit (NPU).
- ❖ Two Indians - Mukesh Ambani (12th) and Gautam Adani (14th) have been included in the list of top 15 extremely rich people in the world in the Bloomberg Billionaires Index.
- ❖ Ed Dwight, a 90-year-old sculptor and former Air Force test pilot became the first Black astronaut after flying on Jeff Bezos’ rocket.
- ❖ The Indian Institute of Technology Madras has set up an IIT-M Maestro Ilaiyaraja Centre for Music Learning and Research on its premises.
- ❖ Indian spiritual guru Ravi Shankar has received the first stamp released commemorating the completion of 200 years of Indian Origin Tamils in Sri Lanka.
- ❖ UK charity, the Whitley Fund for Nature (WFN), has recognised Dr Purnima Devi Barman from India with the prestigious 2024 Whitley Gold Award.



- This is recognising her extraordinary work to rescue the Greater Adjutant Stork, affectionately known as Hargila.
- ❖ The world celebrates International Tea Day on May 21st, a day designated by the United Nations to highlight the cultural and economic significance of tea.
- ❖ President Droupadi Murmu has appointed Justice R. Mahadevan, the seniormost judge of the Madras High Court as Acting Chief Justice.
- ❖ Mariyappan Thangavelu broke the championship record by crossing over 1.88m in the men's high jump T63 final in World Para Athletic C'ships 2024.
- ❖ Tamil Nadu's Chandru G clinched the WBC India Cruiserweight Championship title against Punjab boxer Jaskaran Singh.
- ❖ Iran's first Vice President Mohammad Mokhber has been appointed as the acting president of Iran after the death of President Ebrahim Raisi in a helicopter crash.
- ❖ Narayanan Vaghul, the renowned banker and former Chairman of ICICI Bank, passed away recently.
- ❖ German tennis star Alexander Zverev made history by winning the Italian Open singles title for the second time.
- ❖ Google's biggest annual developers' event of the year, Google I/O 2024 was held recently.
- ❖ India's Satwiksairaj Ranki reddy-Chirag Shetty reclaim No. 1 spot in the BWF rankings following Thailand Open title.
- ❖ Sanjiv Puri, the Chairman and Managing Director of ITC Ltd, has been elected as the President of the Confederation of Indian Industry (CII) for the term 2024-25.
- ❖ Indian athlete Neeraj Chopra clinched the gold medal in the men's javelin throw event at the Federation Cup 2024 athletics meet in Bhubaneswar, Odisha.
- ❖ Defence Cyber Agency of India conducted Exercise Cyber Suraksha – 2024 to improve the cyber defence skills of all cybersecurity organizations in the country.
- ❖ Srinivas R Kulkarni, an Indian-origin American scientist and professor at California Institute of Technology, has been awarded the 2024 Shaw Prize in astronomy.
- ❖ Spain has joined the International Solar Alliance (ISA) as its 99th member.
- ❖ Deepthi Jeevanji set a world record and bagged gold at the World Para Athletics Championships in Japan.
 - She finishes 400m T20 race in just 55.07 seconds and broke the previous record of 55.12 seconds set by Breanna Clark of the US in 2023.
- ❖ China has introduced a new large language model (LLM) AI based on Xi Jinping Thought.



- It aims to integrate AI into various sectors while maintaining strict regulatory control over cybersecurity.
- ❖ NTPC has achieved an impressive milestone by securing the 3rd rank globally at the ATD BEST Awards 2024.
- ❖ India-born aviator Gopi Thotakura was among the six space tourists who undertook a short recreational trip to space.
- ❖ The 2024 AI Summit at Seoul was co-hosted by the South Korean and British government.
- ❖ The 10th World Water Forum was held in Bali, Indonesia under the theme “Water for Shared Prosperity”.
- ❖ Maldives will soon launch India’s RuPay service “to bolster the Maldivian Rufiyaa”.
- ❖ Thiruvananthapuram International Airport has made history by becoming the first airport in India to achieve the Zero Waste to Landfill (ZWL) accolade.
- ❖ National Centre for Polar and Ocean Research (NCPOR), Goa and the Antarctic Treaty Secretariat organized the 46th Antarctic Treaty Consultative Meeting meetings in Kochi, Kerala.
- ❖ Klaus Schwab, founder and executive chairman of the World Economic Forum (WEF), will step back from his current role and become chairman of the board of by next January.
- ❖ The 194 member states of the World Health Organization (WHO) are about to finish two years of talks in Geneva on new rules for how to respond to a pandemic.
 - The main goal of these talks is to strengthen global defences against future pandemics.
- ❖ The 33rd session of the UN Commission on Crime Prevention and Criminal Justice (CCPCJ) will be held in Vienna.
- ❖ Wildlife authorities in Himachal Pradesh’s Lahaul & Spiti have started surveys as part of census to estimate the population of blue sheep or bharal and the Himalayan ibex.
- ❖ The G7 declared their commitment to achieving net zero emissions by 2050 at the latest.
- ❖ Norway, Ireland, and Spain recognised a state of Palestine, marking the first time a Western European country has committed to such recognition.
- ❖ The European Union member states gave final agreement to the world’s first major law for regulating artificial intelligence, as institutions around the world race to introduce curbs for the technology.
- ❖ Anasuya Sengupta becomes First Indian Actor to Win Best Actress Award Actor at the prestigious Cannes Film Festival, France.



- ❖ Recently, twelve nations signed the Zero Debris Charter at the ESA/EU Space Council, committing to making space activities debris-neutral by 2030.
- ❖ Kolkata Knight Riders won their third IPL title by defeating Sunrisers Hyderabad team in IPL 2024.
- ❖ According to the IUCN's first global mangrove assessment, Mangroves along the South India Coasts, especially the east coast covering Tamil Nadu, are classified as critically endangered.
- ❖ Arti, an 18-year-old rickshaw driver from Bahraich of Uttar Pradesh, received the Amal Clooney Women's Empowerment Award in London.
- ❖ Karnataka government has now made it mandatory to provide 33% reservation for women in services and posts that are being outsourced by various government departments and organisations.
- ❖ The International Olympic Committee (IOC) has announced the launch of 'Let's Move India'.
 - This initiative aims to inspire people to celebrate the athletes participating in the upcoming Olympic Games in Paris.
- ❖ Uttar Pradesh emerged as the number one state in terms of the addition of transmission lines by state transmission companies in 2023-24.
 - It is followed by Gujrat and Tamil Nadu.
- ❖ Pakistan reports third polio case of 2024 from southwestern Balochistan province.
 - Polio is still common in only two countries: Afghanistan and Pakistan.
- ❖ Each year on May 30, Hindi Journalism Day is observed to commemorate the publish of Udant Martand, India's first Hindi newspaper by Pt. Jugal Kishor Shukla in 1986.
- ❖ The World Vape Day is to be observed on May 30 all over the world.
 - It aims to increase awareness on e-cigarettes and help smokers that are unable to quit smoking.
- ❖ The College of Engineering Thiruvananthapuram (CET) and the Indian Institute of Technology (IIT) Madras have bagged a patent for designing a contactless voltage measurement device.
- ❖ The Foundation for Interoperability in Digital Economy (FIDE) has unveiled a multi-network AI agent that can carry out commercial transactions on the user's behalf.
- ❖ GAIL (India) Ltd. inaugurated India's first 10 MW Green Hydrogen Plant under the National Green Hydrogen Mission in Madhya Pradesh's Vijaipur.



- ❖ Mountaineer and cricketer Kabak Yano from Arunachal Pradesh creates history by becoming first Nyishi tribe women to scale Mount Everest.
- ❖ Jyoti Ratre (55) from Madhya Pradesh, has become the oldest Indian woman to conquer Mount Everest.
- ❖ Purnima Shrestha from Nepal, has made history as the first woman in the world to climb Mount Everest three times in the same season, all in just 13 days.
- ❖ Gymnast Dipa Karmakar made history by becoming the first Indian to win a gold medal at the Asian Senior Championships 2024, by clinching the title in the women's vault.
- ❖ Charles Leclerc, the Ferrari driver, has achieved a remarkable feat by becoming the first Monegasque driver to win the Monaco Grand Prix 2024.
- ❖ Filmmaker Payal Kapadia made a history after her film 'All We Imagine As Light' won the prestigious Grand Prix at the 2024 Cannes Film Festival, France.
- ❖ Smartphones become India's Fourth Largest Export Item with 42% growth to \$15.6 billion in FY24.
- ❖ NHPC, India's premier hydropower company, has been conferred with the prestigious 'The Economic Times HR World Future Ready Organization Award 2024-25'.

TAMIL NADU

Illegal solid waste movement from Kerala

- ❖ The Central Pollution Control Board (CPCB) has devised an action plan for the prevention of illegal interstate movement of solid waste from Kerala to Tamil Nadu.
- ❖ Following a directive from the southern bench of the National Green Tribunal (NGT), which is hearing a suo motu case against the illegal dumping of waste from Kerala near Anamalai.
- ❖ The CPCB found the mismanagement of biomedical wastes generated from the households in violation against the Bio Medical Waste Management Rules, 2016.
- ❖ The Kerala SPCB has been asked to ensure that all local bodies prepare a detailed inventory of the waste management system in their jurisdiction.
- ❖ To strengthen the capacity of solid waste management, the CPCB has directed Kerala's Suchitwa Mission to identify the gaps in solid waste management specifically with respect to non-recyclable wastes.



TN Heritage Commission Act

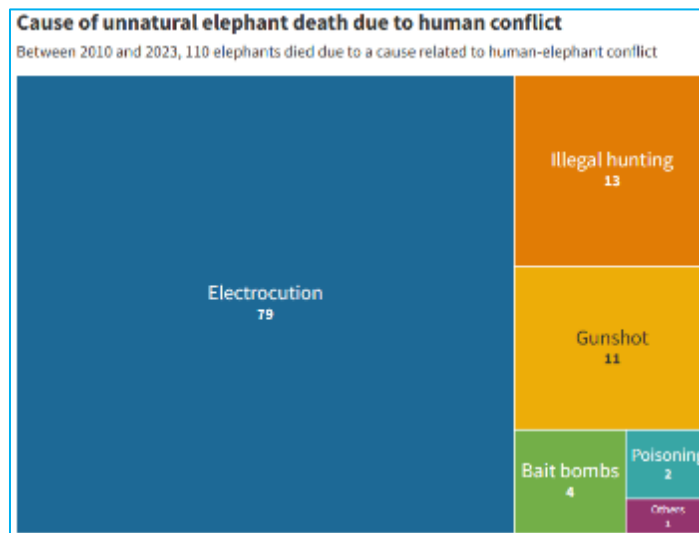
- ❖ Tamil Nadu government bring into force the Tamil Nadu Heritage Commission Act of 2012 (as amended in 2017), 12 years since it was enacted by the legislature.
- ❖ The court has now directed the government to constitute the commission to preserve the heritage structures in the State.
- ❖ This act is required for the constitution of a Tamil Nadu Heritage Commission.
- ❖ It will be chaired by an eminent person with concern for heritage conservation and comprising top government officials.
- ❖ There were several historic buildings in the State outside the purview of the Ancient Monuments and Archaeological Sites and Remains Acts of the Centre (enacted in 1958) and the State (1966).
- ❖ The commission will be protecting heritage sites and monuments in the state as mandated under the Act.

Phase 2 of Grand Anicut Canal renovation project

- ❖ The Tamil Nadu government gave sanction for the second phase of 'extension, renovation and modernisation' of the Grand Anicut (GA) Canal system in the Cauvery delta.
- ❖ The canal was built during the British era.
- ❖ It serves as a source of irrigation for about 2.25 lakh acres in Budalur, Orathanadu, Pattukottai and Peravurani areas in Thanjavur district and parts of Pudukkottai district.

42 elephant corridors in Tamilnadu

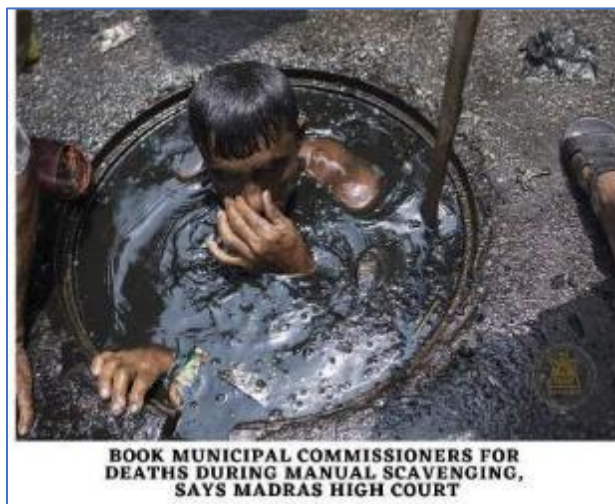
- ❖ A committee was constituted by the Tamil Nadu government to identify elephant corridors in the State.
- ❖ It has brought out a list of 42 elephant corridors and has invited comments from the public.
- ❖ This number is much higher than the number of corridors listed by the Project Elephant division of the Ministry of Environment Forest and Climate Change in 2023.
- ❖ The MoEFCC division had identified 20 corridors: 15 located within the State and five inter-state corridors connecting with forests of Karnataka and Kerala.
- ❖ The synchronised census in 2023 indicated an estimated population of 2,961 elephants in the State.
- ❖ Elephants are distributed across 20 of the 26 forest divisions in Tamil Nadu, covering 9217.13 sq.km



Madras High Court on Manual Scavenging

- ❖ The Madras High Court has issued a set of 19 guidelines to the government to effectively deal with the manual scavenging issue.
- ❖ The court also asked the government to eradicate the practice by at least 2026.
- ❖ The guidelines included steps to ensure mechanisation of clearing of sewer, septic tank and stormwater drains.
- ❖ The court suggested registration of FIR against not only the contractors but also the head of the civic body (Commissioners of Corporations, Municipalities and Panchayat Unions) in the case of death of workers as part of deterrent measure.

- ❖ Currently, FIRs were being registered only in cases of deaths and that too “by identifying a convenient scapegoat, typically a lowly employee of a contractor.”
- ❖ It suggested the compensation paid for the family of workers who die in manual scavenging to be increased to `20 lakh from `10 lakh.
- ❖ It is urging the authorities to ensure strict implementation and compliance of the Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2023.
- ❖ The compensation for the deaths due to manual scavenging had been increased from ₹10 lakh to ₹30 lakh through a Government Order issued on January 23, 2024.

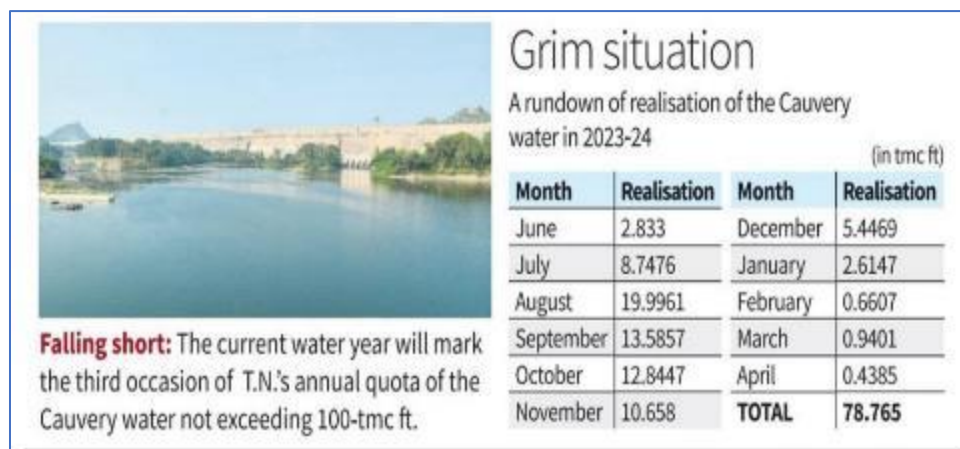


Impact of GI certified products



- ❖ The NABARD has sanctioned a study on the impact evaluation of Geographical Indication (GI) products to Symbiosis School of Economics.
- ❖ This particular study will enable NABARD to analyse the benefits accrued to artisans/producers because of the GI tags over the years.
- ❖ As of today, 144 products supported by NABARD, are GI tagged.
- ❖ The first product that received a GI tag with support from NABARD, was Pochampally Ikat from Telangana.

Annual realization of Cauvery water



- ❖ With the current water year 2023-24 coming to an end this month, the overall realisation by the State in the year may end up next to the lowest figure of 69 tmc ft (thousand million cubic feet) during 2016-17 since 1974.
- ❖ As on April 30, the cumulative receipt since June 1, 2023 was about 78.8 tmc ft.
- ❖ This was marginally higher than around 75.6 tmc ft, which was recorded during 2003-04.
- ❖ The current water year will, in all probability, mark the third occasion of Tamil Nadu's annual quota of the Cauvery water not exceeding the 100-tmc ft mark.
- ❖ Since 2000, there were two more years in which Tamil Nadu's annual share crossed the 100-tmc ft by a small margin.
- ❖ In 2012-13, the State got 100.4 tmc ft and in 2002-03, the figure was 109.9 tmc ft.
- ❖ Karnataka's argument on Cauvery water was that the 50-year time period for the 1924 agreement had ended in 1974.
- ❖ As per the agreement in 1924, Tamil Nadu and Puducherry would get 75% of the surplus water, while Karnataka would get 23%.
- ❖ The remaining would go to Kerala.

Temple submerged by Bhavanisagar dam

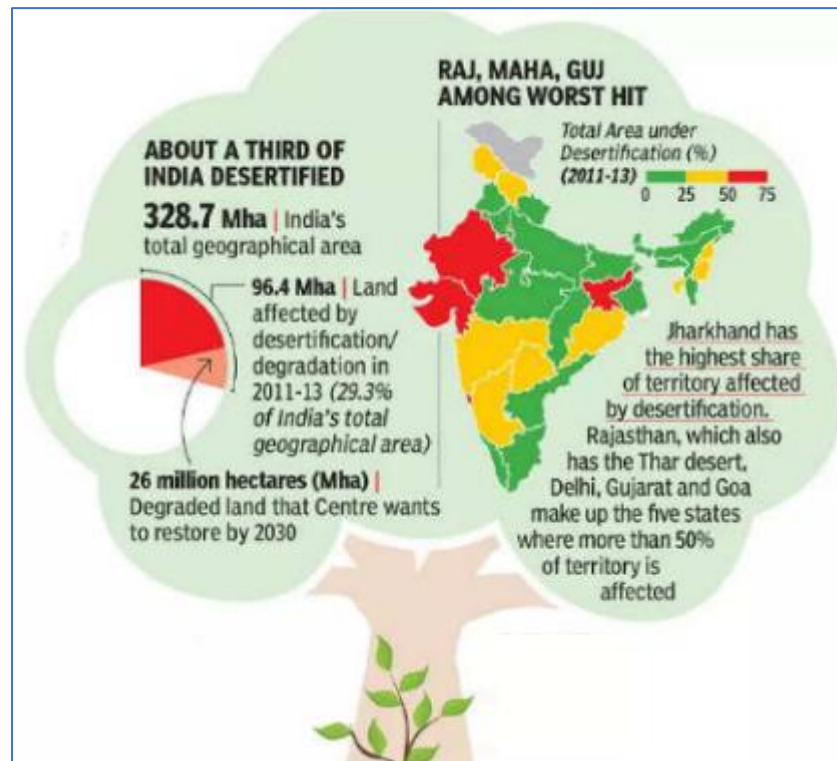
- ❖ A major trade route connecting the Kongu region in western Tamil Nadu with southern Karnataka and Kerala had existed over a 1,000 years ago.
- ❖ This is revealed by the inscriptions found at the Sri Madhava Perumal Temple.
- ❖ This temple has largely remained submerged in the water spread area of the Bhavanisagar dam in Erode district.
- ❖ The temple, in a dilapidated state, is currently visible following the depletion of water level in the dam to less than 46 feet, as against the full reservoir level of 105 feet.
- ❖ 10 to 15 inscriptions, each dating back to various periods, were found.
- ❖ They revealed a village, named Thuravalur, which existed there over 1,000 years ago with a temple for Thondreeshwaramudiayar (Lord Shiva).
- ❖ The area served as peruvai (a trunk road), and traders crossed River Bhavani and River Moyar to reach Wayanad in Kerala and various places in Karnataka.
- ❖ The area came under the Hoysala rulers.
- ❖ King Veera Ballala III (1292-1342), the last great king of the Hoysala Empire, ruled this area.



Lands to Green Credits Program

- ❖ As many as 13 degraded land parcels in Tamil Nadu measuring a total of 263.4 hectares will be restored under the Green Credits Programme (GCP).
- ❖ This program is rolled out by the Ministry of Environment, Forest and Climate Change.
- ❖ It is a market-based mechanism designed to incentivise voluntary environmental actions across diverse sectors by individuals, communities, private sector industries, and companies.
- ❖ The stakeholders can invest in restoring the degraded land and, in return, receive green credits that can be exchanged for compensatory afforestation when diverting forest land for non-forest purposes.

- ❖ 101 land parcels of 2,448.57 ha were identified and uploaded to the Green Credits registry web portal.
- ❖ Of that, 13 (263.46 ha) have been approved and 19 (150.84) have been rejected.
- ❖ The approved land parcels fall in Tiruvallur, Sivagangai, Dindigul, Erode, Salem, and Dharmapuri.



High court on Town and Country Planning Act

- ❖ The Tamil Nadu Town and Country Planning (TTCP) Act, 1971 does not empower the State government to prevent private land owners from constructing buildings on their immovable properties by declaring them to be under 'no development zones.'
- ❖ The government could only acquire such lands if they were required for any public purpose, such as maintaining the catchment area of a lake, the Madras High Court has ruled.
- ❖ They said that the government could not compel the landowners to do only agriculture on those lands.
- ❖ Though right to property was no more a fundamental right because of the deletion of Article 19(1)(f) from the Constitution, the right guaranteed under Article 300A (no person shall be deprived of his property save by authority of law) had been recognised as a human right too.



Samba/Thaladi cultivation season in Tamilnadu 2024

Crop cover					District	Samba/Thaladi 2022-23 03.04.2023	
Paddy coverage during Samba/Thaladi/Pishanam season						Samba coverage	Thaladi coverage
Region	Normal area (5 years' average)	Target	Coverage* (In lakh acres)				
			2023-24	2022-23			
Cauvery delta	8.914	13.263	11.927	13.528	Cuddalore	1,29,001	18,229
Non-delta	21.716	21.902	21.055	22.984	Tiruchi	90,950	—
Total	30.63	35.165	32.982	36.512	Karur	25,140	—
					Ariyalur	28,706	—
					Pudukkottai	17,594	—
					Thanjavur	1,90,343	1,55,632
					Nagapattinam	1,19,526	40,548
					Mayiladuthurai	77,773	93,067
					Tiruvarur	2,14,749	1,51,599
					Total	8,93,782	4,59,075

- ❖ Despite Tamil Nadu's poor realisation of Cauvery water during the current water year, the delta region has exceeded the normal coverage during the Samba / Thaladi cultivation season by three lakh acres.
- ❖ However, the achievement fell short of the target by about 1.25 lakh acres.
- ❖ At the end of April, the cumulative realisation of Cauvery water was around 78.8 tmc ft.
- ❖ Against the normal coverage of 8.9 lakh acres (based on an average of five years), the delta region achieved about 11.93 lakh acres.
- ❖ The harvested area comprised around 11.67 lakh acres.
- ❖ The area under direct sowing accounts for about 45.7%, or 3.32 lakh acres, in the Samba season alone.

Tamil Nadu's economy in 2024-25

Studying growth

A look at the assumed growth and GSDP for various sub-sectors in 2024-25, based on two different scenarios



GSDP: Gross State Domestic Product

Note: The table has been prepared on the basis of two scenarios. In the first scenario, it is assumed that the growth rate of all the sub-sectors along with taxes minus subsidies will be 0.5 percentage points higher than that of 2022-23. In the second, only six major sub-sectors - Agriculture & allied, Manufacturing, Construction, Trade-repair-hotels, Real estate and Taxes minus subsidies - will register a 0.5% higher growth while the rest will grow as in 2022-23.

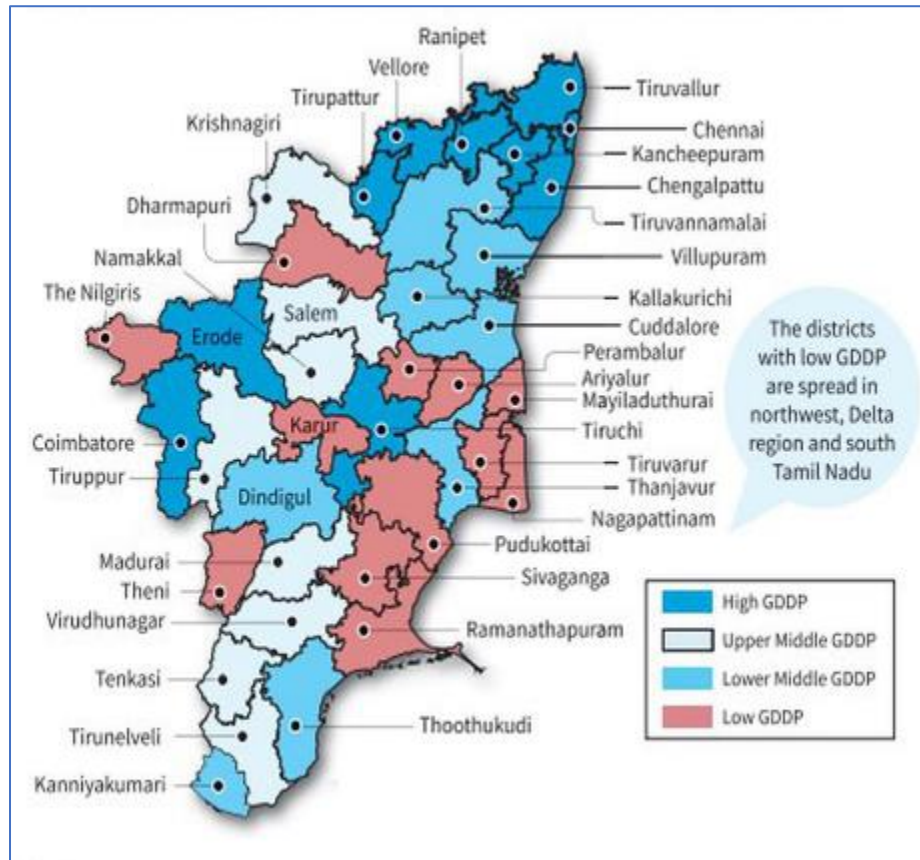
Sub-sector	Scenario 1		Scenario 2	
	Assumed growth (%)	GSDP (₹ in crore)	Assumed growth (%)	GSDP (₹ in crore)
Agriculture & allied	4.94	1,60,181	4.94	1,60,181
Mining & quarrying	2.29	5,440	1.29	5,360
Manufacturing	11.4	3,96,109	11.4	3,96,109
Electricity, gas	2.05	10,504	1.05	10,350
Construction	8.51	1,77,616	8.51	1,77,616
Trade, repair, hotels	7.18	1,65,941	7.18	1,65,941
Transport, storage	9.16	82,474	8.16	81,343
Financial services	9.23	1,00,310	8.23	98,935
Real estate	8.88	2,47,416	8.88	2,47,416
Public administration	4.82	35,873	3.82	35,361
Other services	11.49	1,43,248	10.49	1,41,324
Taxes minus subsidies	11.86	2,02,168	11.86	2,02,168
GSDP (Real)	9.29	17,27,280	9.08	17,22,102

- ❖ Tamil Nadu's economy may grow at a rate of 8.08% to 10.69% in 2024-25.
- ❖ The Madras School Economics has estimated that in the recently concluded financial year of 2023-24, the State's growth rate varied from 8.08% to 9.44%.
- ❖ Country's expected economic growth rate for 2023-24 was 7.3%.
- ❖ The State "registered a strong real growth" of 10.3% from 2005-06 to 2011-12 (2004-05 series), while the all-India growth stood at 8.23%.
- ❖ However, its average growth rate declined to 6.21% during 2012-13 to 2022-23 (2011-12 series), compared with the all-India figure of 5.73%.

Lower per capita income districts in Tamilnadu

- ❖ There are 19 districts in Tamil Nadu whose per capita income is lower than that of the State average (₹2,36,783) in 2019-20.
- ❖ The figures of the remaining 13 districts exceeded the State's tally.
- ❖ Tiruvallur topped the list with around ₹3.64 lakh, followed by Erode (₹3.57 lakh), and Coimbatore (₹3.39 lakh).

- ❖ In these districts, per capita income was higher than any of the major Indian States in that year, including Telangana, Haryana, and Karnataka.
- ❖ At the bottom were Perambalur (₹1,07,731), Tiruvarur (₹1,25,653), and Villupuram (₹1,30,103).
- ❖ But these districts levels were “higher than” that of Assam, Bihar, Uttar Pradesh, Jharkhand, Madhya Pradesh, and Odisha in the same year.
- ❖ However, the figures were lower than the all-India figure of ₹1.32 lakh for that year.



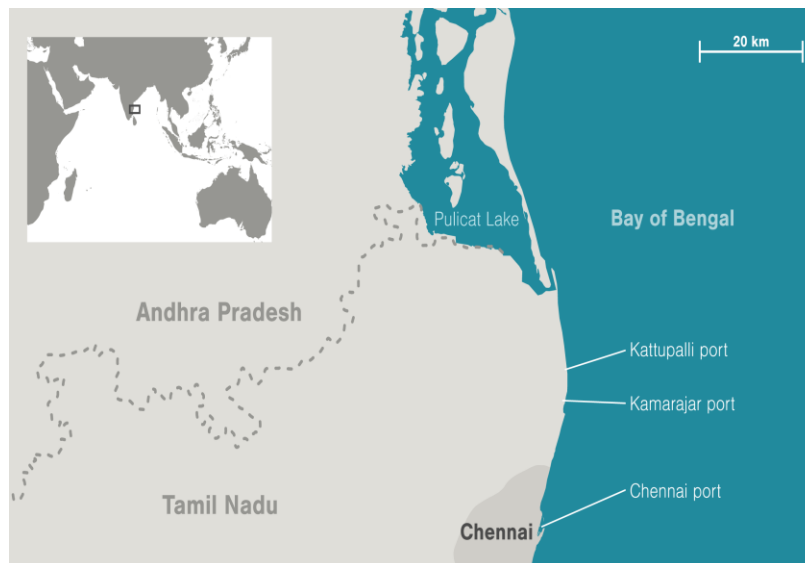
TN 12th results 2024

- ❖ This year, the TNDGE conducted the HSE plus 2 exams from March 1 to March 22 in pen and paper mode for over eight lakh candidates.
- ❖ There has been a substantial drop in the number of students appearing the TN +2 exams.
- ❖ There were 8,42,512 students in 2019, 7,79,931 students in 2020, 8,16,473 in 2021, 8,06,277 in 2022.
- ❖ Finally, in 2023, the number of students taking the exam declined to 8,03,385.

- ❖ A total of 2478 schools have achieved 100 per cent result.
- ❖ Of these, 397 are government schools.
- ❖ Science stream has the highest pass percentage of students this year (96.35%).
- ❖ A total of 26,352 students scored 100 marks in any subject
- ❖ Male candidates passed: 3,25,305 (92.37%).
- ❖ Female candidates passed: 3,93,890 (96.44%).
- ❖ Total Pass percentage: 94.56 per cent
- ❖ Tirupur district has scored highest pass percentage of 97.45%.

HR. SEC. SECOND YEAR EXAMINATION MARCH - 2024 - GROUP WISE PERFORMANCE												
GROUP	APPEARED				PASSED				PERCENTAGE			
	BOYS	GIRLS	T.G	TOTAL	BOYS	GIRLS	T.G	TOTAL	BOYS	GIRLS	T.G	TOTAL
SCIENCE	216359	270601	1	486961	205662	263514	1	469177	95.06	97.38	100.00	96.35
COMMERCE	110590	118214	0	228804	99127	112418	0	211545	89.63	95.10	0.00	92.46
ART	4906	6679	0	11585	3909	6016	0	9925	79.68	90.07	0.00	85.67
VOCATIONAL	20310	12946	0	33256	16607	11942	0	28549	81.77	92.24	0.00	85.85
TOTAL	352165	408440	1	760606	325305	393890	1	719196	92.37	96.44	100.00	94.56

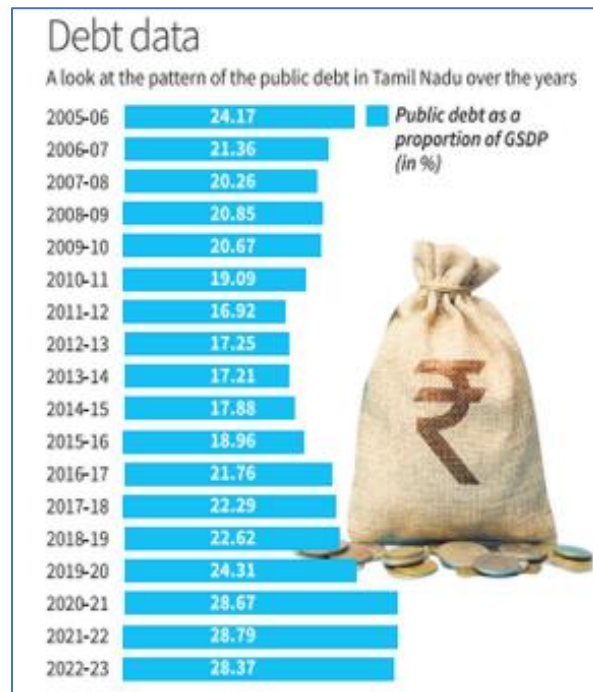
Boundaries of Pulicat bird sanctuary



- ❖ The Tamil Nadu government has taken steps to denotify the boundaries of the Pulicat bird sanctuary, which includes 13 revenue villages.

- ❖ This will exclude the villages and thereby reduce the sanctuary's eco-sensitive zone.
- ❖ A port expansion plan and an industrial park within the present default eco-sensitive zone threaten its future.
- ❖ Encompassing 720 square kilometres, most of the lake falls in Andhra Pradesh and less than 20% in Tiruvallur district of Tamil Nadu.
- ❖ In 1980, the bird sanctuary was notified under Section 18 of the Wild Life (Protection) Act, 1972.
- ❖ However, a final notification specifying the limits of the area within the sanctuary must be declared under Section 26A.

Economic growth and public debt - Tamilnadu



- ❖ The Economists C. Rangarajan and K.R. Shanmugam of the Madras School of Economics carried out the study by covering different facets of the State economy.
- ❖ Tamil Nadu's public debt has neither "adversely affected" the growth nor "supported" it.
- ❖ This finding was with reference to the period from 2005-06 to 2022-23 when the public debt-Gross State Domestic Product (GSDP) ratio had a negative effect on real economic growth, but it was "not significant".
- ❖ However, they cautioned that in future, a "higher debt ratio may adversely affect growth".

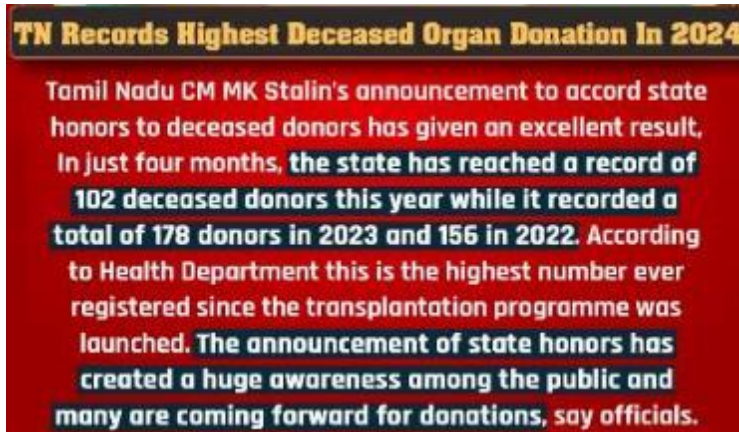
- ❖ They also observed that “reduction in the debt-GSDP ratio may induce growth”.
- ❖ Analysing the pattern of the ratio over the years, in 2016-17 that the ratio had exceeded 20%.
- ❖ This is the sustainable level recommended by the Fiscal Responsibility and Budget Management (FRBM) Review Committee in 2017.

Class X results in Tamilnadu

- ❖ This year, 91.55% of students have registered a pass in the Class X State board exams.
- ❖ Ariyalur district tops the list at 97.3%, while Sivagangai district is second at 97% and Ramanathapuram district is third at 96.3%.
- ❖ This year’s pass percentage has surpassed last year’s 91.39% by a small margin.
- ❖ However, the total number of students who took the exam this year has fallen from last year’s 9,14,320 to 8,94,260 students this year.
- ❖ Girls outperformed boys with 94.53% while the boys were at 88.58%.
- ❖ This shows a 5.85% difference in the pass percentage.
- ❖ Out of the 12,625 schools in the State, 4,105 schools and 1,364 government schools recorded a 100% pass.
- ❖ As many as 20,691 students scored a centum in Mathematics while 5,104 students scored a centum in science.
- ❖ In Tamil, only eight centum were recorded while English saw 415 centum.
- ❖ As many as 228 prison inmates in the State passed the exam out of the total 260 who wrote the exam.

S.NO	DESCRIPTION	2020	2021	2022	2023	2024
1	No. of Candidates appeared	9,39,829	9,60,216	9,12,620	9,14,320	8,94,264
2	Composition of School Candidates					
	a) Boys	4,71,759	4,91,332	4,60,120	4,59,303	4,47,203
	b) Girls	4,68,070	4,68,883	4,52,499	4,55,017	4,47,061
	c) Transgender		1	1		
3	Overall Percentage of Pass Among School Candidates	100.00 % (9,39,829)	100.00 % (9,60,216)	90.07% (8,21,904)	91.39% (8,35,614)	91.55% (8,18,743)
4	Percentage of Pass among School Candidates					
	a) Boys	100.00 % (4,71,759)	100.00 % (4,91,332)	85.83% (3,94,920)	88.16% (4,04,904)	88.58% (3,96,152)
	b) Girls	100.00 % (4,68,070)	100.00 % (4,68,883)	94.38% (4,27,073)	94.66% (4,30,710)	94.53% (4,22,591)
	c) Transgender		(100 %) 1	(100 %) 1		

Number of deceased donors

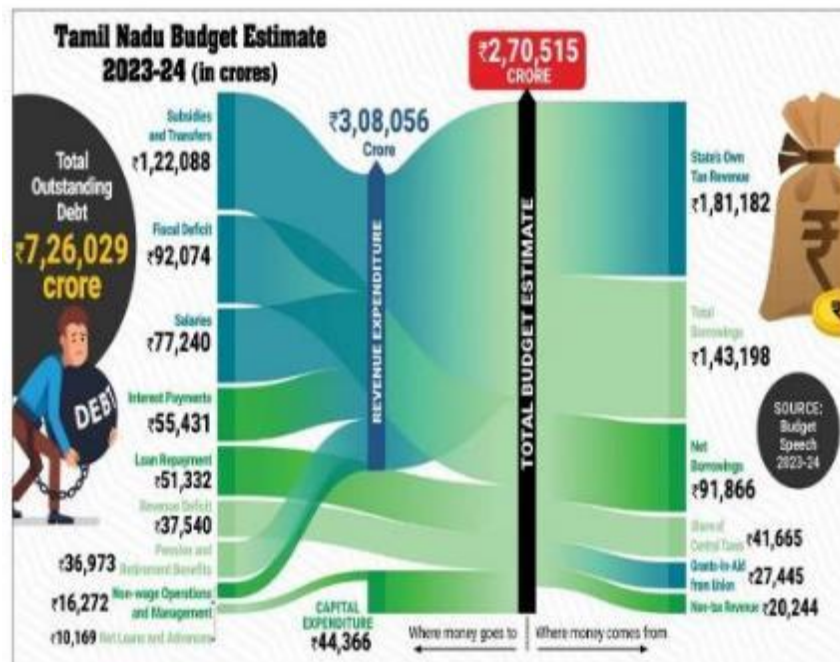


- ❖ In just four months, Tamil Nadu has reached a record high in the number of organ donations this year.
- ❖ In 130 days (as of May 9, 2024), the number of deceased donor organ donations has crossed 100 in the State.
- ❖ There were 102 deceased donors so far this year.
- ❖ There were 178 donors in 2023 and 156 donors in 2022.
- ❖ A total of 324 major organs and 271 tissues were retrieved from these donors.
- ❖ Two hand transplants were also performed this year.
- ❖ 2023 saw 1,000 organs being retrieved from 178 donors.

State's Own Tax Revenue 2023-24

- ❖ Tamil Nadu's Own Tax Revenue stood at ₹1,52,030.77 crore in fiscal 2023-24.
- ❖ The State's Own Tax Revenue (SOTR) increased marginally from ₹1,50,222.75 crore in the final accounts for 2022-23.
- ❖ SOTR contributes 75.6% of Tamil Nadu's total revenue receipts.
- ❖ The SOTR estimates were revised to ₹1,70,147 crore for 2023-24 from the initial budget estimates of ₹1,81,182 crore.
- ❖ Among the SOTR components, State Goods and Services Tax (SGST) increased about 15.11% to ₹61,960.29 crore in 2023-24 from ₹53,822.72 crore in 2022-23.
- ❖ The State also saw its revenue from Stamps and Registration Fees increased about 8.3% to ₹19,013.36 crore in 2023-24 from ₹17,559.89 crore in 2022-23.
- ❖ Land revenue increased to ₹255.87 crore in 2023-24 from ₹247.48 crore in 2022-23.

- ❖ Revenue from Taxes on Sales, Trade etc (which includes VAT on petrol and diesel and liquor) increased to ₹60,026.96 crore in 2023-24 from ₹59,143.52 crore in 2022-23.
- ❖ The State Excise Duties increased to ₹10,774.29 crore in 2023-24 from ₹10,422.61 crore in the comparable period last year.
- ❖ Including these components, the State's total revenue receipts stood at ₹2,62,382.45 crore in 2023-24.
- ❖ The total revenue receipts estimate for 2023-24 was revised to ₹2,72,576.80 crore.



Green solution to prevent landslips

- ❖ The State highways department is undertaking the stabilisation of slopes around the Nilgiris' major roads at five locations by growing grasses to prevent soil erosion.
- ❖ The project is known as 'slope stabilisation using soil nailing and Hydroseeding method.'
- ❖ Soil nailing is a geotechnical engineering technique that involves the insertion of reinforcing elements into the soil in a specified area to strengthen it.
- ❖ It is being undertaken in Ketti, Kattabettu, Perar, Kudah and Udhagamandalam.
- ❖ This method of preventing landslips will help in mitigating impact of linear infrastructure such as roads in the Nilgiris.



Wage rate for NREGA in Tamilnadu

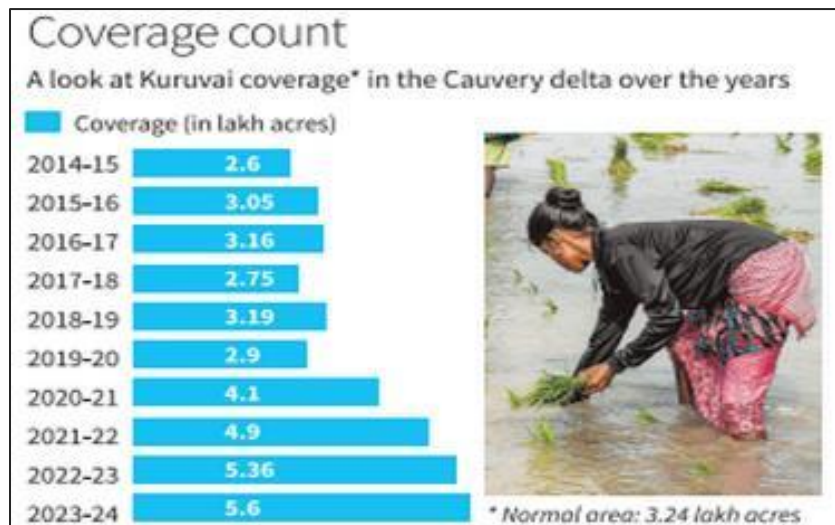
MGNREGA WAGES FOR UNSKILLED MANUAL WORKERS			
REVISED WAGES IN 2024			CHANGE IN %
WAGES IN 2023			
Andhra Pradesh	272	300	10.2%
Assam	238	249	2.9%
Bihar	228	245	7.4%
Chhattisgarh	221	243	9.9%
Gujarat	256	280	9.3%
Goa	322	356	10.5%
Haryana	357	374	4.7%
J&K	244	259	6.1%
Jharkhand	228	245	7.4%
Karnataka	316	349	10.4%
Kerala	333	346	3.9%
Madhya Pradesh	221	243	9.9%
Maharashtra	273	297	8.7%
Odisha	237	254	7.1%
Punjab	303	322	6.2%
Rajasthan	255	266	4.3%
Tamil Nadu	294	319	8.5%
Telangana	272	300	10.2%
Uttar Pradesh	230	237	3%
Uttarakhand	230	237	3%
West Bengal	237	250	5.4%

Wages in rupees, States

- ❖ The Tamil Nadu government recently accorded sanction to release ₹1,229 crore for the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) for 2024-25.
- ❖ While ₹921 crore is the 75% share from the Central assistance for this programme (material component), ₹307 crore is the 25% share of the State government for the same for 2024-25.

- ❖ The Government of India had earlier this year increased the wages under MGNREGS by ₹25 per worker a day.
- ❖ In March this year, the Central Empowered Committee approved “20 crore person days” under the labour budget for Tamil Nadu for 2024-25.
- ❖ The Government of India had that month approved ₹319 per person a day under the MGNREGS for workers in Tamil Nadu.
- ❖ The funds for MGNREGS have three components
 - Wage for unskilled labour (100% funded by the Union government),
 - Material for civil works (75% by the Union government and 25% by the State government) and
 - For salary and other expenditure (100% by the Union government).

Kuruvai coverage 2024



- ❖ The Cauvery delta region, in the last five years have seen a perceptible rise in the average extent of coverage for the season.
- ❖ Kuruvai coverage rose by 40% above normal in last five years.
- ❖ The normal coverage, as worked out by the State Agriculture Department, is about 3.24 lakh acres for the delta.
- ❖ It covers the districts of Thanjavur, Tiruvarur, Nagapattinam, Mayiladuthurai, Ariyalur, Tiruchi and Cuddalore.
- ❖ However, going by the average for the last five years, the figure comes to 4.57 lakh acres — a nearly 40% rise.

Butterfly migration in 2024

- ❖ Tamil Nadu witnessed reasonably good migration of butterflies from the Western Ghats hill ranges to the plains and the Eastern Ghats in April and May this year.
- ❖ It was followed by good pre-monsoon rainfall across the State in the summer.
- ❖ As per the observations made by TNBS since 2013, no butterfly migration was reported in 2016 when Tamil Nadu witnessed a drought-like situation.
- ❖ Though the migration improved in 2017 and 2018, there was a decline in 2019.
- ❖ The Nature and Butterfly Society (TNBS) considers this year's migration ahead of Southwest Monsoon a healthier one compared to the ones in the past few years.

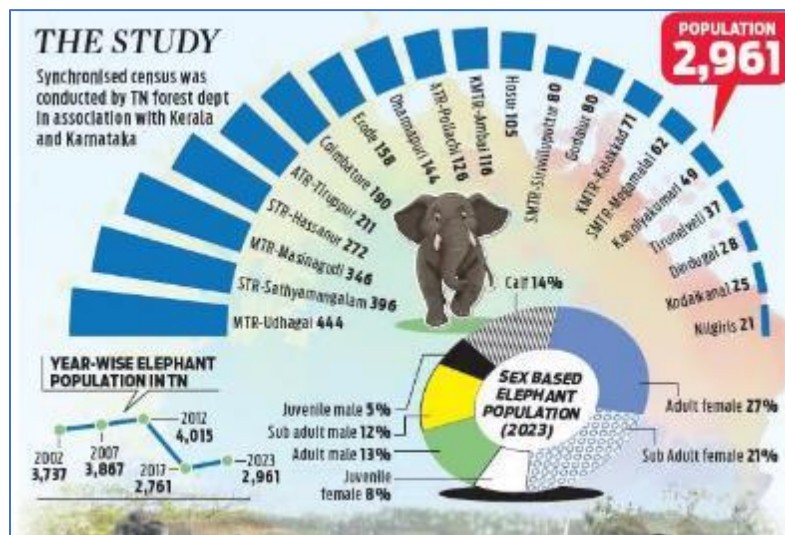
Paddy procurement 2023-24

Season	Quantity procured (tonnes)	Payment under MSP (₹ in crore)	Farmers benefitted by MSP
2023-24			
Kharif	22,09,517.17	5,207.82	2,91,745
Rabi	5,64,079.76	1,111.83	57,642
TOTAL	27,73,596.93	6,319.65	

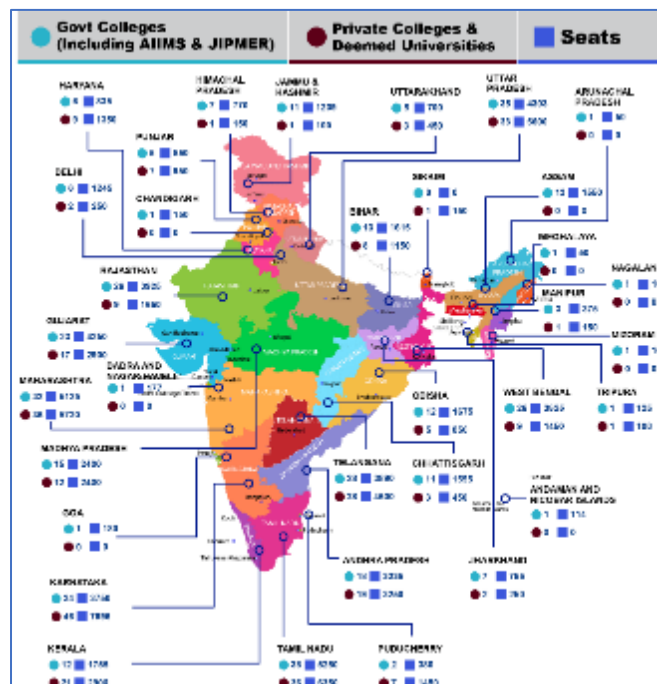
- ❖ Tamil Nadu, during 2023-24, procured about 17 lakh tonnes of paddy less than what it did in the previous year.
- ❖ In 2022-23, the figure of paddy procurement was around 44.26 lakh tonnes.
- ❖ Next year, it was about 27.74 lakh tonnes, which was about seven lakh tonnes short of the estimated figure.

2nd synchronized elephant population estimation

- ❖ The second synchronised elephant population estimation began in Tamil Nadu, Kerala, Karnataka, and Andhra Pradesh.
- ❖ In Tamil Nadu, it is being conducted in 26 forest divisions and 697 blocks.
- ❖ A synthesis report of the southern States will be prepared to give better insights into the population patterns in the neighbouring States.
- ❖ Last year, 2,961 elephants were recorded in Tamil Nadu.



Six new medical colleges



- ❖ The National Medical Commission has granted approval to establish new medical colleges in six districts in Tamil Nadu.
- ❖ Authorisation has been granted to set up medical colleges in six districts namely Tenkasi, Mayiladuthurai, Perambalur, Arakkonam, Ranipet and Tirupattur.
- ❖ Earlier in 2022, Tamil Nadu opened 11 new medical colleges.
- ❖ Tamil Nadu has a population of a little more than 8 crore and more than 10,000 seats in more than 70 medical colleges.

PM-KUSUM scheme - Tamilnadu



- ❖ The Tamil Nadu Generation and Distribution Corporation (TANGEDCO) has issued new guidelines to implement the PM - KUSUM scheme.
- ❖ It aims to encourage farmers to instal solar energy-powered pump sets.
- ❖ The plan is to implement the scheme for 5,000 agriculture pump sets in the State.
- ❖ The State and the Central governments will together give 60 % of the cost of the project as subsidy and the farmer will have to bear 40 % of the cost.
- ❖ PM - KUSUM stands for Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan.

State's rice yield 2024

- ❖ Tamil Nadu's yield of rice, during 2023-24 for both the cultivation seasons of kharif and rabi, is lower than that of the national average.
- ❖ The yield for the year has been worked out to be 2.31 tonnes per hectare against the all-India average of 2.74 tonnes per hectare.
- ❖ This was a departure at least from the two previous years when the State's figure was higher than that of all-India.
- ❖ The State works out yield or productivity with regard to paddy while the Central authorities does it for rice.

- ❖ As per the norms, 100 kg of paddy is expected to produce 67 kg of raw rice, or 68 kg in case of par-boiled rice.

Dip in performance
A former official of the State Agriculture Department attributes the drop in the yield rate to crop damage caused due to heavy rainfall in districts such as Tiruvallur and Ramanathapuram

Rice cultivation details of various States									
State	2022-23			2023-23			2023-24*		
	Area in lakh ha	Production in lakh tonnes	Yield in tonnes/ha	Area in lakh ha	Production in lakh tonnes	Yield in tonnes/ha	Area in lakh ha	Production in lakh tonnes	Yield in tonnes/ha
Andhra Pradesh	22.89	77.64	3.39	21.29	79.42	3.73	19.7	76.76	3.9
Karnataka	13.98	43.18	3.09	13.28	42.8	3.22	8.99	25.5	2.84
Kerala	1.96	4.87	2.48	1.92	5.96	3.1	1.17	2.54	2.17
Tamil Nadu	22.17	79.07	3.57	21.59	75.57	3.5	18.43	42.63	2.31
Telangana	36.55	124.1	3.4	46.62	158.77	3.4	45.25	160.25	3.54
All India (average)	463.79	1,294.71	2.8	478.32	1,357.55	2.84	451.52	1,238.15	2.74

*Data for the year 2023-24 is based on 2nd Advance Estimates

Salem Central Prison

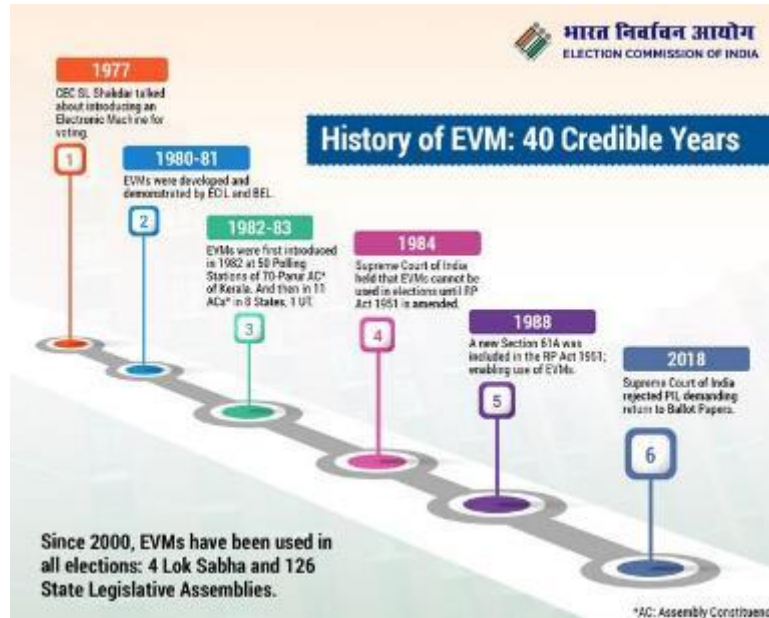
- ❖ Salem Central Prison, previously designated as a facility for habitual offenders, has now been reclassified as a casual prison.
- ❖ Constructed by the British in 1862, Salem Central Prison includes an annex built in 1934 to accommodate adolescent prisoners.
- ❖ After 162 years, the Home Department reclassified Salem Central Prison as a casual prison.
- ❖ Salem Central Prison hosts several factories and an open-air prison (farm jail).

NATIONAL

Authorized Economic Operator (AEO) status

- ❖ The Centre has extended Authorised Economic Operator (AEO) status to the gem and jewellery sector.
- ❖ The Gem & Jewellery Export Promotion Council (GJEPC) is the apex body of the sector.
- ❖ The AEO is a programme under the World Customs Organisation (WCO) SAFE Framework of Standards to secure and facilitate global trade.
- ❖ The aim is to enhance international supply chain security and facilitate movement of legitimate goods.

Supreme Court verdict on EVMs

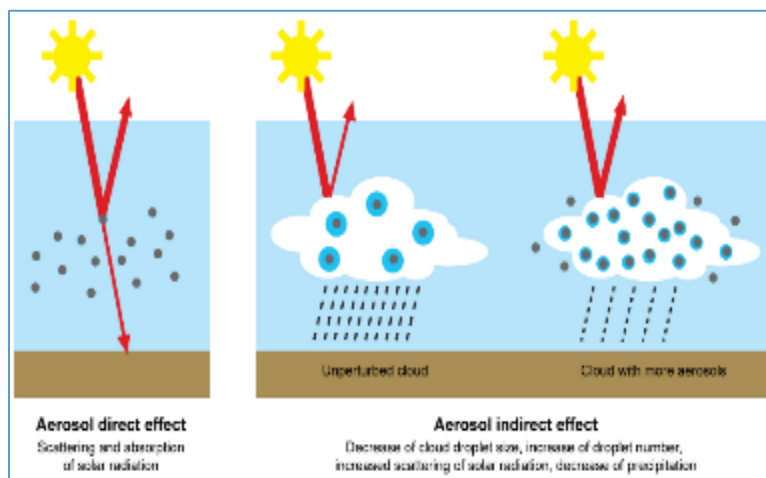


- ❖ The Supreme Court has rejected the pleas seeking 100% cross-verification of Electronic Voting Machines (EVMs) data with Voter Verifiable Paper Audit Trail (VVPAT) records.
- ❖ Also, it refused to direct, return to the previous system of voting through paper ballots.
- ❖ Only 5% of EVM-VVPAT counts are currently randomly verified in any Assembly constituency.
- ❖ New checks have been introduced for candidates who have questions over the result.
- ❖ The direction to preserve the data on the machines for 45 days and a provision to cross-check would strengthen the system and address concerns.
- ❖ It also gave suggestion of generating party-specific barcodes was articulated.

Decreasing Solar Radiation Availability

- ❖ The quantity of solar radiation available that can be economically converted by the solar panels to electricity is showing an “alarming decreasing trend” in several locations in India.
- ❖ Global solar radiation showed a generally decreasing trend from 1981-2006.
- ❖ 1971-2000 showed greater dimming compared to 1981-2006.
- ❖ However, on the whole, there was a reversal in trends after 2001 with the exact causes unclear.

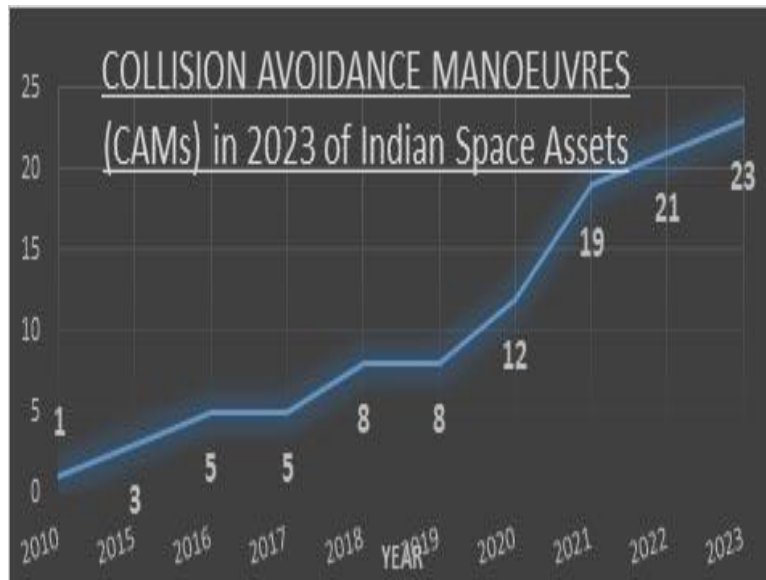
- ❖ While increased aerosol load and clouding are said to be causative factors, installing more efficient solar panels could help counter this.
- ❖ Aerosols absorb the sunlight and deflect it away from the ground and they can also precipitate the formation of dense clouds, that again block sunlight.
- ❖ The efficiency of solar panels is significantly influenced by the amount of sunlight incident on them.
- ❖ India's largest solar parks are located in the north-west, particularly Gujarat and Rajasthan.
- ❖ India's installed solar power capacity is about 81 GW (1 GW is 1,000 megawatt), or roughly 17% of the total installed electricity.



ISSAR 2023 report

- ❖ ISRO's annual assessment of the prevailing space situation is also compiled in the form of the Indian Space Situational Assessment Report (ISSAR).
- ❖ Space assets operating in outer space are vulnerable to various environmental hazards - natural objects like asteroids, comets, and meteoroids, energy and particle flux, and artificial space objects.
- ❖ According to the report, about 1,37,565 close approach alerts were received from US Space Command.
- ❖ Also, a total of 3,033 alerts for close approaches within the distance of one kilometre were deduced by the ISRO satellites.
- ❖ Since the beginning of the Indian space era, a total of 127 Indian satellites, including those from private operators/academic institutions, have been launched till 31st December 2023.
- ❖ As of 31 Dec 2023, the number of operational satellites owned by Govt. of India is 22 in LEO (Low Earth Orbit) and 29 in GEO (Geo-synchronous Earth Orbit).

- ❖ In addition, three Indian deep space missions were also active by the end of 2023, namely, Chandrayaan-2 Orbiter, Aditya-L1, and the Propulsion Module of Chandrayaan-3.
- ❖ A total of 21 Indian satellites have re-entered the atmosphere till the end of 2023.
- ❖ In the year 2023 alone, 8 Indian satellites have re-entered the atmosphere.
- ❖ A total of 82 rocket bodies from Indian launches were placed in orbit till 2023.



India on Kankesanthurai Port

- ❖ The Sri Lankan Cabinet has decided to implement the renovation of the Kankesanthurai Port with India agreeing to grant the entire cost of the project.
- ❖ It is situated in the northern region of Sri Lanka, the Kankesanthurai Port or the KKS Port.
- ❖ The direct passenger ship service connecting Nagapattinam in Tamil Nadu to Kankesanthurai port near Jaffna covers a distance of 111 km (60 nautical miles) in approximately three and a half hours.



75 Years of Diplomatic Ties with Indonesia



- ❖ Diplomatic relations between India and Indonesia were established in 1950.
- ❖ It is marked by the visit of the Indonesian President and the signing of the Treaty of Friendship in 1951.
- ❖ Both nations were pivotal participants in the Bandung Conference of 1955, a landmark event in the history of the Non-Aligned Movement.
- ❖ They had established a Strategic Partnership in 2005, later elevating it to a Comprehensive Strategic Partnership.
- ❖ Indonesia is a key partner in India's Act East Policy.

Eggshell skull rule

- ❖ The Supreme Court restored the compensation of Rs 5 lakhs awarded by the district consumer forum in a medical negligence case after it find 'eggshell skull' legal principle was incorrectly applied.
- ❖ The eggshell skull rule is a common law principle applied in civil litigation.
- ❖ Essentially, when the offender would be liable for all injuries that might be intensified due to the peculiar conditions of the injured person that the offender might not have known.
- ❖ Simply put, the defendant would be held responsible for injuries caused to a person when he hit him on the head, even if the victim had a particularly delicate skull or an 'eggshell' for a skull.



Shaksgam Valley

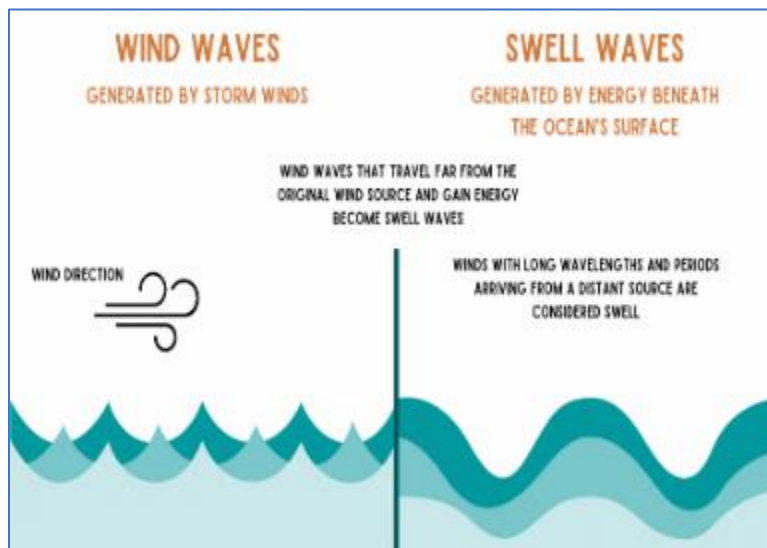
- ❖ India has lodged a strong complaint with China over construction work in the Shaksgam valley.
- ❖ It is described as an “illegal” effort to change the situation on the ground.
- ❖ Shaksgam valley is a strategically situated region which is now part of Pakistan-occupied Kashmir (PoK).
- ❖ The Shaksgam valley, or the Trans Karakoram Tract, is part of the Hunza-Gilgit Region of PoK.
- ❖ It is bordered by the Xinjiang Province of the People's Republic of China to the north.
- ❖ The northern areas of PoK are to its west and south and the Siachen Glacier region to the east.
- ❖ In 1963, Pakistan ceded the Shaksgam valley to China when it signed a border agreement with Beijing to settle their border disputes.
- ❖ India had never accepted the China-Pakistan border agreement of 1963, under which Pakistan tried to illegally cede this area to China.



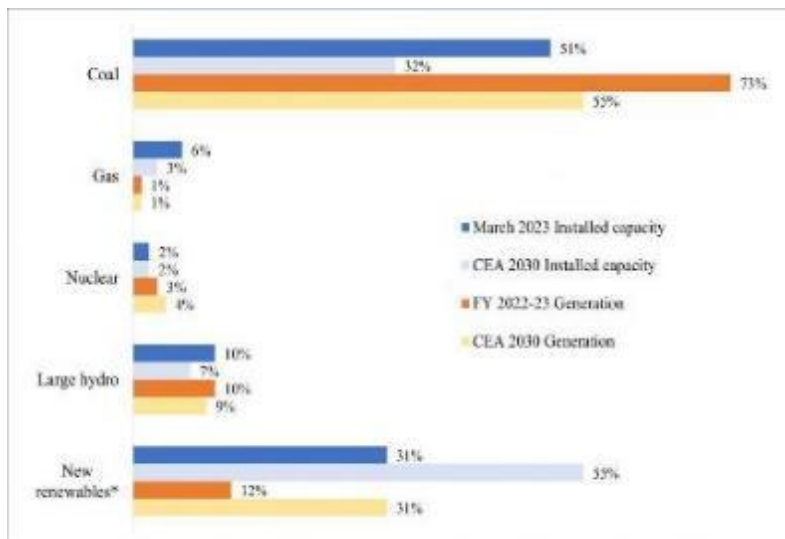
Swell Waves in coasts of India

- ❖ INCOIS forecasted that high sea waves, also known as swell waves, might hit the coastal states.
- ❖ In March, swell waves led to flooding in several areas of Kerala — the worst affected were Alappuzha, Kollam, and Thiruvananthapuram districts.

- ❖ Such flooding events are called Kallakkadal in Kerala.
- ❖ During such storms, huge energy transfer takes place from the air into the water, leading to the formation of very high waves.
- ❖ Such waves can travel thousands of kilometres from the storm centre until they strike shore.
- ❖ Usually, states like Kerala witness swell waves as a result of strong winds in the southern part of the Indian Ocean, where an ocean swell is generated.
- ❖ The waves then travel north to reach the coast in two or three days.
- ❖ Tsunamis are around 10 times faster than swell waves.

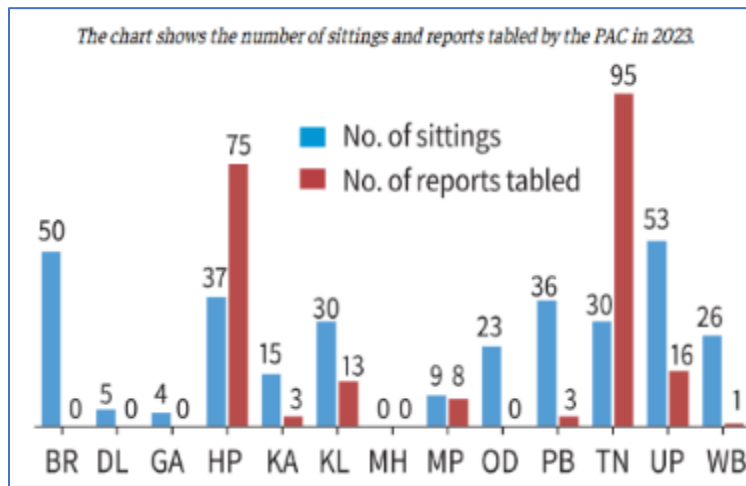


Coal's share in electricity



- ❖ Renewable energy (RE) sources contributed to 71 per cent of the total 26 GW of all new power generation capacity.
- ❖ The share of the polluting fossil fuel — coal/lignite — in India’s total installed capacity has also dropped below 50 per cent (217.6 GW) for the first time.
- ❖ It now accounts for 49.2 per cent of total installed capacity.

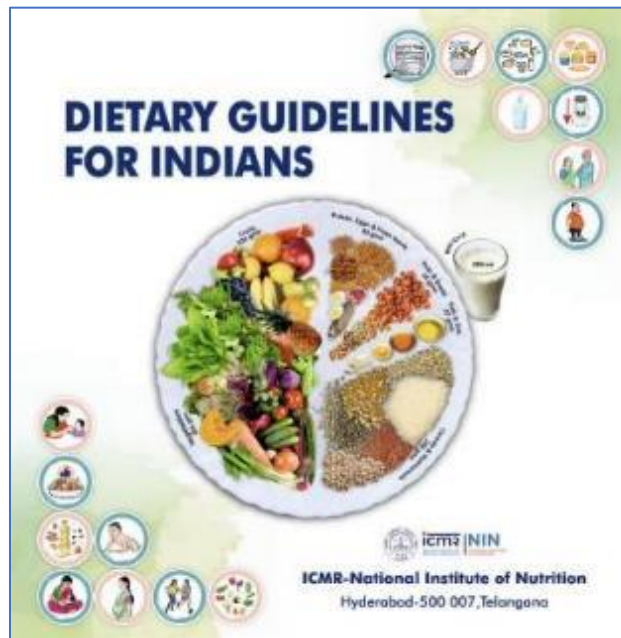
Annual Review of State Laws 2023



- ❖ In 2023, of the Rs. 18.5 lakh crore budget presented by 10 States, close to 40% was passed without discussion.
- ❖ As many as 20 States also saw 84 Ordinances being promulgated in 2023.
- ❖ The highest number of Ordinances was promulgated by Uttar Pradesh (20), followed by Andhra Pradesh (11), and Maharashtra (9).
- ❖ In 2023, only four Ordinances were promulgated in Kerala, compared to 15 in 2022, and 144 in 2021.
- ❖ Madhya Pradesh passed 85% of its Rs. 3.14 lakh crore Budget without discussion, the highest among the ten States.
- ❖ Kerala came second with 78%, followed by Jharkhand (75%) and West Bengal (74%).
- ❖ In 2023, the Public Accounts Committee held 24 sittings and tabled 16 reports on average in the States considered.
- ❖ In five of the 13 States for which data was available — Bihar, Delhi, Goa, Maharashtra and Odisha — the PAC did not table any reports.
- ❖ In contrast, the PAC in Tamil Nadu tabled 95 reports followed by Himachal Pradesh (75 reports).

- ❖ An analysis of the time taken by State legislatures to pass Bills shows that many were passed quickly with minimal debate.
- ❖ In fact, 44% of the Bills were passed either on the same day they were introduced in the Assembly or the next day.
- ❖ The figure is consistent with the trend observed in 2022 (56%) and 2021 (44%).
- ❖ In Gujarat, Jharkhand, Mizoram, Puducherry, and Punjab, all Bills were passed on the day of introduction or the next day.
- ❖ In 13 of 28 State legislatures, Bills were passed within five days of introduction.
- ❖ Kerala and Meghalaya took more than five days to pass more than 90% of their Bills.
- ❖ About 55% of Bills in Rajasthan were also passed after more than five days of deliberation.

New Dietary Guidelines



- ❖ The ICMR released a revised Dietary Guidelines for Indians.
- ❖ It mentions the guidelines required to meet essential nutrients and prevent non-communicable diseases (NCDs).
- ❖ According to guidelines, sugar should be less than 5 per cent of total energy intake.
- ❖ A balanced diet should provide not more than 45 per cent calories from cereals and millet.

- ❖ Adding more, it said sugar should be 15 per cent of calories from pulses, beans and meat.
- ❖ The rest of the calories should come from nuts, vegetables, fruits, and milk.
- ❖ While total fat intake should be less than or equal to 30 per cent energy.
- ❖ It has also advised against the consumption of protein supplements to build body mass.
- ❖ Around 56.4 per cent of the total disease burden in India is due to unhealthy diets.

Solar power generator in 2023



- ❖ India surpasses Japan to become third largest solar power generator in 2023.
- ❖ The global solar generation in 2023 was more than six times larger than in 2015.
- ❖ Solar produced a record 5.5 per cent of global electricity in 2023.
- ❖ India behind China, US, Brazil in terms of solar power generation.
- ❖ India saw the world's fourth-largest increase in solar generation in 2023 (+18 tera watt hour or TWh), behind China (+156 TWh), the United States (+33 TWh) and Brazil (+22 TWh).

Share of Religious Minorities (1950-2015)

- ❖ The Economic Advisory Council to the Prime Minister (EAC-PM) has recently published working paper on the share of religious minorities in 167 countries, including India.
- ❖ The paper strikingly claimed that for India, while the share in population of Muslims increased by 43.15% in this time period, the share in population of Hindus decreased by 7.82%.

- ❖ In 1950, Hindus' share in population was 84.68%, coming down to 78.06% in 2015.
- ❖ Similarly, Muslims' share in population had risen from 9.84% to 14.09%.
- ❖ The paper has concluded that Hindus' share declined by 7.82%, Christians' rose by 5.38%, Sikhs went up by 6.58%, and that of Parsis went down by 85%.
- ❖ The 2011 Census had counted 96.63 crore Hindus — 79.8% of the population and 17.22 crore Muslims — 14.2% of the population in the country at the time.

Sl. No.	Country	Religious denomination (1950)	Major Religion (1950)	Majority Religion Share (1950)	Majority Religion Share (2015)	Rate of change in share	Religious denomination (2015)
1	Myanmar	Theravada Buddhists	Buddhist	78.53	70.80	-9.84	Theravada Buddhists
2	India	Hindus	Hindus	84.68	78.06	-7.82	Hindus
3	Nepal	Hindus	Hindus	84.30	81.26	-3.61	Hindus
4	Maldives	Shafil Sunnis	Muslim	99.83	98.36	-1.47	Shafil Sunnis
5	Afghanistan	Hanafi	Muslim	88.75	89.01	0.29	Hanafi
6	Pakistan	Hanafi	Muslim	77.45	80.36	3.75	Hanafi
7	Sri Lanka	Theravada Buddhists	Buddhist	64.28	67.65	5.25	Theravada Buddhists
8	Bhutan	Tibetan Buddhists	Buddhist	71.44	84.07	17.67	Tibetan Buddhists
9	Bangladesh	Hanafi	Muslim	74.24	88.02	18.55	Hanafi

Contribution to UN counter terrorism fund



- ❖ India has contributed \$500,000 to the UN Counter-Terrorism Trust Fund.
- ❖ Since 2018, India has also been actively supporting programmes combating this threat.
- ❖ With its current contribution, India's cumulative financial support to the trust fund now stands at \$2.55 million.

- ❖ India's contribution would support mainly Countering Financing of Terrorism and Countering Terrorist Travel Programme.
- ❖ This fund was established in 2009

Drip Pricing in India

- ❖ A recent warning regarding “drip pricing” was issued by the Department of Consumer Affairs, which warned customers of the practice.
- ❖ In this scenario, only a portion of the price is initially advertised and further fees are added later on in the purchase process.
- ❖ Drip pricing is a pricing technique in which firms advertise only part of a product's price and reveal other charges later as the customer goes through the buying process.
- ❖ The additional charges can be mandatory charges, such as hotel resort fees, or fees for optional upgrades and add-ons.”
- ❖ When the represented price is inaccurate, it can lead consumers to make misinformed decisions and can result in unfair outcomes for honest competitors.



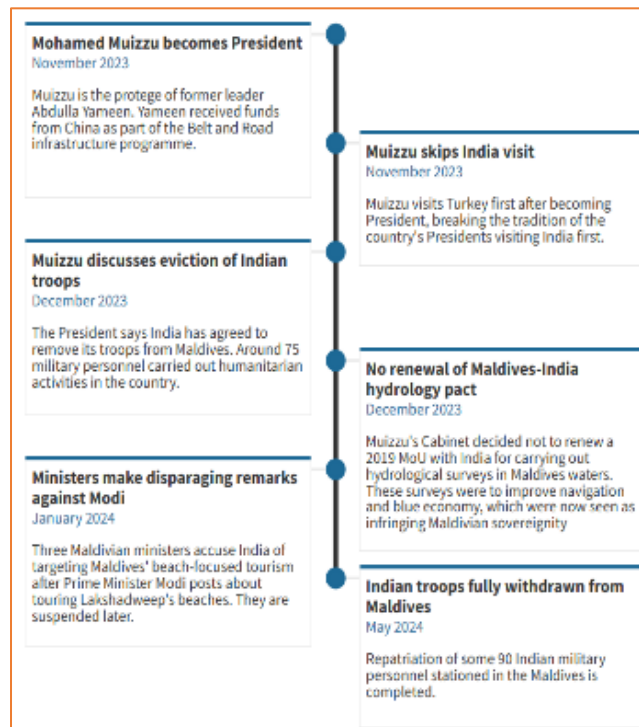
High-Yielding Wheat Variety - HD 3386

- ❖ The Indian Agricultural Research Institute has introduced a new high yielding variety of wheat seed variety.
- ❖ The new seed variant – HD 3386 was recently approved by the central seed committee.
- ❖ It is resistant to yellow, and leaf rust diseases mostly reported in the key wheat growing region of northwest region – Punjab, Haryana, Uttar Pradesh and Rajasthan.

- ❖ It is aimed at replacing the currently used seed HD2967 also developed by IARI in 2010.
- ❖ In terms of yield, the existing variety has productivity of around 22 quintal/acre while the new variant has productivity of 25 quintal/acre.

Military Withdrawal from Maldives

- ❖ India and the Maldives had agreed to withdraw the remaining Indian troops before May 10.
- ❖ India has withdrawn all its soldiers from the Maldives ahead of the deadline set by President.
- ❖ The Indian military personnel were stationed in the Maldives to operate and maintain two helicopters and Dornier aircraft India gifted earlier.
- ❖ Maldives' new President Mohamed Muizzu's famous "India Out" campaign aimed to reduce Indian influence in the country.



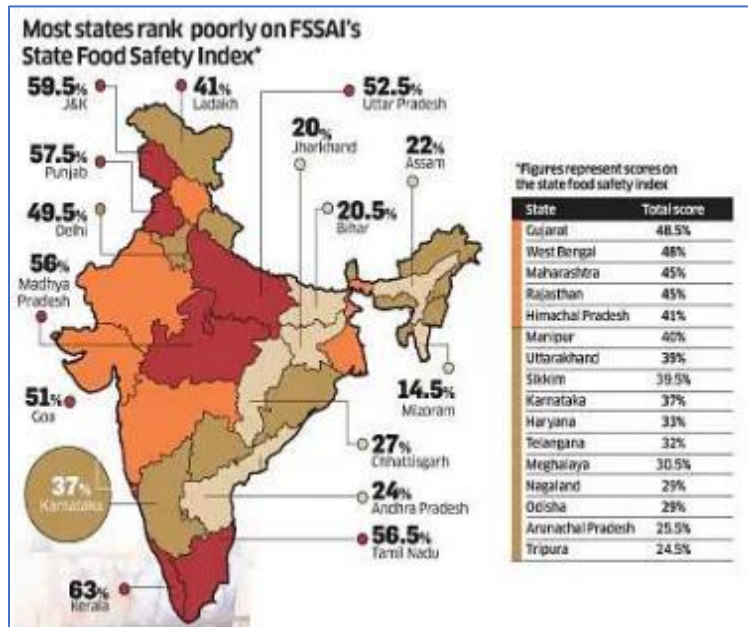
Misleading Packaged Food Labels

- ❖ ICMR warned that, the information presented on packaged food can be misleading.
- ❖ Sugar-free foods maybe loaded with fats, while packed fruit juices may contain only 10 per cent fruit pulp.

- ❖ The food product can be called 'natural' if it doesn't have added colours and flavours or artificial substances and goes through minimal processing.
- ❖ There is a general misconception that 'nutrition facts' and 'nutrition/nutrient claims' are the same.
- ❖ Nutrition claims refers to any statement which suggests or implies that a food has particular nutritional properties.
- ❖ All of the nutrition information shown is based on the referred serving size.



Guidelines for prevent ETO contamination



- ❖ Recently, Hong Kong and Singapore banning the sale of popular brands after detecting the carcinogenic chemical ethylene oxide in their products.

- ❖ The Spices Board has come out with comprehensive guidelines for exporters to prevent ethylene oxide (EtO) contamination in the products shipped from India.
- ❖ It asked to take effective measures to prevent cross-contamination of spices and herbs by direct or indirect contact with potentially contaminated material at all stages of the processing.
- ❖ They are encouraged to use the alternate methods of sterilisation like steam sterilization; irradiation.
- ❖ In 2023-24, India's spice exports totalled USD 4.25 billion, accounting for a 12 per cent share of the global spice exports.
- ❖ The world spice trade is worth USD 35 billion in 2023.
- ❖ China is the top exporter with exports of USD 8 billion in 2023.

Rules on contesting seats

Representation of the People's Act 1951		
PART V: Conduct of Elections		
Chapter I: Nomination of Candidates (Sec 30-39A)	Chapter II: Candidates & Their Agents (Sec 40-51)	Chapter III: General Procedure at Elections (Sec 52-55A)
Chapter IV: The Poll (Sec 56-63)	Chapter V: Counting of Votes (Sec 64-67A)	Chapter VI: Multiple Elections (Sec 68-70)
Chapter VII: Publication of Election Results & Nominations (Sec 71-74)	Chapter VIIA: Declaration of Assets & Liabilities (Sec 75A)	Chapter VIII: Election Expenses (Sec 76-78)

- ❖ According to the Representation of the People Act (RPA), 1951, a candidate is permitted to contest an election from up to two constituencies.
- ❖ But he or she can hold only one seat at a time if elected from both.
- ❖ A sub-section, 33 (7), of the RPA, allowing a candidate to contest from two seats, was introduced through an amendment in 1996.
- ❖ Prior to which there was no bar on the number of constituencies from which a candidate could contest.
- ❖ However, Section 70 of the same Act stipulates that a candidate can hold only one seat at a time, regardless of whether he or she has been elected from more than one seat.

- ❖ Thus, if a candidate wins from two seats, a byelection is necessary from the seat he or she vacates.
- ❖ Moreover, a person has to be a voter in a particular State to contest Assembly polls from there.
- ❖ But to contest in a Lok Sabha election, a person can be registered as a voter in any constituency of the country.
- ❖ If a person is a registered voter in any constituency, he or she can contest from any seat in India, except Assam, Lakshadweep and Sikkim.

Chabahar Port deal

- ❖ India signed an agreement with Iran to manage the southeastern Iranian port of Chabahar for the next 10 years.
- ❖ India has been developing a part of the port in Chabahar, which is located on Iran's southeastern coast along the Gulf of Oman.
- ❖ This move, taking place amidst a busy election season, is seen as a significant geopolitical outreach to Iran with major regional implications.
- ❖ This marks the first instance of India taking over the management of an overseas port.



GST Registration Based on Aadhaar

- ❖ Telangana, Tamil Nadu, and Karnataka are among the five states that have indicated interest in utilising Aadhaar-based verification for GST registration.
- ❖ Currently, Gujarat and Andhra Pradesh, and the Union Territory of Puducherry have launched the Aadhaar authentication of taxpayers on a pilot basis.

- ❖ GST authorities have so far been using OTP-based Aadhaar authentication to establish the identity of the applicants, seeking registration.

BHISHM portable cubes

- ❖ The Indian Air Force tested BHISHM portable cubes at Agra for airdrops from the aircraft.
- ❖ This is the first time the Indian Air Force tested this portable hospital.
- ❖ This test was performed so that the portable hospital can be deployed to cater to emergencies anywhere.
- ❖ These portable cubes are a part of the broader initiative named “Project BHISHM” - Bharat Health Initiative for Sahyog, Hita and Maitri.
- ❖ It is tailored to treat up to 200 casualties, emphasising rapid response and comprehensive care.



Center for World University Rankings 2024

- ❖ Indian Institute of Management (IIM) Ahmedabad secured the top rank among the best performing institutes across India.
- ❖ 64 other universities and institutes from India made it to the 2024 edition of the Global 2000 list.
- ❖ IIM Ahmedabad climbed 9 spots to secure 410th rank.
- ❖ Indian Institute of Science dropped 7 places to sit at 501st position.
- ❖ IIT Bombay plunged 14 spots and stood at 568th rank.
- ❖ IIT Delhi and IIT Kharagpur were also among top ten best performers of the year.
- ❖ IIT Madras secured 582nd position by descending 12 spots.
- ❖ Tata Institute of Fundamental Research secured 606th rank as it descended 26 spots.



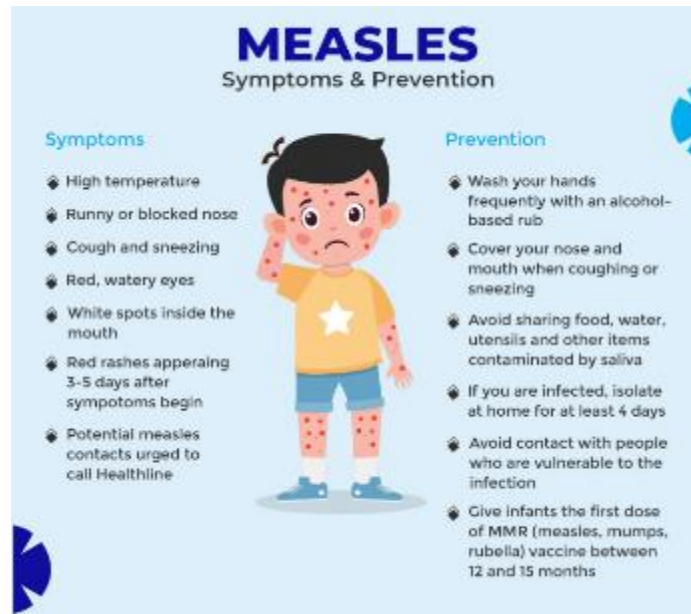
World Rank	Institution	Location	National Rank	Education Rank	Employability Rank	Faculty Rank	Research Rank	Score
410 Top 2%	Indian Institute of Management Ahmedabad	India	1	367	11	-	-	75.4
501 Top 2.4%	Indian Institute of Science	India	2	323	690	-	476	74.3
568 Top 2.8%	Indian Institute of Technology Bombay	India	3	-	330	-	660	73.7
602 Top 2.9%	Indian Institute of Technology Madras	India	4	-	187	-	614	73.5
606 Top 2.9%	Tata Institute of Fundamental Research	India	5	-	-	-	573	73.3
616 Top 3%	Indian Institute of Technology Delhi	India	6	-	155	-	685	73.2
622 Top 3%	Delhi University	India	7	532	168	-	675	73.2
704 Top 3.4%	Indian Institute of Technology Kharagpur	India	8	-	518	-	681	72.5
790 Top 3.9%	Academy of Scientific & Innovative Research	India	9	-	-	-	761	71.8
828 Top 4%	Punjab University	India	10	527	745	-	794	71.6

Severe Heat Waves in India 2024

WHAT MAKES FOR A HEATWAVE?		
Places with normal maximum temperature	Heatwave if temperature higher by	Severe heatwave if temperature higher by
40 degree Celsius or less	5-6 degree Celsius	7 degree Celsius
More than 40 degree Celsius	3-4 degree Celsius	More than 5 degree Celsius
For any place	Maximum temperature remains above 45 degree Celsius for two consecutive days	
<i>These criteria have to be met in at least two stations of a meteorological sub-division for at least two consecutive days. Source: Parliament question and IMD</i>		

- ❖ The extreme heat in parts of eastern and southern India this April has been attributed to climate change.
- ❖ A new study has said that the abnormally high temperatures were made about 45 times more likely by climate change.
- ❖ This is the third straight year that heatwaves in the early part of summer in India have been attributed to climate change.
- ❖ The same researchers had earlier shown that the excessive heat in March-April of 2022 and April of 2023 was also most likely caused by climate change.
- ❖ Heatwaves are not defined by high temperatures.
- ❖ They are defined by abnormalities in temperature.

Measles Vaccine in India



- ❖ Nearly 12 per cent of children in India who are eligible for measles vaccination have received none of the recommended double-dose.
- ❖ It is signalling a “concerning gap” in immunisation coverage.
- ❖ The team found that close to 30 per cent of the eligible children have received only one measles-containing vaccine (MCV1).
- ❖ About 60 per cent have been fully immunised (MCV2).
- ❖ The findings showed that zero-dose cases were high in the northeastern states, with Nagaland reporting the greatest share at 26 per cent.
- ❖ Tamil Nadu was found to report the lowest at 4.6 per cent.

Igla-s air defense systems

- ❖ The Indian Army is all set to begin receiving another set of Russian Igla-S very short-range air defence systems (VSHORAD) soon.
- ❖ It is a man-portable air defence system (MANPADS) developed by Russia.
- ❖ It is a hand-held defence system that can be operated by an individual or crew.
- ❖ It is designed to bring down low-flying aircraft and can also identify and neutralise air targets such as cruise missiles and drones.
- ❖ It has a range of 500 metres to 6 kilometres and attack targets up to an altitude of 3.5 kilometres.
- ❖ The Army is also set to receive the first of two Israeli Hermes-900 Medium Altitude Long Endurance Unmanned Aerial Vehicles (UAV).

Igla-S portable anti-aircraft missile system

Designed to engage all types of aircraft and helicopters, as well as small airborne targets such as cruise missiles, at any time of day in visible conditions on collision and pursuit courses against background and artificial thermal interference.



- 500 to 6,000 m Firing range
- 10 to 3,500 m target altitude
- no more than 12 s. mobile-to-combat position transition time
- no more than 5 s. ready to start time from activation
- Target speed:
 - up to 400 m/s on collision courses
 - up to 320 m/s on catch-up courses
- Homing head type:
 - tracking
 - passive
 - thermal
 - bispectral

MDL Shipyard 250th Anniversary

- ❖ Mazagon Dock Shipbuilders Ltd (MDL) of Mumbai celebrated the completion of 250 years.
- ❖ During the event, it launched a prototype indigenous midget submarine named 'Arowana', and commissioned the Solar Electric Hybrid boat.
- ❖ It was beginning as a small dry dock in 1774.
- ❖ In 1960, the Government of India took over the yard to further its warship development programme and incorporated it as a PSU.

THE Young University rankings 2024

THE World University Rankings 2024 Young

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Top 10

Rank 2024	Rank 2023	Institution	Country/region
1	1	Nanyang Technological University, Singapore	Singapore
2	3	Paris Sciences et Lettres - PSL Research University Paris	France
3	2	The Hong Kong University of Science and Technology	Hong Kong
4	6	City University of Hong Kong	Hong Kong
5	12	Université Paris-Saclay	France
6	8	Institut Polytechnique de Paris	France
7	4	Hong Kong Polytechnic University	Hong Kong
8	15	Sorbonne University	France
9	14	Pohang University of Science and Technology (POSTECH)	South Korea
10	13	Maastricht University	Netherlands



- ❖ Mahatma Gandhi University in Kottayam has retained its first position among Indian universities in the Times Young University Rankings 2024.
- ❖ These rankings list universities worldwide that are 50 years old or younger.
- ❖ The 2024 ranking includes 673 universities from around the world.
- ❖ MGU is occupying the 81st position.
- ❖ Anna University and Bharathiar University from Tamil Nadu, along with the Indian Institute of Technology, Patna, are placed second to fourth in the Indian ranking.

NHRC's international accreditation

- ❖ On May 1, GANHRI deferred NHRC's accreditation for the second year in a row.
- ❖ This process is governed by the U.N.-recognised Global Alliance of National Human Rights Institutions (GANHRI).
- ❖ NHRC has held an 'A rating' since 1999.
- ❖ It was due for re-accreditation by the Geneva-based body last year.
- ❖ The GANHRI unites 120 National Human Rights Institutions globally.
- ❖ The body is responsible for reviewing and accrediting NHRIs in compliance with the Paris Principles adopted in 1993.
- ❖ The Sub-Committee for Accreditation (SCA) consists of sixteen 'A' status NHRIs, four from each region in the Americas, Europe, Africa, and the Asia-Pacific.
- ❖ The decision could affect India's ability to vote at the Human Rights Council and some UNGA bodies.

Exemption from Consumer Protection Act

- ❖ The Supreme Court ruled that advocates cannot be held liable under the Consumer Protection Act of 1986 for deficiency in service.
- ❖ The court ruled that a complaint to this effect against an advocate was not maintainable before a consumer forum.
- ❖ The court also indicated that its 1996 decision that held medical professionals accountable under the Consumer Protection Act may need to be revisited.
- ❖ As per the SC, CP Act, 1986 as re-enacted in 2019 was to provide protection to the consumers from the unfair trade practices and unethical business practices only.
- ❖ There is nothing on record to suggest the Legislature ever intended to include the Professions or the Professionals within the purview of the Act.

- ❖ Advocates must be liable under civil/criminal law, not consumer law.

CONSUMER PROTECTION ACT 1986	PROVISIONS	CONSUMER PROTECTION ACT 2019
No separate regulator	Regulator	Central Consumer Protection Authority (CCPA) to be formed
Complaint could be filed in a consumer court where the seller's (defendant) office is located	Consumer court	Complaint can be filed in a consumer court where the complainant resides or works
No provision. Consumer could approach a civil court but not consumer court	Product liability	Consumer can seek compensation for harm caused by a product or service
District: up to ₹20 lakh State: ₹20 lakh to ₹1 cr National: above ₹1 cr	Pecuniary jurisdiction	District: up to ₹1 cr State: ₹1 cr to ₹10 cr National: Above ₹10 cr
No provision	E-commerce	All rules of direct selling extended to e-commerce
No legal provision	Mediation cells	Court can refer settlement through mediation

SC order on UAPA

Targeting terror

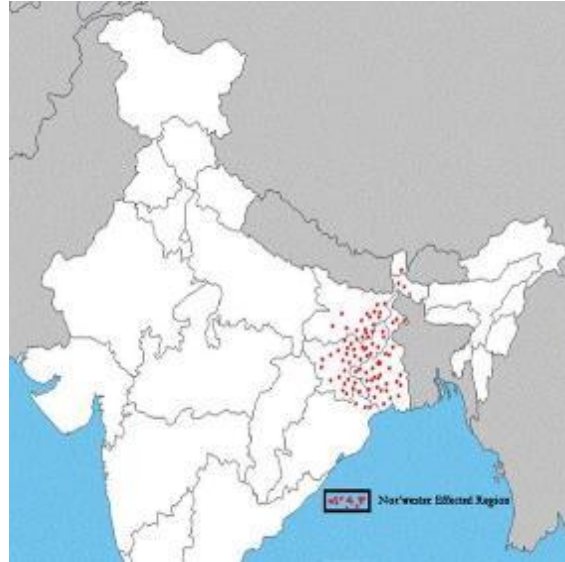
The UAPA (Amendment) Bill will enable the government to designate a person as a terrorist

- The proposal to designate an individual as a terrorist will come from security agencies
- The information will then be corroborated through multiple agencies
- The Home Ministry will examine the proposal. Once the Ministry is convinced, the proposal will be signed by the Home Minister
- The individual can then file an appeal with the Ministry
- The Ministry will have to decide on appeal in 45 days
- The individual can also file an appeal before an independent committee
- The UAPA, first framed in 1967, was amended in 2004, 2008 and 2013

- ❖ The Supreme Court declared as illegal News Click founder and Editor-in-Chief Prabir Purkayastha's arrest by the Delhi police and his remand in a case under the Unlawful Activities (Prevention) Act 1967.
- ❖ It is alleged that the news portal received foreign funds in violation of the FCRA case.
- ❖ In October last year, Purkayastha was arrested by the Delhi Police Special Cell under the UAPA.

- ❖ His arrest came after several raids conducted following a New York Times article which claimed that News Click was being paid by an American billionaire to promote Chinese propaganda.

Nor'westers research testbed



- ❖ India is establishing its first research testbed to study severe thunderstorms known as Nor'westers, primarily affecting the eastern and northeastern regions.
- ❖ It aims to study thunderstorms from the formation stage, growth, and propagation over eastern parts of the country.
- ❖ This will be done using meteorological instruments, drones, and other equipment that will aid in the systematic tracking of thunderstorms.
- ❖ Originating over east and northeast India, south Nepal, Bhutan and Bangladesh, the nor'westers are extremely severe thunderstorms accompanied by squally winds.

50 years of India's first nuclear test

- ❖ On May 18, 1974, India conducted its first nuclear test in Pokhran, code-named Operation Smiling Buddha.
- ❖ With this, India had entered the league of nations with nuclear capabilities.
- ❖ With Smiling Buddha, India became the first nation to conduct a nuclear test apart from the five permanent members of the United Nations Security Council.
- ❖ After the nuclear test, there were criticisms that it was an attempt to divert people's attention from the economic crisis the country was facing in the 1970s.

- ❖ In 1998, India again conducted a series of nuclear tests in Pokhran once again, code-named Operation Shakti.

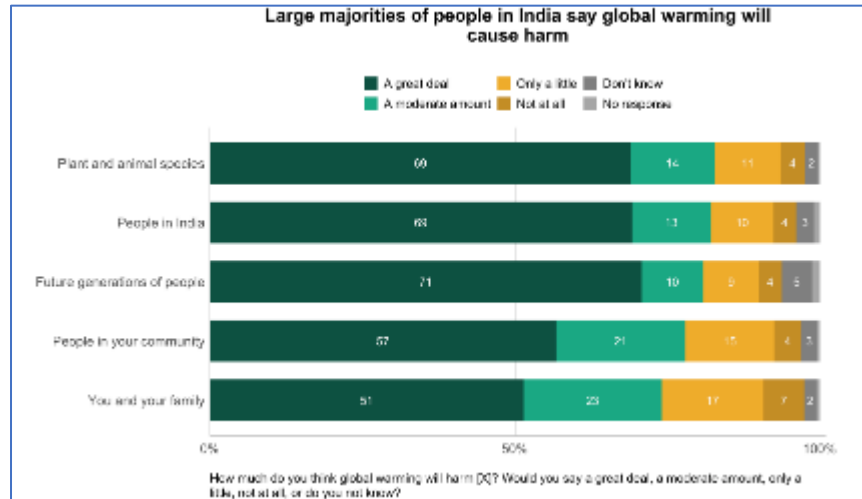


Constitution Bench Verdict

- ❖ The Supreme Court said, A judgement of a constitution bench would be “binding” on benches of lesser strength.
- ❖ The apex court had held that a panchayat cannot claim ownership of the land which has been taken from the real owners from their permissible ceiling limits under the land law in Haryana.
- ❖ The apex court had consequently said panchayats can only manage and control the land which has been taken from the owners and cannot claim title.
- ❖ Earlier, the top court had delivered the verdict on a batch of appeals against a full bench verdict of the Punjab and Haryana High Court which had examined the legality of sub-section 6 of Section 2(g) of the Haryana Village Common Lands (Regulation) Act, 1961.



Climate Change in the Indian Mind, 2023



- ❖ More than 90 per cent of people interviewed for a nationally representative survey said they were “worried” about global warming.
- ❖ This was 61 per cent in 2011 and 81 per cent worried in 2022.
- ❖ 54 per cent of Indians “know just a little about global warming with only 10 per cent of people stating that they know “a lot”.
- ❖ 32 per cent said they had never heard of it.
- ❖ 78 per cent of the respondents said global warming was happening and 52 per cent said it was caused by humans.
- ❖ Over 70 per cent said the phenomenon is affecting weather in their local area and monsoons of the country.

Misuse of Non-Stick Teflon Cookware

- ❖ In the revised Dietary Guidelines for Indians (DGIs), ICMR and the National Institute of Nutrition (NIN) have advised against non-stick cookware due to health risks from PFOA, PFOS in Teflon coatings.
- ❖ ICMR has also advised to opt for eco-friendly options like ceramic, cast iron, and stainless steel.
- ❖ Non-stick cookware has long been hailed as a convenient option for cooking due to its non-stick surface.
- ❖ This makes it easy to clean and requires less oil for cooking.
- ❖ One of the primary concerns with non-stick cookware is perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS).
- ❖ They are the chemicals used in producing non-stick coatings such as Teflon.

- ❖ When non-stick cookware is heated to high temperatures, these chemicals can release toxic fumes into the air, posing health risks to those exposed.
- ❖ Inhalation of these fumes has been linked to various health issues, including respiratory problems, thyroid disorders, and even certain types of cancer.
- ❖ PFOA belongs to a larger class of chemicals known as per- and polyfluoroalkyl substances (PFAS).
- ❖ While PFOA is largely phased out, other PFAS compounds may still be present in some non-stick cookware.
- ❖ Non-stick cookware, particularly those coated with polytetrafluoroethylene (PTFE or Teflon), can release toxic fumes when overheated.
- ❖ They potentially causing flu-like symptoms in humans and being fatal to birds.



Indian citizenship under CAA

- ❖ The Union Government granted citizenship certificates to more than 300 people who applied under the Citizenship (Amendment) Act (CAA), 2019.
- ❖ The 14 people who received the certificates in Delhi came from Pakistan in 2013.
- ❖ Most Pakistani Hindus who entered India legally are living in Gujarat, Chhattisgarh, Rajasthan, Haryana, Punjab, and Delhi.
- ❖ It was not known how many people from West Bengal, including Matuas and Nama sudras, and those excluded from the National Register of Citizens (NRC) in Assam, had applied under the CAA.
- ❖ The citizenship portal requires applicants to declare the country of origin, and also submit at least one document tracing their roots to Bangladesh, Pakistan or Afghanistan.
- ❖ Since the intended beneficiaries in West Bengal entered India without any documents, they are unable to apply under CAA.
- ❖ On March 11, the MHA notified the Citizenship Amendment Rules, 2024 that enabled the implementation of the CAA.
- ❖ The legislation was passed by the Parliament in December 2019.



Student Enrollment Under Various Category

- ❖ The National Commission for Backward Classes (NCBC) reported a significant increase in student enrollment under various categories from 2014-15 to 2021-22.
- ❖ According to the data, enrollment of students from the Scheduled Caste (SC) category rose by 44 percent, from 4.61 million to 6.62 million.
- ❖ Minority female student enrolment also saw a notable increase of 42.3 percent, growing from 1.07 million to 1.52 million during the same period.
- ❖ Enrolment of ST students increased by 65.2 per cent, from 1.641 million in 2014-15 to 2.71 million in 2021-22.
- ❖ Female ST enrollment was increasing by 80 per cent.
- ❖ There was a 71 per cent increase in OBC enrolment, with female OBC enrollment more than doubling.
- ❖ Enrolment in higher education grew from 34.2 million in 2014-15 to 41.4 million in 2020-21.
- ❖ It is reaching 43.3 million in 2021-22 and this marking a 26.5 per cent increase.
- ❖ Female enrollment rose from 15.7 million in 2014-15 to 20.7 million in 2021-22, a 32 per cent increase.

Food and Nutrition board

- ❖ A board responsible for providing technical and logistical support for functioning of community nutrition programmes has been “officially dissolved” as part of a plan for rationalisation of government bodies.
- ❖ The Food and Nutrition Board has been shut down by the Women and Child Development (WCD) Ministry.

- ❖ It was a technical wing of the ministry headquartered at the Centre in Delhi.
- ❖ The board had a wide network of offices, including four regional offices and as many quality control laboratories in Faridabad, Mumbai, Kolkata and Chennai.
- ❖ The FNB was originally established under the agriculture ministry but later transferred to the WCD ministry in 1993.

New Driving license rules 2024



No Need For Driving Tests At RTO: New Driving License Rules From June 1st

What are the key changes in the new driving license regulations announced by the Ministry of Road Transport and Highways?

The key changes include allowing individuals to take driving tests at private institutions instead of government RTOs starting June 1, 2024. These centers can conduct tests and issue license eligibility certificates.

How do the new regulations focus on the environment in terms of reducing pollution?

The regulations aim to phase out old government vehicles, totaling around 900,000, and implement stricter car emission standards. This move is intended to contribute to reducing pollution levels.

What are the penalties for minors caught driving under the new regulations?

Minors caught driving will face a substantial fine of ₹s 25,000, their vehicle owner's registration card will be revoked, and they will be ineligible for a license until they reach 25 years of age. These penalties aim to deter underage driving.

- ❖ The Ministry of Road Transport and Highways has announced new driving licence rules from June 1, 2024.
- ❖ It is bringing significant changes aimed at simplifying the process of obtaining a driving licence.
- ❖ One of the most notable changes is that applicants no longer need to take a driving test at the Regional Transport Office (RTO).
- ❖ Instead, the driving test can be conducted at accredited private driving schools.
- ❖ If the applicant passes the test at these schools, they will receive a certificate.
- ❖ That certificate can be used to apply for a driving licence without undergoing further testing at the RTO.
- ❖ However, in the absence of a certificate from an accredited school, the candidate will have to appear for driving test at an RTO.
- ❖ Driving a car without a valid licence now incurs a penalty that can go as high as ₹2,000.

Form 17C



- ❖ The Supreme Court declined Association for Democratic Reforms (ADR)'s request to direct the Election Commission (EC) to upload polling station-wise voter turnout data during the ongoing Lok Sabha elections.
- ❖ It stated that there is no legal mandate to provide Form 17C to any person other than the candidate or their agent.
- ❖ The Form 17C from the Conduct of Election Rules, 1961, records a multitude of data,
 - Electors assigned to each booth
 - Number of registered voters in the area
 - Number of voters who decided not to vote
 - Number of voters not allowed to vote
 - Number of votes recorded (data from the EVM)
 - If the number of votes recorded is equal to number of voters minus those who did not vote
 - Data about ballot papers (received, issued, and not used/returned)
 - Data about paper seals (numbers issued/used/returned).

Integrated theatre commands

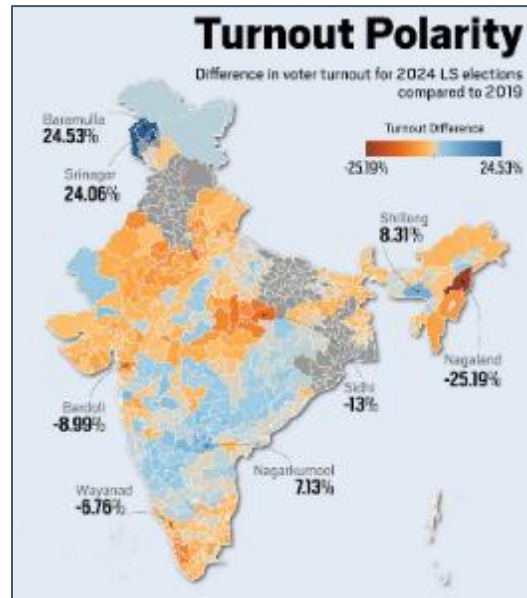
- ❖ The Indian Armed Forces have been finetuning the final draft for the creation of integrated theatre commands.
- ❖ This reform is aimed at integrating the three defence services to operate jointly in specific adversary-based theatres with defined military goals during a limited conflict or war.
- ❖ The three defence services currently operate individually under their individual operational commands.
- ❖ With the creation of the theatre commands, their personnel, assets, infrastructure, and logistics would be integrated.

- ❖ Currently, the Army and the IAF have seven commands each, while the Navy has three.
- ❖ In addition, there are two tri-service commands — the Andaman and Nicobar Command, and the Strategic Forces Command (SFC).



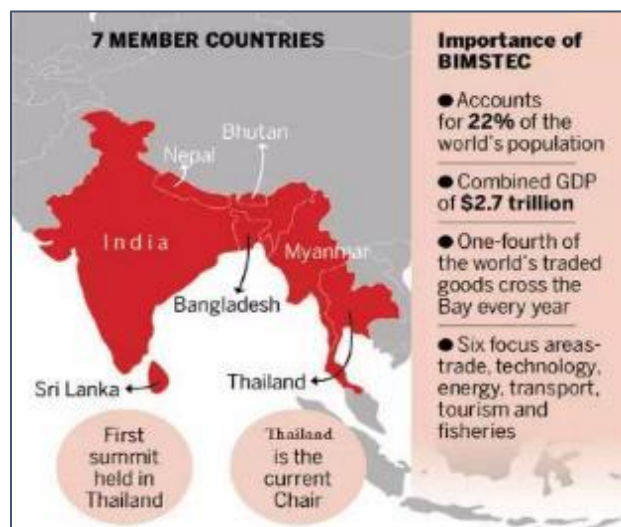
Absolute number of votes cast

- ❖ The Election Commission (EC) released the absolute number of votes cast in each constituency in the first five phases of the general election.
- ❖ This is the first time that the EC has shared the total number of votes cast in this Lok Sabha election.
- ❖ Earlier, the Supreme Court refused to direct the poll body to disclose details of Form 17 C, which contains voter turnout data at the booth level.
- ❖ The highest number of votes were cast in Dhubri constituency in Assam (24.5 lakh).
- ❖ The least votes were polled in Lakshadweep (48,630).
- ❖ Voter turnout:
 - The first phase polled 11,00,52,103 votes (of a total 16,63,86,344 registered voters),
 - The second phase 10,58,30,572 votes (out of 15,86,45,484),
 - The third 11,32,34,676 (out of 17,24,04,907),
 - Fourth 12,24,69,319 (out of 17,70,75,629), and
 - Fifth phase recorded 5,57,10,618 votes (out of 8,95,67,973).



BIMSTEC Charter 2024

- ❖ BIMSTEC now open to new members and observers after a historic first charter of the grouping came into force.
- ❖ The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation grouping has acquired a 'legal personality'.
- ❖ It will be able to enter into structured diplomatic dialogue with other groupings and countries.
- ❖ BIMSTEC was formed in 1997 but for a long time, the organization could not form consensus among its seven member states.
- ❖ The members are Bangladesh, Bhutan, Sri Lanka, Nepal, Thailand, Myanmar and India.



INTERNATIONAL

Priority Watch List for IP Protection

- ❖ India has been placed on the Priority Watch List on the US administration's 2024 Special 301 Report.
- ❖ It remains "one of the world's most challenging" major economies with respect to the protection and enforcement of intellectual property (IP).
- ❖ Numerous long-standing problems remain with respect to India like
 - Inadequate IP enforcement,
 - High rates of online piracy,
 - An extensive trademark opposition backlog, and
 - Insufficient legal means to protect trade secrets.
- ❖ Further, India still needs to fully implement the WIPO Internet Treaties and to ensure that copyright statutory licenses do not extend to interactive transmissions.
- ❖ Besides India, the other countries included in the list are Argentina, Chile, China, Indonesia, Russia and Venezuela.

USTR'S KEY CONCERNS	
> Inadequate enforcement of intellectual property rights	> High rates of online piracy
> Points to India being among countries where high level of counterfeit medicines originated	> Extensive trademark opposition backlog
> Also listed among countries with significant trademark violations	> Insufficient legal means to protect trade secrets
	> India yet to implement the WIPO Internet Treaties
Progress in addressing issues with trademark infringement investigations, pre-grant opposition proceedings	

Climate resilience fund – UNHCR

- ❖ UNHCR, the UN Refugee Agency, launched the UNHCR Climate Resilience Fund.
- ❖ It aims to boost the protection of refugees and displaced communities who are most threatened by climate change.
- ❖ For the first time, the Fund will exclusively target financing efforts to protect the most threatened displaced communities, equipping them to prepare for, withstand and recover from climate-related shocks.

- ❖ In 2022, more than 70 percent of refugees and asylum seekers fled from highly climate-vulnerable countries.
- ❖ The UNHCR works to protect more than 114 million people forced to flee their homes globally.



WHO's New Global Malaria Strategy for 2030

Goals	Milestones		Targets
	2020	2025	2030
1. Reduce malaria mortality rates globally compared with 2015	At least 40% 18% reduction achieved 22% off track	At least 75%	At least 90%
2. Reduce malaria case incidence globally compared with 2015	At least 40% 3% reduction achieved 37% off track	At least 75%	At least 90%
3. Eliminate malaria from countries in which malaria was transmitted in 2015	At least 10 countries On track	At least 20 countries	At least 35 countries
4. Prevent re-establishment of malaria in all countries that are malaria-free	Re-establishment prevented On track	Re-establishment Prevented	Re-establishment prevented

- ❖ WHO Global Malaria Program published a new operational strategy outlining its priorities and key activities up to 2030 to help change the trajectory of malaria trends.

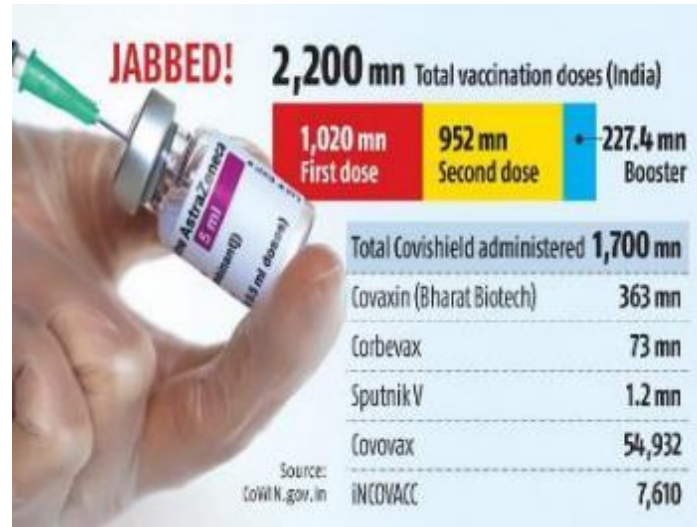
- ❖ The strategy outlines 4 strategic objectives where WHO will focus its efforts,
 - Including developing norms and standards,
 - Introducing new tools and innovation,
 - Promoting strategic information for impact, and
 - Providing technical leadership of the global malaria response.
- ❖ In 2022 there were an estimated 608,000 malaria-related deaths and 249 million new malaria cases globally.
- ❖ Africa bears a disproportionate burden, accounting for 95% of malaria deaths and 94% of cases worldwide.

Anti-LGBT Legislation – Iraq



- ❖ Iraq's parliament has passed a bill criminalising same-sex relations, which will receive a sentence of up to 15 years in prison.
- ❖ Transgender people will be sentenced to three years' jail under the amendments to a 1988 anti-prostitution law.
- ❖ A previous draft had proposed capital punishment for same-sex relations.
- ❖ The new amendments enable courts to sentence people engaging in same-sex relations to between 10 to 15 years in prison.
- ❖ There is also a Minimum seven-year prison term for “promoting” same-sex relations.

Covishield Controversy



- ❖ Controversy erupted when UK-based pharmaceutical giant AstraZeneca admitted that its Covid vaccine could cause blood clot-related side effects 'in very rare cases'.
- ❖ Its legal document mentioned that, this vaccine could cause Thrombosis with Thrombocytopenia Syndrome (TTS) in “very rare cases”.
- ❖ The very same vaccine was manufactured by the Serum Institute of India (SII) and was known in India as Covishield.
- ❖ TTS is a rare condition characterized by the formation of blood clots (thrombosis) accompanied by low platelet count (thrombocytopenia).

Nakuru dam burst

- ❖ The old Kijabe dam was broken near a village in the Rift Valley region of southern Kenya.
- ❖ It is a hillside barrier formed naturally over decades after railway construction work by Kenya’s former British colonial rulers.
- ❖ Kenya, along with neighbouring Tanzania and Burundi, has recently been hit hard by floods.
- ❖ The ongoing heavy rainfall in Kenya has deposited debris, stones and soil.
- ❖ This caused the tunnel to become blocked and ultimately burst.
- ❖ Late last year, more than 300 people died in rains and floods in Kenya, Somalia and Ethiopia.
- ❖ As per the UN’s World Meteorological Organization, the latest El Nino is one of the five strongest ever recorded.



Pakistan's maiden Moon mission



- ❖ Pakistan's lunar mission iCube-Q was launched on board of China's Chang'e 6 lunar probe.
- ❖ The iCube-Q orbiter would carry two optical cameras to capture images of the lunar surface.
- ❖ It has been designed and developed by Pakistan's Institute of Space Technology (IST) in collaboration with China's Shanghai University and Pakistan's national space agency.
- ❖ The Chang'e-6 mission aims to collect soil and rock samples from the far side of the Moon.

G7 & Its coal targets

- ❖ Energy Ministers from the Group of Seven (G7) major democracies agreed to end the use of coal in power generation “during the first half of (the) 2030s.”

- ❖ Germany has written into its legislation a final target to shut coal plants by 2038 at the latest, while Japan has not set a date.
- ❖ The agreement on coal marks a significant step in the direction indicated last year by the COP28 United Nations climate summit to phase out fossil fuels.



Hangor Class Submarine



- ❖ The first Hangor class submarine, built by China for Pakistan, was launched recently.
- ❖ This was the first of eight submarines of this class that the Pakistan Navy is set to induct into its fleet by 2028.
- ❖ The Hangor-class, an export variant of the Chinese Type 039A Yuan class, is a diesel-electric attack submarine.
- ❖ It is the direct counterpart of India's Kalvari class of submarines, based on the French Scorpene-class.

Conflict Minerals

- ❖ The Democratic Republic of the Congo (DRC) has protested alleged fuelling of conflict on its territory by multinationals buying “blood minerals” to fuel the energy and digital transformations.
- ❖ It has accused United States smartphone giant- Apple of paying for minerals without critically looking at the suppliers.
- ❖ Apple argued that, the tin, tungsten, tantalum — the 3Ts — and gold that its suppliers purchase is conflict free and do not finance war.
- ❖ The DRC’s mineral-rich eastern region, home to tantalum, tin, tungsten, and gold (collectively known as 3T or 3TG), has been plagued by violence for decades.
- ❖ There are approximately 120 armed groups in the eastern DRC, according to the Kivu Security Tracker.
- ❖ These armed groups benefit from the mining and trade of minerals to varying degrees.

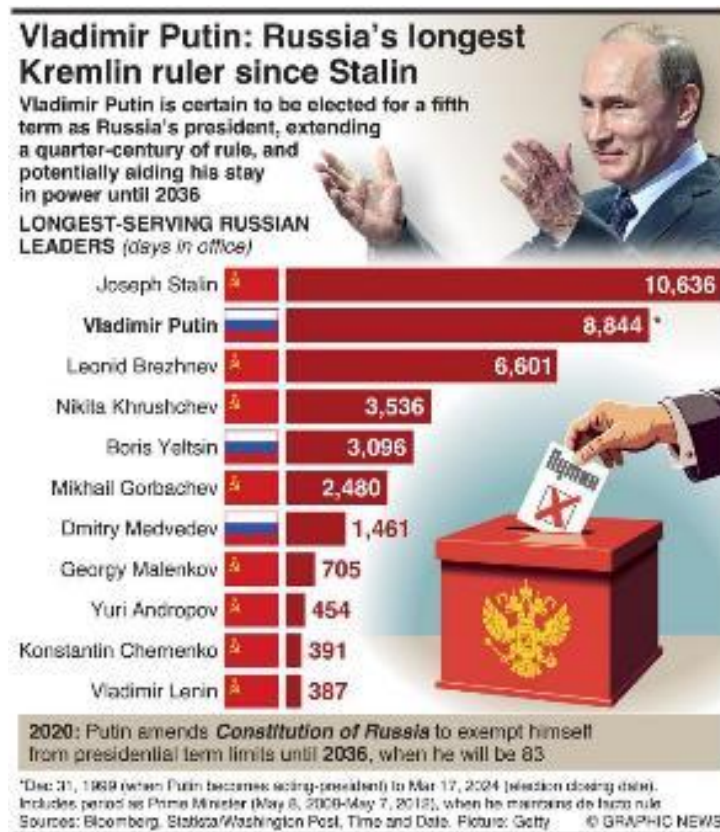


Special 301 Report 2024

Priority Watch List	Watch List	
<ul style="list-style-type: none"> • Argentina • Chile • China • India • Indonesia • Russia • Venezuela 	<ul style="list-style-type: none"> • Algeria • Barbados • Belarus • Bolivia • Brazil • Bulgaria • Canada • Colombia • Ecuador • Egypt 	<ul style="list-style-type: none"> • Guatemala • Mexico • Pakistan • Paraguay • Peru • Thailand • Trinidad and Tobago • Türkiye • Turkmenistan • Vietnam

- ❖ The US has once again included India in the ‘priority watch list’ of countries, along with China, Russia, Venezuela, and three others.
- ❖ India remains “one of the world’s most challenging” major economies with respect to the protection and enforcement of intellectual property (IP).
- ❖ India still needs to fully implement the WIPO Internet Treaties and to ensure that copyright statutory licenses do not extend to interactive transmissions.

Putin’s Fifth Term



- ❖ Vladimir Putin began his fifth term on May 7 as Russian leader at a Kremlin inauguration.
- ❖ Putin won his first presidential election in March 2000 and a second term in 2004.
- ❖ After two stints as president, he switched back to being prime minister in 2008 to circumvent a constitutional ban on holding more than two consecutive terms as head of state.
- ❖ He returned to the presidency in 2012 despite pro-democracy protests in Moscow, winning a fourth term in 2018.

Law Against Violence Towards Women



- ❖ The European Union adopted the first law to tackle violence against women.
- ❖ It includes action against forced marriages, female genital mutilation and online harassment but failed to settle on a common definition of rape.
- ❖ The sweeping legislation aims to protect women in the 27-nation bloc from gender-based violence.
- ❖ It also criminalises cyber violence against women including online stalking, harassment, incitement to hatred or violence, and the non-consensual sharing of intimate images.

World's largest carbon capture plant



- ❖ The world's largest facility designed to remove carbon dioxide from the atmosphere started operations in Iceland.
- ❖ It is dubbed as “Mammoth,” this plant is Climeworks' second commercial direct air capture (DAC) facility.

- ❖ This cutting-edge technology draws in air and chemically extracts carbon dioxide, which can then be stored underground, converted into stone, or reused.
- ❖ The Mammoth direct air capture and storage (DAC+S) plant run by Climeworks is 10 times bigger than the Swiss company's previous plant, Orca.

70th anniversary of the Hague Convention

- ❖ UNESCO is commemorating the 70th anniversary of the Hague Convention for the Protection of Cultural Property in Armed Conflict.
- ❖ It was created on the 14 May 1954.
- ❖ It is also the 25th Anniversary of its Second Protocol, which was opened for signature on 24 March 1999.
- ❖ It is the first and the most comprehensive multilateral treaty dedicated exclusively to the protection of cultural heritage in times of peace as well as during an armed conflict.
- ❖ In pursuance of this, the Blue Shield, formerly the International Committee of the Blue Shield was founded in 1996.
- ❖ The Blue Shield network is often referred to as the cultural equivalent of the Red Cross.
- ❖ India is party to Hague Convention 1954.



WHO certification on HIV

- ❖ Three tiny Caribbean countries - Belize, Jamaica, St. Vincent and Grenadines receive WHO certification for eliminating mother-to-child transmission of HIV and syphilis.

- ❖ WHO awards this certification to countries which have brought the mother-to-child HIV transmission rate to under five per cent.
- ❖ India had 2.5 million people living with HIV in 2022, including 70,000 children.
- ❖ 66,000 people were infected in 2022, a slight increase since 2021.
- ❖ There were 32,000 AIDS-related deaths in 2022 (four deaths every hour).
- ❖ But the overall number had reduced by 25 per cent in a year.
- ❖ In the normal course, the transmission rate of the virus from mother to child during breast-feeding is 24.3 per cent.



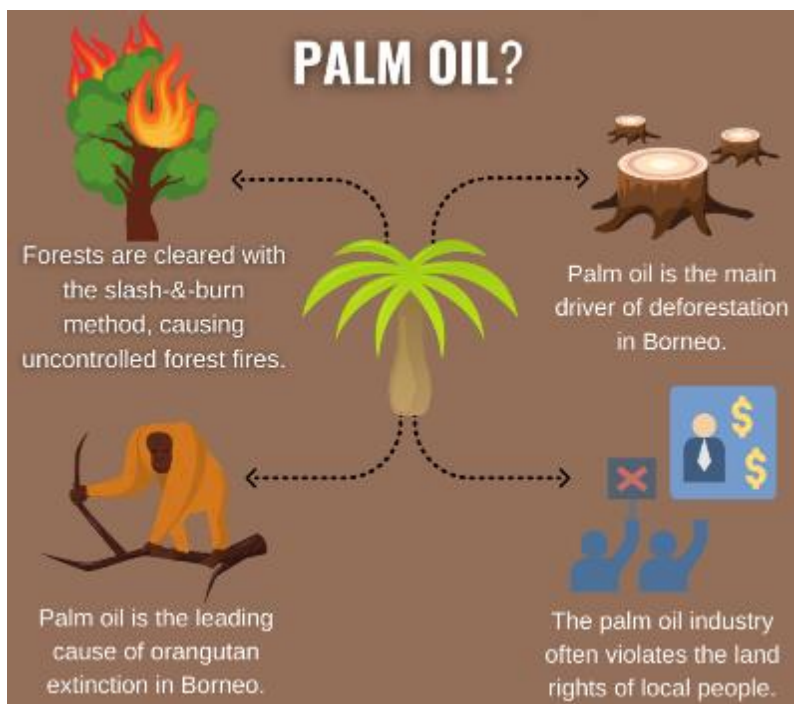
Afghanistan Flash Floods 2024

- ❖ The provinces of Badakhshan, Ghor, Baghlan, and Herat have all experienced heavy flooding.
- ❖ The flash floods add to a string of recent natural disasters that the region has had to endure.
- ❖ Afghanistan is among the globe's most at risk nations from the effects of climate change.



Orangutan Diplomacy

- ❖ Malaysia is considering gifting orangutans to foreign countries that buy its palm oil, a strategy dubbed as “Orangutan Diplomacy.”
- ❖ The plan mirrors China's world-famous “Panda Diplomacy.”
- ❖ The palm oil industry has been blamed for deforestation in Southeast Asia, destroying orangutan habitats.
- ❖ Malaysia has lost millions of hectares of forest cover in recent decades for palm oil production
- ❖ China's program involves loaning pandas to promote conservation efforts.
- ❖ But the orangutan diplomacy seems solely focused on public relations.
- ❖ There are three species of orangutans: Bornean, Sumatran and Tapanuli.
- ❖ Bornean orangutans are listed as endangered by the WWF.
- ❖ The Sumatran and Tapanuli species are listed as Critically Endangered.



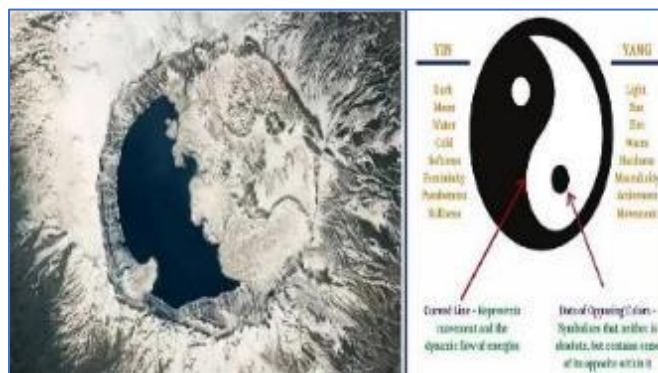
New guidelines on use of catheter

- ❖ WHO has published the first global guidelines to prevent bloodstream and other infections caused by use of catheter placed in minor blood vessels during medical procedures.
- ❖ Poor practices in the insertion, maintenance, and removal of these catheters carry a high risk of introducing germs directly to the bloodstream.

- ❖ It may lead to serious conditions such as sepsis, and difficult-to-treat complications in major organs like the brain and kidneys.
- ❖ Soft tissue infections at the insertion site of the catheter can also occur.
- ❖ WHO estimated that between 2000–2018, average mortality among patients affected by health care-associated sepsis was 24.4%.
- ❖ It was increasing to 52.3% among patients treated in intensive care units.
- ❖ The new guidelines include 14 good practice statements and 23 recommendations on key areas for health workers.



Mount Nemrut volcano



- ❖ NASA captured a rare image of an unusual crater or caldera which gets created on the Mount Nemrut volcano in Turkey.
- ❖ The image captured showed how the entire area gets split into two halves - a solidified lava region and a lake.
- ❖ This is seeming like a yin-yang symbol from Chinese philosophy.

WHO – Action on Salt and Hypertension

- ❖ The WHO/Europe released a report called “Action on salt and hypertension”.
- ❖ They warned to reduce salt intake and improve detection and control of hypertension to protect people’s health.
- ❖ People should eat less than 5 grams of salt (equal to less than 2 grams of sodium) every day to lower the health risks.
- ❖ Cardiovascular diseases (CVDs) are the predominant cause of disability and premature death in the European Region.
- ❖ It is causing over 42.5% of all deaths annually, this equals to 10, 000 deaths every day.

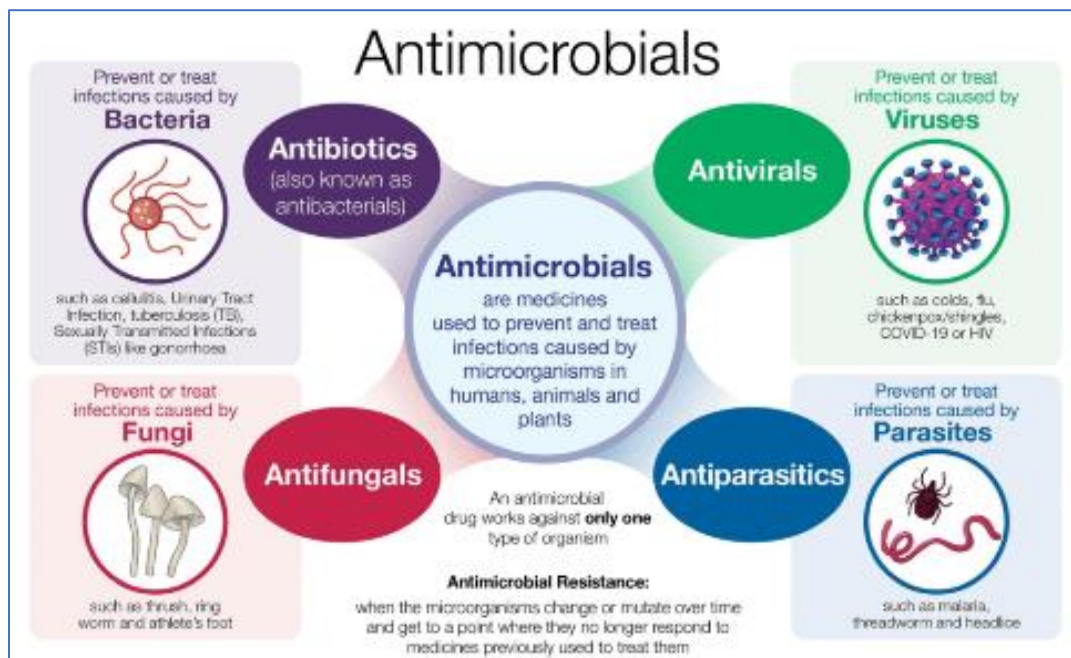


Nagorno-Karabakh dispute

- ❖ Armenia and Azerbaijan had agreed a deal on disputed sections of their shared border.
- ❖ The deal between the two Caucasus nations, includes the return to Azerbaijan of four border villages seized by Armenia in the 1990s.
- ❖ The move will see four border villages — Baghanis Ayrum, Ashaghi Askipara, Kheyrimli and Ghizilhajili — return to Azerbaijani control.
- ❖ Armenia and Azerbaijan fought two wars, in the 1990s and in 2020, for control of the then-contested breakaway region of Nagorno-Karabakh.



Global Cooperation and Pandemic Treaty



- ❖ UN called to Finalise the international pandemic treaty with utmost importance, especially as the world faces the growing health challenge of antimicrobial resistance (AMR).
- ❖ The pandemic treaty is envisioned to pull together global efforts against new pathogens that pose a danger to public health.
- ❖ In 2019, nearly 1.27 million deaths annually were directly linked and 4.9 million deaths were associated with AMR.
- ❖ By 2050 the potential impact is estimated at 10 million annual deaths.

Bacterial Pathogens Priority List

- ❖ The latest Bacterial Pathogens Priority List (BPPL) updated by the World Health Organization (WHO).
- ❖ This includes gram-negative bacteria resistant to last resort antibiotics, and Mycobacterium tuberculosis resistant to the antibiotic Rifampicin.
- ❖ The list features 15 families of antibiotic-resistant bacteria grouped into critical, high and medium categories for prioritisation.
- ❖ Seven years since it published the last such list, the WHO stated that high priority pathogens, including salmonella and shigella, are of particularly high burden in low- and middle-income countries, along with Pseudomonas aeruginosa and Staphylococcus aureus.
- ❖ They pose significant challenges in healthcare settings.



MATES Migration Scheme

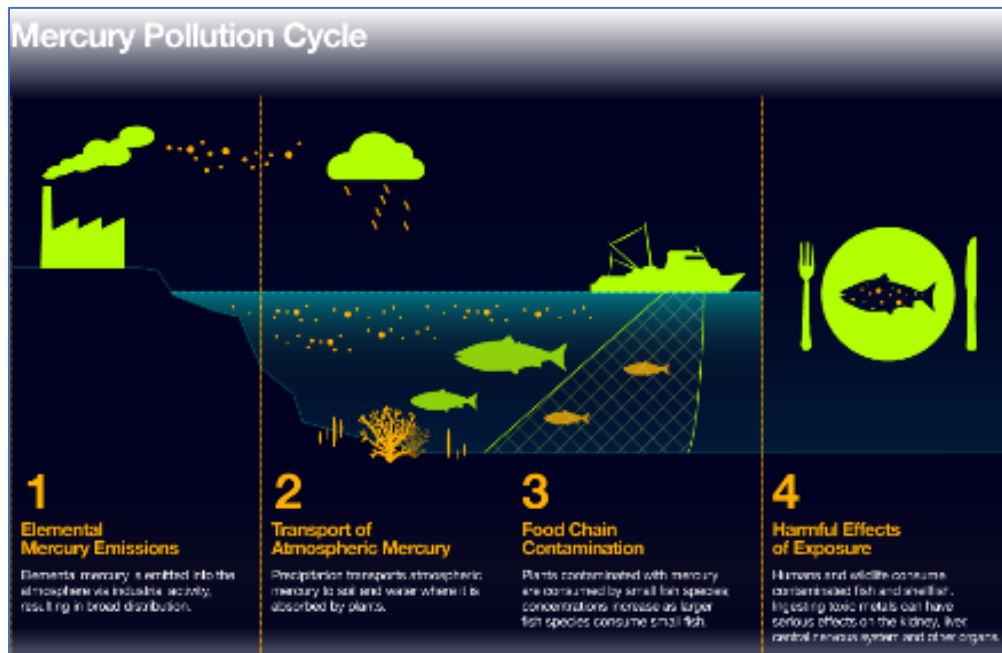
- ❖ Australia announced the start date for the Mobility Arrangement for Talented Early-professionals Scheme (MATES) for Indian Nationals.
- ❖ According to the document, the MATES Migration Scheme will go into effect on November 1.

- ❖ This will create a new mobility pathway for 3,000 Indian graduates and early-career professionals.
- ❖ Under the MATES scheme, Indian graduates and early career professionals (aged 18 to 30) with knowledge and skills in specific fields of study will be offered a new temporary mobility pathway to live and work in Australia for up to two years.

Tokyo Atacama Observatory

- ❖ The world's highest astronomical observatory at 5,640 metres (18,500 feet) above sea level is now open in the Atacama Desert, Chile.
- ❖ The University of Tokyo Atacama Observatory (TAO) is now built and fully operational, sitting on the summit of a mountain in the Atacama Desert.
- ❖ The TAO's telescope is 6.5 metres in length and consists of two science instruments designed to observe the universe in infrared.
- ❖ One of the instruments, SWIMS, will image galaxies from the very early universe.
- ❖ The second, named MIMIZUKU, will aid the overarching science goal by studying primordial disks of dust.

Eliminating Mercury-Containing Medical Devices

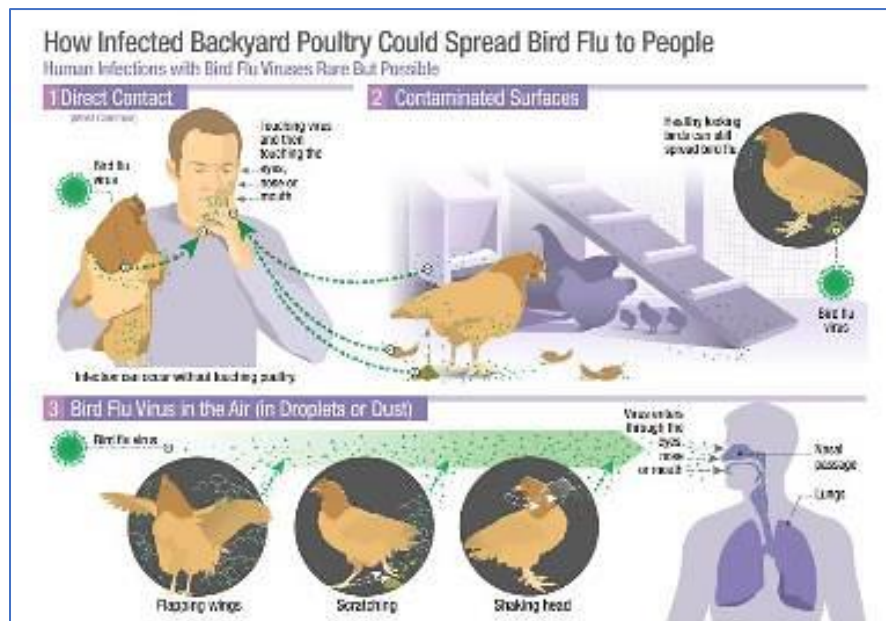


- ❖ Albania, Burkina Faso, India, Montenegro and Uganda have joined forces to halt mercury pollution from the healthcare sector

- ❖ Mercury Used in health-care settings for centuries, is a toxic metal that poses a threat to human health and the environment.
- ❖ \$134-million initiative will support a holistic approach to improve the management of mercury waste and the adoption of alternatives.
- ❖ Medical thermometers and sphygmomanometers contain mercury and are harmless as long as they remain intact.

1st Human Case of 'Bird Flu'

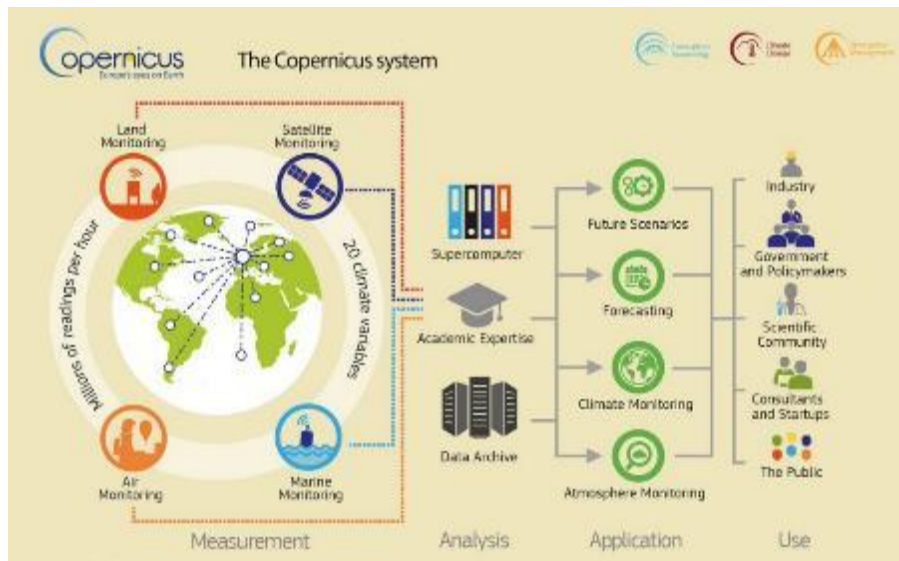
- ❖ Australia has announced the first confirmed case of human bird flu in a child.
- ❖ The child may acquire the avian influenza A (H5N1) infection while in India.
- ❖ Human case of avian influenza A(H5N1) infection, also known as “bird flu”.
- ❖ This child was the first case of highly pathogenic avian influenza in Australia, and the first detected case of the H5N1 strain in the country.



Copernicus EMS Rapid Response Service

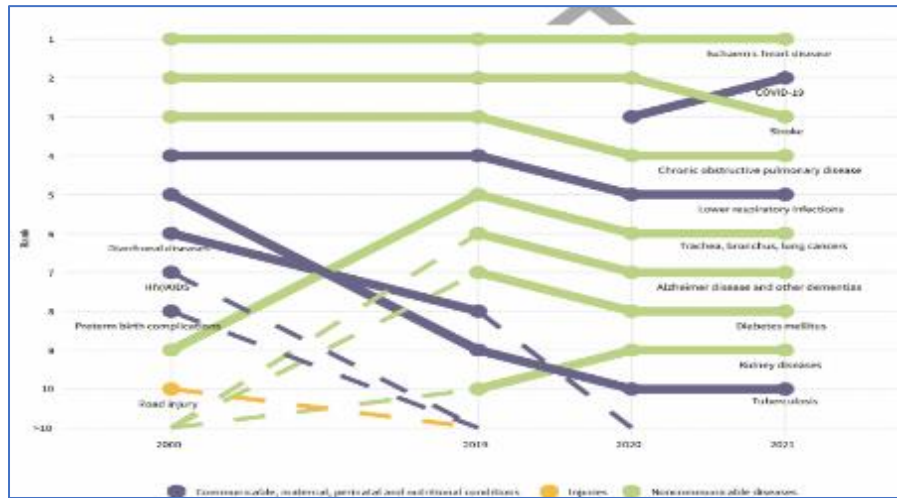
- ❖ The European Union activated its emergency satellite mapping service at Iran's request as adverse weather and darkness hampered search and rescue operations.
- ❖ The rapid response mapping technology is a critical component of the Emergency Management Service (EMS) within the Copernicus programme.
- ❖ It is named after the renowned 15th-century scientist Nicolaus Copernicus.

- ❖ The programme is the earth observation component of the European Union's space initiative.
- ❖ Copernicus was launched in 1998, and was earlier known as the Global Monitoring for Environment and Security Programme (GMES).
- ❖ The programme uses global data from satellites, and ground-based, airborne, and sea-borne measurement systems to address issues related to climate change, disaster management, and agriculture, among other uses.
- ❖ Notably, data from the Copernicus programme is freely available and accessible to all.

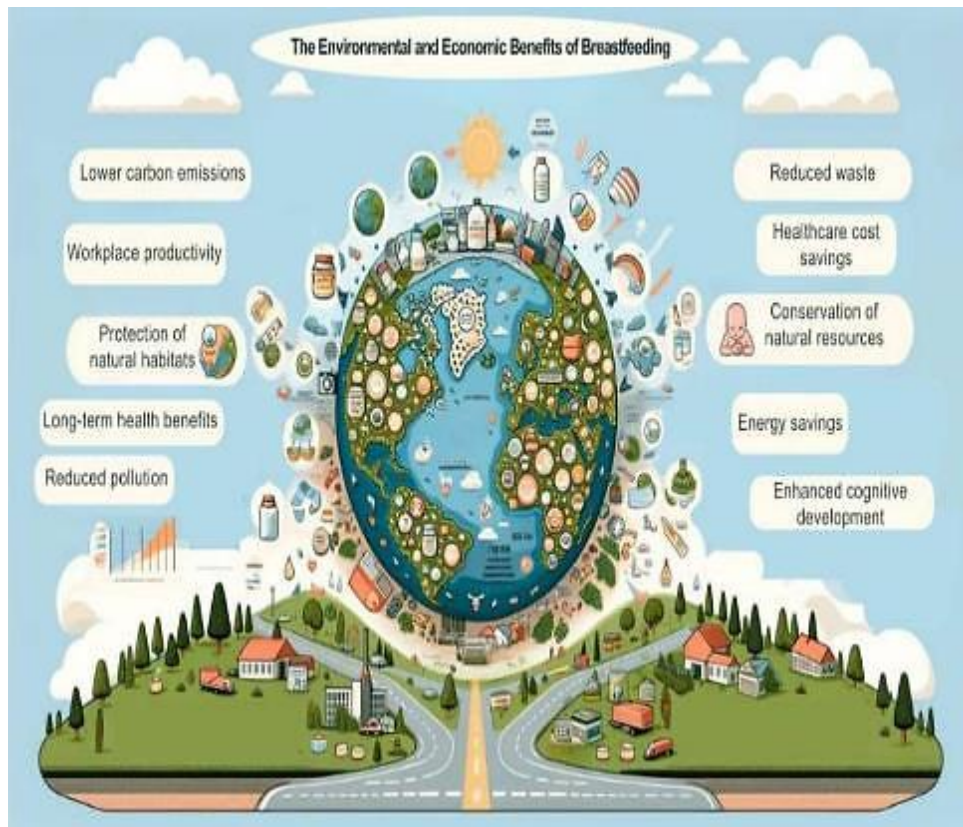


Fall of Life expectancy

- ❖ Globally, the proportion of deaths from non-communicable diseases (NCDs) rose to 73.9 per cent by 2019.
- ❖ The share of communicable diseases dropped to 18.2 per cent.
- ❖ The estimates showed that 13 million people died of COVID-19 between 2020 and 2021.
- ❖ COVID-19 ranking third-highest worldwide as the cause of mortality globally in 2020 and second in 2021.
- ❖ Global life expectancy increased by 7.8 years from 1990 to 2019, dropping to 71.4 years according to a Lancet study.
- ❖ The COVID-19 pandemic reversed global life expectancy by 1.8 years.



Breastfeeding and environment



- ❖ Commercial milk formula food generates around 11-14 kilograms of greenhouse gas emissions (more than that of eggs, poultry, and vegetables combined).
- ❖ It uses more than 5,000 litres of water during its life cycle.
- ❖ In contrast, breastmilk is economically valuable, leaves a low carbon footprint, and is essential for well-being.

- ❖ Breastfeeding women nourish half the world's infants and young children.
- ❖ No country, however, accounts for this care work in their GDP figures or national budgets.
- ❖ The Exclusive breastfeeding for six months saves an estimated 95-153 kg CO₂ equivalent per baby compared with formula feeding.
- ❖ The average water footprint of milk powder is roughly 4700 L/kg⁶ (the equivalent of almost 140 showers).
- ❖ The milk substitutes market in India is projected to grow by 18.19% between 2024 and 2028.

'Drone wall' against Russia

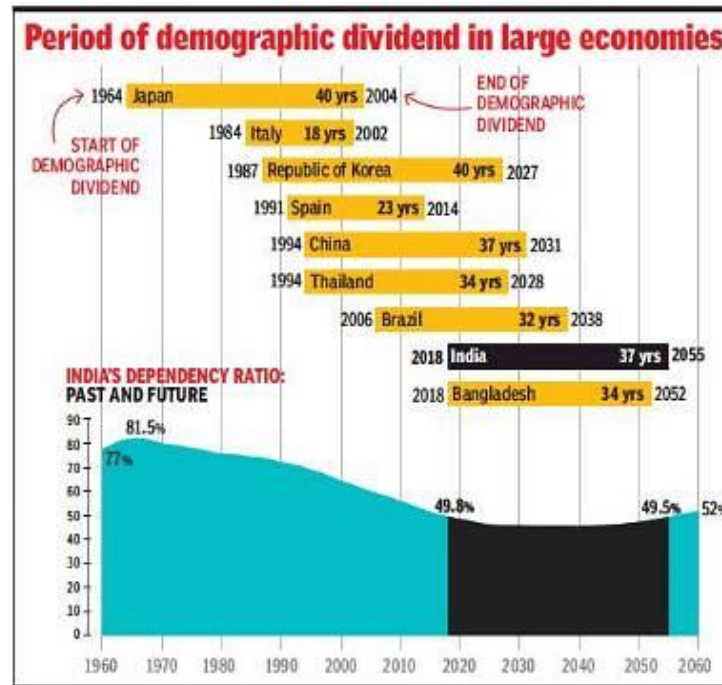
- ❖ Six NATO countries neighbouring Russia are joining forces to build a “drone wall” to protect their borders.
- ❖ The “drone wall” will be constructed using a combination of unmanned aerial vehicles (UAVs) and advanced surveillance technologies.
- ❖ The drones will be equipped with various sensors and cameras to monitor border activities continuously.
- ❖ The states taking part are Lithuania and its Baltic neighbours Latvia and Estonia, as well as Poland, Finland, and Norway.
- ❖ Finland, which joined NATO in 2023, shares an 832-mile border with Russia.



ECONOMY

Demographic dividend data - RBI

- ❖ To harness the full potential of its demographic dividend, the Indian economy must grow at 8-10% annually over the next decade.
- ❖ The working-age population is set to expand at the rate of about 9.7 million per annum during 2021-31 and 4.2 million per annum during 2031-41.
- ❖ India can achieve a growth rate of 10% in the next decade and become the second-largest economy by 2032 and the largest by 2050.
- ❖ In the past 10 years, the average annual real GDP growth in India has been less than 6%.



China's Share in India's Imports

- ❖ India's imports from China crossed \$101 billion in 2023-24 from about \$70 billion in 2018-19.
- ❖ The country's share of India's industrial goods imports has risen from 21% to 30% over 15 years.
- ❖ Goods imports from China have risen 2.3 times faster than India's total imports over 15 years.
- ❖ China is the top supplier in eight major industrial sectors, including machinery, chemicals, pharmaceuticals, and textiles.

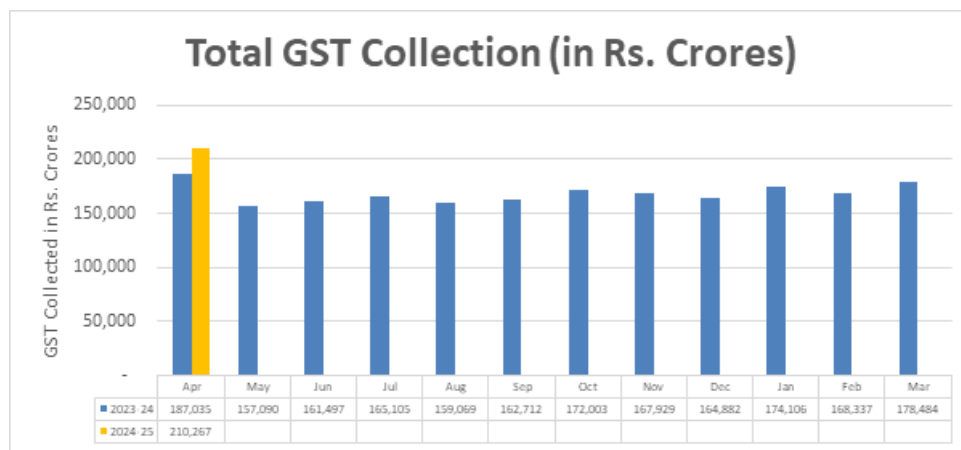
China's share in India's imports

The table lists commodities imported by India, where China accounts for the largest share in total imports

Commodity	China's share in imports
Electronics/telecom/electrical products	43.9%
Machinery	39.7%
Textiles and clothing	38.2%
Chemicals and pharmaceuticals	26.8%
Automobiles	26%

High GST Revenue Collection - April 2024

- ❖ GST collections rose 12.4 per cent to touch a record-high of Rs 2.10 lakh crore in April.
- ❖ The increase was driven mainly by 13.4 per cent year-on-year higher domestic transactions and imports (up 8.3%).
- ❖ This is the highest level of GST collections recorded since the indirect tax reform kicked in almost seven years ago in July 2017.
- ❖ That is the first time that the overall mop-up crossed the Rs 2 lakh crore mark.
- ❖ The previous highest level was registered in April 2023 at Rs 1.87 lakh crore, reflecting year-end sales of March 2023.



India Leads Global Remittances

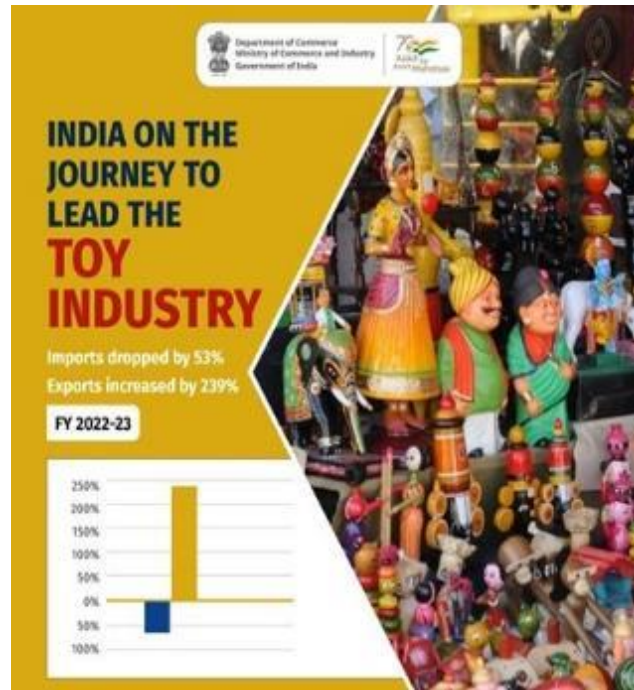
- ❖ India has made history by becoming the first country to have the first countries receiving the highest remittances in 2022.
- ❖ India's remittances surged to \$111 billion last year, surpassing all other nations.

- ❖ India being the top country receiving remittances in 2010, 2015, 2020, and 2022.
- ❖ The report highlighted that Mexico, China, the Philippines, and France were the other four nations in the top five remittance recipient countries.
- ❖ Southern Asia receives some of the largest inflows of remittances globally since it has a significant number of migrant workers from the region.
- ❖ Three countries, India, Pakistan, and Bangladesh, rank among the top ten recipients of international remittances in the world.

Rank	Country (2020)	Country (2022)	Remittance amount (2020)	Remittance amount (2022)
1	India	India	\$83.15	\$111.22
2	China	Mexico	\$59.51	\$51.00
3	Mexico	China	\$42.88	\$61.10
4	Philippines	Philippines	\$34.88	\$38.05
5	France	France	\$30.04	\$30.04
6	Pakistan	Pakistan	\$26.09	\$29.87
7	Egypt	Egypt	\$29.60	\$28.33
8	Bangladesh	Bangladesh	\$21.75	\$21.50
9	Germany	Nigeria	\$19.32	\$20.13
10	Nigeria	Germany	\$17.21	\$19.29

India's Toy Exports 2023-24

- ❖ India's toy exports declined marginally to USD 152.34 million in 2023-24 from USD 153.89 million in the previous financial year.
- ❖ From FY'2020 to FY'2022, exports increased modestly from USD 129.6 million to USD 177 million.
- ❖ However, by FY'2024, exports decreased to USD 152.3 million.
- ❖ Imports, increased to USD 64.92 million in 2023-24 from USD 62.37 million in 2022-23.
- ❖ In 2022, the global market imported toys valued at about USD 60.3 billion.
- ❖ The largest importer of toys is the USA, which alone procured toys worth USD 22.2 billion.
- ❖ It is followed by the European Union (USD 9 billion), Japan (USD 2.8 billion), and Canada (USD 1.6 billion).



India's medical consumables export

- ❖ India has now reversed an old trend to become a net exporter of medical consumables and disposables, a first for the country.
- ❖ Till now, the foreign products dominated the country's market for medical consumables, which include needles and catheters, among other things.
- ❖ During the fiscal year 2022-23, the country exported consumables and disposables valued at \$1.6 billion.
- ❖ It is surpassing imports which amounted to approximately \$1.1 billion.
- ❖ Exports witnessed a 16% increase over the previous fiscal year, whereas imports saw a 33% decline.



India's top trading partner in FY24



- ❖ China has emerged as India's largest trading partner in the FY 2023-24 with \$118.4 billion two-way commerce.
- ❖ It narrowly edging past the US, according to the data of economic think tank GTRI.
- ❖ The bilateral trade between India and the US stood at \$118.3 billion in 2023-24.
- ❖ India's exports to China rose by 8.7 per cent to \$16.67 billion in the last fiscal.
- ❖ The main sectors which recorded healthy growth in exports to that country include iron ore, cotton yarn/fabrics/madeups, handloom, spices, fruits and vegetables, plastic and linoleum.
- ❖ Meanwhile, exports to the US dipped by 1.32 per cent to \$77.5 billion in 2023-24 as against \$78.54 billion in 2022-23, while imports dipped by about 20 per cent to \$40.8 billion.

Dividend from public sector banks in FY24

- ❖ The government will get about 30 per cent more dividends from public sector banks (PSBs) in FY24 vis-a-vis FY23.
- ❖ PSBs will pay dividends aggregating ₹18,013 crore to the government in FY24 against ₹13,804 crore in the preceding financial year.
- ❖ This calculation does not take into account the 15 per cent dividend distribution tax as the same also goes to the government.

- ❖ Out of 12 PSBs, 10 have declared dividends.
- ❖ The top four PSBs to pay rich dividends (relative to face value) in FY24 are – State Bank of India (SBI), Bank of Baroda (BoB), Canara Bank and Indian Bank.
- ❖ Central Bank of India and Indian Overseas Bank did not declare dividend.



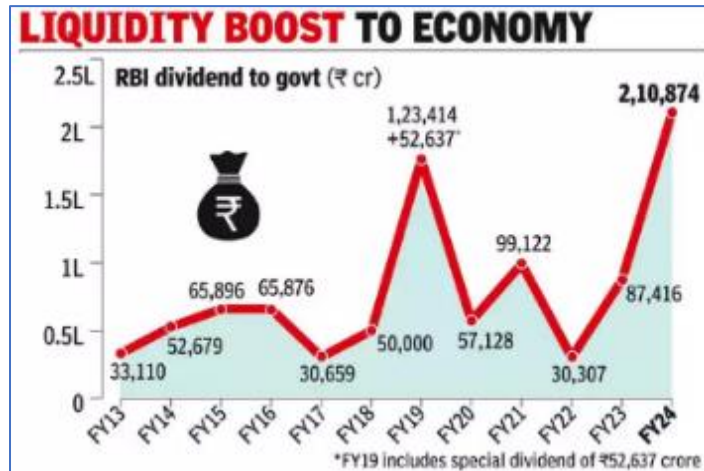
Bank of Maharashtra growth rate

- ❖ State-owned Bank of Maharashtra recorded the highest growth rate last fiscal in terms of total business and deposit mobilisation among public sector lenders.
- ❖ It has registered a 15.94 per cent rise in the total business (domestic) in FY24.
- ❖ It is followed by State Bank of India (SBI) with 13.12 per cent growth.
- ❖ SBI's total business (deposit and advances) was about 16.7 times higher at ₹79,52,784 crore compared to ₹4,74,411 crore of Bank of Maharashtra (BoM) in absolute terms.
- ❖ BoM continued to maintain its top spot in terms of growth in deposit mobilisation, with a 15.66 per cent rise in FY24.
- ❖ It was followed by SBI (11.07 per cent), Bank of India (11.05 per cent) and Canara Bank (10.98 per cent).
- ❖ Out of 12 public sector banks, only these four lenders could log a double-digit growth in deposits in the financial year 2023-24.

Highest-Ever Dividend for Government

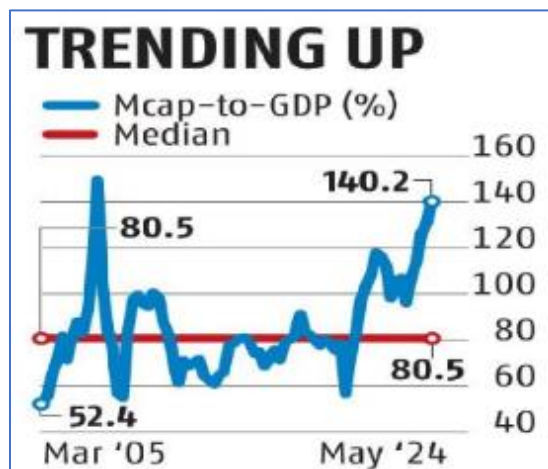
- ❖ The Reserve Bank of India will pay a record ₹ 2.1 lakh crore dividend to the government for the fiscal ended March 31.
- ❖ This is more than double of what was budgeted expectation.

- ❖ The government had budgeted a receipt of ₹ 1.02 lakh crore as dividends from the RBI for the fiscal year 2024-25.
- ❖ The dividend or surplus transfer by the RBI to the Centre was ₹ 87,416 crore for the fiscal 2022-23.
- ❖ The previous high was ₹ 1.76 lakh crore in 2018-19.



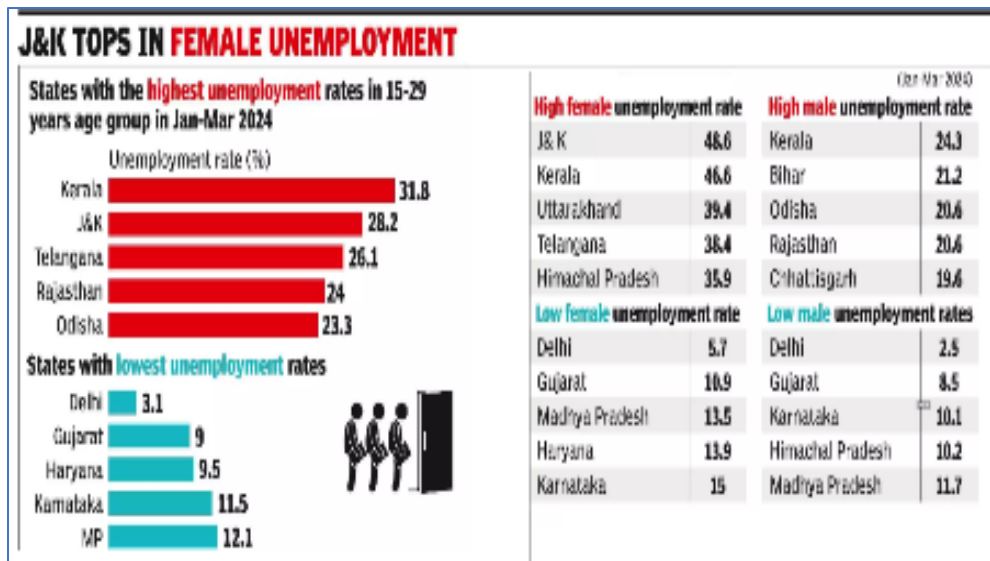
India's Market Capitalization

- ❖ The total market capitalisation of BSE-listed stocks closed above \$5 trillion as the benchmark indices ended at record levels led by banks and auto stocks.
- ❖ India's market capitalisation to GDP has surged to 1.42 times, or 142%, inching closer to the peak seen in 2007.
- ❖ The market-cap of all BSE-listed companies stood at \$5.05 trillion (or ₹420.22 lakh crore).
- ❖ India is the fifth country after the US, China, Japan, and Hong Kong whose market capitalisations have crossed the \$5-trillion mark.



Periodic Labour Force Survey 2024

- ❖ The latest Periodic Labour Force Survey (PLFS) was released by the Ministry of Statistics and Program Implementation (MOSPI).
- ❖ Kerala recorded the highest unemployment rate among the 15-29 age group in urban areas for the January-March quarter of 2024.
- ❖ Jammu & Kashmir, Telangana, Rajasthan, and Odisha as other states with high unemployment rates in this age category.
- ❖ Three states and UTs recorded single-digit unemployment rates: Delhi (3.1 per cent), Gujarat (9 per cent), and Haryana (9.5 per cent).
- ❖ Karnataka (11.5 per cent) and Madhya Pradesh (12.1 per cent) also had relatively low unemployment rates.



India's Trade Deficit in 2023-24

- ❖ India recorded a trade deficit with nine of its top ten trading partners, including China, Russia, Singapore, and Korea, in 2023-24.
- ❖ The deficit with China, Russia, Korea, and Hong Kong increased compared to the previous fiscal year.
- ❖ It narrowed with the UAE, Saudi Arabia, Russia, Indonesia, and Iraq.
- ❖ The trade deficit with China rose to \$85 billion, Russia to \$57.2 billion, Korea to \$14.71 billion and Hong Kong to \$12.2 billion in 2023-24.
- ❖ It was \$83.2 billion, \$43 billion, \$14.57 billion and \$8.38 billion, respectively, in 2022-23.

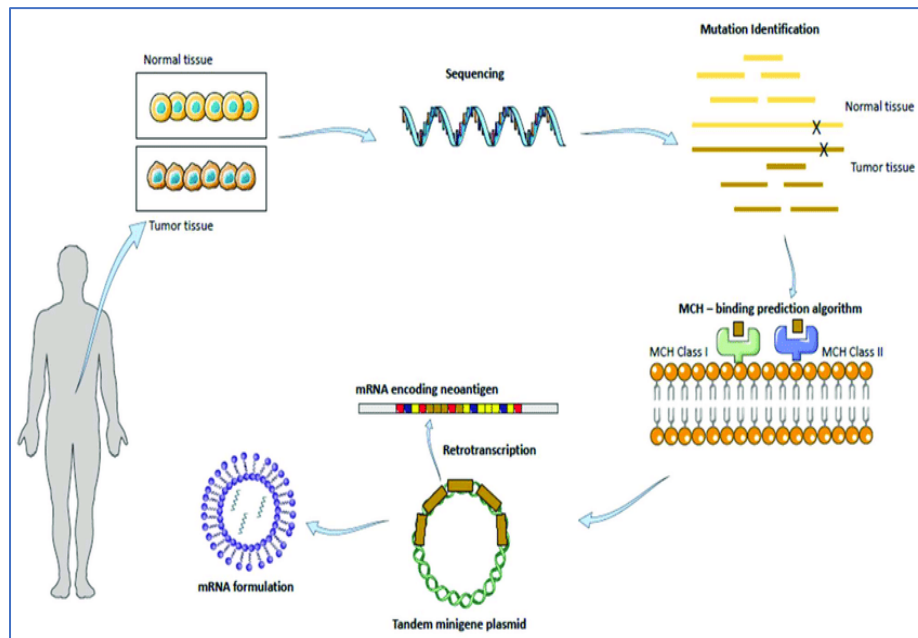
- ❖ China has emerged as India's largest trading partner with \$118.4 billion of two-way commerce in 2023-24, edging past the U.S.
- ❖ The bilateral trade between India and the U.S. stood at \$118.28 billion in 2023-24.
- ❖ Washington was the top trading partner of New Delhi during 2021-22 and 2022-23.
- ❖ India has a free trade agreement with four of its top trading partners — Singapore, the UAE, Korea and Indonesia (as part of the ASEAN bloc).
- ❖ India has a trade surplus of \$36.74 billion with the U.S. in 2023-24.
- ❖ The surplus is also there with the U.K., Belgium, Italy, France and Bangladesh.



SCIENCE AND TECHNOLOGY

Personalized mRNA vaccine for melanoma

- ❖ Doctors have started the trials on hundreds of patients for the world's first personalised mRNA cancer vaccine for melanoma.
- ❖ Melanoma, the leading cause of skin cancer deaths globally, affects approximately 132,000 people annually.
- ❖ The vaccine, called mRNA-4157 (V940), is a personalised treatment that activates the immune system to fight a patient's specific cancer.
- ❖ It targets tumour neoantigens, which are unique markers found on tumours and can be recognised by the immune system.

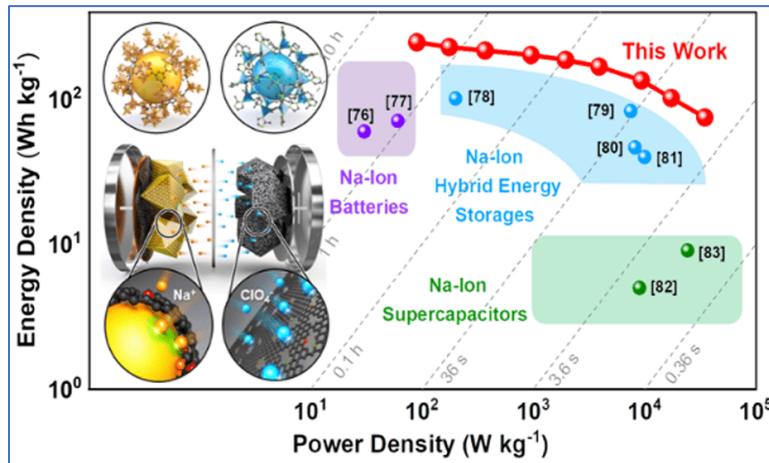


China's Shenzhou - 18 Crew

- ❖ China has launched its seventh crew to the Tiangong space station.
- ❖ The rocket carried the Shenzhou 18 spacecraft and its three-person crew into orbit.
- ❖ The Shenzhou-18 spacecraft completed rendezvous and docking with Tiangong's radial docking port.
- ❖ This marks the most recent mission in Beijing's space programme, which is working towards sending astronauts to the Moon by 2030.

Fast-Charging Sodium-Ion Battery

- ❖ The South Korean researchers have developed a high-power hybrid sodium-ion battery that can be charged in seconds.
- ❖ Sodium is nearly 1000 times more abundant than lithium and is less rare a mineral.
- ❖ So, a sodium-ion electrochemical energy storage would be a cheaper and potentially more feasible source of energy.
- ❖ At present, the available sodium-ion energy storage systems are poor in rechargeability as they have a low power density while providing a relatively high energy density.



Iran's Kamikaze Drone

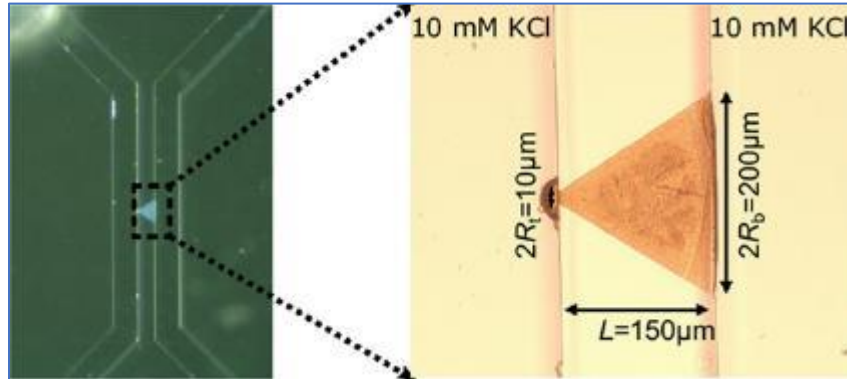
- ❖ Iran revealed the development of a new loitering munition—colloquially known as “suicide” or “kamikaze” drones.
- ❖ The drone must have a flight endurance of 30 to 60 minutes.
- ❖ This may carry a payload of 3 to 6 kilograms within a range of 40 kilometres.
- ❖ Recently, the US, the UK and Canada imposed new sanctions against Iran by targeting the country's drone production and export efforts.



Artificial Synapse

- ❖ Researchers have created artificial neurological junctions called synapses using a mix of water and salt.
- ❖ This is paving the way for the development of advanced computers that mimic the performance of a human brain.
- ❖ The artificial brain cells use the same water and salt ingredients the brain uses.

- ❖ Human brains use water and dissolved salt particles called ions as their medium.
- ❖ On the other hand, current advanced computer systems rely on conventional solid materials for the same function.



Speech reconstruction technology

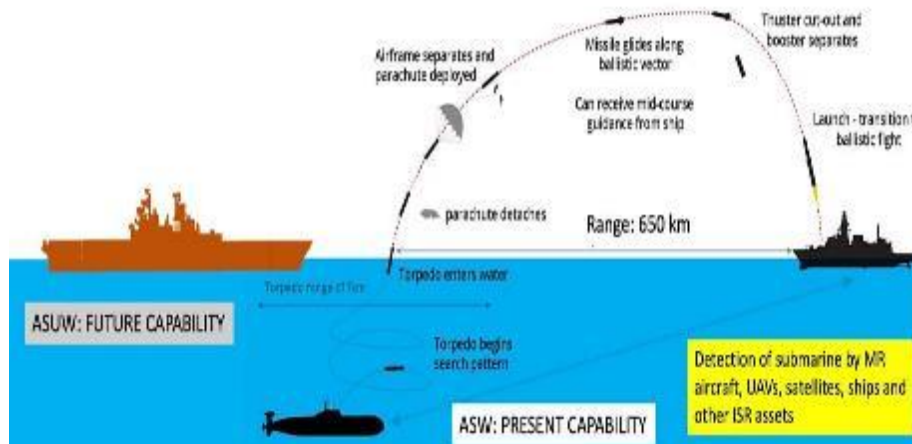
- ❖ Researchers at IIT Guwahati developed the “LOQU”, a novel method to generate human speech signals directly from vocal cord vibration signals.
- ❖ It can capture vocal fold movement without invasive procedures, utilizing sensors placed over the throat.
- ❖ During speech, vocal folds vibrate due to intrinsic laryngeal muscle movement.
- ❖ In some cases, like mutism from apraxia, individuals may have normal vocal fold vibration without sound production
- ❖ For the above issue, LOQU can be used for the reconstruction of speech signals from vocal cord vibrations.



DRDO's SMART system

- ❖ DRDO successfully made flight test of the Supersonic Missile-Assisted Release of Torpedo (SMART) system.
- ❖ SMART is a next-generation missile-based light-weight torpedo delivery system designed and developed by DRDO.
- ❖ It aims to enhance the anti-submarine warfare capability of the Indian Navy far beyond the conventional range of lightweight torpedoes.

Supersonic Missile Assisted Release of Torpedo (SMART) CONOPS



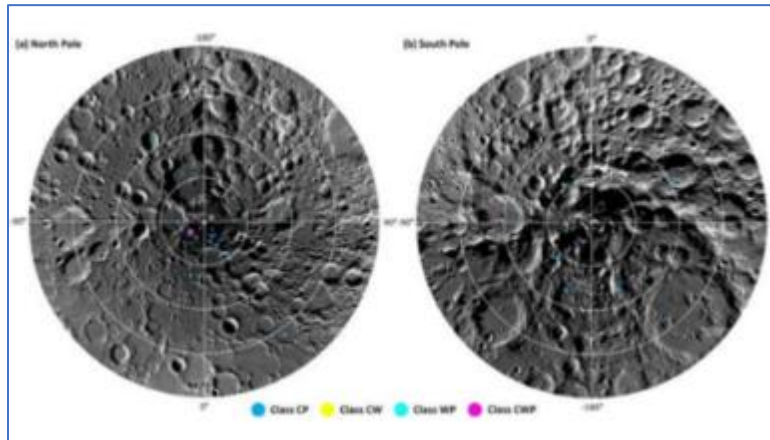
LSAM 20 Barge

- ❖ The sixth barge of the LSAM 16 (Yard 130) series, built by a private firm, was launched in Maharashtra's Thane by Indian Navy.
- ❖ It is named 'Ammunition Cum Torpedo Cum Missile Barge, LSAM 20.'
- ❖ LSAM stands for "Landing Ship Ammunition," indicating the barge's role in transporting ammunition for the Indian Navy.

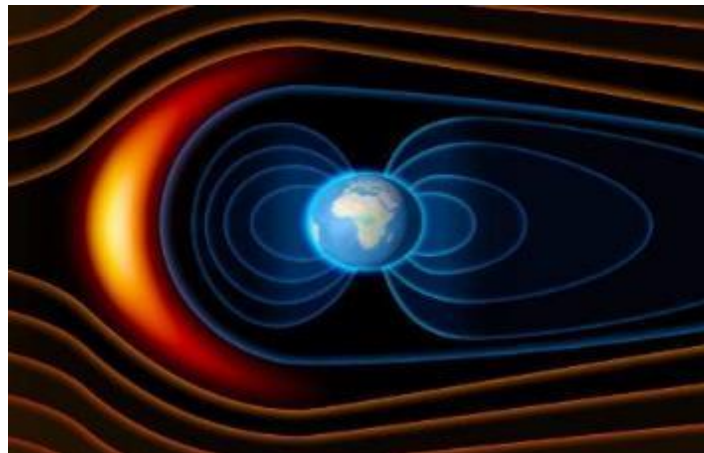
Greater ice on Moon

- ❖ ISRO revealed evidence for enhanced possibility of water ice occurrence in the polar craters of the Moon.
- ❖ The amount of subsurface ice in the first couple of metres is about five to eight times larger than the one at the surface in both poles of earth.

- ❖ The study also suggests that the extent of water ice in the northern polar region is twice that in the southern polar region.
- ❖ The results also conclude that the distribution of water ice is likely governed by “Mare volcanism”.



Oldest evidence of Earth's magnetic field



- ❖ Geologists have found ancient rocks in Greenland that bear the oldest remnants of Earth's early magnetic field.
- ❖ The researchers determined that the rocks are about 3.7 billion years old and retain signatures of a magnetic field with a strength of at least 15 micro teslas.
- ❖ The ancient field is similar in magnitude to the Earth's magnetic field today.
- ❖ Previous studies have shown evidence for a magnetic field on Earth that is at least 3.5 billion years old.
- ❖ The new study is extending the magnetic field's lifetime by another 200 million years.

K2-18b and Dimethyl Sulphide

- ❖ The James Webb Space Telescope has reportedly discovered the “strongest, most promising sign” of life on another planet.
- ❖ Exoplanet K2-18b, situated 124 light-years from Earth.
- ❖ It is believed to likely contain dimethyl sulfide (DMS) gas in its atmosphere.
- ❖ Dimethyl sulphide (DMS) gas is only produced by life on Earth.



Moon occulting Antares

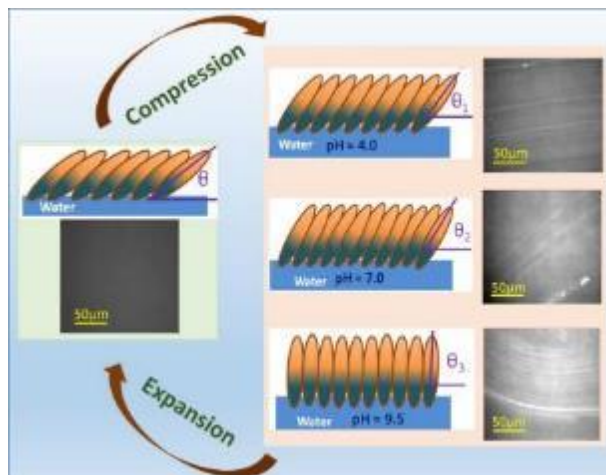
- ❖ The Bengaluru-based Indian Institute of Astrophysics (IIA) has filmed the passing of the moon in front of Antares, a bright red star.
- ❖ The moon passed in front of Antares on April 27, hiding it for roughly 40 minutes.
- ❖ While moving in its orbit roughly once a month, the moon will occasionally occult, or hide, bright stars that are behind, and sometimes, even planets.
- ❖ This happens now and then for the star Antares (Jyeshtha), which is the brightest star in the constellation of Scorpius.
- ❖ The last such occultation of Antares, which was visible from India, was on February 5 this year.
- ❖ The next one will be in June 2027.
- ❖ However, the occultation of the planet Saturn by the moon can be seen from India on July 24, and again on October 14 in 2024.



First Indigenous Bomber UAV

- ❖ Flying Wedge Defence and Aerospace Technologies unveiled the FWD-200B.
- ❖ It is the country's first indigenous bomber unmanned aerial vehicle (UAV).
- ❖ The FWD-200B is a medium-altitude, long-endurance (MALE) unmanned combat aerial vehicle.
- ❖ With a payload capacity of 100kg, it can carry optical surveillance payloads as well as precision air-strike weapons.

2D Protein Monolayer



- ❖ Scientists have successfully fabricated a 2D protein monolayer using lysozyme molecules.
- ❖ It serves as a model protein for understanding diseases like Amyloidosis.

- ❖ This research not only paves the way for a more profound comprehension of Amyloidosis but also establishes a versatile platform for probing disease mechanisms.
- ❖ Lysozyme is a naturally occurring enzyme found in various bodily secretions like tears, saliva, mucus.
- ❖ It plays a crucial role in the body's defence system against bacteria.
- ❖ Amyloidosis is a rare condition characterized by the accumulation of a protein called amyloid in various organs.
- ❖ This buildup can adversely affect the functioning of vital organs such as the heart, kidneys, liver, spleen, nervous system, and digestive tract, ultimately leading to multi-organ dysfunction.

JWST's Cosmic revelation

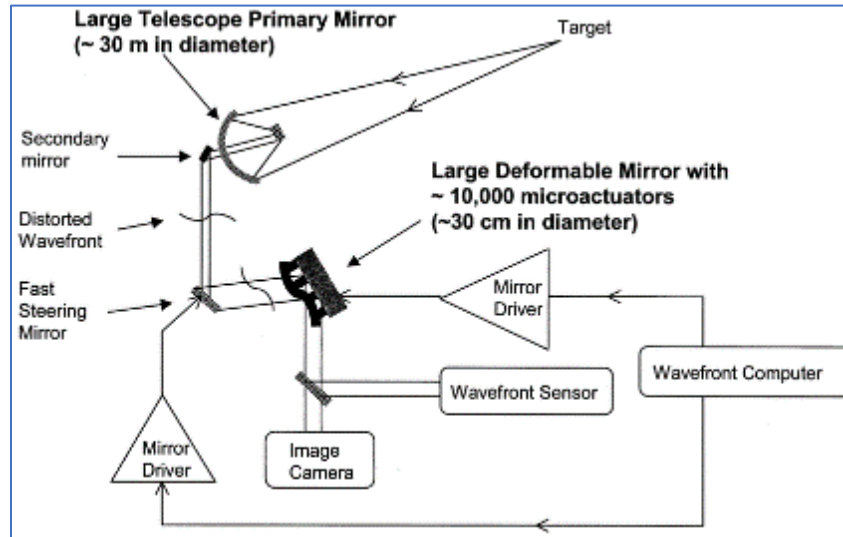


- ❖ NASA's James Webb Space Telescope has treated us to an enchanting image of a vast cluster of 500,000 stars within Sagittarius C.
- ❖ It is a star-forming region approximately 300 light-years away from the centre of the Milky Way.
- ❖ Sagittarius C is situated around 25,000 light years away from Earth.
- ❖ This will provide into the intricacies of star birth.

Deformable Mirrors in Space Telescopes

- ❖ As per NASA reports, these mirrors may enable direct imaging of exoplanets by correcting imperfections or shape changes in a space telescope down to subatomic scales.
- ❖ Notably, deformable mirrors are used in conjunction with wavefront sensors and real-time control systems in adaptive optics.

- ❖ Deformable mirrors (DM) are the mirrors whose surfaces can be bent to achieve wavefront control and optical aberration correction.
- ❖ Also, their shape can be controlled with speed.



'All-in-one' vaccine

- ❖ Scientists have developed an all-in-one vaccine that they hope can protect humans against a broad range of coronaviruses, including ones that are yet to emerge.
- ❖ This vaccine works by training the body's immune system to recognise specific regions of eight different coronaviruses, including SARS-CoV-2 which caused the COVID-19 outbreak.
- ❖ The new vaccine is based on a structure called a nanoparticle – a ball of proteins held together by incredibly strong interactions.
- ❖ Chains of different viral antigens are attached to this nanoparticle using a novel “protein superglue”.

Eta Aquariid Meteor Shower

- ❖ The Eta Aquariid meteor shower, which has been active since April 15, was peak on May 5 and 6.
- ❖ It is comprising burning space debris moving at speeds of around 66 km per second (2.37 lakh kmph) into Earth's atmosphere.
- ❖ These showers are seen in May every year.
- ❖ The Eta Aquariid meteor shower is known for its rapid speed. This makes for long, glowing tails which can last up to several minutes.

- ❖ They are visible to countries such as Indonesia and Australia in the Southern Hemisphere.
- ❖ Meteor showers come from comets, which are frozen leftovers from the formation of our solar system, some 4.6 billion years ago.
- ❖ Comets are composed of dust, rock and ice, and orbit around the Sun in highly elliptical orbits.
- ❖ In some cases, they take hundreds of thousands of years to complete.
- ❖ According to NASA, a total of 3,910 comets are currently known.
- ❖ Billions more are theorised to be orbiting the Sun beyond Neptune, in the Kuiper Belt and even more distant Oort cloud.



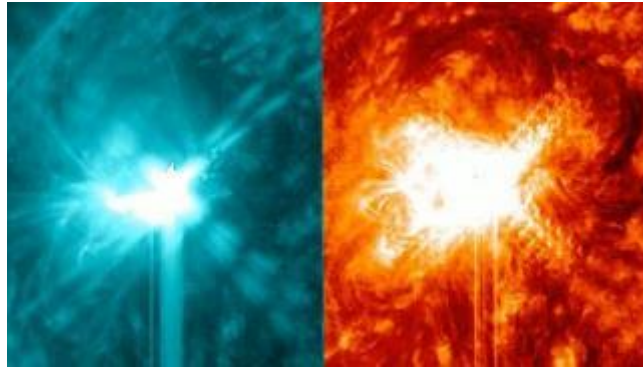
Building rail tracks on Moon



- ❖ NASA has been funding projects which seem far from reality, but if completed can take mankind's achievements in space to new heights.
- ❖ These 'ambitious' projects include a fluid-based telescope, a transit system to transfer humans and cargo to Mars and a lunar railway system.
- ❖ These projects are still in the exploratory stage and there is no guarantee of success.

- ❖ The FLUTE project gives a potential solution for creating space observatories which have a large aperture or unsegmented liquid primary mirrors.
- ❖ Such liquid primary mirrors get formed in space with the use of fluidic shaping in microgravity.

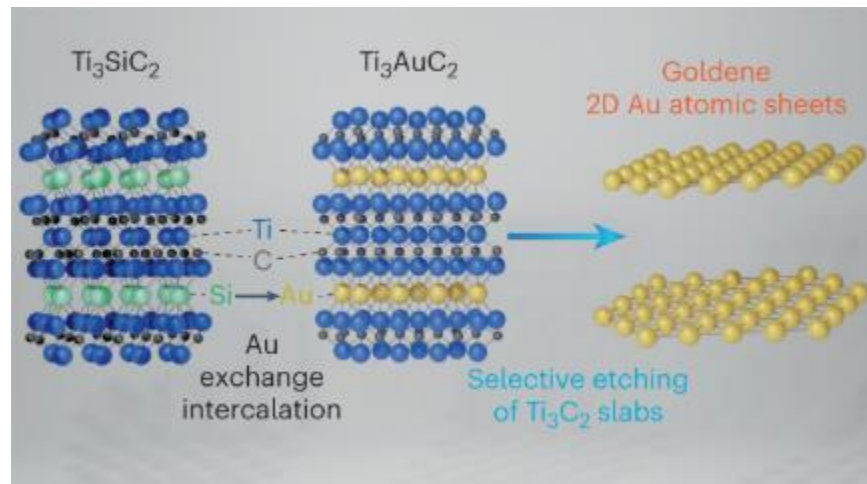
Powerful Solar Storms



- ❖ Just days ago, two colossal solar flares have emerged from sunspot region AR3663 and Earth is in the firing line.
- ❖ The first eruption occurred on May 2 and it was an X-class flare, the most powerful category of solar flares.
- ❖ It causes shortwave radio blackouts across Australia, Japan and much of China.
- ❖ X FLARE! Sunspot region AR3663 just produced an X1.7 flare, the 11th largest flare so far this cycle.
- ❖ The second eruption reported was an M-class flare.
- ❖ Flares are classified according to their strength.
- ❖ After the most powerful X-class, there are M-class flares that are 10 times less powerful
- ❖ It is followed by C-class and finally, B-class flares.

Goldene sheet

- ❖ For the first time, researchers have created a free-standing sheet of gold that is only one atom thick.
- ❖ This makes gold the first metal to be formulated into (freestanding) 2D sheets — opening up a host of exciting possibilities for the future.
- ❖ It is not that such 2D materials have not been created before.
- ❖ Since the 2004 development of graphene, the atom-thin material made of carbon, scientists have identified hundreds of 2D materials.



Secure IoT microprocessor

- ❖ IIT-Madras's Mindgrove created India's first commercial high-performance RISC-V based System on Chip (SoC) named 'Secure IoT'.
- ❖ It will allow Indian Original Equipment Manufacturers (OEMs) to use an Indian SoC in their products.
- ❖ It will help reduce the cost of their feature-rich devices, without compromising on high-end features.



3D-Printed Rocket Engine

- ❖ ISRO successfully conducted hot testing of liquid rocket engine manufactured through 3D printing technology.
- ❖ The engine used is the PS4 engine of PSLV upper stage.

- ❖ The same engine is also used in the Reaction Control System (RCS) of the first stage (PS1) of PSLV.
- ❖ The engine uses the earth-storable bipropellant combinations of Nitrogen Tetroxide as oxidizer and Mono Methyl Hydrazine as fuel.



Cosmic Glitch

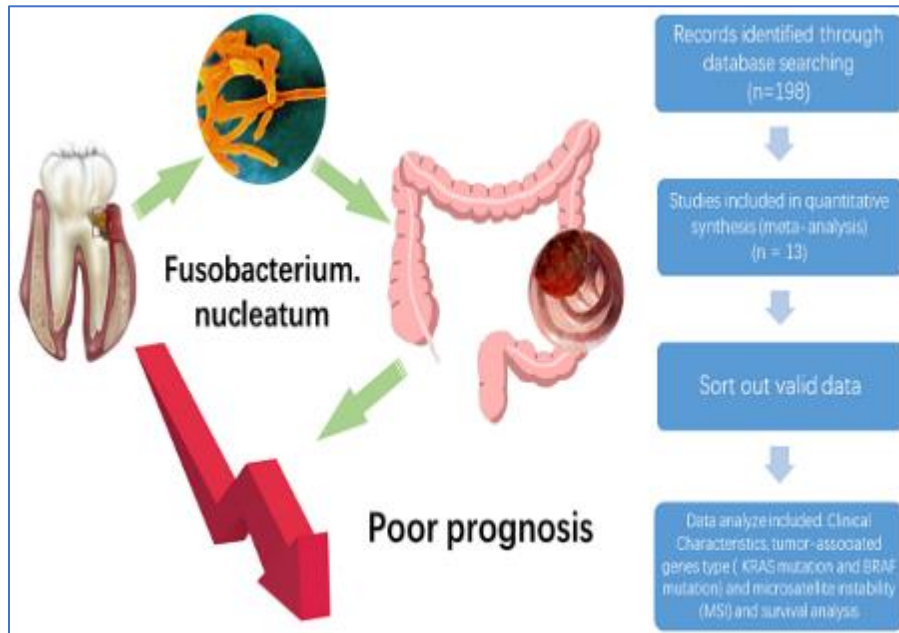
- ❖ Researchers have discovered what they're calling a “cosmic glitch” in gravity.
- ❖ It could potentially help explain the universe's strange behavior on a cosmic scale.
- ❖ They said, Albert Einstein's theory of general relativity may not be sufficient to explain the accelerating expansion of the universe.
- ❖ Einstein's “model of gravity has been essential for everything from theorizing the Big Bang to photographing black holes.
- ❖ As galaxies recede into the distance, they accelerate, seemingly defying the boundaries set by Einstein's theory.
- ❖ Our findings suggest a departure from the expected gravitational behavior, particularly at immense distances, akin to a 'cosmic glitch.’“
- ❖ When traversing cosmic distances, it appears that additional considerations come into play.

OpenAI's Sora

- ❖ OpenAI has released its latest AI model, Sora which is powered by Diffusion transformer (DiT).
- ❖ It has capabilities of video generation that could potentially replace filmmaking in the future.
- ❖ Diffusion transformer also written as DiT is essentially a class of diffusion models that are based on the transformer architecture.

- ❖ DiT helps Sora understand text prompts and make cool videos by breaking them down into smaller parts, adding a bit of randomness, and then cleaning things up based on the text.

Fusobacterium nucleatum



- ❖ The bacteria known as *Fusobacterium nucleatum* live in the human mouth and are rarely found elsewhere.
- ❖ But in cases of cancer of the colon or the rectum, the bacteria are found in tumours in the gut.
- ❖ There, they help cancer cells escape from the immune system and spread to other parts of the body.
- ❖ Researchers has identified a distinct subtype of the bacterium that's found in relatively greater quantities in colorectal cancer (CRC) tumours.
- ❖ CRC is the seventh most common type of cancer in India, where the number of cases rose by 20% from 2004 to 2014.

Chloropicrin - Chemical Weapon

- ❖ The U.S. State Department accused Russia of having used a chemical weapon against Ukrainian forces in violation of the Chemical Weapons Convention.
- ❖ The US factsheet accuses Russia of using chemical agent chloropicrin in Ukraine.
- ❖ The chemical compound chloropicrin is used both as a warfare agent and pesticide.

- ❖ If inhaled, it poses a health risk.
- ❖ Also known as nitro chloroform, chloropicrin is also employed as an antimicrobial agent, and as a herbicide and nematicide.
- ❖ It was first made for us as a poison gas in the First World War, by both the Allied and the Central Powers.
- ❖ Chloropicrin has documented irritating and tears-inducing effects on humans, and is also known to be highly toxic and carcinogenic.

CHEMICAL WEAPONS

Types of chemical agents

- 1 Choking agents**
Inflict damage along the nose, throat and lungs causing victims to choke

Agents:
Chlorine (Cl)
Chloropicrin (PS)
Diphosgene (DP)
Phosgene (CG)
- 2 Blister agents**
Affect the eyes, respiratory tract, and skin causing large blisters which resemble severe burns

Agents:
Sulfur mustard (H, HD)
Nitrogen mustard (HN)
Lewisite (L)
Phosgene oxime (CX)
- 3 Blood agents**
Inhibit the ability of cells to use oxygen, causing the body to suffocate

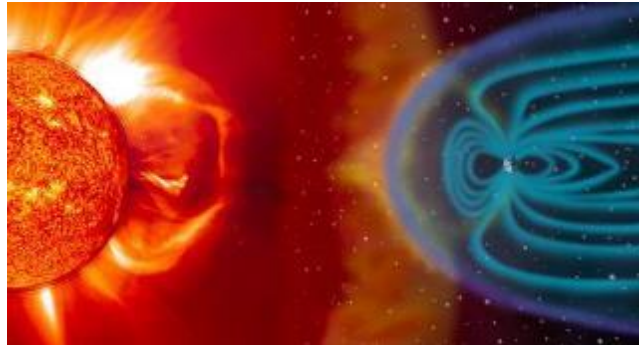
Agents:
Hydrogen cyanide (AC)
Cyanogen chloride (CK)
Arsine (SA)
- 4 Nerve agents**
Overstimulate the body's nervous system leading to difficulty in breathing seizures or death

Agents:
Tabun (GA)
Sarin (GB)
Soman (GD)
Cyclosarin (GF)
VX
- 5 Riot control agents**
A collection of chemicals that cause irritation to the eyes, skin and respiratory system.
Agents: Tear Gas (CS) Pepper Spray (OC)

Extreme Solar Storm Hits Earth

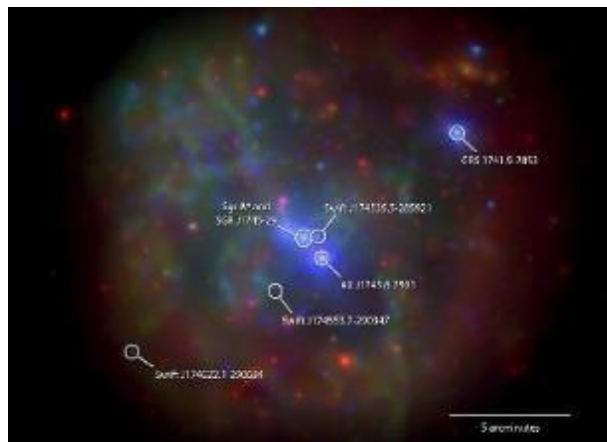
- ❖ An unusually strong solar storm hitting Earth could produce northern lights in the U.S.
- ❖ The most intense solar storm in recorded history, in 1859, prompted auroras in central America and possibly even Hawaii.
- ❖ An extreme geomagnetic storm in 2003, for example, took out power in Sweden and damaged power transformers in South Africa.

- ❖ The sun has produced strong solar flares since May 8, resulting in at least seven outbursts of plasma.



Swift Spin of Sagittarius A

- ❖ The Recent research unveiled that Sagittarius A*, the colossal black hole at the galaxy's core, spins rapidly, reshaping space-time around it.
- ❖ The Space-time is an amalgamation of the one-dimensional time and three-dimensional space.
- ❖ It functions as a continuum, altering and curving under the influence of massive celestial bodies.
- ❖ This black hole is situated 26,000 light-years away from Earth.



Nancy Grace Roman telescope

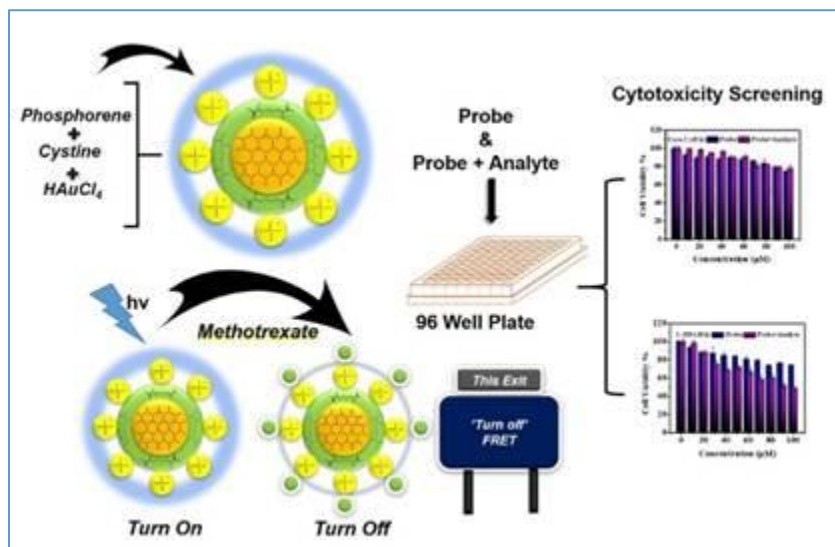
- ❖ NASA's upcoming Nancy Grace Roman Space Telescope is poised to embark on a groundbreaking mission.
- ❖ It will start hunting for primordial black holes dating back billions of years to the Big Bang.
- ❖ The mission is set to launch in late 2026.

- ❖ “Primordial black holes,” if proven to exist, could challenge our understanding of the universe's early epochs some 13.8 billion years ago.
- ❖ Hawking's theory of Hawking radiation proposes that black hole “leak” radiation and eventually evaporate.
- ❖ For primordial black holes to survive billions of years without evaporating, they must defy Hawking's predictions.

Semi-Cryogenic Engine

- ❖ ISRO conducted the first ignition trial for SCE-200 (semi-cryogenic engine-200) at the semi-cryo integrated engine test facility (SIET) in Mahendragiri.
- ❖ Semi-cryogenic engine ignition is achieved using a start fuel ampule which uses a combination of Triethylaluminium and Triethyleboron.
- ❖ This is used for the first time in ISRO in the 2000 kN semi-cryogenic engine.
- ❖ The SCE-200 is a 2MN thrust class liquid rocket engine developed by ISRO's Liquid Propulsion Systems Centre (LPSC).
- ❖ This next generation rocket engine is designed to enhance the payload capability of ISRO's Launch Vehicle Mark-III launcher and other future launch vehicles.

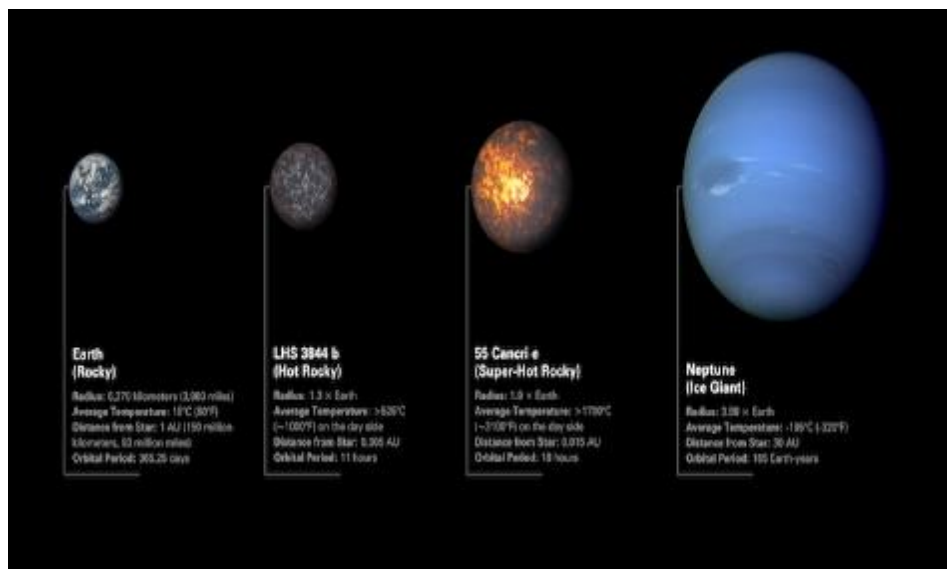
Detection of anticancer drug - Ph-Cys-Au



- ❖ A new highly fluorescent material with exceptional optical properties has been developed using phosphorene, cystine, and gold (Ph-Cys-Au)
- ❖ It can be used as a visual sensing platform for detecting anti-cancer drug MTX overdose of which has toxic effect on lungs, stomach, and heart.

- ❖ Monitoring therapeutic drugs and their elimination is crucial because they may cause severe side effects on the human body.
- ❖ Methotrexate (MTX) is a widely used anti-cancer drug.
- ❖ The MTX value of more than 10 μM in blood plasma is hazardous if it remains in the system for more than 10 hours.
- ❖ It will be resulting in poisoning effects on the lungs, ulcers of the stomach, and heart stroke.

Rocky planet - 55 Cancri e



- ❖ Scientists have discovered a rocky planet beyond our solar system with an atmosphere.
- ❖ The planet, called 55 Cancri e or Janssen, is about 8.8 times more massive than Earth, with a diameter about twice that of our planet.
- ❖ It orbits its star at one-25th the distance between our solar system's innermost planet Mercury and the sun.
- ❖ As a result, its surface temperature is about 3,140 degrees Fahrenheit (1,725 degrees Celsius/2,000 degrees Kelvin).
- ❖ The planet is probably tidally locked.
- ❖ That is it perpetually has the same side facing its star, much like the moon does toward Earth.
- ❖ The planet cannot be habitable, it is too hot to have liquid water, considered a prerequisite for life.

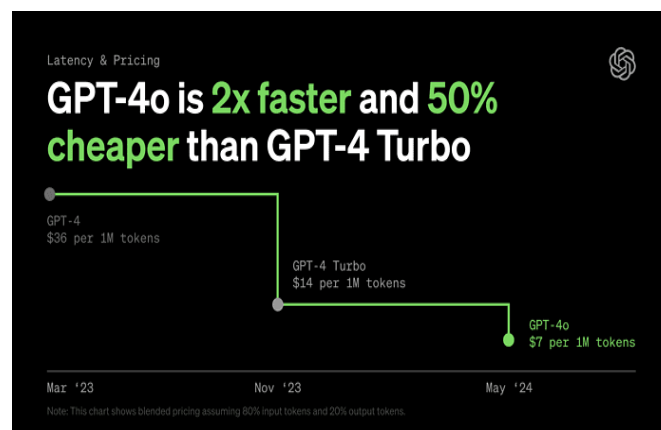
IBM's Condor



- ❖ IBM quantum scientists are building a quantum computer with a 1,121-qubit processor, called Condor, inside a large dilution “super-fridge.”
- ❖ Condor lays the groundwork for scaling to fully error-corrected, interconnected, 1-million-plus-qubit quantum computers.
- ❖ It serves as an innovation milestone, solving scale and informing future hardware design.
- ❖ In 2021, IBM will debut the 127-qubit “Eagle” chip.

OpenAI GPT-4o

- ❖ OpenAI has introduced GPT-4o, a new iteration of its GPT-4 model designed to power ChatGPT with enhanced performance across text, vision, and audio capabilities.
- ❖ It offers increased speed and real-time reasoning across text, audio, and video.
- ❖ It also, introduces capabilities for mimicking human cadences in verbal responses and detecting people's moods.

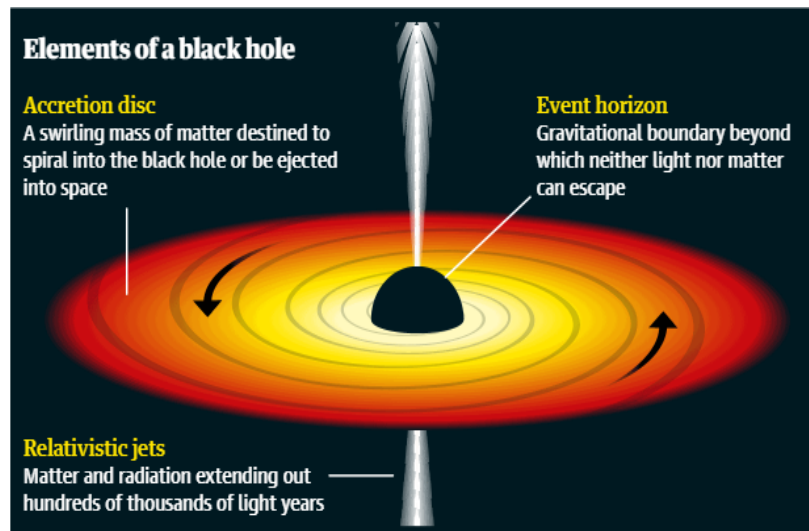


High Energy Photon Source

- ❖ China's High Energy Photon Source (HEPS) was successfully installed in the Huairou Science City in Beijing.
- ❖ The HEPS, after completion, will stand as one of the brightest synchrotron radiations (SR) sources in the world.
- ❖ It is also the first high-energy synchrotron radiation facility in China.
- ❖ The HEPS is designed to accelerate electrons up to energies of 6 gigaelectron volts within its 1.36-kilometer circumference storage ring.
- ❖ This process will produce high-energy X-rays that can penetrate deep into samples, revealing intricate details at the nano meter scale.



“Plunging regions” around black holes



- ❖ A new study found the first observational proof of a key prediction from Einstein's theory of gravity regarding the existence of “plunging regions” around black holes.

- ❖ It also exerts some of the strongest gravitational forces yet identified in the galaxy.
- ❖ Einstein's theory states that
 - Sufficiently close to a black hole it is impossible for particles to safely follow circular orbits.
 - Instead, they rapidly “plunge” toward the black hole at close to the speed of light – giving the plunging region its name.

SPECULOOS-3b - New Dwarf Planet

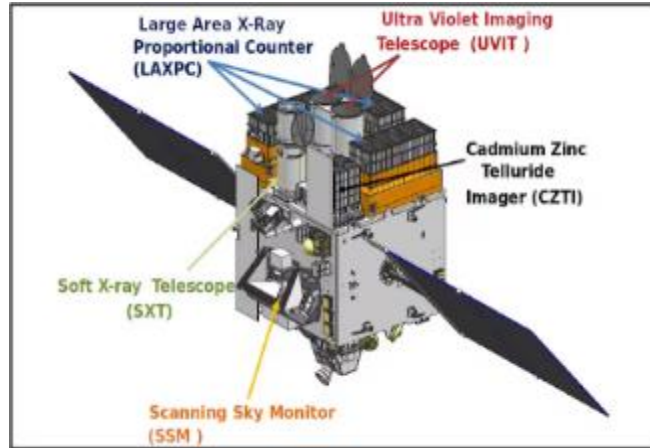


- ❖ Scientists have discovered a new Earth-sized planet, orbiting an ultracool red dwarf star.
- ❖ It is called the SPECULOOS-3b, it is 55 light-years away from Earth.
- ❖ It swings around the red dwarf once every 17 hours, which makes a year on this planet shorter than a single day on Earth.
- ❖ Moreover, it is likely missing an atmosphere and differs vastly in environmental conditions.

Black Hole Binary System

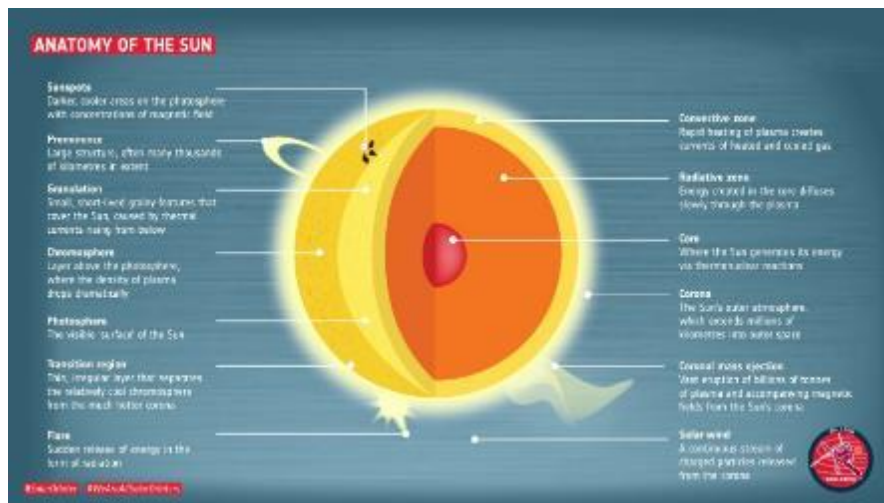
- ❖ AstroSat has made a significant discovery regarding the black hole binary source Swift J1727.8-1613.
- ❖ In the black hole X-ray binary system (BH-XRB), a black hole and its companion star are gravitationally bound.
- ❖ The black hole pulls matter from its companion, forming a bright accretion disk.
- ❖ As this matter heats up, it emits high-energy X-rays, which help scientists detect and study these black holes.

- ❖ A black hole is a region in space where the gravitational pull is so strong that nothing, not even light, can escape from it.
- ❖ AstroSat is the India's first dedicated multi-wavelength space observatory.



Sun's magnetic field

- ❖ Till now, scientists have believed the Sun's powerful magnetic field, responsible for solar storms that impact Earth, originated deep within the star.
- ❖ But as per the recent studies, the Sun's dynamo, the process generating the magnetic field, might be located much closer to the surface, in the star's outermost layers.
- ❖ The results showed that the magnetic field is generated about 20,000 miles below the Sun's surface.
- ❖ It is contradicting earlier studies that suggested that it was originating from about 130,000 miles below the sun's surface.



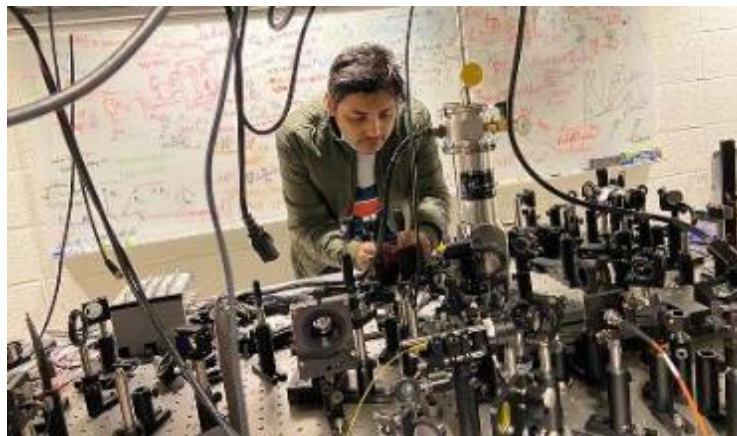
eVTOL aircrafts

- ❖ IIT Madras-incubated ePlane Company is set to launch eVTOL (electric Vertical Take-Off and Landing) aircraft in Bengaluru.
- ❖ eVTOLs are designed to operate in urban areas, reducing traffic congestion, and air pollution, and improving connectivity and emergency services.
- ❖ These are vehicles that can take off and land vertically using electric propulsion.
- ❖ It is expected to cut through the road traffic for daily commute and cargo delivery and even be used for military purposes.



Optical Nanopatterning Process

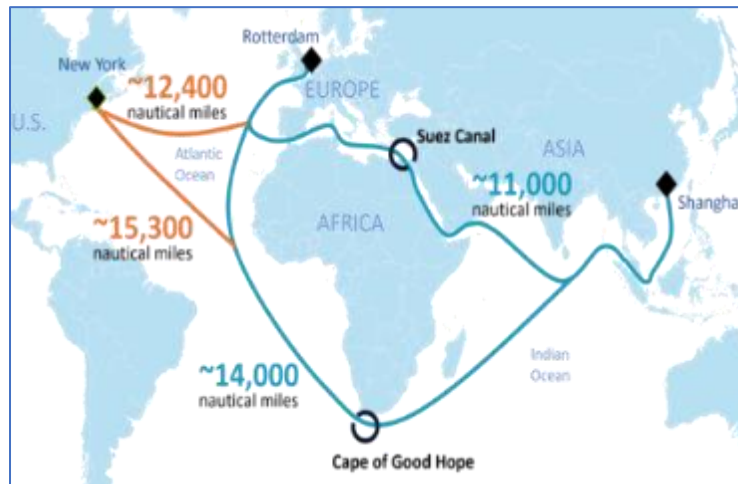
- ❖ IIT Guwahati and Columbia University, USA scientists have developed a method for nanopatterning using a simple tabletop IR (infrared) laser.
- ❖ A simple IR laser on a table is used to change the qualities of materials at their resonance frequency, without touching them directly.
- ❖ Nanopatterning involves creating patterns on materials at the nano meter scale.
- ❖ It is a hundred thousand times smaller than the width of a single human hair.



ENVIRONMENT


Red Sea Carbon Emissions

- ❖ Ships navigating around the Red Sea due to ongoing security threats from Houthi rebels are contributing to carbon emission surge.
- ❖ Instead of passing through the Suez Canal, vessels have opted for the longer route around South Africa's Cape of Good Hope since mid-December.
- ❖ This diversion has resulted in approximately 13.6 million additional tons of CO₂ emissions over the past four months.
- ❖ This is equivalent to the pollution generated by about 9 million cars during the same period.



Rapid Warming of Indian Ocean

- ❖ From 1950-2020, the Indian Ocean had become warmer by 1.2°C and climate models expect it to heat up a further 1.7°C–3.8°C from 2020–2100.
- ❖ The “marine heatwaves” in the sea are linked to the rapid formation of cyclones.
- ❖ They are expected to increase tenfold from the current average of 20 days per year to 220–250 days per year.
- ❖ The heat content of the Indian Ocean is measured from the surface to a depth of 2,000 meters.
- ❖ It is currently increasing at the rate of 4.5 zetta-joules per decade.
- ❖ Further it is predicted to increase at a rate of 16–22 zetta-joules per decade in the future.
- ❖ Joule is a unit of energy and one zetta-joule is equal to one billion-trillion joules (10²¹).

IN TROUBLED WATERS	
<p>> Marine heatwaves (periods of abnormally high ocean temperatures) are projected to increase from 20 days per year (during 1970-2000) to 220-250 days per year</p>	
<p>> They cause habitat destruction due to coral bleaching, seagrass destruction, and loss of kelp forests, affecting fisheries sector adversely and also lead to the rapid intensification of cyclones</p>	
<p>> Maximum warming will occur in the northwestern Indian Ocean, including the Arabian Sea, while</p>	
	<p>there will be reduced warming off the Sumatra and Java coasts</p>
	<p>> "The future increase in heat content is comparable to adding the energy equivalent of one Hiroshima atomic bomb detonation every second, all day, every day, for a decade," says Roxy Mathew Koll, a climate scientist</p>

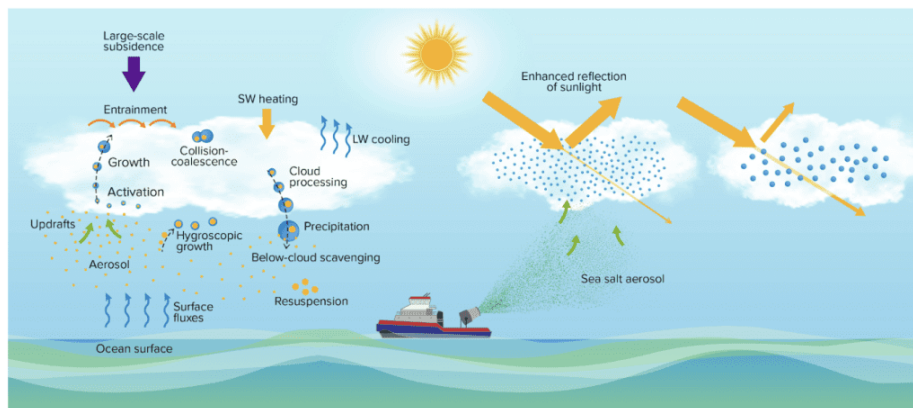
La Cumbre volcano & Land iguanas

- ❖ The La Cumbre volcano located on Fernandina Island was erupted last month.
- ❖ The La Cumbre volcano is located around 1,125 kilometres off mainland Ecuador and erupted for the first time since 2020.
- ❖ The island is also home to a large population of rare land iguanas.
- ❖ They nest and lay eggs on the rim of the volcano's large crater or caldera and deep within it.
- ❖ It is a very large species of lizard in the family Iguanidae.
- ❖ It is one of three species of land iguana endemic to the Galapagos Islands.
- ❖ The others being the Santa Fe land iguana and the Galapagos pink land iguana.

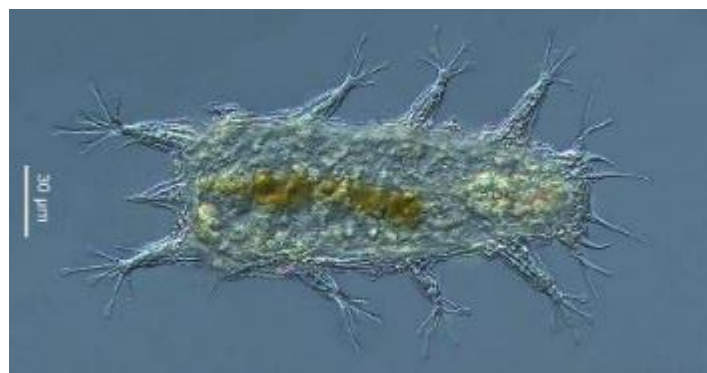


Marine Cloud Brightening

- ❖ Scientists have conducted the inaugural outdoor trial of a technology designed to manipulate clouds and reflect sunlight back into space.
- ❖ This geoengineering technique is called marine cloud brightening.
- ❖ It aims to potentially mitigate the Earth's increasing temperatures.
- ❖ This geoengineering technique involves spraying tiny particles, such as sea salt or other aerosols, into the lower atmosphere over the ocean.
- ❖ These particles act as cloud condensation nuclei, promoting the formation of more numerous but smaller water droplets within existing clouds.
- ❖ As a result, the clouds become brighter and more reflective, effectively increasing their albedo - their ability to reflect sunlight back into space.



Batillipes chandrayaani

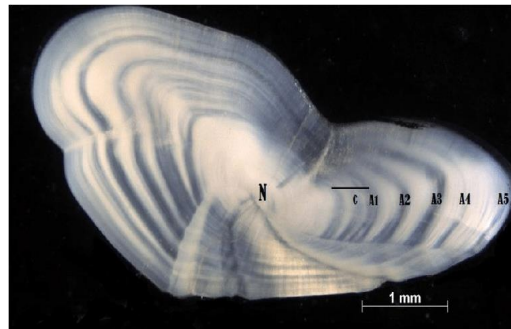


- ❖ This New species was discovered from southeast coast of Tamil Nadu.
- ❖ It is the third marine tardigrade species to have been scientifically described from the Indian waters and the second from the east coast.
- ❖ It has been named *Batillipes chandrayaani* after the Chandrayaan-3 moon mission.

- ❖ Tardigrades are microscopic marvels commonly known as ‘water bears,’ although they have no relation to actual bears.
- ❖ *Batillipes chandrayaani* is also the 39th species described under the genus *Batillipes*.
- ❖ Marine tardigrades account for 17% of all known tardigrade species.

Otolith Rings

- ❖ Fish have a kind of stone in their ear that scientists can read like tree rings.
- ❖ Researchers has found a way to decode the chemicals in these stones to measure how much energy they used when alive.
- ❖ They could help bluefin tuna survive the climate crisis.
- ❖ The rising temperatures impact the metabolic rates of young bluefin tuna, particularly affecting their energy utilization.
- ❖ The otolith is a stony lump in the fish ear.
- ❖ Otolith rings, much like tree rings, reveal a fish’s age.



Coral bleaching in Lakshadweep

- ❖ Widespread bleaching impacting of coral reefs Recorded in the Lakshadweep Sea owing to marine heatwaves.
- ❖ Lakshadweep islands have showed that a considerable percentage of hard coral species had undergone severe bleaching.
- ❖ This is primarily due to prolonged period of marine heat waves affecting the region since late October 2023.
- ❖ The ongoing heat waves also threaten other critical marine habitats, including seagrass meadows.
- ❖ Similar to corals, seagrass meadows are experiencing detrimental impacts due to the heatwaves, such as impaired photosynthesis, reduced growth, and hindered reproductive functions.



Glyptothorax punyabratai

- ❖ Glyptothorax punyabratai, a new catfish species, has been described from the Brahmaputra River drainage in Arunachal Pradesh.
- ❖ The species was collected from Tung Stream, a small tributary of the Tissa River, in the Brahmaputra River basin.
- ❖ The new species has been named after Dr. Punyabarata Das, the founder director of ICAR-NBFGR, in honour of his immense and valuable contributions to fisheries research.



World's biggest permafrost crater

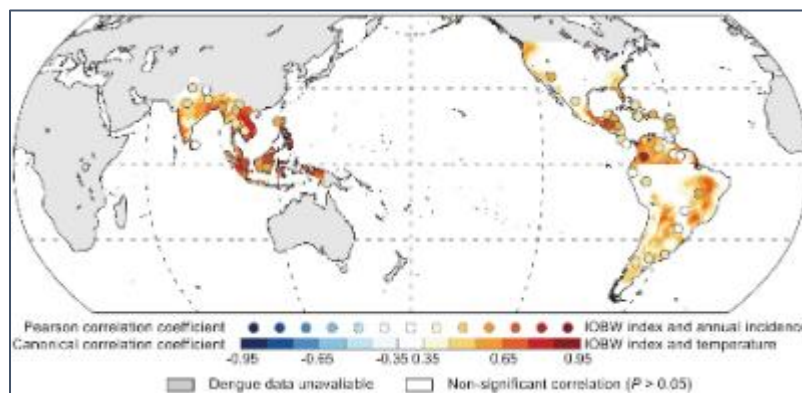
- ❖ Scientists say Russia is warming at least 2.5 times faster than the rest of the world.
- ❖ One of the massive craters in the world, famously known as the “gateway to the underworld” is growing by 35 million cubic feet every year.
- ❖ The huge crater situated in Serbia’s permafrost is expanding due to melting of the ground.
- ❖ Officially known as Batagay (Batagaika), the crater or mega slump is a rounded cliff face that was first discovered in 1991 through satellite images.

- ❖ It was created after a section of hillside collapsed in the Yana Uplands of northern Yakutia in Russia.
- ❖ This collapse exposed layers of permafrost within the remaining portion of the hillside that have been frozen for up to 650,000 years now.
- ❖ It is known as the oldest permafrost in Siberia and second oldest in the world.

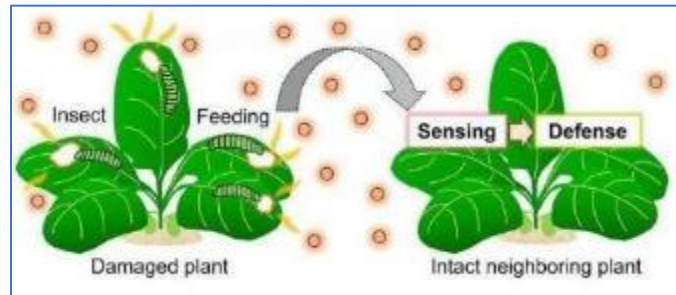


Indian Ocean temperature and Dengue Intensity

- ❖ Researchers have found a potential link between anomalies in sea-surface temperatures in Indian Ocean and the intensity of dengue epidemics globally.
- ❖ The link is likely due to its influence on regional temperatures through teleconnections, large-scale atmospheric patterns that can transfer heat and moisture across vast distances.
- ❖ Dengue is a viral infection transmitted through the bite of infected Aedes species mosquitoes.
- ❖ Before 1970, severe dengue outbreaks were only reported in nine countries.
- ❖ But now it affects nearly half of the world's population, with an estimated 100–400 million infections occurring each year.



Green Leaf Volatiles



- ❖ Recently, for the first time, scientists visualise the plants sensing compounds called green leaf volatiles (GLVs) released by other plants in danger.
- ❖ The Plants have two major defence mechanisms, involving a chain of molecular reactions.
- ❖ The reactions are triggered when a plant is damaged and GLVs are released as by-products.
- ❖ The Scientists are considering harnessing this process to fight agricultural pests without having to use pesticides.
- ❖ Volatiles are elements or compounds that change from solid or liquid state into vapour at relatively low temperatures.

Genome of *Lepidopygopsis typus*

- ❖ Scientists have decoded for the first time the mitochondrial genome of *Lepidopygopsis typus*.
- ❖ It is a unique freshwater fish species of the Western Ghats.
- ❖ It is known to occur only inside Kerala's Periyar Tiger Reserve.
- ❖ *Lepidopygopsis typus* is an example of a monotypic species (a genus having only a single species).
- ❖ The purpose of mitogenome sequencing is to help understand the evolution of a species and how different they are from its relatives.
- ❖ *Lepidopygopsis typus* is also a species that has been listed as 'endangered' on the IUCN Red List.



New species of needlefish

- ❖ Scientists at the Central Marine Fisheries Research Institute (CMFRI) have identified two new species of needlefish from Indian waters.
- ❖ The research found that the previously identified flat needlefish (*Ablennes hians*) is a complex of at least three distinct species.
- ❖ The new fishes have been scientifically named as *Ablennes joseberchmansis* and *Ablennes gracalii*.
- ❖ The study focused on specimens collected from Thoothukudi in Tamil Nadu.



UNFF-19

- ❖ The 19th edition of the United Nations Forum on Forests (UNFF 19) was held in New York.
- ❖ It had focused on achieving global forest goals and increasing progress towards sustainable development by 2030.
- ❖ The UNFF is a body under the UN Economic and Social Council (ECOSOC).
- ❖ It aims to support the goals of the International Arrangement on Forests (IAF) and advance other international forest-related instruments, processes, commitments, and objectives.
- ❖ Globally, India ranks third in the net gain, in average annual forest area, between 2010 and 2020.

Sea Anemone

- ❖ Scientists have found mass anemone bleaching off the Agatti island.
- ❖ Coral bleaching is not a new phenomenon in the Lakshadweep but sea anemone bleaching has been observed for the first time in the group of islands.
- ❖ Bleaching is making sea anemone more susceptible to diseases and increases mortality.
- ❖ Sea anemone is an aquatic animal marked by soft bodies and an ability to sting.
- ❖ They are close associates of corals and live rocks.



Sei Whales - Argentina



- ❖ After over a century of absence, the majestic sei whales have returned to the waters off Argentina's Patagonian coast.
- ❖ These giant blue-grey creatures were once on the brink of extinction due to relentless hunting during the 1920s and 1930s.
- ❖ Sei whales belong to the baleen whale family.
- ❖ They are characterised by their sleek, streamlined bodies, typically bluish-grey in colour.
- ❖ Sei whales can reach lengths of up to 62-66 feet and weigh up to 28-45 metric tons.

Venezuela's Humboldt glacier shrink

- ❖ Venezuela is thought to be the first nation in modern times to have completely lost all of its glaciers.
- ❖ The South American nation's only remaining glacier is the Humboldt, or La Corona, in the Andes.
- ❖ It had become "too small to be classed as a glacier".
- ❖ Hence, the glacier has been reclassified as an ice field.
- ❖ The country had been home to 6 glaciers in the Sierra Nevada de Mérida Mountain range.

- ❖ Five of the glaciers had disappeared by 2011, leaving just Humboldt.
- ❖ According to scientists, Indonesia, Mexico, and Slovenia are next in line to become glacier-free.



Armored sailfin catfish

- ❖ CCMB scientists have developed a technique to detect invasive fish that threaten ecosystems and lead to loss in fish catch.
- ❖ They have developed an eDNA-based quantitative PCR assay to map the presence and spread of the invasive armored sailfin catfish in the water bodies of Eastern Ghats.
- ❖ This is a fish, originating from South America that was once introduced for its unique appearance and its ability to clean algal growth in tanks and aquaria.
- ❖ But now it has spread to 60% of water bodies of the Eastern Ghats, specifically in Andhra Pradesh, Telangana, and Tamil Nadu.
- ❖ It is also damaging fishing nets and the overall ecosystem.
- ❖ The catfish was first reported in the fresh waters of Puerto Rico in Venezuela.
- ❖ The exotic fish has gained notoriety in India as the 'Devil fish'.
- ❖ Its spread in the water bodies of the three states is posing a threat to over 150 species of freshwater fishes.

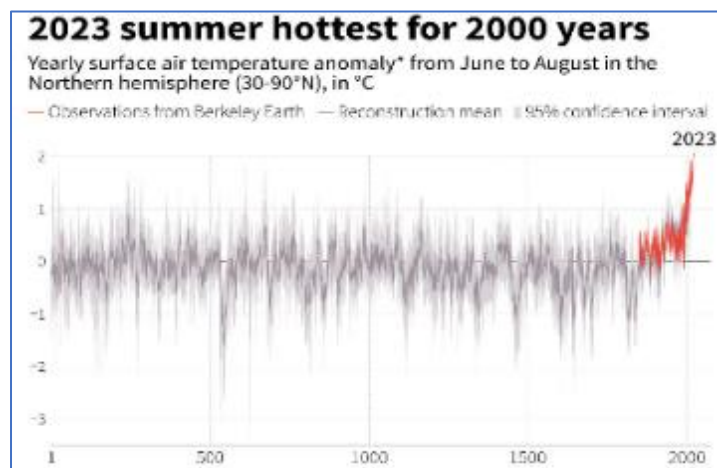


Eco-Friendly Water Treatment Solution

- ❖ Indian Institute of Petroleum & Energy (IIPPE), Visakhapatnam, in association with other research institutions, have found an effective eco-friendly solution 'Surface Modification Technique of Membrane'.
- ❖ It aims to resolve the problems associated with water treatment at various levels, particularly for muddy river water.
- ❖ This technique is eco-friendly and it utilises non-toxic gases.
- ❖ It reduces the need for harsh chemicals or solvents in surface modification processes, minimising environmental impact
- ❖ Muddy water reduces oxygen levels, blocks sunlight and carries pollutants, leading to habitat degradation, species displacement and waterborne diseases.

Hottest year in 2,000 Years

- ❖ The summer of 2023 was hotter than any other in the Northern Hemisphere for the past two millennia.
- ❖ Scientists previously determined that 2023 was the hottest year since 1850, when global modern temperature records began.
- ❖ The extreme warmth of last summer not only smashed modern records but also exceeded the warmest summer prior to the instrumental record - in the year 246 - by more than half a degree Celsius.
- ❖ It was almost 4C warmer than the coldest summer (in 536).
- ❖ European Union's Copernicus Climate Change Service were saying the year of 2023 was “very likely” to have been the warmest in some 100,000 years.
- ❖ More than 150,000 deaths in 43 countries linked to heatwaves for each year between 1990 and 2019.

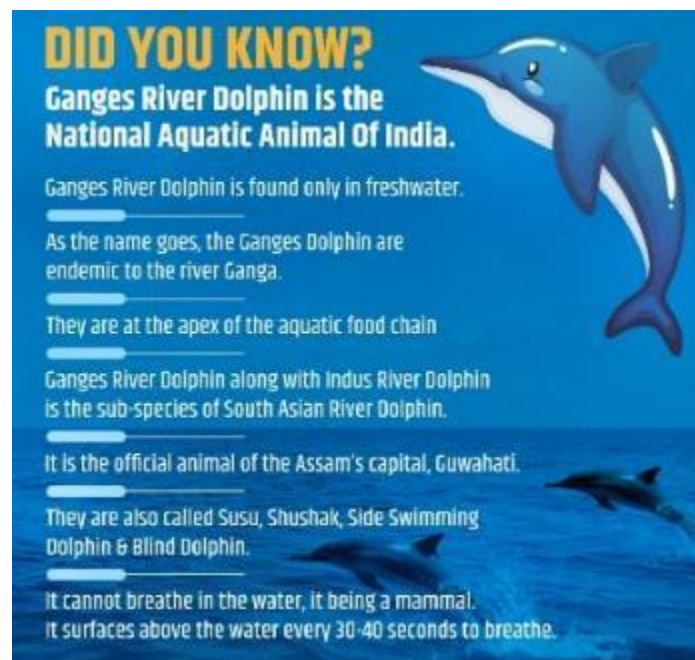


Endangered Meitei Ponies

- ❖ The Government of Manipur has recently joined hands with various organisations and associations to save the Manipuri Pony or *Meitei Sagol*.
- ❖ Its population has been dwindling rapidly in recent times - from 1,898 animals in the 17th Quinquennial Livestock Census 2003 to only 1,101 in the 19th Quinquennial Livestock Census 2012.
- ❖ In the last livestock census done in 2019, the number had dropped further to 1,089.
- ❖ The Meitei Sagol is one of the seven recognised horse and pony breeds of India.
- ❖ The others include the Marwari Horse, the Kathiawari Horse, the Zanskari Pony, the Spiti Pony, the Bhutia Pony and the Kachhi-Sindhi Horse.



Gangetic Dolphins in India



DID YOU KNOW?
Ganges River Dolphin is the National Aquatic Animal Of India.

Ganges River Dolphin is found only in freshwater.

As the name goes, the Ganges Dolphin are endemic to the river Ganga.

They are at the apex of the aquatic food chain

Ganges River Dolphin along with Indus River Dolphin is the sub-species of South Asian River Dolphin.

It is the official animal of the Assam's capital, Guwahati.

They are also called Susu, Shushak, Side Swimming Dolphin & Blind Dolphin.

It cannot breathe in the water, it being a mammal. It surfaces above the water every 30-40 seconds to breathe.

- ❖ According to the Wildlife Institute of India, currently, about 4,000 dolphins are present in the Ganga and its tributaries.
- ❖ The number of Gangetic dolphins in Uttar Pradesh is expected to be 2,000.
- ❖ It is more than half of the total number of Gangetic dolphins found in India.
- ❖ In Uttar Pradesh, the dolphins are mainly found in the Chambal River.
- ❖ Ganges river dolphin also known as blind dolphin, Ganges susu or its scientific name is *Platanista gangetica*.
- ❖ It is mainly found in the mainstream of the Ganga River and its tributaries, Ghaghra, Kosi, Gandak, Chambal, Rupnarayan, and Yamuna.
- ❖ Gangetic river dolphin was declared the National Aquatic Animal of India on 18 May 2010.

World's Rangelands Degradation

- ❖ It is a new report released by the United Nations Convention on Combating Desertification (UNCCD).
- ❖ About half of the world's rangelands are degraded and need policy interventions, and communities depending on them need focused support.
- ❖ The UNCCD report defines rangelands as natural or semi-natural ecosystems that are grazed by livestock or wild animals.



- ❖ Rangelands contain vegetation such as grasses, shrubs, bushes, open forests, and agroforestry systems (land which contains trees and crops or pastures).
- ❖ Currently, rangelands cover 80 million sq km of Earth's terrestrial surface area (over half of Earth's land).
- ❖ Rangelands generate 16% of global food production and 70% of feed for domesticated herbivores, most significantly in Africa and South America.
- ❖ In India, rangelands occupy about 1.21 million sq km, from the Thar Desert to Himalayan meadows.

- ❖ The United Nations General assembly has designated 2026 as the International Year of Rangelands and Pastoralists (IYRP).

First Global Mangrove Assessment

- ❖ The report, Red List of Mangrove Ecosystems, is the first global mangrove assessment for the International Union for Conservation of Nature (IUCN).
- ❖ It warns that half of the world's mangrove ecosystems run the risk of collapse.
- ❖ The report shows that 50% of the mangrove ecosystems assessed are at risk of collapse.
- ❖ Under business as usual, 25% of the global mangrove area is predicted to be submerged in the next 50 Years.
- ❖ By 2050 about ~7,065 km² (-5%) more mangroves will be lost and ~23,672 km² (-16%) will be submerged.
- ❖ Indian mangrove ecosystems have been bunched into three parts.
- ❖ The ecosystems in the Bay of Bengal region shared by India and Bangladesh and those in the west shared by India and Pakistan are in the least concerned category.
- ❖ However, the mangrove ecosystem in the south, which India shares with Sri Lanka and Maldives, is categorised as critically endangered.



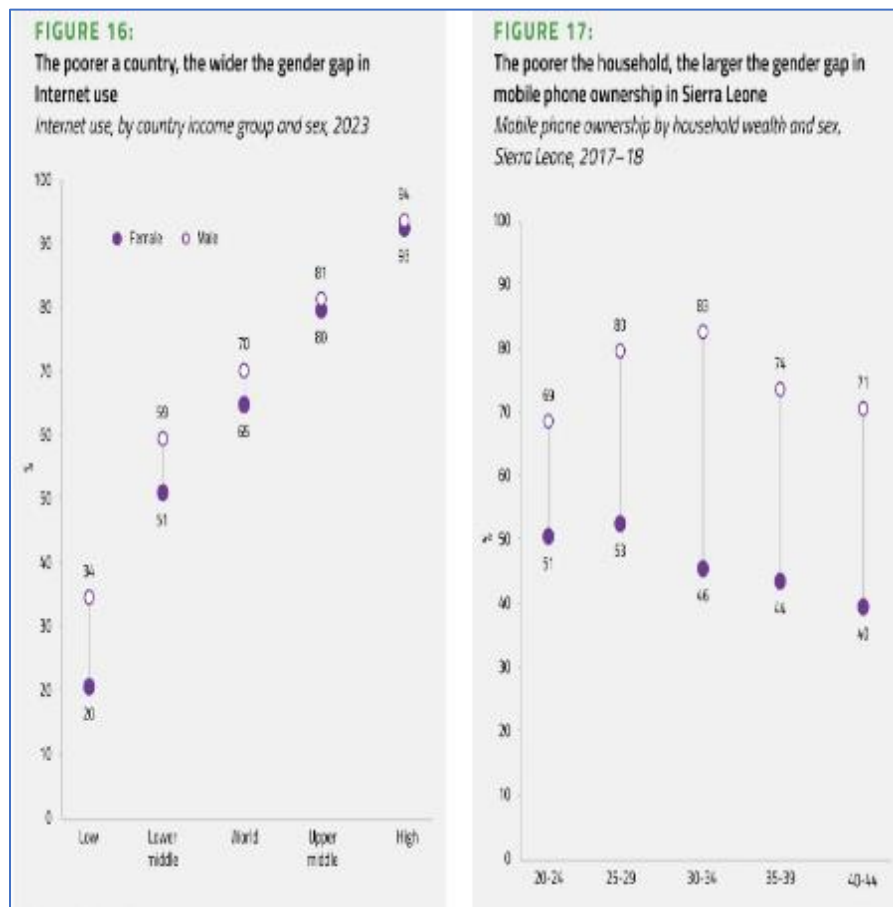
GSAP SKILLS Platform

- ❖ IUCN has launched the Global Species Action Plan Online Knowledge Platform, known as GSAP SKILLS,
- ❖ The GSAP SKILLS platform aims to facilitate global collaboration and partnership, connecting decision makers, species conservation practitioners and experts at all levels.
- ❖ The platform provides real-time updates on technical tools and resources, ensuring accessibility and relevance.

REPORTS AND INDICES

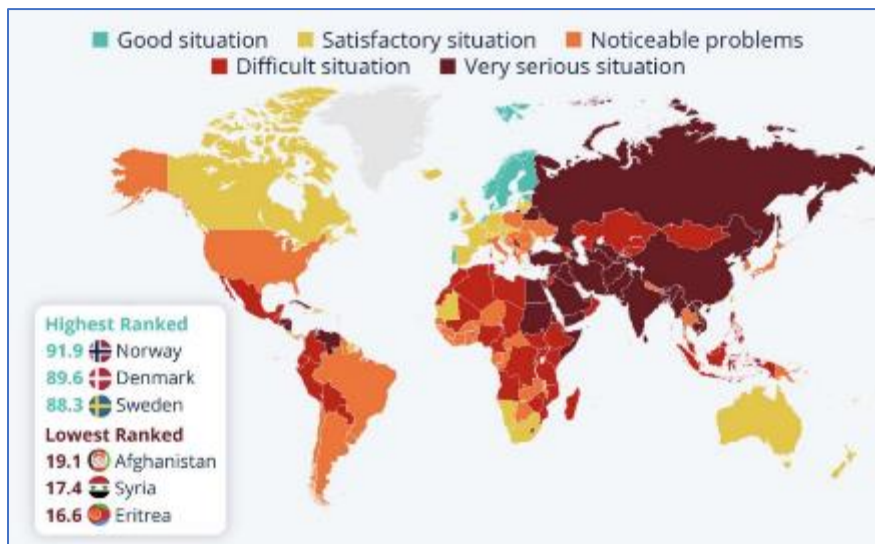
Technology on her Terms

- ❖ The Gender Report of the Global Education Monitoring 2024 has recently been released by UNESCO.
- ❖ The title is named as “Technology on her Terms”.
- ❖ The report examines the impact of technology on girls' education opportunities and future technological development.
- ❖ Social media has a negative impact on girls’ Education and negatively affects the overall wellbeing.
- ❖ 15 percent of young female graduates follow STEM and the average share of STEM among male graduates is 35 percent.
- ❖ The share of women holding jobs in science, engineering and ICT sector is less as in the year of 2022, women held less than 25 percent of these jobs.



World Press Freedom Index 2024

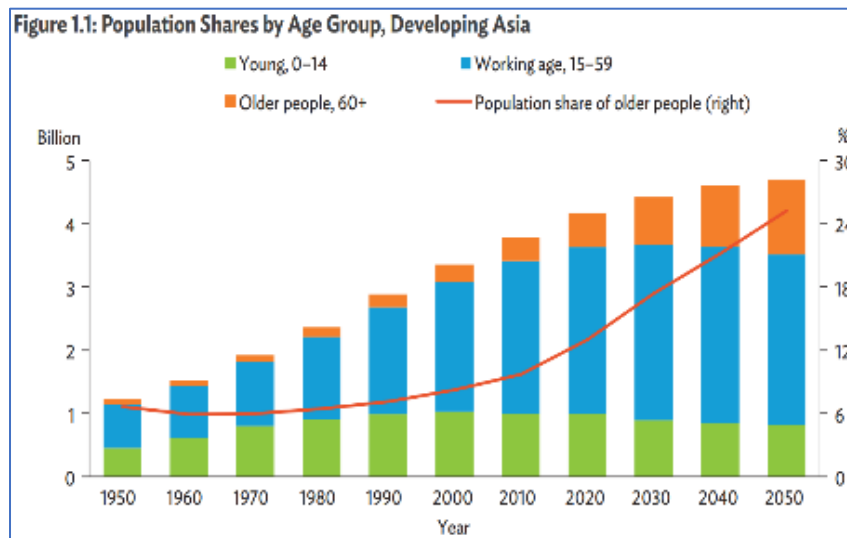
- ❖ The latest annual World Press Freedom Index was released by Reporters Without Borders.
- ❖ In this, India's rank improved from 161 in 2023 to 159 in 2024.
- ❖ Meanwhile, Pakistan ranked seven spots above India at 152.
- ❖ But, India's score in the World Press Freedom Index fell over the last year, from 36.62 to 31.28.
- ❖ Norway and Denmark topped the RSF table while Eritrea was at the bottom, with Syria just ahead of it.



Aging Well in Asia report 2024

- ❖ The new report titled 'Aging Well in Asia' was prepared by Asian Development Bank.
- ❖ The South Korea and Thailand have achieved universal health coverage.
- ❖ In Bangladesh, Indonesia and India, more than half of those without access to healthcare are in the bottom two wealth quintiles.
- ❖ The number of people aged 60 and older in developing Asia and the Pacific is set to nearly double by 2050 to 1.2 billion or about a quarter of the total population.
- ❖ Others lag behind with India having the lowest health insurance coverage among older people at 21%.
- ❖ At the same time, these economies have an opportunity to reap a “silver dividend” in the form of additional productivity from older people.
- ❖ It could boost gross domestic product in the region by 0.9% on average.

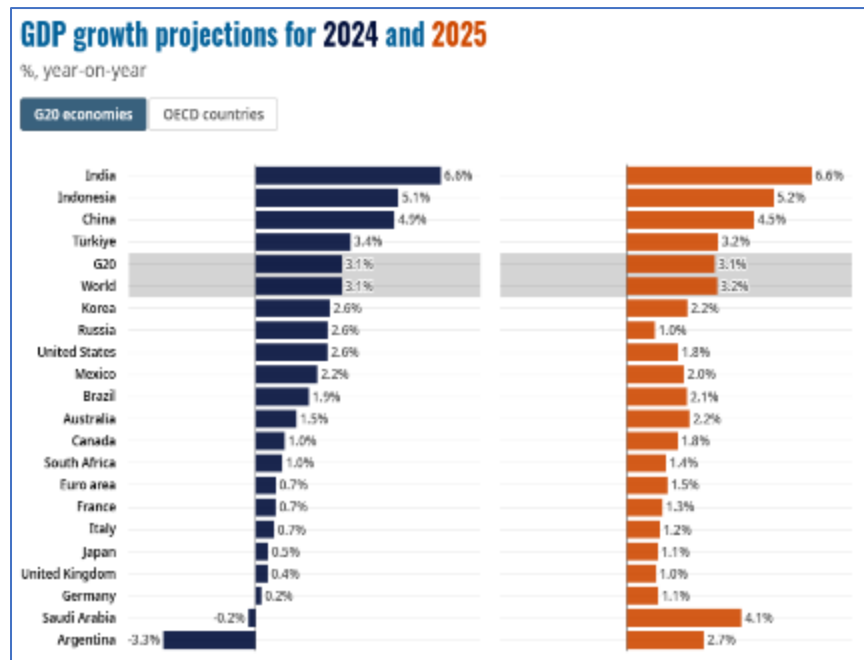
- ❖ Schemes like Ayushman Bharat that provides cashless healthcare to bottom quartile of population has improved health coverage since its launch.
- ❖ Expanding it further will improve the condition and make people aged over 60 years more productive for the economy.
- ❖ The share of financially prepared near-old people (those within 5 years or so of retirement) to be as high as 86% in Japan and 73% in India.
- ❖ But this is somewhat lower at 64% in China and 58% in the Republic of Korea.
- ❖ Older women in India will see the greatest increase in life expectancy at 6.4 years, followed by Kazakhstan; Georgia; and Hong Kong, China at 4.6 years.
- ❖ For older men, Armenia will have the highest increase in life expectancy at 6.1 years, followed by India at 5.7 years and Georgia at 5.2 years.



OECD's Economic Outlook

- ❖ Headline inflation in the OECD countries is expected to fall to 5% in 2024, from 6.9% in 2023, and decline further to 3.4% in 2025.
- ❖ By the end of 2025, inflation in the OECD is projected to be close to most central bank targets of 2%.
- ❖ The G20 and other developed nations' growth are likely to lag significantly behind developing nations.
- ❖ The United Kingdom estimated to see a growth of only 0.4% in 2024, rising to 1% in 2025.
- ❖ The Euro area is estimated to see a growth of 0.7% in 2024 and 1.5% in 2025.
- ❖ France is also likely to see a 0.7% this year, but could possibly lag the Euro area with a 1.3% growth in 2025.

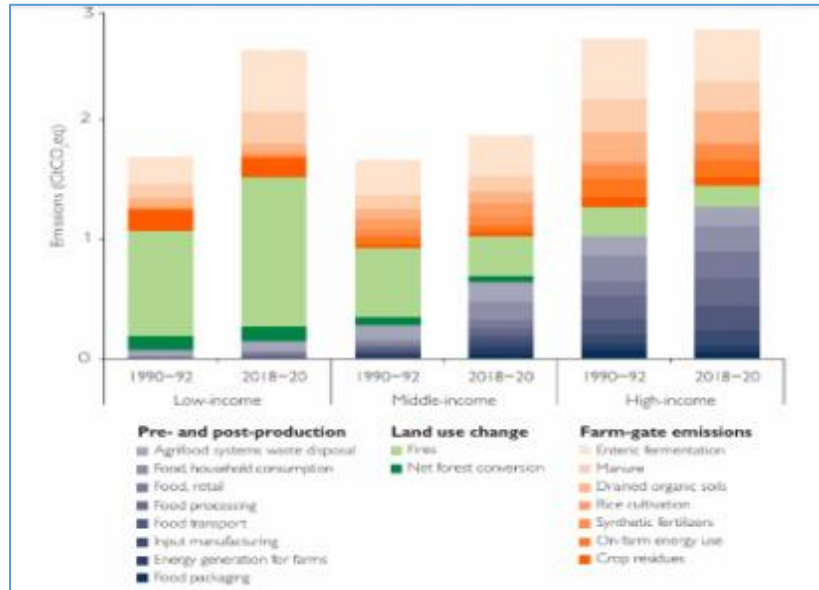
- ❖ Similarly, Italy is also expected to grow 0.7% this year, jumping to 1.2% in 2025.
- ❖ Germany, long considered the “sick man” of Europe, is expected a very modest 0.2% growth.
- ❖ India is expected to grow at a steady rate of 6.6% for both 2024 and 2025, while Indonesia could see a 5.1% rise in 2024, moving to 5.2% in 2025.
- ❖ However, China expected to increase 4.9% this year, but only 4.5% next year.



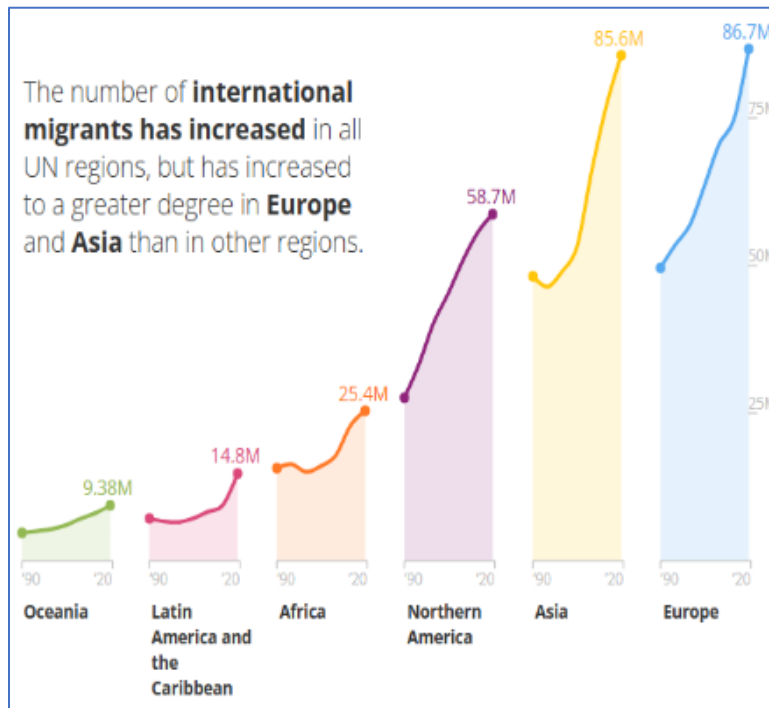
World Bank Report on Agri-food System

- ❖ World Bank released the report, “Recipe for a Livable Planet: Achieving Net Zero Emissions in the Agrifood System”.
- ❖ The world’s agrifood system emits about 16 gigatonnes of greenhouse gases (GHG) per year — about a third of all global emissions.
- ❖ Livestock is a major driver, with high-income countries among the largest consumers.
- ❖ Wealthy nations should reduce financial support for livestock farming to help tackle pollution caused by consuming red meat and dairy.
- ❖ One-third of all agricultural subsidies went toward meat and milk products in 2016
- ❖ Annual investments will need to climb 18-fold to \$260 billion to halve agri-food emissions by 2030 and help the world hit a 2050 net-zero target.

- ❖ Replacing a quarter of India’s 8.8 million diesel irrigation pumps with solar pumps would cut agrifood emissions by 11.5 million tonnes per year.
- ❖ The top ten agrifood system emitters are China, Brazil, India, United States, Indonesia, the Democratic Republic of Congo, Russian Federation, Canada, Pakistan and Argentina.



World Migration Report 2024



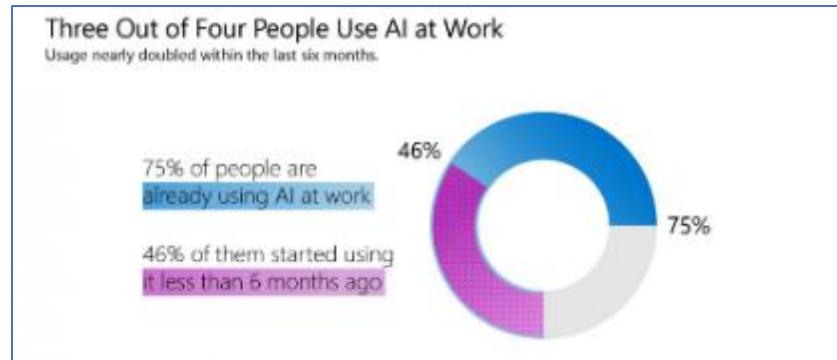
- ❖ The International Organisation for Migration (IOM) recently released its World Migration Report 2024.
- ❖ The current global estimate is that there were around 281 million international migrants in the world in 2020.
- ❖ It equates to 3.6 percent of the global population.
- ❖ Europe and Asia each hosted around 87 and 86 million international migrants, respectively.
- ❖ Global displacement is at a record high, with the number of internally displaced at around 71.2 million
- ❖ The number of refugees and asylum seekers at 40.7 million.
- ❖ India is ranked 13th as the destination country for immigrants, with 4.48 million immigrants.

World Wealthiest cities report 2024

- ❖ New York City has continued to maintain its position as the world's wealthiest city, with 11 other US cities joining the top 50 list.
- ❖ Tokyo, held the top spot a decade ago, has fallen to third place due to a decline in its high-net-worth individual population.
- ❖ Singapore rising to fourth place as a leading Asian financial hub.
- ❖ Traditional financial centre London have moving down to fifth place.
- ❖ India with two of its cities breaking into the top 50 list.
- ❖ Mumbai and Delhi rank 24th and 37th, respectively.

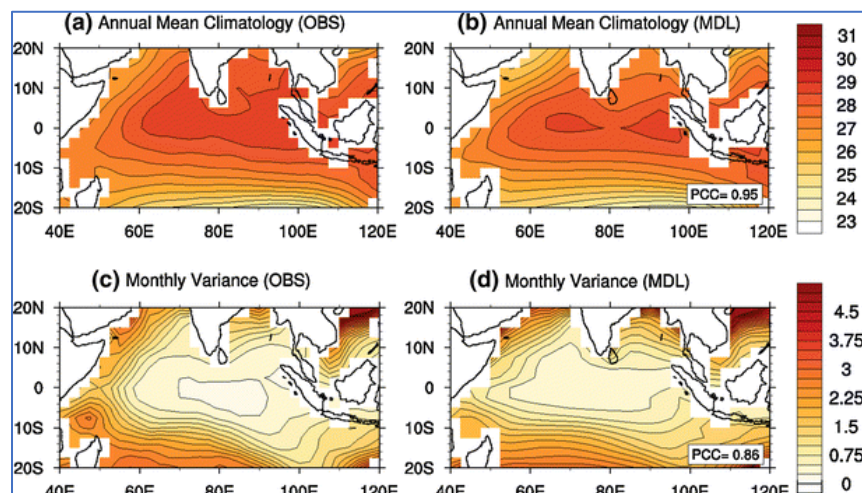
City/Area	Country	Millionaires (USD 1m+)	Cent-millions (USD 100m+)	Billionaires (USD 1bn+)
New York City	USA	349,500	744	60
The Bay Area	USA	305,700	675	68
Tokyo	Japan	290,300	267	14
Singapore	Singapore	244,800	336	30
London	UK	227,000	370	35
Los Angeles	USA	212,100	496	43
Paris & Île-de-France	France	165,000	286	23
Sydney	Australia	147,000	205	20
Hong Kong	Hong Kong (SAR, China)	143,400	320	35
Beijing	China	125,600	347	42

2024 Work Trend Index



- ❖ The 2024 Work Trend Index Annual Report is released by Microsoft and LinkedIn.
- ❖ Artificial Intelligence (AI) is influencing the way people work, lead and hire around the world.
- ❖ In the last six months, the use of Artificial Intelligence has “nearly doubled.”
- ❖ While 79 per cent of leaders agree that “the AI adoption is critical to remain competitive”, 59 per cent “worry about quantifying the productivity gains of AI.”
- ❖ According to the report, 75 per cent of people are already using AI at work, while 46 per cent of them started using AI less than six months ago.
- ❖ From the employer’s perspective, 66 per cent of leaders have admitted they would not hire someone without AI skills.

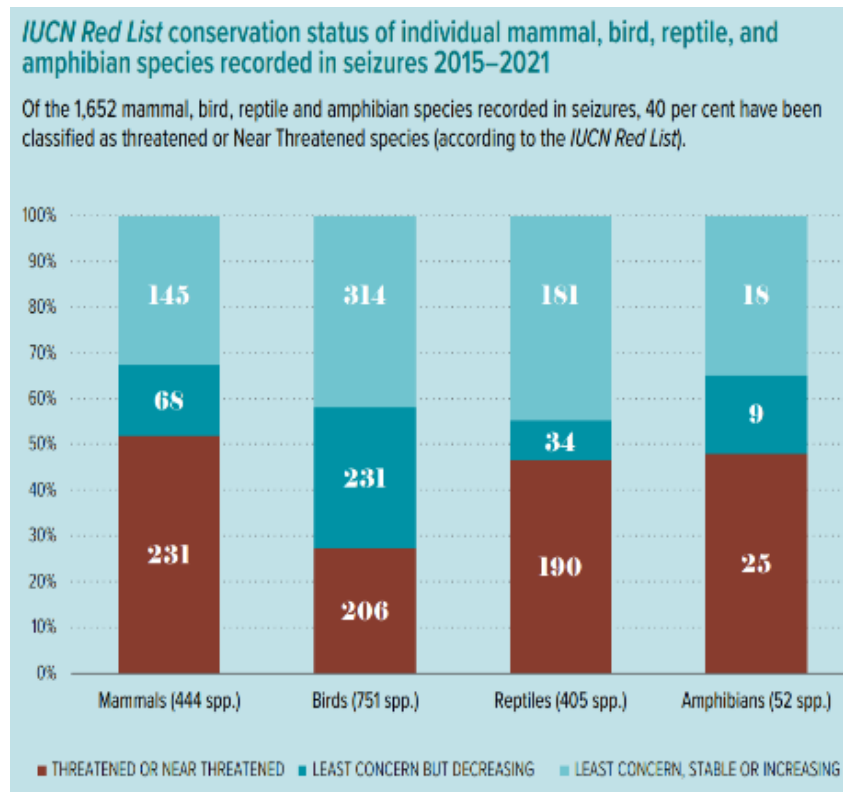
Indian Ocean Basin-Wide Index



- ❖ It represents the average sea-surface temperature variations across the tropical Indian Ocean.
- ❖ It has emerged as a key indicator for predicting the magnitude and timing of dengue epidemics in each country.

- ❖ Its association with the Southern Hemisphere is stronger than that with the Northern Hemisphere.
- ❖ It has a more pronounced impact on temperatures in tropical regions.
- ❖ The link between the Indian Ocean’s temperature and dengue incidence is likely due to its influence on regional temperatures through teleconnections, large-scale atmospheric patterns that can transfer heat and moisture across vast distances.

2024 World Wildlife Crime Report



- ❖ The 2024 World Wildlife Crime Report released by the United Nations Office on Drugs and Crime.
- ❖ Illegal trade in 162 countries and territories during 2015–2021, which impacted around 4,000 plant and animal species.
- ❖ 3,250 of this are listed in the CITES Appendices.
- ❖ At 29 per cent, the market for rhino horn constituted the biggest chunk among animal species.
- ❖ It was followed by the market for pangolin scales at 28 per cent, followed by the market for elephant ivory at 15 per cent.

- ❖ Other animal species most affected by the global illegal animal trade included eels (5 per cent), crocodilians (5 per cent), parrots and cockatoos (2 per cent), carnivores (2 per cent), turtles and tortoises (2 per cent), snakes (2 per cent), seahorses (2 per cent) and others (8 per cent).

CWUR 2024 report

World Rank	Institution	Location	National Rank	Education Rank	Employability Rank	Faculty Rank	Research Rank	Score
410 Top 2%	Indian Institute of Management Ahmedabad	India	1	337	91	-	-	75.4
501 Top 2.4%	Indian Institute of Science	India	2	325	880	-	476	74.3
555 Top 2.8%	Indian Institute of Technology Bombay	India	3	-	330	-	580	73.7
552 Top 2.8%	Indian Institute of Technology Madras	India	4	-	187	-	814	73.5
605 Top 2.9%	Tata Institute of Fundamental Research	India	5	-	-	-	678	73.3
615 Top 3%	Indian Institute of Technology Delhi	India	6	-	555	-	605	73.2
622 Top 3%	Tamil University	India	7	532	968	-	675	73.2
704 Top 3.4%	Indian Institute of Technology Kharagpur	India	8	-	515	-	581	72.5

- ❖ 64 Indian universities and institutions were featured in the 2024 edition of the Global 2000 list.
- ❖ The Indian Institute of Management (IIM) Ahmedabad secured the top rank.
- ❖ This year, IIM Ahmedabad's position improved a bit and it secured 410th rank.
- ❖ Indian Institute of Science dropped 7 places and currently positioned itself at 501st position.
- ❖ Indian Institute of Technology Madras ranked at 582th rank globally and 4th in India.
- ❖ Anna University, Vellore Institute of Technology, Tamil Nadu Dr M.G.R. Medical University and NIT- Tiruchirappalli were featured in the list.

Internet shutdowns in 2023

- ❖ Of the 1,458 shutdowns Access Now has recorded globally since 2016, India has accounted for 773 (53%) of them.
- ❖ For sixth year in a row, India leads in global internet shutdowns with 116 internet shutdowns in 2023.
- ❖ This is accounting for 41% of the 283 globally.
- ❖ Of the 1,458 shutdowns Access Now has recorded since 2016, India has accounted for 773 (53%) of them.

- ❖ In 2023, the number of internet shutdowns rose by 41% from 201 in 2022 to 283 in 2023.
- ❖ In India, 64 shutdowns affected more than one district.
- ❖ This was driven by 47 shutdowns in Manipur and the statewide shutdown in Punjab.
- ❖ 13 states in India saw local or statewide internet shutdowns.
- ❖ The number of Indian states with more than five shutdowns increased from 3 in 2022 to 7 in 2023; 41% of all shutdowns in India lasted five or more days, up from 15% in 2022.
- ❖ In 2023, Myanmar followed India with 37 internet shutdowns followed by Iran with 34.
- ❖ In 2023, 39 countries saw internet shutdowns. Pakistan had 7 shutdowns while Iraq had 6.
- ❖ Twelve shutdowns in six countries, including India, were ordered to prevent cheating in exams.

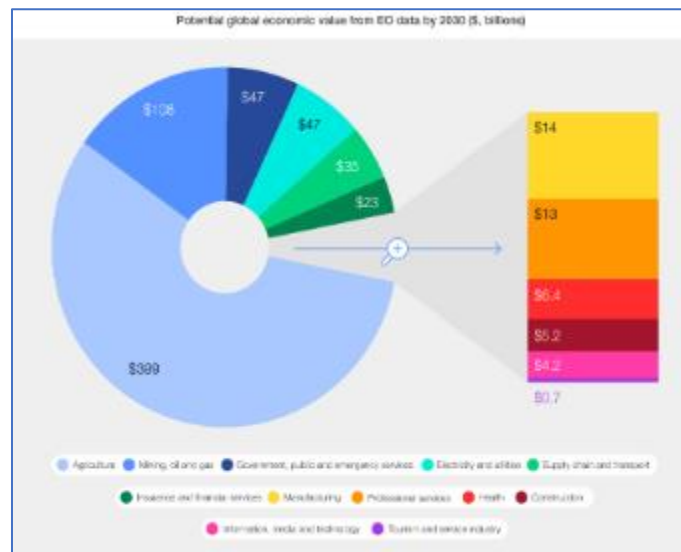


Global Report on Internal Displacement 2024

- ❖ The Global Report on Internal Displacement 2024 (GRID-2024) was released by the Geneva-based Internal Displacement Monitoring Centre (IDMC).
- ❖ In 2023, the number of internally displaced people increased to 75.9 million, from 71.1 million in the preceding year.
- ❖ Internal displacement is the number of forced movements of people within the borders of their country recorded during (a) year.

- ❖ During 2022-2023, conflicts and violence causing more displacements, particularly in the last two years.
- ❖ 68.3 million people were living in internal displacement as a result of conflict and violence at the end of 2023.
- ❖ Sudan, Syria, the Democratic Republic of the Congo (DRC), Colombia and Yemen host nearly half of the world’s internally displaced people.
- ❖ This is a 49 per cent increase over the 2022 figure.
- ❖ The disaster-induced internal displacement population was 7.7 million by the end of 2023; one-fourth of it was caused by earthquakes.
- ❖ Internal displacement due to weather-related disasters came down by a third in 2023, in comparison to 2022.
- ❖ Overall, 56 per cent of all internal displacement in 2023 was caused by disasters, while the rest by conflict and violence.

Amplifying the Global Value of Earth Observation

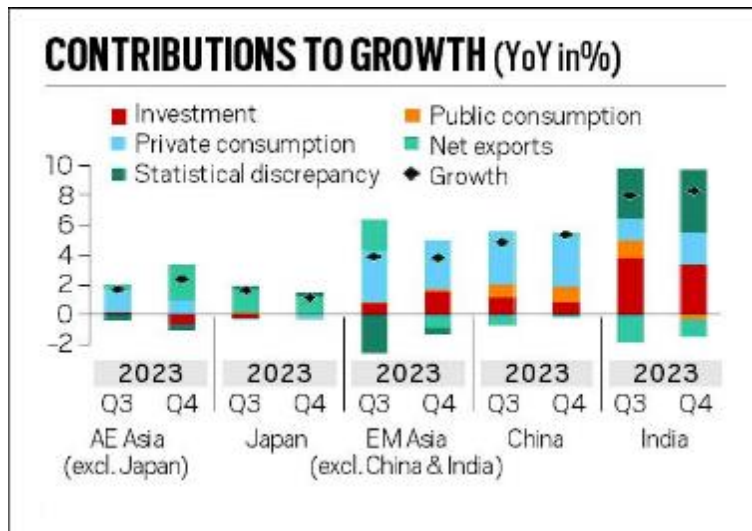


- ❖ The report released by the World Economic Forum delves into the economic potential of Earth Observation (EO) technologies across various sectors.
- ❖ Greater adoption of Earth Observation data and technology can boost global growth by adding up to \$3.8 trillion to global GDP.
- ❖ The global value of Earth observation data is projected to increase from \$266 billion to over \$700 billion by 2030.
- ❖ Earth Observation Data has the potential to reduce greenhouse gas emissions by up to 2.2 gigatonnes annually, which is equal to the emissions of 476 million cars.

- ❖ The Asia Pacific region will be the leader in capturing the value of EO, potentially reaching \$315 billion by 2030.
- ❖ Earth Observation is the process of collecting information about activities and characteristics on Earth which includes physical, chemical, biological and anthropogenic (human) systems.

Regional Economic Outlook for Asia and Pacific

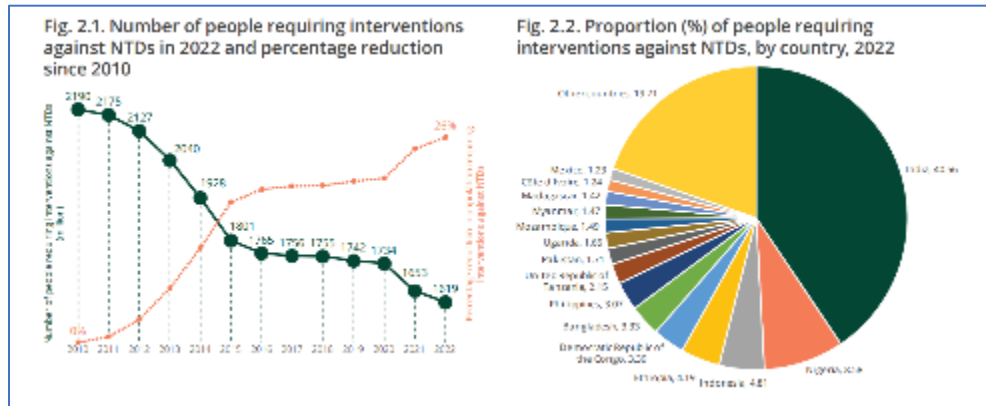
- ❖ The International Monetary Fund (IMF) has released its Regional Economic Outlook for Asia and Pacific Report April 2024.
- ❖ Asia-Pacific's growth in late 2023 surpassed expectations at 5.0%, with varying inflation rates across economies.
- ❖ Projections for 2024 suggest a slight growth slowdown to 4.5%, balancing near-term risks
- ❖ India's growth forecast for the financial year 2024-25 to 6.8% from 6.5% earlier and retained the growth forecast for 2025-26 at 6.5%.
- ❖ India was the source of repeated positive growth surprises, supported by resilient domestic demand.
- ❖ Also, Public Investment is a significant factor in driving India's economy.



Global Report on Neglected Tropical Diseases 2024

- ❖ The World Health Organization (WHO) released its Global report on neglected tropical diseases (NTD) of 2024.
- ❖ The report provides an account of the progress made in 2023 towards the implementation of the Road map for neglected tropical diseases 2021-2030.

- ❖ As of December 2023, a total of 50 countries have successfully eliminated at least one NTD, marking the halfway point towards the 2030 target of 100 countries.
- ❖ 5 countries were acknowledged by WHO for eliminating one NTD, and one country for eliminating two NTDs.
- ❖ In July 2023, Iraq became the 50th country to eliminate at least one NTD. This event marks the halfway point towards achieving the 100-country target set for 2030.
- ❖ Noma was added to the list of NTDs in 2023.
- ❖ In October 2023, Bangladesh became the first country to be validated by WHO for eliminating visceral leishmaniasis as a public health problem.
- ❖ India was certified free of NTDs like dracunculiasis and yaws.



Oxford Economics global cities index 2024

- ❖ The Oxford Index has ranked New York at the top of the list, followed by London, San Jose, Tokyo and Japan.
- ❖ The first 50 places of the index were dominated by cities in the US and Europe.
- ❖ Delhi is ranked the best among Indian cities in the Oxford Economics Global Cities Index.
- ❖ The national capital, however, ranks 350th on the global list.
- ❖ It also features several other Indian cities, including Bengaluru, Mumbai and Chennai.
- ❖ However, no Indian city could make the Top 300.
- ❖ In India, Bengaluru is ranked 411, Mumbai 427, Chennai 472, Kochi 521, Kolkata 528, Pune 534, Thrissur 550, Hyderabad 564 and Kozhikode 580.
- ❖ Tiruchirappalli (634), Coimbatore (669), Madurai (691), Vellore (729) and Salem (767) are featured from Tamil Nadu.

Rank	City	Country	Economics	Human Capital	Quality of Life	Environment	Governance
350	Delhi	India	108	91	838	973	380
411	Bengaluru	India	171	179	847	727	380
427	Mumbai	India	169	126	915	812	380
472	Chennai	India	244	189	879	763	380
521	Kochi	India	259	560	765	790	380
528	Kolkata	India	166	392	884	919	380
534	Pune	India	386	181	897	713	380
550	Thirissur	India	326	698	757	581	380
564	Hyderabad	India	253	524	882	674	380
580	Kozhikode	India	392	607	783	620	380

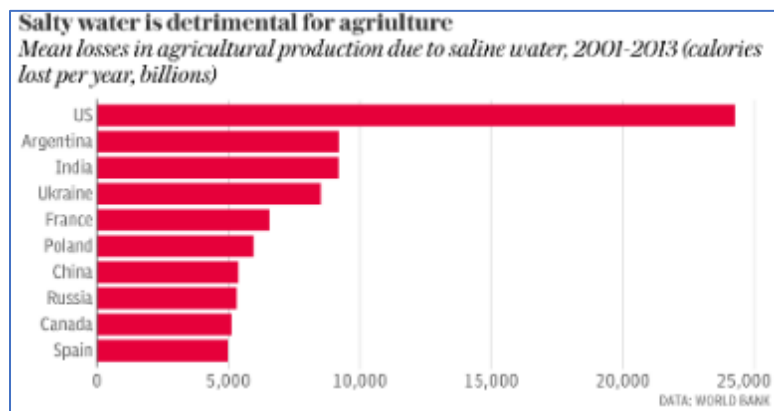
WEF Travel & Tourism Development Index 2024



- ❖ India's rank on the World Economic Forum's Travel & Tourism Development Index 2024 has risen to 39th place
- ❖ While the US topped the list, India is ranked highest in South Asia and among the lower-middle-income economies.
- ❖ After the US, Spain, Japan, France and Australia figure among the top five in the 2024 list.
- ❖ Germany was ranked 6th, followed by the UK, China, Italy and Switzerland in the top ten.
- ❖ India was ranked 54th in the previously published index in 2021.

Global Water Crisis Report

- ❖ The World Bank released the new report titled “Water for Shared Prosperity,” at the 10th World Water Forum in Bali, Indonesia.
- ❖ Approximately 2.2 billion people around the world do not have safely managed drinking water services.
- ❖ 3.6 billion people do not have safely managed sanitation services, and 2.3 billion lack basic handwashing facilities.
- ❖ China and India, with 36% of the global population, hold only 11% of freshwater, while North America, with 5% of the population, possesses 52%.
- ❖ Globally, over 800 million people are at high risk of drought, with twice as many living in flood-prone areas.
- ❖ Water-intensive sectors account for 56 per cent of jobs in low-income countries but only 20 per cent in high-income countries.
- ❖ The Democratic Republic of the Congo has more than half of Africa’s total water resources.
- ❖ Hotspots in the Sahel, Southeastern Africa, and South and Central Asia are the most water stressed.



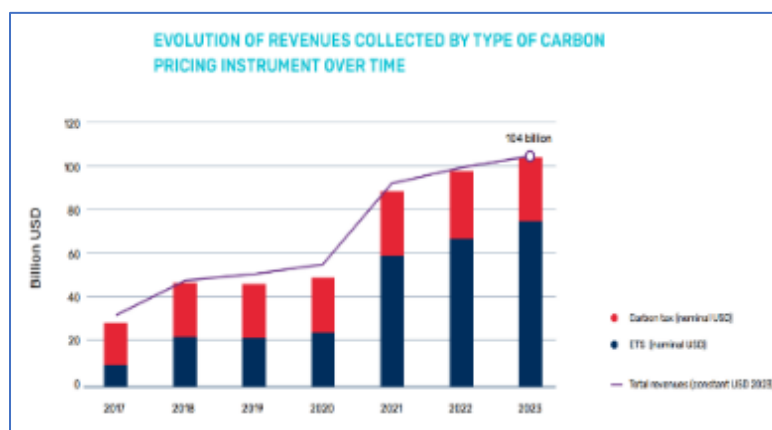
Top 10 global startup cities – 2024

- ❖ Pitch Book recently unveiled its global Venture Capital ecosystem rankings for 2024.
- ❖ It showcases the top 50 startup cities worldwide and providing insights into the development of these ecosystems.
- ❖ San Francisco is situated in Silicon Valley topped in the list.
- ❖ It is followed by New York City, USA and Beijing, China
- ❖ Two Indian cities have featured among the top 50 startup cities globally, with Mumbai at 32nd place and Bengaluru at 34th.



State and trends of carbon pricing 2024

- ❖ In 2023, carbon pricing revenues reached a record \$104 billion, according to the World Bank’s annual “State and Trends of Carbon Pricing 2024” report.
- ❖ According to the 2024 report, 24% of global emissions are now covered.
- ❖ There are 75 carbon taxes and emissions trading schemes in operation worldwide.
- ❖ Carbon pricing instruments cover around 24% of global emissions.
- ❖ Carbon taxes and emissions trading systems (ETSs) currently being considered could lift coverage to almost 30%.
- ❖ Large middle-income countries including Brazil, India, Chile, Colombia, and Türkiye are making strides in carbon pricing implementation.

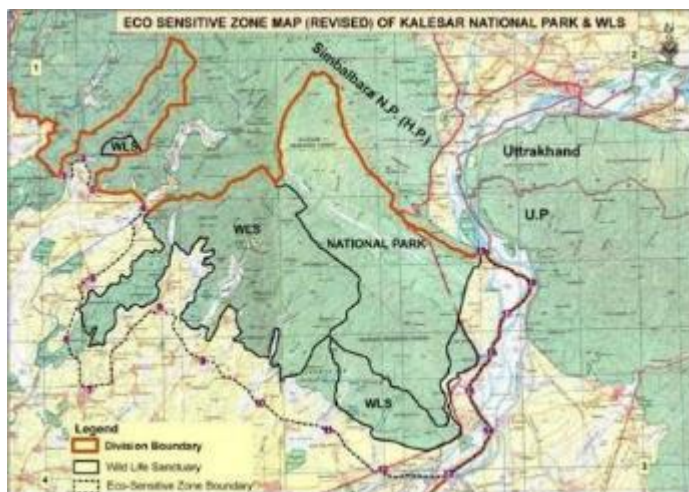


STATES

Bru Community in Lok Sabha elections

- ❖ Bru migrants, who have resettled in Tripura, voted for the Lok Sabha elections for the first time since their permanent resettlement.
- ❖ This was occurred as a result of a four-party agreement involving the central government, and the state governments of Tripura and Mizoram, back in 2020.
- ❖ They had previously taken part in the 2023 Assembly elections in Tripura.
- ❖ In previous Lok Sabha polls, Bru migrants voted at transit camp facilitation centres in 2009 and 2014, and special polling centres in Mizoram's Mamit district during 2019.
- ❖ Around 32,000 Bru, also known as Reang, fled Mizoram following ethnic clashes in 1997, seeking refuge in Tripura.
- ❖ After two decades, a quadripartite agreement was signed on July 3, 2018.
- ❖ It was aiming at repatriate 5,407 Bru families, totalling 32,876 people, from temporary camps in Tripura to Mizoram.

Kalesar Wildlife Sanctuary



- ❖ The Supreme Court stayed the construction of four proposed dams inside Kalesar Wildlife Sanctuary in Haryana's Yamunanagar district.
- ❖ The top court was hearing a plea against the construction of four dams Chikan, Kansli, Khillanwala and Ambawali within Kalesar Wildlife Sanctuary.
- ❖ It is argued that, it will have a negative impact on the flora and the fauna in the area.
- ❖ This Wildlife Sanctuary is located on the Siwalik foothills.

- ❖ It is contiguous to Rajaji National Park (Uttarakhand) and Simbalbara National Park (Himachal Pradesh).

Forest fire in Uttarakhand



- ❖ The fire, in the upper reaches of a hill in the Dhumakot area of Uttarakhand's Pauri Garhwal district.
- ❖ It is among the latest of 998 incidents of forest fires recorded by the state's forest department since November 2023.
- ❖ 68 of those between May 6 and 7 alone.
- ❖ Last season, the state recorded 773 such fires.
- ❖ The Indian Air Force deployed its Mi17 V5 helicopters to Bambi Bucket operations to provide relief.
- ❖ This specialized firefighting technique involves suspending a container beneath a helicopter, filling it from a water source, and then releasing it over the fire zone.
- ❖ Bambi Buckets are vital for tackling wildfires in inaccessible areas.
- ❖ To prevent the forest fire, the government is working on the 'Pirul Lao-Paise Pao' (bring pine leaves and get money) mission.

Nerium oleander – Kerala

- ❖ After the death of a 24-year-old woman, two Kerala government-controlled temple boards, which together manage 2,500-odd temples in the state, have banned use of oleander (*arali*) flowers.
- ❖ Nerium oleander, commonly known as oleander or rosebay, is a plant cultivated worldwide in tropical, subtropical, and temperate regions.
- ❖ It is known for its drought tolerance; the shrub is often used for ornamental and landscaping purposes.
- ❖ There are different varieties of oleander, each with a flower of a different colour.

- ❖ An oil prepared from the root bark can be used to treat skin diseases.
- ❖ Even though it is prescribed in some ayurvedic formulations, oleander's toxicity has also long been recognised across the world.
- ❖ Moreover, ingestion or inhalation of smoke from burning oleander can also be intoxicating.



Thirthahalli Arecanut

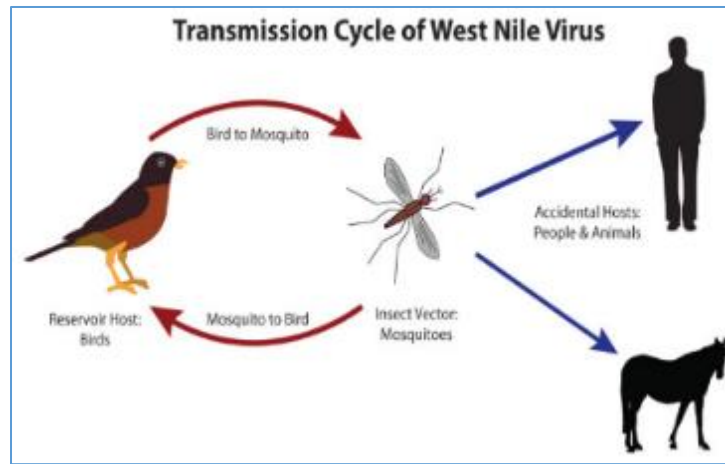
- ❖ The arecanut grown in the Tirthahalli region emerged as the best quality areca among the varieties grown in Karnataka.
- ❖ Tirthahalli is a traditionally areca growing area.
- ❖ The climate conditions also add value to the product.
- ❖ It will not be the same if it is taken out from the region and cultivated somewhere else.



West Nile Virus – Kerala

- ❖ The West Nile virus (WNV), a mosquito-borne arbovirus of the family Flaviviridae, has become a cause of concern across Kerala.
- ❖ West Nile virus is a single-stranded RNA virus transmitted mainly by mosquitoes.
- ❖ It shares similarities with viruses causing Japanese encephalitis and yellow fever.
- ❖ The virus gets transmitted from person to person through the biting of infected Culex mosquitoes.

- ❖ They acquire the virus from infected birds (mostly migratory).
- ❖ It also infects humans, horses and other mammals.



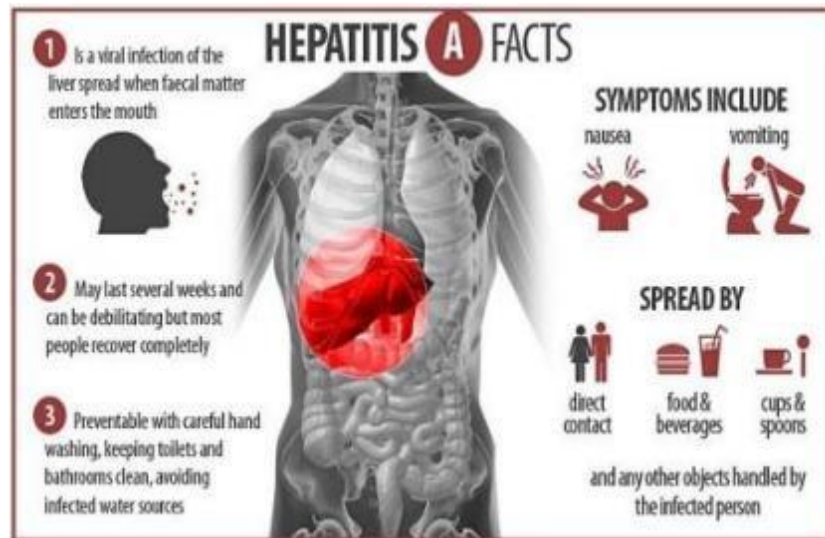
Giant Shrike - first sighting in India

- ❖ In a first record of its sighting in India, the Giant Shrike was sighted near Tawang in Arunachal Pradesh.
- ❖ This bird commonly found in the high-altitude regions of China.
- ❖ Giant grey shrikes are found at high elevations, in open habitats with shrubs and migrate to lower elevations during winters.



Hepatitis A - Outbreak

- ❖ There have been reports of a massive outbreak of Hepatitis A in Kerala's Malappuram district, with about 8,000 cases and 12 deaths.
- ❖ Hepatitis A is a liver infection caused by a highly contagious virus.
- ❖ In 99% of cases, the infection goes away on its own and does not damage the liver permanently.
- ❖ The main way the Hepatitis A virus gets from feces to mouth is through contaminated food or water.



SC on Sariska Tiger Reserve



- ❖ The Supreme Court has ordered the Rajasthan government to shutter 68 mines operating within a 1-kilometre periphery of the critical tiger habitat (CTH) of the Sariska reserve.
- ❖ Both the Wildlife Protection Act, 1972 and Environment Protection Act, 1986 prohibit quarrying in and around a tiger reserve.
- ❖ In May 2005, the SC ordered the CBI to investigate the disappearance of tigers from the reserve in the Aravalli roughly halfway between Delhi and Jaipur.
- ❖ That was almost a decade and a half after the court first took up the issue of illegal mining in Sariska.
- ❖ In April 1993, the SC ordered the closure of 262 mines within that area.
- ❖ In September 2005, the SC laid down rules for issuing temporary mining permits in forest areas.

- ❖ But the mines were back in business in 2008 after the Rajasthan government claimed that the sanctuary boundary had been demarcated, and allowed quarries outside the 100-metre periphery of the sanctuary.

OBCs Reservation in West Bengal and Punjab

In Need of Corrective Action

West Bengal

Rohingyas and Bangladeshi immigrants have got OBC certificates

118 of the 179 castes in the state OBC list are from Muslim community

I would like to clearly state that the commission has no bias against any community but we asked the state (West Bengal) how there is a distinct bias in favour of the Muslim community
Hansraj Gangaram Ahir, NCBC chairman

Rajasthan

In seven districts, not a single person has got OBC reservation benefits

State taking the income of the entire family (including brothers and sisters and not just parents) to give OBC certificates, making several people ineligible for non-creamy layer OBC certificate

Bihar

From 1993 to 2023, the state included agricultural income of class III and IV employees to calculate income and give non-creamy layer OBC certificates.

Bihar giving flawed certificates to those belonging to Kurmi caste.

Punjab

OBCs have 12% reservation and SCs 25%, which takes the total quantum to 37% while the state can give 50% reservation

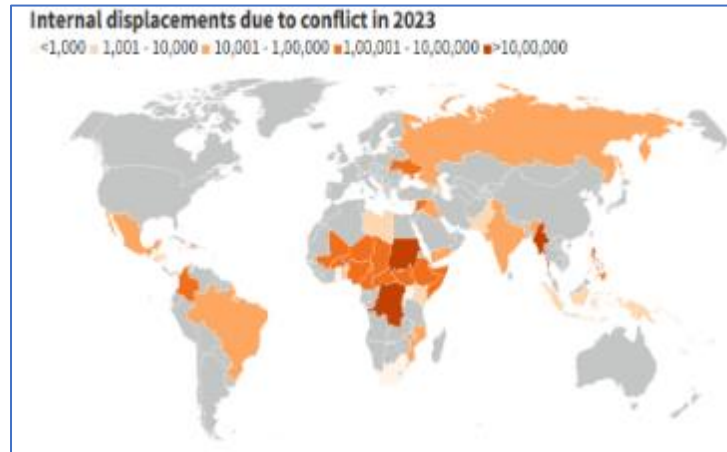
State told to increase the percentage of OBC reservation from 12% to 25%

- ❖ The National Commission for Backward Classes (NCBC) has recommended an increase in the reservation quota for Other Backward Classes (OBCs) in public employment in Punjab and West Bengal.
- ❖ Currently, Punjab allocates 25% of public employment positions to Scheduled Castes and 12% to OBCs, totalling 37% reservation.
- ❖ The NCBC has proposed enhancing the OBC quota by an additional 13%, bringing the total OBC reservation in public employment to 25%.
- ❖ As on date, 143 communities were included in the State List of OBCs out of which 83 castes/communities belonged to Muslim religion.
- ❖ A total of 179 OBC communities are enlisted in the State list of OBCs in West Bengal.

Manipur Displacement 2023

- ❖ Conflict and violence triggered 69,000 displacements in South Asia in 2023, with Manipur violence alone accounting for 67,000, according to a new report.
- ❖ It is the highest number of displacements triggered by conflict and violence in India since 2018.

- ❖ More than three-quarters of the movements took place within Manipur.
- ❖ Almost a fifth were moved to the neighbouring state of Mizoram and smaller numbers to Nagaland and Assam.



PERSONALITIES, AWARDS AND EVENTS

Human Exploration Rover Challenge 2024 Awards



- ❖ Nasa awarded two Indian students' teams from Delhi-NCR and Mumbai for the human exploration rover challenge.



- ❖ The KIET Group of Institutions from Delhi-NCR won the award in “Crash and Burn”.
- ❖ Kanakia International School from Mumbai received the “Rookie of the Year” award.
- ❖ Parish Episcopal School of Dallas in the United States won first place in the high school division.

Subramanya Dhareshwar

- ❖ Yakshagana thespian Subrahmanya Dhareshwar (67) passed away recently.
- ❖ He had earned the fame of 'Bhagavata Shrestha' for his scintillating voice.
- ❖ He served 46 years in the field of Yakshagana, a unique dance form from coastal Karnataka.
- ❖ It involves distinct singing, dancing and drama style that has resemblance with the Theyyam art form of neighbouring Kerala.

2024 Pulitzer Prize Winners

- ❖ The Columbia University hosted the 108th Pulitzer Prizes ceremony.
- ❖ It is widely regarded as the pinnacle of achievement in their respective fields within the United States.
- ❖ The New York Times clinched one of its three Pulitzer Prizes for its comprehensive coverage of the Gaza conflict.
- ❖ Some other winners
 - Fiction - Night Watch by Jayne Anne Phillips (Knopf)
 - Drama - Primary Trust by Eboni Booth
 - Poetry - Tripas: Poems by Brandon Som (Georgia Review Books)
 - Special Citations: - Greg Tate and Journalists and media workers covering the war in Gaza.

Forbes 30 under 30 Asia 2024

- ❖ Forbes has released the ninth edition of the 30 Under 30 Asia list.
- ❖ 86 Indians have grabbed the spot among 300 people.
- ❖ The list featured young entrepreneurs, leaders, and trailblazers across the Asia-Pacific region in 10 categories.
- ❖ It is including art, entertainment, sports, finance, and venture capital.

- ❖ A trio from IIT Kanpur who made it to the list.
- ❖ Pratyush Rai, Siddhartha Saxena and Sirsendu Sarkar, co-founders of Merlin, have made it under Consumer Technology.

Forbes World Highest paid athletes 2024

1. Cristiano Ronaldo	\$260M
2. Jon Rahm	\$218M
3. Lionel Messi	\$135M
4. LeBron James	\$128.2M
5. Giannis	\$111M
6. Kylian Mbappé	\$110M
7. Neymar	\$108M
8. Karim Benzema	\$106M
9. Stephen Curry	\$102M
10. Lamar Jackson	\$100.5M



- ❖ According to Forbes' list Cristiano Ronaldo tops Forbes' list of the world's highest-paid athletes.
- ❖ He is followed by Jon Rahm (golf), Lionel Messi (soccer) and LeBron James (basketball).
- ❖ For the first time, the top-10 highest paid athletes have each earned more than \$100 million.
- ❖ No women have ranked inside the top 50 of Forbes' list for the first time since 2019.

International Booker Prize 2024

- ❖ German writer Jenny Erpenbeck and translator Michael Hofmann have won the International Booker Prize.
- ❖ The novel Kairos was written by Jenny and translated by Michael.
- ❖ This is formerly known as the Man Booker International Prize, established in 2005.
- ❖ It is awarded annually for a single book translated into English and published in the United Kingdom or Ireland.
- ❖ The prize aims to promote global fiction and celebrates the work of translators.

Tenure of Army Chief Gen Pande

- ❖ The Appointments Committee of Cabinet granted one month extension in tenure to Chief of the Army Staff Gen Manoj Pande beyond his retirement date, up to June 30, 2024.
- ❖ Normally, for Service Chiefs the tenure is 62 years of age or three years whichever is earlier.
- ❖ There is only such instance in the past.
- ❖ In 1975 then Army Chief Gen G.G. Bewoor was given a one-year extension by Indira Gandhi-led Government.

SPORTS

Elorda Cup 2024

- ❖ The Indian boxing contingent made a remarkable impact at the 3rd Elorda Cup 2024 of Astana, Kazakhstan.
- ❖ Two-time world champions Nikhat Zareen and Minakshi won two gold medals for India.
- ❖ Anamika (50 kg) and Manisha (60 kg) claimed silver medals for India.
- ❖ Totally Indian men won 4 medals, while the women boxer bagged 8 medals.
- ❖ Indian contingent finished the Elorda Cup with 12 medals—2 gold, 2 silver, and 8 bronze.



ICC Men's T20 World Cup Brand Ambassador

- ❖ The International Cricket Council (ICC) has appointed the legendary Pakistani cricketer Shahid Afridi as the brand ambassador for the upcoming 9th ICC Men's T20 World Cup.
- ❖ This will be co-hosted by the West Indies and the United States of America.
- ❖ Afridi joins an esteemed group of brand ambassadors, including Indian cricketer Yuvraj Singh, West Indian icon Chris Gayle, and Jamaican sprinter Usain Bolt.



IMPORTANT DAYS

International Labour /May Day 2024 - May 01

- ❖ In 1886, a large demonstration was happened in America where the labours demanded eight hours of work on a daily basis.
- ❖ Following the bombing of a labour gathering in Haymarket Square in Chicago, workers across the US banded together to demand their rights and fight for improved working conditions.
- ❖ In 1889, the Second International, a global association of socialist and labour parties, met in Paris and declared this day.
- ❖ In India, the first Labour Day was celebrated on May 1, 1923, in Madras.
- ❖ The Labour Kisan Party of Hindustan was initiated and Comrade Singaravelar led the celebrations.



Maharashtra and Gujrat Day 2024 - May 01

- ❖ After the Independence, Bombay was recognised as a state which consisted of people speaking Marathi, Gujarati, Konkani, and Kutchi.
- ❖ This was recognised under the State Recognition Act, 1956.
- ❖ However, soon this led to commotion and distress.
- ❖ Linguistic differences between the people of Bombay shook the sanctity of the state, leading to problems.
- ❖ Bombay Reorganisation Act was charted out by the Government of India.
- ❖ On May 1st of 1960, Gujarat and Maharashtra were recognised as two different states.



World Tuna Day 2024 - May 02

- ❖ It is dedicated to raise the awareness about the critical importance of tuna conservation.
- ❖ Tuna is popular for its numerous health benefits, as it provides Omega-3 fatty acids, protein and vital vitamins.
- ❖ These migratory tuna species account for 20 percent of the value of all marine capture fisheries and over 8 percent of all globally traded seafood.

Press Freedom Day 2024 - May 03

- ❖ The anniversary of the Declaration of Windhoek is celebrated as World Press Freedom Day.
- ❖ This day was proclaimed by the UN General Assembly in December 1993, following the recommendation of UNESCO's General Conference.
- ❖ The theme for 2024 is “A Press for the Planet: Journalism in the Face of the Environmental Crisis.”

International Sun Day 2024 - May 03



- ❖ This day is dedicated to raise the awareness about the importance of solar energy and the need to use renewable energy sources.
- ❖ It was first proposed by Denis Hayes, who also founded Earth Day, in 1978.
- ❖ Sun Day was first celebrated on April 22, 1978.

Coal Miners' Day 2024 - May 04

- ❖ It honours the hard work and sacrifices of coal miners around the world.

- ❖ The day reminds us of its vital role in providing energy for homes, industries, and communities.
- ❖ The history of Coal Miners Day dates back to the opening of the first coal mine in Scotland in 1575.
- ❖ In India, the first coal mine was established in 1774 at the Raniganj Coalfield.



International Firefighters Day 2024 - May 04

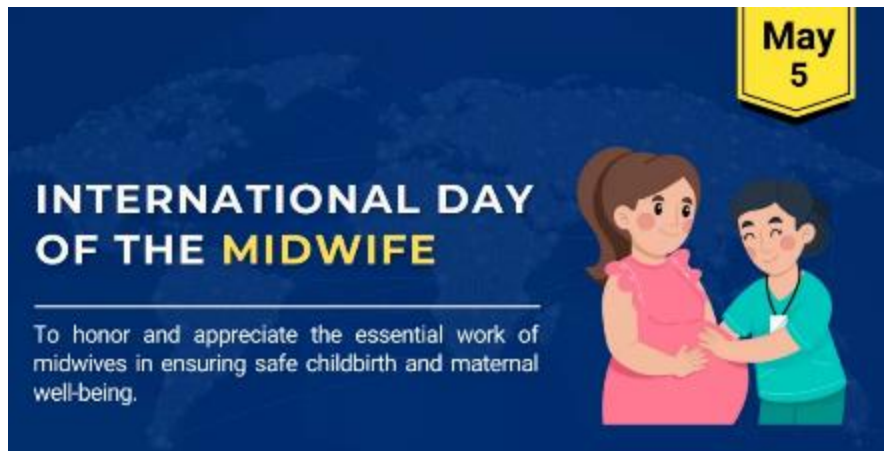
- ❖ It aims to honour the heroes who risk their lives to safeguard their communities.
- ❖ It serves as a day to recognise and appreciate the sacrifices of firefighters who protect their communities and save lives while putting their own in danger.
- ❖ This date was chosen for its connection to the feast day of St Florian - the patron saint of all firefighters.
- ❖ On December 2nd, 1998, five firefighters lost their lives while battling a fierce wildfire in Linton, Victoria.

World Hand Hygiene Day 2024 - May 05

- ❖ This global event aims to promote the importance of hand hygiene in preventing the spread of diseases and infections.
- ❖ This campaign, launched in 2009, aims to 'bring people together' in support of hand hygiene globally.
- ❖ The theme for the year 2024 is “Promoting knowledge and capacity building of health and care workers through innovative and impactful training and education, on infection prevention and control, including hand hygiene.”



International Day of the Midwife 2024 - May 05



- ❖ It was announced in 1992 by the International Confederation of Midwives (ICM) to celebrate services of Midwives.
- ❖ This day honours the vital role Midwives play in providing care to women during pregnancy, childbirth and postpartum.
- ❖ This year's theme is 'Midwives: A Vital Climate Solution'.

International Leopard Day - May 03

- ❖ It aims to raise the awareness about the leopards and their protection and its conservation.

- ❖ The leopard (*Panthera pardus*) is the smallest of the Big Cat family.
- ❖ IUCN Red List status of leopard is Vulnerable.
- ❖ India's leopard population rose by 8% from 12,852 in 2018 to 13,874 in 2022.
- ❖ About 65% of the leopard population is present outside protected areas in the Shivalik landscape.
- ❖ Madhya Pradesh has the highest number of leopards (3,907), followed by Maharashtra, Karnataka, and Tamil Nadu.

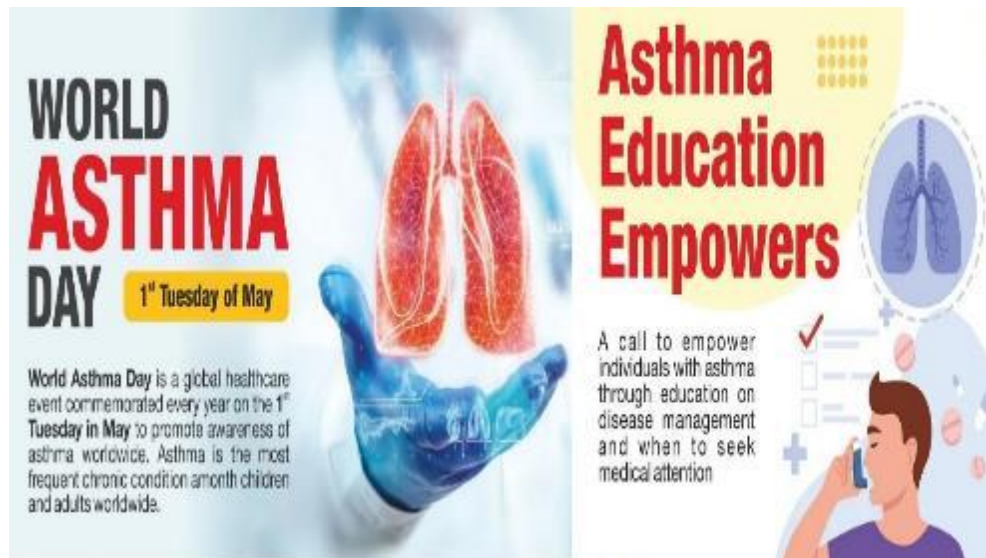


World Athletics Day 2024 - May 07

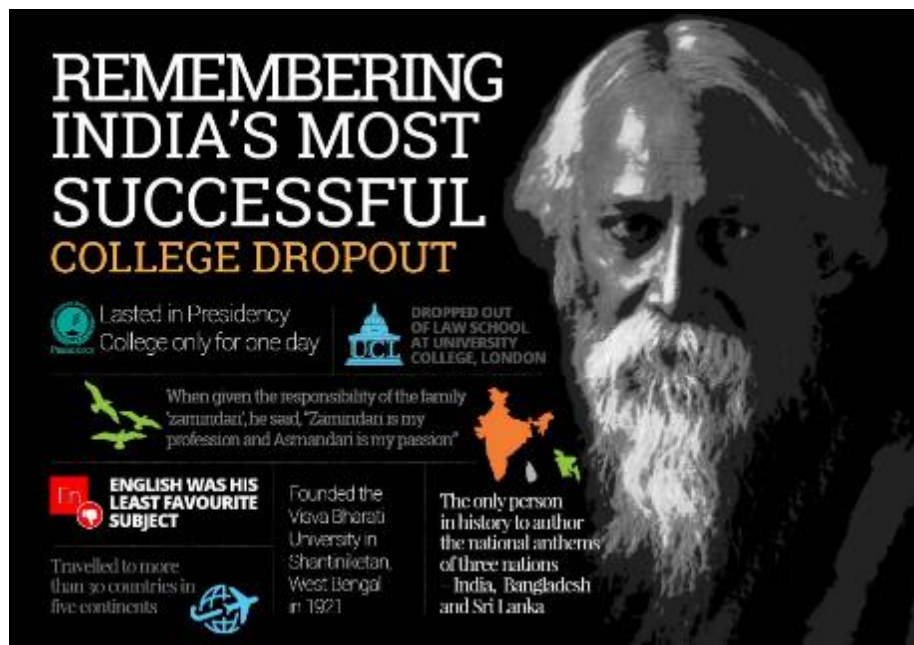
- ❖ The International Association of Athletics Federations (IAAF) was founded in Stockholm, Sweden on July 17, 1912.
- ❖ Since 2019, the organisation is referred to as World Athletics.
- ❖ The first World Athletics Day was celebrated on 1996.
- ❖ The theme for 2024 is 'World Mile Challenge'.

World Asthma Day 2024 - May 07

- ❖ Every year, World Asthma Day is observed on the first Tuesday of the month of May.
- ❖ The Global Initiative for Asthma (GINA) was established in 1993.
- ❖ The first World Asthma Day was observed in the year 1998.
- ❖ This day aims to spreading awareness about the challenges faced by people suffering from Asthma.
- ❖ The theme for 2024 is “Asthma Education Empowers”.



Rabindranath Tagore Jayanti 2024 - May 07



- ❖ On May 7, 1861, Rabindranath Tagore was born in Jorasanko Thakurbari in Kolkata.
- ❖ He is a versatile poet, songwriter, playwright, novelist, author and a philosopher.
- ❖ He became the first non-European to receive Nobel Prize for Literature in the year 1913.
- ❖ He also wrote the national anthems for India, Bangladesh and Sri Lanka.

World cartoonist day 2024 - May 05



- ❖ This day is dedicated to celebrating the remarkable contributions of cartoonists across the globe.
- ❖ The National Cartoonists Society (NCS) was established in 1946.
- ❖ This date was chosen to acknowledge the first appearance of the mischievous cartoon character “The Yellow Kid”.
- ❖ This was appeared in the New York World newspaper on May 5, 1895.

65th BRO Raising Day 2024 - May 07

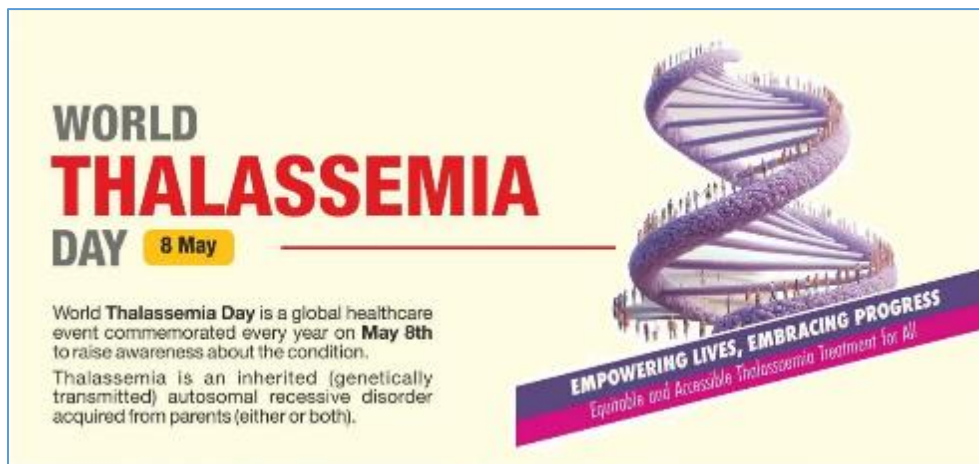
- ❖ The Border Roads Organisation was established on May 7, 1960.
- ❖ It operates under the Ministry of Defence.
- ❖ BRO is renowned for its unwavering dedication to constructing and maintaining roads, bridges, and tunnels in some of the world’s most challenging and inhospitable terrains.
- ❖ It has emerged as a premier infrastructure construction agency, specializing in high-altitude and snow-bound areas.
- ❖ This year’s theme will be “Harnessing Technology for the Expedited Infrastructure Development.”

World Red Cross and Red Crescent Day 2024 - May 08

- ❖ It aims to honour the humanitarian work and principles of the International Red Cross and Red Crescent Movement.
- ❖ It all starts with Henry Dunant, a Swiss businessman who witnessed the horrors of the Battle of Solferino in Italy in 1859.

- ❖ Dunant's ideas gained momentum, leading to the formation of the International Committee of the Red Cross (ICRC) in 1863.
- ❖ In 1946, the idea of celebrating the birth anniversary of Henry Dunant, May 8th, as a day to honour the Red Cross Movement was put forward.
- ❖ Two years later, the first World Red Cross Day was celebrated.
- ❖ The theme for 2024 is “I give with joy, and the joy I give is a reward.”

World Thalassaemia Day 2024 - May 08



- ❖ It aims to debunk misconceptions surrounding the disease and advocate for enhanced research towards improved treatment and care options.
- ❖ Thalassaemia stands as an inherited disorder marked by diminished levels of haemoglobin and a reduced count of red blood cells compared to the normal.
- ❖ Haemoglobin is the protein responsible for carrying oxygen.
- ❖ This day was inaugurated by the Thalassaemia International Federation (TIF) in 1994.
- ❖ The theme for 2024 is “Empowering Lives, Embracing Progress: Equitable and Accessible Thalassaemia Treatment for All.”

World Migratory Bird Day 2024 - May 11

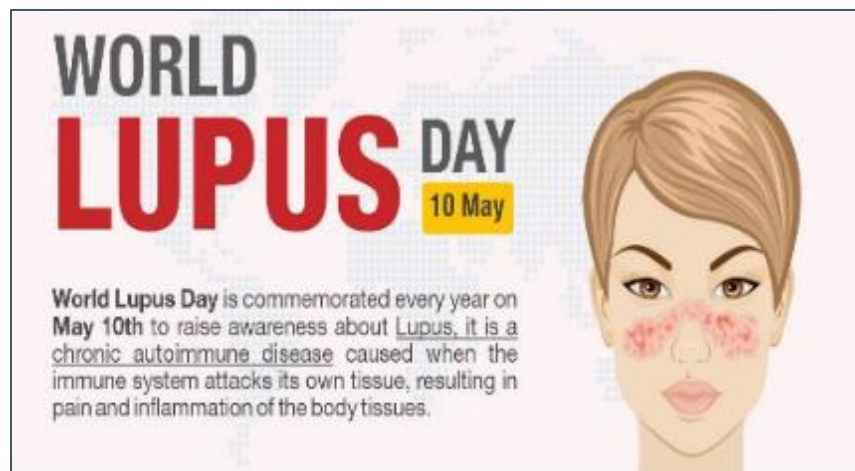
- ❖ This day is celebrated every year in May and October.
- ❖ This year, it falls on 11 May and 12 October, due to the varying cyclic patterns of bird migration in different hemispheres.
- ❖ This is an annual awareness-raising campaign to highlight the necessity of conserving migratory birds and their habitats.
- ❖ The theme of 2024 is 'Protect Insects, Protect Birds.'



Maharana Pratap Jayanti 2024 - May 09

- ❖ According to the Julian calendar, Maharana Pratap was born on May 9, 1540.
- ❖ Maharana Pratap was a Hindu Rajput King of Mewar, Rajasthan.
- ❖ He belonged to the Sisodiya clan of Rajputs and is known as one of the revered kings to have ruled this country.
- ❖ He is famously known for his Battle of Haldighati where he fought against Mughal Emperor Akbar.
- ❖ In January 1597, Maharana Pratap had sustained a lot of injuries and died on January 29th.

World Lupus Day 2024 - May 10



- ❖ This day is dedicated to people worldwide who suffer from this debilitating disease and struggle with multiple symptoms across their body.
- ❖ Lupus is an autoimmune disease makes your body's immune system attack your own tissues and organs due.
- ❖ This inflammation can affect joints, skin, kidneys, blood cells, brain, heart and lungs.
- ❖ Almost 5 million people worldwide suffer from Lupus, with 1.5 million of them living in the United States alone.

National Technology Day 2024 - May 11



- ❖ This day commemorate the successful nuclear test in 1998.
- ❖ Indian Army conducted five nuclear bomb tests under the name – Pokhran II – in Rajasthan.
- ❖ The tests were led by the Mission Man of India – Dr APJ Abdul Kalam.
- ❖ After the huge success of the Pokhran II test, India was announced the sixth nuclear country in the world.
- ❖ The following year, on May 11, 1999, the Council for Technology organised the inaugural celebration of National Technology Day.

International Nurse Day 2024 - May 12

- ❖ This day marks the birth anniversary of Florence Nightingale who laid the foundation of modern nursing.

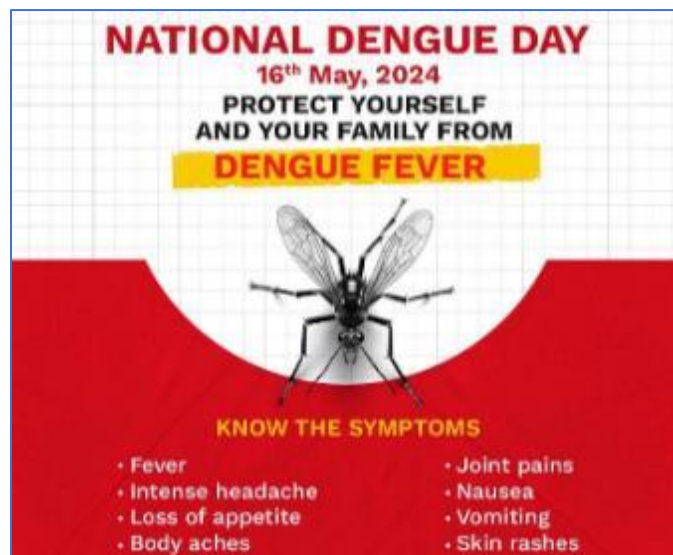
- ❖ International Nurses Day aims to highlight the importance of nurses in the healthcare sector.
- ❖ It also acts as an opportunity to thank nurses for their efforts and for taking care of patients around the clock.
- ❖ The theme for 2024 is “Our Nurses. Our Future. The economic power of care”.

International Day of Families 2024 - May 15

- ❖ The day promotes family well-being and awareness about the social, economic, and demographic changes that impact families.
- ❖ UNGA established this day in 1993 to raise awareness of family-related issues.
- ❖ Theme for 2024 is “Families and Climate Change”.



National Dengue Day 2024 - May 16





- ❖ It aims to increase public awareness about the spread, prevention and treatment of the disease.
- ❖ Dengue (Den-gee) is a vector-borne viral disease transmitted to humans through the bite of infected female mosquitoes of Aedes Species (Aedes Aegypti).
- ❖ The dengue virus comprises four distinct serotypes (DEN-1, DEN-2, DEN-3 and DEN-4).
- ❖ In 2023, approximately ninety-four thousand cases were reported and ninety-one deaths were reported of dengue fever.
- ❖ The theme for this year is “Dengue Prevention: Our Responsibility for a Safer Tomorrow”.

International Day of Light 2024 - May 16

- ❖ It aims to recognise the significance of light and light-based technologies in revolutionising our society and various aspects of our daily lives.
- ❖ This day commemorates the first successful operation of the laser by physicist and engineer Theodore Maiman in 1960.
- ❖ This year’s theme is ‘Light in Our Lives’.

World Telecommunication Day 2024 - May 17

- ❖ This day commemorates the foundation of the International Telecommunication Union and the signing of the first International Telegraph Convention in 1865.
- ❖ It aims to raise awareness about the benefits that the Internet and other information and communication technologies (ICTs) can offer to society and economies.
- ❖ This day is also known as World Information Society Day
- ❖ This year’s theme is “Digital Innovation for Sustainable Development.”

International Day Against Homophobia, Biphobia and Transphobia 2024 - May 17

- ❖ This day marks a celebration of sexual and gender diversity.
- ❖ The meaning of homophobia is irrational fear of, aversion to, or discrimination against homosexuality or gay people.
- ❖ Biphobia is aversion toward bisexuality or people who are identified or perceived as being bisexual.
- ❖ Transphobia, in basic terms, refers to any expression of fear or hatred directed toward folks who are transgender.

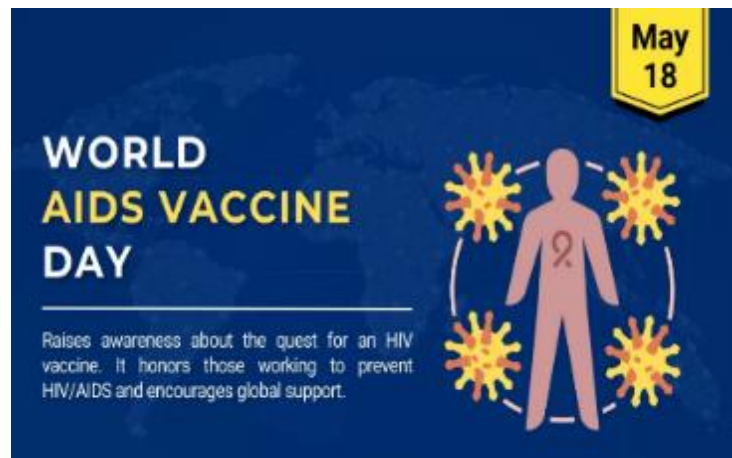
- ❖ The theme of this year celebration is: “No one left behind: equality, freedom, and justice for all”.

World Hypertension Day 2024 - May 17

- ❖ It aims to raise awareness of the prevention, detection and treatment of high blood pressure.
- ❖ High blood pressure is the primary risk factor for developing cardiovascular disease.
- ❖ This day was launched on May 14, 2005, by the World Hypertension League (WHL).
- ❖ Since 2006, May 17 of every year has been dedicated as World Hypertension Day.
- ❖ The theme for this year is, “Measure Your Blood Pressure Accurately, Control It, Live Longer!”.

World AIDS Vaccine Day 2024 - May 18

- ❖ It serves as a global initiative to raise awareness about the urgent need for a vaccine to prevent HIV infection and AIDS.
- ❖ This day commemorates the anniversary of a speech given by then-US President Bill Clinton on May 18, 1997.
- ❖ The first World AIDS Vaccine Day was observed on May 18, 1998.



International Museum Day 2024 - May 18

- ❖ It aims to raise public awareness of museums.
- ❖ The inaugural International Museum Day was organised in 1977 by ICOM, International Council of Museums.
- ❖ The theme for this year is “Museums for Education and Research”.

World Metrology Day 2024 - May 20

- ❖ This day commemorates the signing of the Metre Convention on 20 May 1875.
- ❖ Metrology is the scientific study of measurement.
- ❖ By the Convention, the International Bureau of Weights and Measures (BIPM) was established.
- ❖ BIPM is an organisation focused on promoting the usage of a standardised measurement system.
- ❖ This led to the development of International Prototype of the Kilogramme (IPK) as the standard unit of mass.
- ❖ International Prototype of the Metre (IPM) was chosen as the standard unit of length.
- ❖ The theme for World Metrology Day 2024 is Sustainability.



International Astronomy Day 2024 - May 18

- ❖ It is observed to honour and celebrate the importance of the universe.
- ❖ The day is celebrated twice a year in order to observe the events that occur in space.
- ❖ In 2024, International Astronomy Day will be observed on May 18 in the spring and October 12 in the autumn.
- ❖ This day was initiated by Doug Berger in 1973, who was the president of the Astronomical Association of Northern California at the time.



World Bee Day 2024 - May 20

- ❖ To raise awareness of the importance of pollinators, the threats they face and their contribution to sustainable development, the UN designated this day.
- ❖ This date is coinciding with the birthday of Anton Janša (1734-1773).
- ❖ He is in the 18th century pioneered modern beekeeping techniques in his native Slovenia and was the first beekeeping teacher at the imperial court in Vienna.
- ❖ The theme for 2024 is “Bee Engaged with Youth.”

National Anti-Terrorism Day 2024 - May 21



- ❖ It aims to raise awareness around the ill effects of terrorism and violence on the society.
- ❖ It is observed every year to commemorate the death anniversary of former Prime Minister Rajiv Gandhi, the sixth PM of India.
- ❖ He was assassinated on May 21, 1991 at Sriperumbudur, by a suicide bomber.

World Day for Cultural Diversity for Dialogue and Development 2024 - May 21

- ❖ The goal of the Day is to encourage people to bridge the gap between diverse cultures of different nations, regions and people.
- ❖ In 2001, UNESCO adopted the Universal Declaration on Cultural Diversity.
- ❖ It was first celebrated in 2002.
- ❖ The cultural and creative sector is accounts for more than 48 million jobs globally – almost half of which are held by women.
- ❖ It is representing 6.2% of all existing employment and 3.1% of global GDP.
- ❖ It is also the sector that employs and provides opportunities for the largest number of young people under the age of 30.



International Day for Biological Diversity 2024 - May 22

- ❖ It was established by the Second Committee of the UN General Assembly in 1993.
- ❖ Initially, it was celebrated on December 29 to mark the day the Convention on Biological Diversity came into effect.
- ❖ However, on December 20, 2000, the date was changed to May 22 to commemorate the adoption of the Convention at the Rio de Janeiro Earth Summit in 1992.
- ❖ This year's theme is "Be Part of the Plan."

International Day to End Obstetric Fistula 2024 - May 23

- ❖ It aims to improve maternal and newborn health and with the goal of making obstetric fistula as rare in developing countries as in the developed world.
- ❖ Obstetric fistula is one of the most serious and tragic injuries that can occur during childbirth.

- ❖ It is a hole between the birth canal and the bladder or rectum caused by prolonged, obstructed labour without access to timely, high-quality medical treatment.
- ❖ An estimated 2 million women in sub-Saharan Africa, Asia, the Arab region, and Latin America and the Caribbean are living with this injury.
- ❖ Some 50,000 to 100,000 new cases develop worldwide each year.
- ❖ This year's theme is "Breaking the Cycle: Preventing Fistula Worldwide".



World Turtle Day 2024 - May 23

- ❖ It aims to raise awareness about the lifestyle and habitat of turtles as well as tortoises and urge people to understand them better and contribute to their wellbeing.
- ❖ It was started in the year 2000 by American tortoise Rescue as a way of urging people to come together to understand tortoises and turtles better.
- ❖ Turtles and tortoises are different creatures, even though sometimes they are mistaken for one another.
- ❖ Except for Antarctica, Turtles are highly adaptable and may be found on every continent.
- ❖ Southeastern North America and South Asia are home to most turtle species.



International day for women in maritime 2024 - May 18

- ❖ This annual event was initiated by the International Maritime Organization (IMO) of the United Nations.
- ❖ The purpose of this day is to highlight women's participation in the industry and emphasize the efforts to include more women.
- ❖ This industry includes shipping companies, shipyards, equipment, and service providers, ensures value creation and employment along the entire coast.
- ❖ This year's theme is "Safe Horizons: Women Shaping the Future of Maritime Safety".

Commonwealth Day 2024 - May 24

- ❖ It aims to commemorate the common history, diversity, and shared values among the Commonwealth's member states.
- ❖ The Commonwealth Day was originally celebrated on May 24th (Queen Victoria's birthday).
- ❖ But due to decolonisation and other factors, it was later changed to the second Monday of March.
- ❖ The United Kingdom, Australia and Canada celebrate it on the 2nd Monday in March.
- ❖ On May 24th, India celebrates it along with countries like Belize.
- ❖ India is the largest member state of the Commonwealth, with nearly 60% of the total population of the association.

Africa Day 2024 - May 25



- ❖ It commemorates the founding of the Organisation of African Unity (now known as the African Union) on this day in 1963.
- ❖ It is formally known as African Freedom Day and then African Liberation Day.
- ❖ Its origin lies in the collective African resistance to colonialism and economic exploitation.
- ❖ The African Union today strives to represent a vibrant continent of 1.2 billion people.

International Day of the Markhor 2024 - May 24



- ❖ The UN General Assembly has proclaimed 24 May the International Day of the Markhor and it celebrated for the first time in 2024.

- ❖ The markhor (*Capra falconeri*) is an iconic and ecologically significant species found across the mountainous regions of Central and South Asia.
- ❖ The region includes Afghanistan, India, Pakistan, Tajikistan, Turkmenistan and Uzbekistan.
- ❖ The markhor was categorized as “near threatened” in IUCN Red List.

World Schizophrenia Awareness Day 2024 - May 24



- ❖ It aims to bring the global attention to the challenges faced by people with schizophrenia and their families.
- ❖ The day May 24th was chosen, in honour of Dr Philippe Pinel, a French physician.
- ❖ He is considered a pioneer in the humane treatment of psychiatric patients.
- ❖ Schizophrenia is a severe mental health disorder that impacts a person's ability to think, feel, and behave clearly.
- ❖ The theme for 2024 is “Celebrating the Power of Community Kindness.”

International Missing Children's Day 2024 - May 25

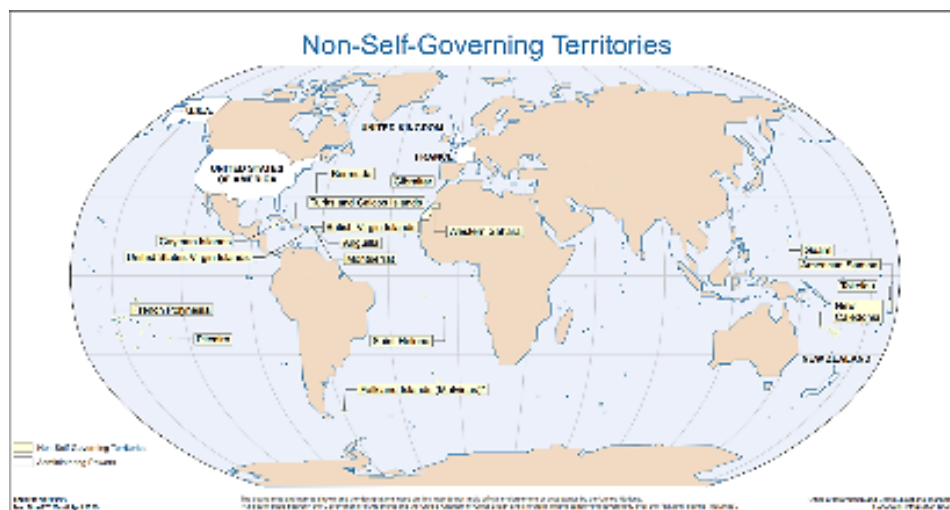
- ❖ It aims to spotlight the plight of missing children, raise awareness, and reinforce the ongoing efforts to reunite families.
- ❖ This started with the case of 6-year-old Etan Patz in New York City on May 25, 1979, who was abducted from the bus while heading to school.
- ❖ In 1983, President Ronald Reagan declared National Missing Children’s Day to recognize the countless children who vanish annually.

- ❖ More than 47,313 children are missing in India, according to the latest data from the National Crime Records Bureau (NCRB), with 71.4 per cent of these being minor girls.
- ❖ Data for 2022 showed that the West Bengal had the highest number of missing children — 12,455 (1,884 boys and 10,571 girls).



International Week of Solidarity with the Peoples of Non-Self-Governing Territories 2024 – May 25/31

- ❖ In the UN Charter, a Non-Self-Governing Territory is defined as a Territory “whose people have not yet attained a full measure of self-government.”
- ❖ In 1946, eight Member States listed 72 territories under their administration, which they considered to be non-self-governing.



- ❖ Eight became independent before 1959.

- ❖ In 1963, the Assembly approved a revised list of 64 territories to which the 1960 Declaration on Decolonization applied.
- ❖ From 1960 to 2002, 54 territories attained self-government.
- ❖ At present, there are 17 Non-Self-Governing Territories remaining.

World Football Day 2024 - May 25

- ❖ On 25 May 1924, all the regions of the world were represented in the 1924 Paris Summer Olympics football event.
- ❖ This year's Summer Olympics in Paris marked the 100th anniversary of the 1924 football event.
- ❖ FIFA was set up in 1902 which gradually became the world governing body of football.
- ❖ FIFA has 211 members which is more than the members of the United Nations.
- ❖ Football was introduced in the Paris Summer Olympics in 1900.
- ❖ Women's football was introduced at the Atlanta Summer Olympics in 1996.

International Day of Action for Women's Health 2024 - May 28

- ❖ It aims to raise the demand for the realisation of sexual and reproductive health and rights, and justice for women.
- ❖ During the 1987 Women's Health Meeting in Costa Rica, the Latin American and Caribbean Women's Health Network (LACWHN) proposed this day.
- ❖ The campaign has historically focused on women's health care, poverty, abortion, HIV/AIDS, contraceptives and government accountability.



World Hunger Day 2024 - May 28

- ❖ World Hunger Day was founded by The Hunger Project in 2011.
- ❖ This global initiative aims to raise awareness about the hundreds of millions of people who suffer from chronic hunger.
- ❖ 783 million people in the world are facing hunger.
- ❖ This year's theme is "Thriving Mothers. Thriving World".

International Day of UN Peacekeepers 2024 - May 29

- ❖ This is the date when in 1948 the first UN peacekeeping mission named the "United Nations Truce Supervision Organization", or UNTSO, began operations in Palestine.
- ❖ On this day, we pay tribute to the professionalism, dedication and courage of all the men and women serving in UN peacekeeping operations, and honour the memory of those who have lost their lives in the cause of peace.
- ❖ Till date, 3,900 military, police and civilian personnel have lost their lives in the service of peace as a result of acts of violence, accidents and disease.
- ❖ UN peacekeepers come from all came with diverse cultural backgrounds and from an ever-growing number of Member States.
- ❖ The theme of 2024 is "Fit for the Future: Building Better Together."

International Mount Everest Day 2024 - May 29

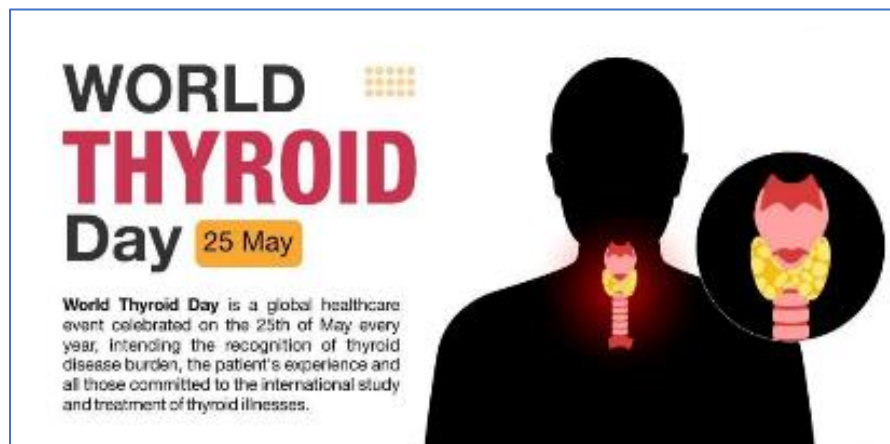


- ❖ This day commemorates the first successful ascent of Mount Everest by Sir Edmund Hillary of New Zealand and Tenzing Norgay of Nepal in 1953.
- ❖ This day was established in 2008, the year when Edmund Hillary died.
- ❖ Mount Everest is situated within the Mahalangur Himal sub-range, which is a prominent section of the Himalayas.
- ❖ The China-Nepal boundary is usually acknowledged to cross via Everest's highest point, which reaches an elevation of 8,848.86 metres.

World Digestive health day – May 29

- ❖ It aims to raise awareness and promote prevention of digestive issues.
- ❖ It was first launched by the World Gastroenterology Organisation (WGO) in 2005.
- ❖ This year's theme is "Your Digestive Health: Make It a Priority".

World Thyroid Day 2024 - May 25



- ❖ This day aims to create awareness about the significance of thyroid gland and how we can ensure that people with thyroid diseases are properly diagnosed and have access to treatment facilities.
- ❖ On May 25, 1965, the European Thyroid Association was founded.
- ❖ This organisation was the first one to recognise World Thyroid Day.
- ❖ The thyroid gland is a small gland situated at the base of the neck, that is responsible for producing two hormones - thyroxine and triiodothyronine.
- ❖ Both iodine deficiency and excess can result in hypothyroidism as well as hyperthyroidism.
- ❖ Approximately 4.2 crore Indians are affected by Thyroid diseases.
- ❖ The theme for this year's is - Non-Communicable Diseases (NCDs).



International Day of Potato 2024 - May 30

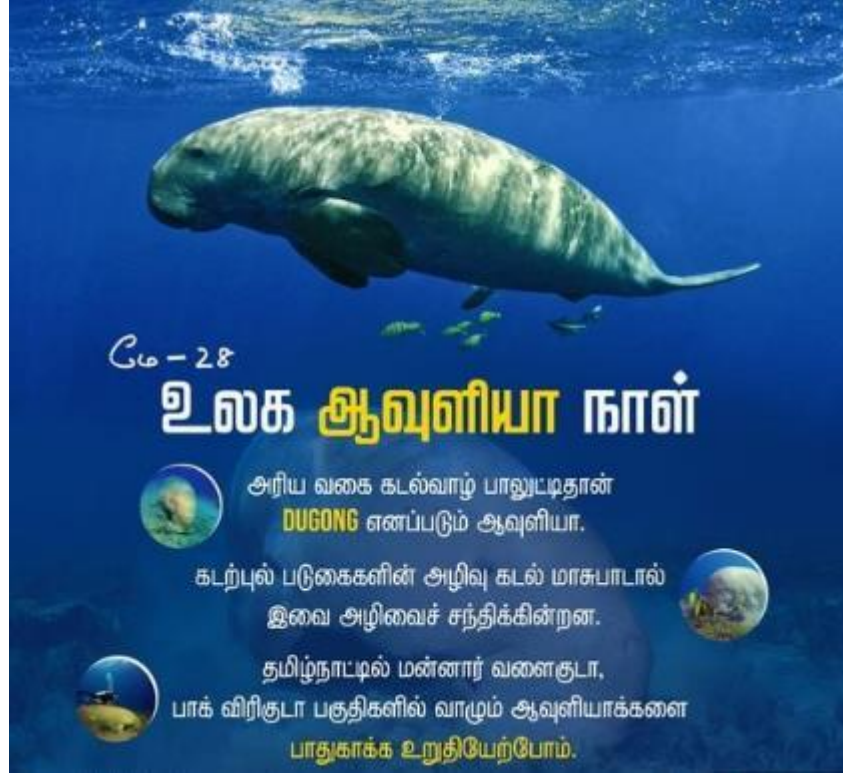
- ❖ The inaugural observation of this day taking place this year.
- ❖ Potato was introduced to Europe in the 16th century, from where it spread to the rest of the world subsequently.
- ❖ With around 5 000 varieties, the diversity of potatoes plays a vital role in global food security and nutrition.
- ❖ It is the third most consumed food crop globally, after rice and wheat.
- ❖ A total of 159 countries in the world have potato crops on a total of 17.8 million hectares.
- ❖ 374 million tons of potato are produced in the world annually.
- ❖ Theme of this year is “Harvesting Diversity, Feeding Hope.”

Goa Statehood Day 2024 - May 30

- ❖ After India gained independence in 1947, it requested the Portuguese to cede their territories. However, Portuguese refused.
- ❖ In 1961, Indian Government launched Operation Vijay and annexed Daman and Diu islands and Goa.
- ❖ An opinion poll, known as the Goa Status Referendum, was conducted in 1967.
- ❖ People voted in favour of Goa becoming a Union territory of India.
- ❖ On 30th May, 1987, the territory was split and Goa was formed.
- ❖ Daman and Diu remained Union Territory.

World Dugong Day 2024 - May 28

- ❖ The dugong is commonly known as the sea cow.
- ❖ Dugongs are an endangered marine species like sea turtles, seahorses, sea cucumbers and others.
- ❖ It is the only existing species of herbivorous mammal that lives exclusively in the sea including in India.
- ❖ Dugongs are mammals, which means they give birth to live young and then produce milk and nurse them.



Anti-Tobacco Day 2024 - May 31

- ❖ This annual event was started by the World Health Organization (WHO).
- ❖ It gives a platform to young people across the world, who are urging governments to shield them from predatory tobacco marketing tactics.
- ❖ Children are using e-cigarettes at rates higher than adults in all regions.
- ❖ Globally an estimated 37 million youth aged 13–15 years use tobacco.
- ❖ The theme for 2024 is “Protecting Children from Tobacco Industry Interference”.



MISCELLANEOUS

Meteorite Impact - Luna Crater

- ❖ NASA's Landsat 8 satellite has captured stunning images of a 6,900-year-old impact crater located in the Kutch district of Gujarat, India.
- ❖ Its geochemical analysis found that "it contains the characteristic signatures of a meteorite impact."
- ❖ The crater is named Luna after a nearby village.
- ❖ It is a geological marvel that has piqued the interest of scientists and enthusiasts alike.
- ❖ Spanning approximately 1.8 kilometers in diameter, the Luna crater's outer rim rises about 20 feet above the crater floor.
- ❖ Radiocarbon dating of plant remnants found in the silt within the crater has helped scientists determine that the meteorite impact occurred around 6,900 years ago.
- ❖ The Luna crater is near the remains of an ancient Harappan settlement.



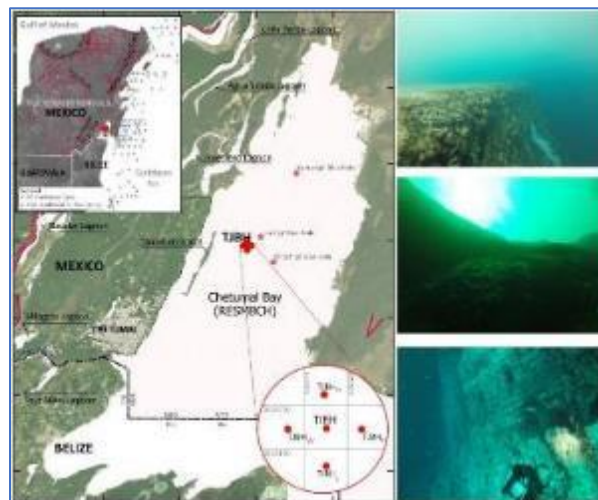
90-Million-Year-Old Herbivore Dinosaur

- ❖ Palaeontologists from Argentina announced the discovery of a new medium-sized herbivorous dinosaur.
- ❖ It was a fast runner and lived about 90 million years ago in the Late Cretaceous period in present day Patagonia.
- ❖ The animal, named Chakisaurus nekul, was found in the Pueblo Blanco Natural Reserve.
- ❖ The largest Chakisaurus reached 2.5 or 3 meters long and was 70 centimetres high (8 to 10 feet long and 27 inches high).



World's Deepest Blue Hole

- ❖ Researchers have found the world's deepest blue hole in the Latin American country of Mexico.
- ❖ They have reached 1,380 feet or 420 meters below sea level, but it is not the end of the hole.
- ❖ The “deepest known blue hole”, Taam Ja’ Blue Hole (TJBH), is located in Chetumal Bay off the Yucatan Peninsula.
- ❖ Its depth can be compared to the height of Trump Tower in Chicago.
- ❖ Blue holes are water-filled vertical caverns, found in coastal regions where the bedrock is made of soluble material, such as limestone, marble, or gypsum.
- ❖ Blue holes typically contain tidally influenced water of fresh, marine, or mixed chemistry.
- ❖ Well-known examples are the Dragon Hole in the South China Sea and, the Great Blue Hole and Dean's Blue Hole in the Caribbean.
- ❖ The Dahab Blue Hole in Egypt and the Great Blue Hole in Belize are other good examples.



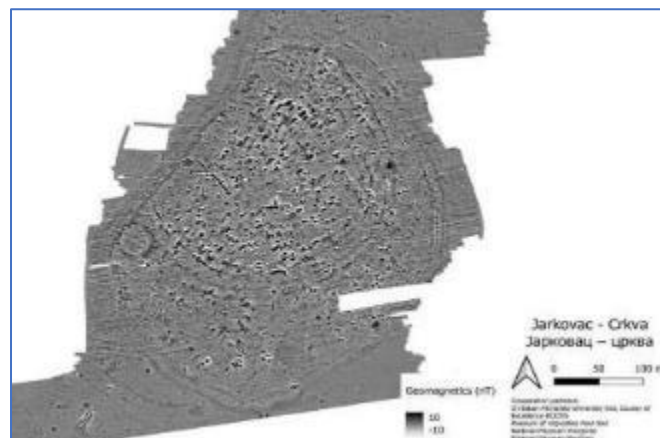
First Walrus Death from Bird Flu

- ❖ One of Norway's Arctic islands recorded its first case of a walrus dying from bird flu.
- ❖ Notably, while bird flu primarily spreads through avian hosts like ducks and geese.
- ❖ Mammals have also been infected due to the consumption of infected birds and living close to other animals.
- ❖ A walrus which can grow to a weight of two tonnes mainly eats fish, but sometimes also consumes marine birds.



7000-year-old pre-historic settlement – Serbia

- ❖ A prehistoric settlement of massive size has been discovered in the Banat region of northeastern Serbia.
- ❖ Archaeologists date back the previously known settlement to some 7,000 years, much later than the Late Neolithic period.
- ❖ The settlement is located near the Tamis River in the Banat region of northeastern Serbia.
- ❖ The Vinca culture is a prehistoric group that occupied a region of southeastern-central Europe during this period.

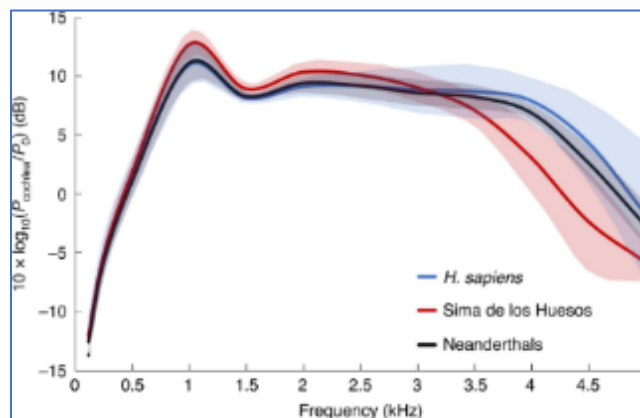


Oldest proof of Earth's photosynthesis

- ❖ Scientists have unearthed ancient microscopic thylakoid structures that offer valuable insights into the origination of photosynthesis.
- ❖ These minuscule fossils are preserved for over two billion years within ancient rock formations.
- ❖ These biological structures are remnants of cyanobacteria preserved in fossilized form, dating as far back as 1.75 billion years ago.
- ❖ This is to be the oldest recorded evidence of photosynthesis on Earth to date.
- ❖ Cyanobacteria are photosynthetic microscopic organisms.
- ❖ Thylakoids are linked disc-shaped sacs within the chloroplast's interior membrane.
- ❖ They are essential in the process of oxygenic photosynthesis in cyanobacteria.

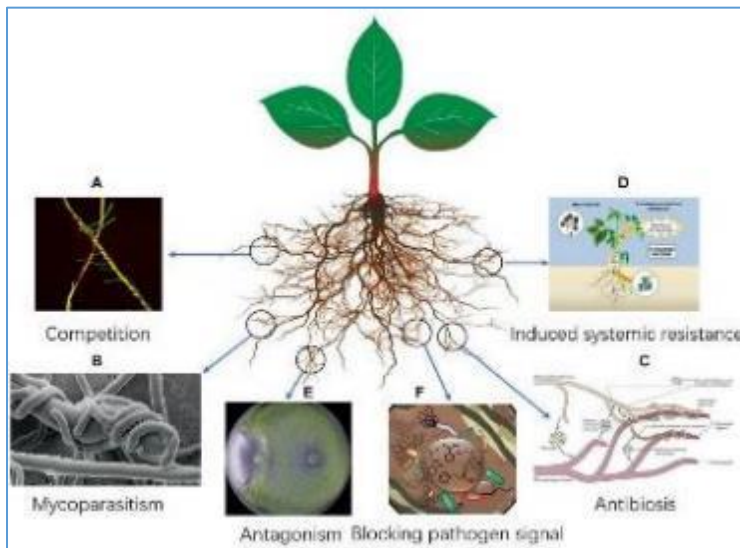


Neanderthals' Speech Capacities



- ❖ Researchers unveiled evidence that Neanderthals possessed the capacity both to hear and produce speech sounds akin to modern humans.
- ❖ They had optimized hearing in the 4 to 5 kilohertz range, similar to modern humans, suggesting a need for vocal communication.
- ❖ The ear structures of Neanderthals and a Sima hominin ancestor, a fossil dating back approximately 430,000 years was analysed for this.

Trichoderma asperellum

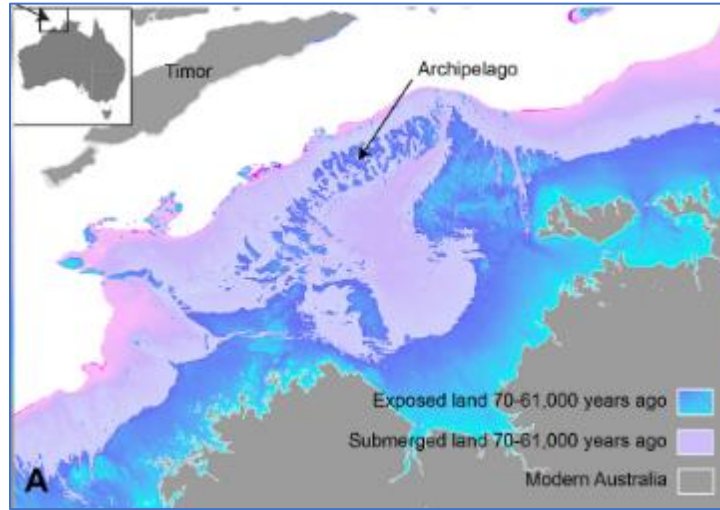


- ❖ The Punjab Agricultural University (PAU), Ludhiana, has developed biocontrol agent *Trichoderma asperellum* (2% WP).
- ❖ The biocontrol agent will help Punjab farmers manage the deadly ‘foot rot’ or ‘bakanae’ disease that plagues the crops of Basmati rice.
- ❖ This would be a major development in Punjab, which, along with Haryana, accounts for more than 70% of India’s basmati exports.
- ❖ This disease caused by the fungus *Fusarium verticillioides*; a soil-seed borne pathogen which spreads the infection through the root of the plant.

UNESCO’s Memory of the World Regional Register

- ❖ Three Indian literary works, *Ramcharitmanas*, *Panchatantra*, and *Sahṛdayaloka-Locana*, were added to UNESCO’s Memory of the World Asia-Pacific Regional Register.
- ❖ *Ramcharitmanas*, is an epic poem in the Awadhi language, composed by the 16th-century Indian bhakti poet Tulsidas.
- ❖ The 15th-century *Sahṛdayaloka-Locana*, by Kashmiri scholars Acharya Anandvardhan and Abhinavagupta, was chosen because of its aesthetics.
- ❖ UNESCO’s MOW programme is an international cooperation strategy aimed at safeguarding, protecting, and facilitating access to and the use of documentary heritage, especially heritage that is rare and endangered.
- ❖ There are 494 inscriptions on the International MoW Register, as of May 2023, according to the UNESCO website.
- ❖ However, the MoW register operates on regional levels as well.

Sahul continent



- ❖ NEW archaeological records provide evidence of a lost Atlantis-like landscape that early humans travelled on more than 70,000 years ago.
- ❖ The supercontinent, once known as Sahul, was a landmass that was exposed thousands of years ago during the Pleistocene epoch.
- ❖ During this period, Earth was in the middle of the last ice age.
- ❖ Glaciation led to declining sea levels, exposing areas of the continental shelf that had previously been submerged.
- ❖ This revealed land connecting what is now mainland Australia to Papua New Guinea in the north and Tasmania in the south.

Ancient Baobab Trees

- ❖ Scientists have solved the mystery of the origins of ancient baobab trees.
- ❖ According to DNA studies, the iconic trees first arose in Madagascar 21 million years ago.
- ❖ Their seeds were later carried on ocean currents to Australia and also to mainland Africa, evolving into distinct species.
- ❖ Six of the world's eight baobab species are indigenous to Madagascar, where the distinctive trees with giant trunks have historically grown in huge forests.
- ❖ Baobab trees can live for 1,000 years and one hectare of land can support eight fully grown baobab trees.
- ❖ Madagascar is also the home of the world's rarest baobab, *Adansonia perrieri*.
- ❖ large-bodied animals such as giant lemurs or giant tortoises played a crucial role in spreading the seeds of baobab trees in their dung.

- ❖ But they became extinct about 500 years ago.
- ❖ Without these animals, baobab seeds are not spread as effectively.



1.5-Billion-Year-Old “Giant” Viruses

- ❖ The Giant viruses dating back 1.5 billion years were found in Yellowstone's geothermal springs.
- ❖ The viruses are labelled as 'giant' because they have extremely large genomes compared to regular viruses and pose no risk to humans.
- ❖ But it could explain what the conditions on Earth were like when single-cell organisms formed.
- ❖ Yellowstone's hot springs formed at least 15,000 years ago after the last glaciers in the region melted, allowing the geysers to spring up.
- ❖ The Yellowstone National Park of USA is the first national park in the world, which was opened in 1872.



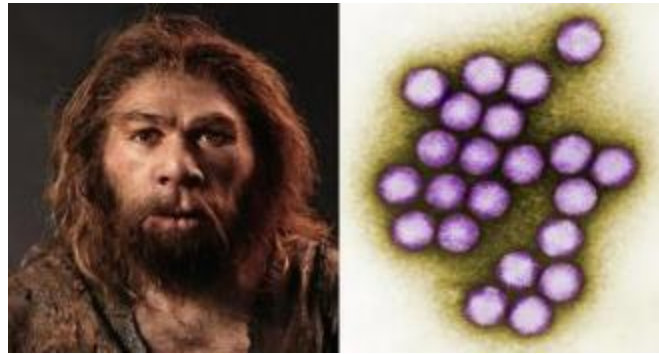
Ancient Branch of Nile River

- ❖ Using satellite imagery, experts identified potential locations of an ancient river branch near the pyramid fields.
- ❖ Satellite images are indicating the presence of a 64-km-long former river branch that once flowed near the pyramid fields.
- ❖ They have proposed that the river branch be named “Ahramat” which means pyramids in Arabic.
- ❖ The researchers believe that the increased windblown sand, linked to a major drought that began approximately 4,200 years ago, likely caused the branch to migrate eastward.
- ❖ This migration, combined with the accumulation of sand, eventually led to the river silting up and disappearing.



Oldest Known Human Viruses

- ❖ The Researchers have found the evidence of ancient viruses in 50,000-year-old Neanderthal bones.
- ❖ The viral fragments suggest a “possible presence” of ancient viruses.
- ❖ While the exact impact of these viruses on Neanderthals remains unknown.
- ❖ The study revealed that Neanderthals could be infected with three common modern human viruses: adenovirus, herpesvirus, and papillomavirus.
- ❖ In modern humans, adenoviruses can cause cold- and flu-like symptoms, sore throat, and pink eye.
- ❖ These findings represent the oldest known remnants of human viruses, surpassing the previous record by about 20,000 years.
- ❖ The earlier record was held by a common-cold virus found in 31,000-year-old baby teeth in Siberia.



Cyclone Remal

- ❖ Cyclone Remal's landfall has affected the coastal areas in West Bengal and Bangladesh near the southwest of Mongla.
- ❖ It was named by Oman as per the standard convention of naming tropical cyclones in the region.
- ❖ Remal in Arabic means 'sand'.
- ❖ Cyclone Remal is the first pre-monsoon cyclone in the Bay of Bengal this season.

