

CURRENT AFFAIRS

NOV. & DEC. 2024

JOIN COACHING CLASSES FOR:

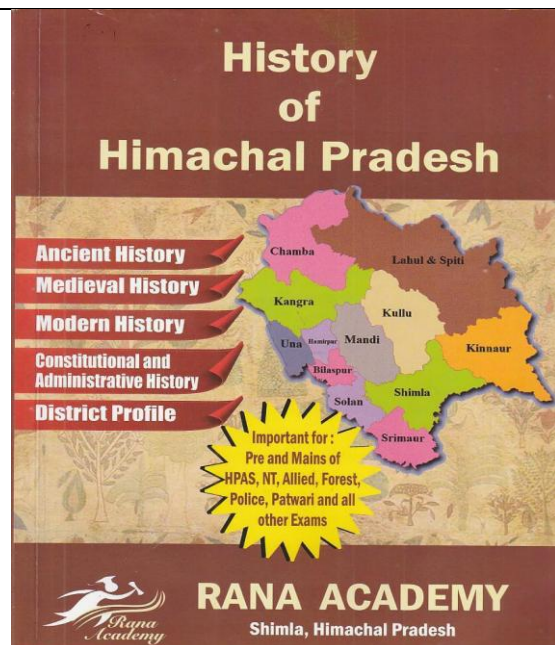
- UPSC/ HAS/HPAS/ BANK PO/
- HPPSC NAIB TEHSILDAR
- Allied and subordinate exams, clerical posts in HP High Court, HP Police constable exam.
- Morning and evening batches are also available - Free demo class.
- Affordable fee.

SOURCES used to compile current affairs : DTE, The Hindu, PIB, Indian Express.

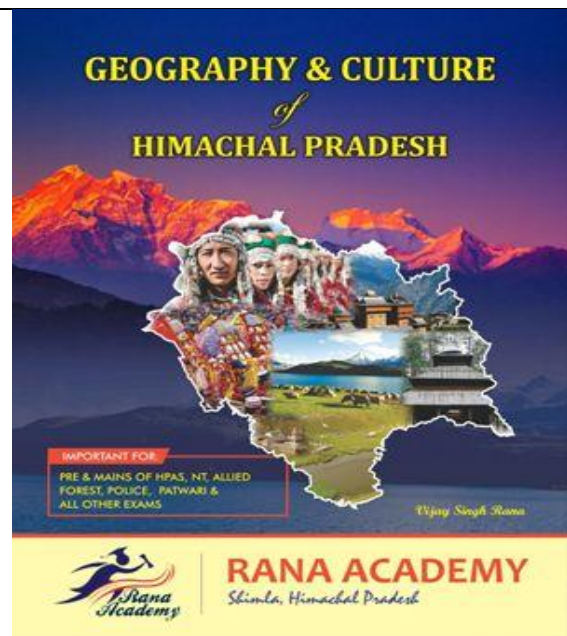
RANA ACADEMY , KHALINI, SHIMLA.

7018596250, 9805332278.

WWW.RANAACADEMYSHIMLA.COM



AVAILABLE ON AMAZON



AVAILABLE ON AMAZON

INDEX

- INTERNATIONAL (WORLD)
- GOVERNANCE, SOCIAL JUSTICE & SCHEMES
- POLITY
- ECONOMY
- HISTORY, ART & CULTURE
- APPOINTMENTS
- SCIENCE AND TECHNOLOGY
- DEFENCE
- RANKS AND REPORTS
- BIODIVERSITY AND ENVIRONMENT
- AWARDS AND HONOURS
- BOOKS
- OBITUARIES / DEATHS
- SPORTS/ GAMES
- IMPORTANT DAYS
- STATE's News
- MISCELLANEOUS

Note : to get important PDFs, monthly current affairs booklet, recent Economic Survey and Budget, recent exam notifications etc, join our Telegram channel named RANA ACADEMY SHIMLA by using this link : <https://t.me/RanaAcademyShimla>.

INTERNATIONAL / WORLD NEWS

Deep state

- The 'deep state' refers to **powerful networks within a country's permanent institutions—especially the military, intelligence agencies, and bureaucracy—that operate independently of elected leaders and influence major policy decisions behind the scenes.**
- In Pakistan, deep state is more institutionalized and powerful. The military and intelligence agency (ISI) have historically influenced not just defense and foreign policy but also domestic politics and even elections. Example: The military's role in the dismissal of elected governments and its involvement in shaping relations with India and Afghanistan is widely acknowledged.
- In China, the Communist Party dominates all institutions, and there is little separation between the party, military (PLA), and the state. Rather than a hidden deep state, power is openly centralized. Example: The Central Military Commission, led by the Party's top leadership, ensures that the army remains under direct political control—there is little room for an autonomous military or intelligence bureaucracy acting independently.

In India:

- Pulitzer Prize winning journalist Steve Coll said that India has a form of deep state, mainly involving the Indian Foreign Service rather than intelligence agencies or the military.
- Journalist Josy Joseph in his book *The Silent Coup: A History of India's Deep State*, argues that there is "a State within a State" that biases against the weaker sections of society. He also includes the National Investigation Agency (NIA) among the agencies allegedly running the deep state.
- However, **such allegations have been rejected by the government** which believes in Panchsheel principles and Vasudhaiva Kutumbakam (The World Is One Family).

US Sanctions

- The U.S. recently sanctioned around 400 entities and individuals, including **19 Indian firms** and **2 Indian nationals**, over links to Russia's war efforts in Ukraine.
- Sanctions typically restrict trade, investment, and financial transactions with targeted entities, aiming to curb their economic and operational activities by cutting off access to U.S.-based resources and systems.
- For firms, this can mean being barred from the U.S. market, losing American partners, and facing significant financial and operational limitations, potentially affecting global trade and their business operations.
- Indian Companies sanctioned - Ascend Aviation, Mask Trans, TSMD Global Private Limited, Futrevo and others.
- 2 Indian Individuals sanctioned: The directors of Ascend Aviation India, Vivek Kumar Mishra and Sudhir Kumar.
- Global Mechanisms for Sanctions
 - Sanctions are imposed by individual countries, such as the U.S. on nations like Iran, North Korea, and Russia, which has become the world's most sanctioned country post-Ukraine war.
 - International bodies like the UN (through its Security Council) and the EU also have mechanisms to impose sanctions.
- Sanctions can be of 2 types:
 - Comprehensive: Affecting entire countries, such as the U.S. embargo on Cuba.
 - Targeted: Directed at specific entities, groups, or individuals, as with U.S. sanctions on Russian firms.
- Historically, **India faced international trade restrictions after its nuclear tests in 1974 and 1998**, India also sanctioned other nations.

107 years of Balfour Declaration

- Balfour Declaration completed was issued on 2nd November, 1917. It was named after Arthur James Balfour, British Foreign Secretary and was a public statement issued by the British government during World War I.
- It supported the establishment of a **"national home for the Jewish people" in Palestine** which was then an Ottoman region with a small Jewish minority population.
- This declaration was issued to ensure Jewish safety amid rising persecution in Europe.

G20 Pandemic Fund

- The Indian government has introduced a **\$25-million** Pandemic Fund to protect animals from **Zoonotic diseases** that originate in animals and then spread to humans, such as COVID-19 (originated in bats), Bird Flu (originated in Birds), Ebola (originated in fruit bats).
- Implementation Partners: The project will be implemented with the collaboration of the Asian Development Bank (ADB), Food and Agriculture Organization (FAO), and the **World Bank**, focusing on an integrated approach to strengthen India's animal health systems and pandemic defenses. The fund is planned to be utilized by August 2026.
- Objectives: Upgrading and expanding animal health laboratories, enhancing disease surveillance, strengthening cross-border collaboration, creating a disaster management framework for the livestock sector.

19th G20 Summit

- Held in: **Rio de Janeiro, Brazil**, under the theme *Building a Just World and a Sustainable Planet*.
- The Rio summit marked the **first time the African Union (AU) participated as a full member**.
- Hosted by Brazil, the third 'Global South' host after Indonesia (2022) and India (2023).
- The **next G-20 (2025) is to be in South Africa**. Brazil, India & South Africa together forms the troika of G20. These countries representing the Global South and are also part of IBSA and BRICS grouping.
- Brazil officially transferred the Group of 20 (G20) Presidency to South Africa during the closing ceremony of the annual G20 summit in Rio de Janeiro, Brazil. This marks a historic milestone as South Africa becomes the first African nation to lead the G20, with a robust agenda planned for its presidency.

G20 Rio de Janeiro Leaders' Declaration

- Global Alliance against Hunger and Poverty: Launched to eradicate poverty and hunger.
- Global Coalition for Local and Regional Production, Innovation and Equitable Access: Launched to promote access to vaccines, diagnostics, and other health technologies for neglected diseases and vulnerable persons.
- Commitments on Basic Needs and Equality: For the first time, G20 committed to mobilising resources for basic sanitation, drinking water, combating racism, and promoting racial equality to reduce inequalities.
- Sustainable development, energy transitions and climate action: Establishment of Task Force on a Global Mobilization against Climate Change to identify & address structural barriers to foster private capital flows for climate action, particularly for developing countries.
- Reform of global governance institutions: Endorsed the G20 roadmap for better, bigger and more effective multilateral development banks (MDBs).
- Tax on the super-rich: Leaders agreed for the first time to engage cooperatively to ensure that ultra-high-net-worth individuals are effectively taxed.

Dark Tourism

- It refers to the practice of visiting locations associated with death, suffering, tragedy, or something unusual.
- It is also known as **black tourism, thanatourism or grief tourism**.
- Dark tourism sites are all associated with tragic history. These sites might include *cemeteries, mausoleums, disaster zones, battlefields, memorials, prisons, execution sites, and crime scenes*.
- As a more specific component of dark tourism, "**disaster tourism**" denotes situations where the tourism witness a boost in the the aftermath of a major disaster or traumatic event". For example, Kerala Police recently asked people to desist from dark tourism, which could hinder rescue efforts in **Wayanad**.
- Prominent dark tourism sites include Auschwitz Concentration Camp Poland, Chernobyl in Ukraine, Ground Zero in New York, Hiroshima Peace Memorial Park in Japan, etc.
- The war in **Ukraine** has sparked the rise of "dark tourism," where visitors travel to conflict zones to witness the aftermath of war in and its effects on local communities.

Dark Tourism India:

- Kuldhara Village, Jaisalmer: An abandoned village with frightening myths. It is now under ASI.
- Cellular Jail, Port Blair (Kala Pani): now a national museum showcasing India's dark history under British rule.
- Roopkund Lake, Uttarakhand (Skeleton Lake): it has hundreds of skeletal remains, whose origins remain unsolved.
- Lothal, Gujarat: A significant site of the Indus Valley Civilization, Lothal.

Rakhine state

- Rakhine is the westernmost state in Myanmar and is one of the poorest regions, facing ongoing conflict, displacement, and poverty.
- For decades, the **Rohingya, a Muslim ethnic minority in Myanmar**, have faced discrimination and exclusionary citizenship laws, leading to hundreds of thousands fleeing persecution.

- Since the early 1990's, the Rohingya have fled successive waves of violence in Myanmar. Their largest and fastest exodus began in August 2017 when violence broke out in Myanmar's Rakhine State, driving more than 742,000 people to seek refuge in neighbouring countries —the majority of whom were women and children.
- In 2017, India signed a development program to help Myanmar build housing infrastructure for displaced persons in Rakhine State.
- In news: The United Nations Development Program (UNDP) has warned that Myanmar's Rakhine state, home to the Rohingya minority, is on the brink of an acute **famine** due to a combination of internal conflicts, economic collapse, and natural disasters. Key factors for Acute Famine are blockades restricting goods, hyperinflation, lack of income, reduced food production, absence of essential services.

India- inducted into ARIN-AP's Steering Committee

- India, represented by the Directorate of Enforcement (ED), has been inducted into ARIN-AP's Steering Committee, granting it a role in decision-making and administrative responsibilities within the organization.
- India will assume the ARIN-AP presidency and host the Annual General Meeting in **2026**, providing a platform to showcase its leadership in asset recovery.
- **ARIN-AP** is a multi-agency network to exchange information on individuals, companies, and assets in the Asia-Pacific region with the intention of facilitating the pursuit and recovery of proceeds of unlawful activities. It is a member of the Global Camden Asset Recovery Inter-agency Network (CARIN). It focuses on the proceeds of all crimes, within the framework of international obligations.

Design Law Treaty (DLT)

- Recently, the member states of the World Intellectual Property Organization (WIPO) including India adopted the Design Law Treaty (DLT) at the Diplomatic Conference held in Riyadh, Saudi Arabia
- The Design Law Treaty (DLT) is an international treaty that aims to harmonise and improve the protection of industrial design standards. The treaty needs 15 contracting members to enter into force.
- It benefits the Small and Medium Sized Enterprises (SMEs), start-ups, and independent designers by streamlining the design registration process.
- It protects traditional knowledge and cultural expression during the registration of design.
- The treaty makes the framework for design protection procedures more predictable and affordable.
- The harmonised procedures provide for legal certainty, promoting global creativity in design.
- India adopted the National Design Policy 2007 to encourage innovation. In the last ten years, design registrations in India have tripled.

ADMM-Plus Forum

- It is a multilateral defence cooperation framework that brings together the defence ministers of the **10 ASEAN member states, 8 Plus countries (dialogue partners), and Timor Leste**.
 - 8 Dialogue partners include India, China, Russia, Japan, South Korea, Australia, New Zealand and the US.
- Establishment: The Inaugural ADMM-Plus was convened in Ha Noi, Viet Nam, on 12th October 2010. Since 2017, the ADMM-Plus meets annually, to allow enhanced dialogue and cooperation among ASEAN and the Plus Countries.
- Focus Area: The ADMM-Plus currently focuses on seven areas of practical cooperation, namely Maritime security (MS), Counter-terrorism (CT), Humanitarian assistance and disaster management (HADR), Peacekeeping operations (PKO), Military medicine (MM), Humanitarian mine action (HMA), Cyber security (CS)
- In news: Recently, India's Defence Minister addressed the **11th ASEAN Defence Ministers' Meeting-Plus (ADMM-Plus)** forum held in **Vientiane, Lao PDR**. He emphasised the role of Buddhist principles in resolving conflicts and celebrated a decade of India's Act East policy (AEP).

2nd India-CARICOM Summit

- Recently, the Prime Minister of India chaired the 2nd India-CARICOM Summit in Georgetown, Guyana, alongside the Prime Minister of Grenada, the current CARICOM Chair.
- The first India-CARICOM Summit was held in 2019 in New York.
- **Caribbean Community (CARICOM):** CARICOM is a grouping of 21 countries: 15 Member States and 6 Associate Members including both island states and mainland territories like Suriname and Guyana.
- CARICOM was founded in **1973** with the signing of the Treaty of Chaguaramas by four founding members of Barbados, Guyana, Jamaica, and Trinidad and Tobago.
- The community is made up of people from African, Indian, European, Chinese, Portuguese, and Indigenous backgrounds.

Ministerial Conference on Antimicrobial Resistance (AMR)

- Recently, the 4th Global High-Level Ministerial Conference on Antimicrobial Resistance (AMR) concluded in **Jeddah, Saudi Arabia**, with the adoption of the Jeddah Commitments.
- Jeddah Commitments** laid down practical, actionable and cross-sectoral steps stakeholders to address AMR-related goals by 2030.
- Its theme was “*From Declaration to Implementation – Accelerating Actions Through Multisectoral Partnerships for the Containment of AMR.*”
- AMR** occurs when pathogens (bacteria, viruses, fungi, parasites) evolve to resist the effects of antimicrobial medicines, making treatments ineffective and increasing risks of severe illness, disease spread, and death. **Resistant pathogens are termed as superbugs.**

India- Kuwait strategic partnership

- India and Kuwait have **elevated their bilateral relationship to a strategic partnership** during Prime Minister Narendra Modi’s historic visit to the Gulf nation, marking the **second visit by an Indian Prime Minister since Indira Gandhi’s visit in 1981**.
- This visit signifies a renewed commitment to trade, defence, and broader cooperation between the two nations.
- Defence Cooperation: both nations signed an MoU on Defence Cooperation, focusing on joint military exercises, training, coastal defense.
- Cultural and Sports Cooperation: India and Kuwait signed a Cultural Exchange Programme for 2025-2029 and an Executive Programme on Sports Cooperation for 2025-2028.
- Technology and Emerging Sectors: Emphasised collaboration in semiconductors, artificial intelligence, e-Governance, and sharing best practices.
- Energy Cooperation: Both sides agreed to move from a buyer-seller relationship to a comprehensive partnership in the energy sector, with a focus on oil, gas, refining, and renewable energy.
- Multilateral Cooperation: Kuwait’s membership in International Solar Alliance (ISA) was welcomed by India.
- The PM of India congratulated Kuwait on its Gulf Cooperation Council (GCC) Presidency and emphasized the importance of concluding the India-GCC Free Trade Agreement.
- Order of Mubarak Al Kabeer: PM Narendra Modi was awarded the ‘Order of Mubarak Al Kabeer,’ the highest honor of Kuwait, in recognition of his contributions to strengthening bilateral ties.

Eastern Maritime Corridor (EMC)

- The Chennai-Vladivostok Eastern Maritime Corridor (EMC) is a sea link connecting the east coast of India (Chennai Port) with ports in the far-east region of Russia (Vladivostok Port).
- It passes through the Sea of Japan, the South China Sea, and the Malacca Strait.

Significance:

- Reduced Logistics Costs: EMC has reduced the shipping distance from 8,675 nautical miles (via the traditional St Petersburg-Mumbai route through Europe) to 5,600 nautical miles, cutting transit time from over 40 days to just 24 days.
- This is significant for India as it has surpassed China to become the largest buyer of Russian oil in July 2024.
- India imports over 85% of its crude oil demand



Vladivostok is the largest Russian port on the Pacific Ocean, and the corridor passes through the South China Sea and strengthens India’s strategic presence addressing China’s dominance in the region.

Major Drug-Producing Regions:

- Golden Crescent**: Comprising **Afghanistan, Iran, and Pakistan**, it remains a primary hub for opium production, impacting Indian states such as Jammu and Kashmir, Punjab, Himachal Pradesh, Rajasthan, and Gujarat.
- Golden Triangle**: Located at the intersection of **Laos, Myanmar, and Thailand**, this region is notorious for heroin production, with Myanmar producing 80% of the world’s heroin. Trafficking routes pass through **Laos, Vietnam, Thailand, and India**.

UN Commission on Narcotic Drugs

- India has been elected to Chair the **68th Session of the UN Commission on Narcotic Drugs (CND)**, with Ambassador **Shambhu S. Kumaran** assuming the Chairmanship.
- This marks the first time India holds this position, emphasizing its commitment to global leadership in addressing international drug policy issues.

About UN Commission on Narcotic Drugs (CND):

- Established by the Economic and Social Council (ECOSOC) in 1946 through Resolution 9(I).
- Expanded in **1991** to function as the governing body of the **UN Office on Drugs and Crime (UNODC)**.
- Headquarters: Vienna, Austria.
- Membership: Comprises **53** Member States, elected by ECOSOC for a **four-year term**, ensuring equitable geographical representation.

UK joins CPTPP

- UK has recently become the **first European country** to join the Indo-Pacific trade bloc Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP).

About CPTPP

- It is a Free Trade Agreement across the Pacific signed originally by the 11 countries in March 2018 in Santiago, Chile and entered into force on December 30, 2018, after the **US withdrew** from the original Trans-Pacific Partnership (TPP) in 2017.
- Membership: Comprises 12 member nations, including the UK, with other members being Australia, Canada, Japan, New Zealand, Brunei, Chile, Malaysia, Mexico, Peru, Singapore, and Vietnam.
- Note: India is not a member of CPTPP.
- Significance: The bloc accounts for about 15% of global GDP and provides trade access to a market of more than 500 million people.

Conference of the Parties (COP)

- COP is the supreme decision-making body of the United Nations Framework Convention on Climate Change (UNFCCC).
- COPs are annual conferences where UNFCCC member countries assess progress, negotiate agreements, and refine commitments to address climate change.
- A key task for the COP is to review the national communications and emission inventories (e.g., Nationally Determined Contributions (NDCs)) submitted by Parties.
- COP29** was held in **November 2024** in **Baku, Azerbaijan**
- COP 30** will be held in **Belém, Brazil**, in November 2025.

UNFCCC COP29 Baku

- COP29, held in **Baku, Azerbaijan**, concluded with Baku Climate Unity Pact and several significant agreements.
- COP 29 which was held in Baku, Azerbaijan was billed as the ‘**finance COP**’. The main goal of COP 29 was to finalize a new goal on finance- often termed as New Cumulative Quantitative Goal on Climate Finance (NCQG). The Paris Agreement 2015 (COP 21) had called for the finalization of NCQG before 2025. However, the agreement did not mention the year from which the new amount has to be mobilized.
- The developing countries had asked for the NCQG to be set at 1.3 trillion dollars every year. However, the developed countries completely ignored the demands of the developing countries. The developed countries managed to force an agreement at COP 29, of putting together 300 billion dollars a year as part of the NCQG framework, that too from 2035. India vociferously opposed the climate finance commitment of the developed countries and called the amount ‘abysmally poor’ and ‘paltry’.

Outcomes of COP 29

New collective quantified goal on climate finance	Developed countries have committed to fund \$300 bn a year for developing countries by 2035. This replaces the earlier goal of developed countries financing \$100bn per year.
Carbon Markets (Under Article 6 of the Paris Agreement)	COP 29 operationalized the Paris Agreement Crediting Mechanism and finalized framework for country-to-country trading of carbon credits.
Centralised UN trading system for green credits	A centralized UN trading system was agreed to be launched for the operationalization of carbon markets. This will allow countries to trade in carbon credits.
Baku Adaptation Roadmap	Baku Adaptation Roadmap was launched to expedite National Adaptation Plans (NAPs).
Baku Workplan	Baku Workplan calls for strengthened role of Indigenous Peoples and local

	communities in climate change mitigation, and acknowledging their critical contributions in addressing climate crisis.
Extension of Lima Work Programme	Lima Work programme which emphasized on gender mainstreaming in climate actions, was extended by COP 29.
Enhanced transparency in Climate Reporting	Biennial Transparency Reports (BTRs) were submitted by 13 countries under the Enhanced Transparency Framework.

India's initiative in COP 29

LeadIT Summit	India co-hosted LeadIT Member Meet with Sweden. The summit focusses on decarbonization of heavy industry.
Solar Energy Leadership	India promoted solar adoption through International Solar Alliance (ISA). India has been targeting a 20-fold increase in global solar energy capacity by 2050.
SIDS Adaptation Finance	India has advocated finance unlocking and disaster-resilient support for SIDS.

Global Energy Efficiency Alliance:

- The UAE has announced the establishment of the Global Energy Efficiency Alliance at COP29 in Baku, Azerbaijan.
- It aims to **double global energy efficiency rates by 2030** and contribute to significant emission reductions.
- It also encourages strategic public-private partnerships and bolster investments in energy efficiency initiatives.
- This initiative aligns with the 'UAE Consensus' from COP28, where all 198 participating countries in COP28, organisations, and companies committed to reducing carbon emissions and minimising natural resource consumption.
- The UAE plans to lead the alliance by sharing its expertise in energy efficiency, fostering knowledge transfer, and building effective partnership models with the private sector.
- Significance: The alliance is designed to support the reduction of carbon emissions and the sustainable use of natural resources through knowledge sharing, capacity building, and standardization efforts.
- The alliance will focus on compiling and disseminating best practices, with a particular emphasis on assisting African nations.
- This support will extend to developing financing options and technological solutions vital for the continent's progress in energy sustainability.

COP-16 to UNCCD

- Recently, the 16th Conference of the Parties (COP16) to the **United Nations Convention to Combat Desertification (UNCCD)** concluded in **Riyadh, Saudi Arabia**, with nearly 200 countries committing to prioritise land restoration and drought resilience.
- It was also the first time a UNCCD COP was held in the Middle East and North Africa (MENA) region.

Key Outcomes of COP16 UNCCD

- Global Drought Framework: Nations advanced efforts toward a global drought framework, aiming for completion at COP17 in Mongolia 2026.
- Financial Pledges: Over USD 12 billion pledged to address desertification, land degradation, and drought.
- Riyadh Global Drought Resilience Partnership: USD 12.15 billion committed to supporting 80 vulnerable countries, including USD 10 billion from the Arab Coordination Group.
- Great Green Wall (GGW) Initiative: The African-led GGW initiative secured Euros 11 million from Italy for Sahel landscape restoration and Euros 3.6 million from Austria to enhance coordination across 22 African countries.
- Vision for Adapted Crops and Soils (VACS): Nearly USD 70 million announced for VACS initiative. VACS aims to build resilient food systems with diverse, nutritious, and climate-adapted crops in healthy soils.
- Indigenous Peoples and Local Communities: Caucuses for Indigenous Peoples and Local Communities were formed to ensure their perspectives and challenges are represented.
- The Sacred Lands Declaration, presented at the Indigenous Peoples Forum, greater involvement in global land and drought governance.
- Business4Land initiative: It highlights the role of private sector advocacy, environmental, social, and governance (ESG) strategies, and sustainable finance in tackling Desertification, Land Degradation and Drought (DLDD) challenges.
- The private sector currently contributes only 6% of financing towards land restoration and drought resilience.
- UNCCD's Science-Policy Interface (SPI): Parties agreed to continue the UNCCD's SPI, established at COP11 (Windhoek, Namibia) in 2013 to translate scientific findings into recommendations for decision-makers.

United Nations Convention to Combat Desertification

- About: The UNCCD is one of the three Rio Conventions, along with the UN Framework Convention on Climate Change (UNFCCC) and the Convention on Biological Diversity.
- Purpose and Importance: The UNCCD was established in 1994 to protect and restore land, aiming for a sustainable future.
- It addresses the consequences of land degradation and drought, including crop failure, migration, and conflict.
- Objective: Its main goal is to mitigate land degradation and protect land to ensure access to food, water, shelter, and economic opportunities for all people.
- Legally Binding Framework: It is the only legally binding international agreement to combat desertification and drought.
- Membership: The Convention has 197 Parties, including 196 countries and the European Union.
- Principles: It operates on the principles of participation, partnership, and decentralization.

Other international News

- Seventeen foreign tourists are missing after a yacht capsized in the **Red Sea** off the coast of Egypt, amid warnings of turbulent sea conditions. The Red Sea is a major hub for international tourism, known for its diving spots and vibrant marine life. Bordering Countries of Red Sea are *Egypt, Saudi Arabia, Yemen, Sudan, Eritrea and Djibouti*.
- A shipwreck near the **Greek island of Samos** led to the deaths of eight migrants, highlighting the ongoing challenges of irregular migration in the region.
- India's new consulate in **Brisbane (Australia)** was inaugurated on 4th of November, 2024 by External Affairs Minister S. Jaishankar, marking a milestone in strengthening India-Australia relations.
- Norway's Parliament issued an official apology for the century-long assimilation policies, known as "**Norwegianisation**," that discriminated against the Sami, Kven, and Forest Finn communities. Assimilation Policy promotes integrating diverse groups into the dominant culture, often requiring them to adopt its norms, values, and language, sometimes losing their own cultural identity.
- Kazakhstan's state-owned energy company, *KazMunayGas*, has successfully decontaminated significant oil waste along the Caspian Sea's shores, which has been hit by pollution and the effects of global warming. **Caspian sea lies between Asia and Europe** and is bordered by Russia (northwest), Azerbaijan (west), Iran (south), Turkmenistan (southeast) and Kazakhstan (northeast). Three major rivers Volga, Ural, and Terek empty into the Caspian.
- Indian students, for the first time in 15 years, make up 29.4% of international students in the US, surpassing all other countries. India has overtaken China, which now has 277,398 students, as the leading country of origin for international students in the US.
- Recently, External Affairs Minister of India and Russian First Deputy Prime Minister co-chaired the 25th session of the India-Russia Intergovernmental Commission on Trade, Economic, Scientific, Technological, and Cultural Cooperation (**IRIGC-TEC**) in New Delhi. Both nations are optimistic about achieving a USD 100 billion trade volume well ahead of the 2030 target.
- Recently, the Chief of Defence Staff of India visited Algeria, leading to the conclusion of a significant Memorandum of Understanding (**MoU**) **on defence cooperation between India and Algeria**.
- Recently, the **6th ASEAN-India Trade in Goods Agreement (AITIGA) Joint Committee** and related meetings were held in **New Delhi**.
- Recently, the Prime Minister of India has commenced a significant three-nation visit to **Nigeria (Africa), Brazil, and Guyana in South America**. Following his visit to Nigeria, the PM travelled to Brazil to participate in the 19th G20 Summit and subsequently proceeded to Guyana.
- The Prime Minister of India and the Prime Minister of Australia held the **2nd India-Australia Annual Summit** on the sidelines of the 2024 Group of 20 (G20) Summit in Rio de Janeiro, Brazil.
- Recently, the **Global Soil Conference (GSC) 2024** was held in **New Delhi**, highlighting the importance of soil health for food security, climate change mitigation, and ecosystem services.
- Recently, the United States has approved sending **anti-personnel landmines** to Ukraine which are banned under the Anti-Personnel Landmines Convention, 1997. In another development, the US has supplied the **Army Tactical Missile System (ATACMS)** to Ukraine which can hit targets inside Russian territory.
- Recently, the US President Joe Biden issued a 'full and unconditional pardon' for his son, **Hunter Biden**, who faced sentencing for illegally owning a firearm while using drugs and for tax-related offenses.
- **Syria civil war**: Recently, Syrian rebels, led by the Islamist militant group **Hayat Tahrir al-Sham (HTS)**, have claimed control of Homs, Syria's third-largest city, in a significant blow to President **Bashar al-Assad's regime**.
- Recently, at the **India-Japan Forum in New Delhi**, External Affairs Minister (EAM) of India underscored the potential for a strategic semiconductor alliance between India and Japan.

- On 8th December 2024, the South Asian Association for Regional Cooperation (SAARC) marked its **40th Charter Day**. This day is commemorated annually to honor the establishment of SAARC.
- Recently, a **joint rescue operation by the Indian Coast Guard (ICG) and the Pakistan Maritime Security Agency (MSA)** successfully saved 12 crew members from the sunken Indian vessel MSV Al Piranpir in the North Arabian Sea. Recently, a joint rescue operation by the Indian Coast Guard (ICG) and the Pakistan Maritime Security Agency (MSA) successfully saved 12 crew members from the sunken Indian vessel MSV Al Piranpir in the North Arabian Sea.
- Recently, the UN Security Council (UNSC) endorsed the African Union (AU) Peace and Security Council's initiative named **African Union Support and Stabilisation Mission in Somalia (AUSSOM)**. The resolution titled Resolution 2767 (2024) aims to address Somalia's security challenges posed by Somalia's civil war and terrorist groups such as Al Shabaab and Islamic State of Iraq and the Levant.
- Recently, the **new Sri Lankan President (Anura Kumara Dissanayake)** was on his first visit to India focusing on enhancing trade, energy, and maritime cooperation. Discussions with Indian leaders emphasized Tamil aspirations, economic recovery, and countering Chinese influence, reinforcing India's Neighbourhood First policy and SAGAR Vision.
- **Bulgaria and Romania** will join the European Union's Schengen zone on 1st January 2025. Both nations, which have been EU members since 2007, will finally be able to join the borderless area, allowing for seamless travel and movement across Europe.
- **Switzerland** is set to enforce its controversial "**burqa ban**" starting January 1, 2025, following approval in a closely contested 2021 referendum.
- The Ministry of External Affairs (MEA) has announced the signing of an agreement to establish the **BIMSTEC Energy Centre in Bengaluru, Karnataka**.
- India's Minister for Communications, Jyotiraditya M. Scindia, inaugurated the **25th Meeting of the South Asian Telecommunication Regulators' Council (SATRC-25)** in New Delhi.
- The **43rd India International Trade Fair (IITF)** is back at Pragati Maidan, **Delhi**, showcasing India's commitment to "Vocal for Local, Local to Global" with products from across the country and the world.
- **Gabon** (Country in Central Africa) held a landmark referendum, where 91% of voters approved a new constitution, marking a significant political shift in the country. The constitution aims to end 55 years of dynastic rule and reintroduce a democratic civilian government.
- **Armenia** has become the **104th full member of the International Solar Alliance (ISA)**, marking a significant milestone for global solar energy collaboration.
- **Moldova** has officially joined the **International Solar Alliance (ISA)**, as **105th member**.
- **India** has been **re-elected** to the United Nations Peacebuilding Commission (PBC) for the 2025-2026 term, reaffirming its pivotal role in international peace efforts.
- Recently, 2024 edition of **World Maritime Technology Conference (WMTTC)** was held in **Chennai**. WMTTC is a premier global event held every three years under the auspices of the World Maritime Technology Congress. This prestigious gathering brings together industry leaders, professionals, and experts in maritime technology and allied sectors from across the globe.
- During Nepal Prime Minister **K P Sharma Oli's official visit to China**, both countries signed the Belt and Road Initiative (BRI) Cooperation Framework. This agreement aims to accelerate the implementation of BRI projects, marking a pivotal moment in Nepal-China relations. While Nepal joined the BRI in 2017, no projects were executed until now.
- A bust of Mahatma Gandhi was unveiled at the **Nebraska State Capitol** on December 6, 2024, marking the day as "A Day of Remembrance for Mahatma Gandhi." Nebraska is a U.S. state located in the Midwestern region.
- **Switzerland** has decided to suspend the status of '**Most Favoured Nation**' (MFN) to India, a decision that could raise taxes on Indian companies operating in Switzerland.
- India participated in the **24th BIMSTEC Senior Officials Meeting (SOM)**, hosted virtually by **Thailand** on December 20, 2024. Jaideep Mazumdar, Secretary (East) from the Ministry of External Affairs (MEA), represented India during this important session.

GOVERNANCE , SOCIAL JUSTICE, SCHEMES and Programmes in News

Nabhmitra device:

- It is a satellite-based communication system **developed for the safety of fisherman**.
- It enables two-way messaging services from and to the sea which was not possible before induction of this technology beyond mobile coverage range.
- The weather and cyclone warnings will be communicated in the local language, the boats can also send distress messages to the authorities.

- In emergency situations like capsizing and fire, fishers can press a button on the device and get in touch with the control centre.
- While the control centre will receive the alert including the location of the boat, the crew on the boat will get a response message from the control centre.
- Apart from providing information about shipping channels and maritime boundaries, the device will also help to identify fishing fields.
- It was developed by the **Indian Space Research Organisation (ISRO)** and is being implemented through NewSpace India Ltd (NSIL), commercial arm of ISRO.
- **In news:** Recently, the Nabhmitra application helped fishermen in the sea during **cyclone Dana** (east coast) using the Vessel Communication and Support System.

India's First Biomanufacturing Institute (BRIC-NABI)- set up in Mohali

- BRIC-NABI is an innovative institution **dedicated to advancing bio-manufacturing in the agri-food sector**. It aligns with India's "**Make in India**" initiative, fostering self-reliance and inclusive economic growth.
- It Aims to:
 - Streamline the path from research to commercialization, **focusing on high-yield crops, biofertilizers, and biopesticides**.
 - developing bio-based solutions that support sustainable agriculture and enhance food quality and safety, reducing the reliance on chemical inputs, and generate alternative protein sources.
- BRIC-NABI's role also involves creating a supportive ecosystem for start-ups and established companies looking to innovate within bio-manufacturing.
- It was formed from the merger of the *National Agri-Food Biotechnology Institute (NABI)* and the *Center of Innovative and Applied Bioprocessing (CIAB)*.
- The **BioNest Incubation Centre** was launched at BRIC-NABI to nurture startups in agriculture, food, and bioprocessing. It is public-private collaboration hub aimed at empowering youth, women, and farmers, supporting faster commercialization of agri-tech innovations.
- **BioE3 Policy:** This policy will explore biomanufacturing applications in agriculture, food, pharmaceuticals, and energy sectors, aligned with the eco-friendly goals of the BioE3 policy.

Civil Registration System (CRS) Mobile Application launched

- Developed by: Registrar General and Census Commissioner of India (RGCCI) which is responsible for conducting the decadal census in India.
- Aim: to integrate technology with governance. The application will streamline the **registration process for births and deaths**, ensuring a hassle free experience by allowing citizens to register these vital events at any time, from anywhere, and in their state's official language.

DCGI's New Regulations for Imported Cosmetics

- Cosmetics can only be imported if their expiration date is at least six months from the date of import.
- Cosmetics containing **hexachlorophene** (topical antibacterial cleanser) or those tested on animals after post-November 2014 are banned from being imported.
- No cosmetics banned in the country of origin can be imported unless for specific purposes (e.g., testing, analysis).
- Importers of new cosmetic products must seek approval from the **Central Licensing Authority**, with proof of safety and efficacy.
- **Drugs Controller General of India (DCGI):** The DCGI heads the Central Drugs Standard Control Organisation (CDSCO), which is responsible for ensuring quality drugs supply across the country.

Pradhan Mantri Vijaylaxmi scheme

- *The Union Cabinet has approved PM Vijaylaxmi scheme to provide financial support to meritorious students in their pursuit of **higher education**.*
- PM Vijaylaxmi scheme is a **central sector scheme** designed to provide collateral-free, guarantor-free loans from banks and financial institutions to cover the **full amount of tuition fees and other expenses** related to the course in higher education.
- Any student who secures admission in any of the top 860 Quality Higher Education Institutions (QHEIs) is eligible to get benefits under the scheme.
- The scheme will potentially benefit 22 lakh students.
- It provides a **75% credit guarantee for loans up to Rs. 7.5 lakhs**.
- There is also a provision for **3% interest subvention for loans up to Rs. 10 lakhs** during the moratorium period for students with family income of up to Rs. 8 lakhs.

- An allocation of Rs. 3600 crore has been made for the period 2024-25 to 2030-31.

National Adoption Awareness Month

- Recently, Central Adoption Resource Authority (CARA) celebrated **November** as National Adoption Awareness Month to promote legal adoptions.
- Theme: Rehabilitation of Older Children through Foster Care and Foster Adoption.
- CARA is a statutory body established under the Juvenile Justice Act, 2015 and functions under the Ministry of Women & Child Development. It is the nodal body for adoption of Indian children and is mandated to monitor and regulate in-country and inter-country adoptions.
- Inter-country adoptions in India adhere to the **Hague Convention on Inter-country Adoption, 1993**, ratified by Government of India in 2003. Hague Convention is an international treaty to ensure the prompt return of the child who has been “abducted” from the country of their “habitual residence”. The Convention shall cease to apply when the child attains the age of 16 years.

Namo Drone Didi

- It is a **Central Sector Scheme** launched by Government of India to empower women Self-Help Groups (SHGs) under the Deendayal Antyodaya Yojana – National Rural Livelihood Mission (DAY-NRLM).
- Aim: **Empowerment of Women SHGs**:
 - **To provide drones to 1500 selected SHGs during the period from 2024-25 to 2025-2026, for providing rental services** for applying fertilizers and pesticides, promoting technology adoption to enhance crop yields and reduce operational costs.
- **Ministry**: Administered by the Department of Agriculture & Farmers’ Welfare, Ministry of Agriculture, in partnership with the Ministry of Rural Development.
- Financial Support and Accessibility: Women SHGs receive substantial financial assistance, covering 80% of the drone and accessory costs, up to Rs. 8 lakhs. For the remaining 20% cost, SHGs can seek loans from the National Agriculture Infrastructure Financing Facility (AIF) with a 3% interest subvention.
- Collaborative Effort: The scheme is a collaborative venture between:
 - Department of Agriculture & Farmers Welfare
 - Department of Rural Development
 - Department of Fertilisers
 - Lead Fertiliser Companies and other supporting entities.
- Cluster-Based Implementation: Scheme implementation involves selection of area/cluster and SHG groups in Rural Areas under DAY – NRLM (Deendayal Antyodaya Yojana -National Rural Livelihoods Mission), where there is demand for drones to provide agriculture services.
- Specialised Training for Women SHG Members: One of the members of the women SHGs will be selected for 15-day training consisting of:
 - 5-day mandatory drone pilot training.
 - 10 days training for agriculture purposes for nutrient and pesticide application.

Benefits of Namu Drone Didi Scheme:

- Sustainable Livelihoods for SHGs: It provides SHGs with a source of additional income.
- Enhanced Agricultural Efficiency: Drone technology significantly enhances precise application of pesticides and fertilizers. This reduces overuse of chemicals, minimising environmental impact and lowers input costs for farmers.

Digital population clock

- Recently, **Bengaluru** has introduced its first digital population clock at the Institute for Social and Economic Change (ISEC). This clock provides **real-time population estimates**, focusing on Karnataka and India.
- The initiative is a collaboration between ISEC and the Union Ministry of Health and Family Welfare (MoHFW).
- Karnataka’s population estimate updates **every minute and 10 seconds**, reflecting regional growth patterns.
- India’s total population estimate ticks up every two seconds, providing a continuous update on national demographics.
- Its precision is maintained through satellite connections, which ensure accurate, real-time data updates.
- Note: Similar digital population clocks are being installed in 18 Population Research Centres across India by MoHFW

Eklavya Platform

- General Upendra Dwivedi, the Chief of the Army Staff (COAS), launched the **Eklavya online learning platform for the Indian Army**.

- This initiative aligns with the Army's vision of a “**Decade of Transformation**” and the 2024 theme, “**Year of Technology Absorption.**”
- Developed by: Bhaskaracharya National Institute of Space Applications and Geoinformatics (BISAG-N), Gandhinagar with support from the Directorate General of Information Systems.
- Aim: To facilitate continuous professional military education, decongest physical courses, and encourage domain specialization.
- Content: A total of 96 courses by 17 Category ‘A’ Training Establishments of the Indian Army have been hosted on the platform.

One Nation One Subscription (ONOS) scheme

- The Union Cabinet has approved the One Nation One Subscription (ONOS) scheme.
- Aim: It is a **central sector scheme** which aims **to provide nationwide access to international scholarly research articles and journal publications for students, faculty, and researchers in government-managed higher education and R&D institutions.**
- It aligns with the National Education Policy (NEP) 2020, which emphasizes research as a cornerstone of outstanding education.
- The scheme will be coordinated by: **Information and Library Network (INFLIBNET)**, an autonomous inter-university center under the University Grants Commission (UGC).
- Institutions Covered: More than 6,300 government higher education institutions and central government R&D institutions.
- Number of Beneficiaries: Nearly 1.8 crore students, faculty members, researchers, and scientists across disciplines, including those in tier 2 and tier 3 cities.
- Journal Access: It includes 30 major international journal publishers and provides access to approximately 13,000 e-journals.
- A **unified portal**, “**One Nation One Subscription**,” will be developed for institutions to access journals. The entire process will be digital and user-friendly.
- Review and Monitoring: The **Anusandhan National Research Foundation (ANRF)** will periodically review the scheme's usage and publications by Indian authors affiliated with participating institutions.

Bhu-Neer portal

- The “Bhu-Neer” portal was launched during the 8th India Water Week-2024.
- Developed by: The Central Ground Water Authority (CGWA) under the Ministry of Jal Shakti, in collaboration with the National Informatics Centre (NIC).
- Goal: The primary goal of the portal is **to enhance groundwater management and regulation** across the country.
- The “Bhu-Neer” portal is now live and available for public access. Project proponents can visit the portal for groundwater-related applications, clarifications, tracking the status of their requests, and making necessary statutory payments.

‘Paryatan Mitra’ and ‘Paryatan Didi’ initiative

- Launched by: **Ministry of Tourism** on the occasion of World Tourism Day (September 27th, 2024).
- Aim:
 - to connect tourists with locals who can act as Ambassadors and Storytellers for their regions.
 - to enhance tourism through social inclusion, employment generation, and economic progress.
- Pilot Program Locations: The initiative was piloted in 6 tourist destinations across India: **Orchha** (Madhya Pradesh), **Gandikota** (Andhra Pradesh), **Bodh Gaya** (Bihar), **Aizawl** (Mizoram), **Jodhpur** (Rajasthan) and **Sri Vijaya Puram** (Andaman & Nicobar Islands)
- Target Groups for Training: Cab and auto drivers, Railway station and airport staff, Hotel, restaurant, and homestay staff, Police personnel, Tour guides, street vendors, and shopkeepers and Students and other community members.

WAVES OTT Platform

- **Waves** is a digital platform developed by **Prasar Bharati**.
- It aims to cater to India's growing demand for streaming services.
- The platform is free to download, with most content available at no cost, while premium features are available through subscription plans.
- About OTT (Over-the-Top) platforms: OTT refers to streaming services delivering content via the internet, bypassing traditional broadcast methods. Key examples include Netflix, Amazon Prime Video, Disney+ and

others. The term "OTT" also extends to services like messaging (WhatsApp, Telegram) and voice-over-IP (VoIP) calling apps.

- The OTT platforms are regulated by the Ministry of Information and Broadcasting, ensuring content compliance and accountability.
- **Prasar Bharati**: It is an Indian state-owned public broadcaster, headquartered in New Delhi. It is a statutory autonomous body set up by an Act of Parliament and comprises the Doordarshan television broadcasting and Akashvani (formerly, All India Radio or AIR), which were earlier media units of the Ministry of Information and Broadcasting. The Parliament of India passed the Prasar Bharati Act to grant this autonomy in 1990, but it was not enacted until 15 September 1997.

E-Daakhil portal

- Recently, Department of Consumer Affairs has launched E-Daakhil portal in **Ladakh**.
- With its latest launch in Ladakh, it has now become operational in all states and union territories.
- The **E-Daakhil portal was launched on 7th September 2020** by the **National Consumer Dispute Redressal Commission** under the Consumer Protection Act 2019, amid the COVID-19 pandemic.
- It provides an **inexpensive, speedy, and hassle-free mechanism for filing consumer complaints online**.
- It lets consumers file complaints, pay fees, and track cases from home. Registration is simple via OTP on mobile phones or email addresses.
- The government is also developing **e-Jagriti**, a platform to enhance case filing and resolution, aiming to transform consumer justice in India.

National Consumer Dispute Redressal Commission (NCDRC)

- It is a **quasi-judicial commission** in India which was set up in **1988** under the Consumer Protection Act of 1986. Its head office is in **New Delhi**. The Commission is headed by a sitting or retired Judge of the Supreme Court of India or a sitting or retired Chief Justice of the High Court.

PRAGATI Portal

- **In news**: A recent study by Oxford University praised India's PRAGATI (Pro-Active Governance and Timely Implementation) platform for transforming infrastructure development, successfully accelerating 340 delayed projects valued at USD 205 billion.
- The **PRAGATI (Pro-Active Governance and Timely Implementation) platform**, was launched on March 25, 2015, by Prime Minister Narendra Modi, as a part of Digital India program.
- The system has been designed in-house by the PMO team with the help of the National Informatics Center (NIC).
- The portal is managed by the Prime Minister's Office (PMO) and aims to address inefficiencies in project implementation through a structured review process.
- Recently, Prime Minister Narendra Modi chaired the **45th PRAGATI meeting** on December 26, 2024, focusing on the review of eight key projects and public grievances.

Objectives of PRAGATI

- It aims at bringing **e-transparency and e-accountability** with real-time presence and exchange among the key stakeholders.
- This innovative platform is designed to enhance governance by improving communication among various government departments and **ensuring timely execution of projects** across the country. It also monitors and reviews key programs and projects of the Government of India, along with those identified by State Governments. It combines leadership with digital tools such as video conferencing, drone monitoring, and data management. The platform emphasizes green technologies and sustainable practices.

Key Features of PRAGATI

- **Three-Tier System**: It is a three-tier system (**PMO, Union Government Secretaries, and Chief Secretaries of the States**), facilitating effective monitoring and evaluation of government projects.
- **Monthly Reviews**: A monthly review meeting, termed "**PRAGATI Day**," is held on the **fourth Wednesday of each month (3:30 PM)**, where the Prime Minister reviews flagged issues related to ongoing programs and public grievances. In this meeting, through video conference, the Prime Minister interact with the Government of India Secretaries and Chief Secretaries.
- **Real-Time Monitoring**: The platform facilitates real-time tracking of project progress, enabling early identification of delays and issues.

Notable Projects Accelerated by PRAGATI:

- Projects like the National Highway 8, the **Chenab Bridge** (the world's highest rail bridge), and the **Bogibeel Bridge** in Assam, which were previously delayed for years, were completed swiftly under PRAGATI's purview.

Other complimentary platforms for Infrastructure monitoring?

- **PM GatiShakti National Master Plan (PMGS-NMP)** was launched on 13th October 2021 for providing multimodal connectivity infrastructure to various economic zones. The focus will be on planning, financing including through innovative ways, use of technology and speedier implementation of the infrastructure projects in India.
- **PARIVESH** is a Single-Window Integrated Environmental Management System, developed in pursuance of the spirit of 'Digital India' initiated by the Prime Minister and capturing the essence of Minimum Government and Maximum Governance. It aims to streamline environmental clearances of infrastructure projects.
- **PRAGATI, PM Gati Shakti, and PARIVESH** together form a robust digital ecosystem for infrastructure development. These platforms have reduced approval times significantly- from 600 days to as little as 70-75 days- and optimized project design while minimizing environmental impact.

Pradhan Mantri Ayushman Bharat Health Infrastructure Mission (PM-ABHIM)

- The PM Atmanirbhar Swasth Bharat Yojana (PMASBY), which has now been renamed as PM-ABHIM is one of the largest pan India **Centrally Sponsored Scheme** (CSS) with certain Central Sector Components.
- It was **launched in 2021** by the Union Ministry of Health and Family Welfare with the outlay of Rs. 64,180 Crores for the scheme period (2021-22 to 2025-26).
- **Objective:** It aims to strengthen India's healthcare infrastructure systems at all levels- primary, secondary, and tertiary- and enhance pandemic preparedness. It supplements the National Health Mission (NHM) by addressing infrastructure gaps in public health facilities.

Bima Sakhi Yojana

- The Prime Minister of India launched the 'Bima Sakhi Yojana' of **Life Insurance Corporation**, in line with his commitment to women empowerment and financial inclusion.
- **Aim:** To empower women through **financial literacy and insurance awareness**.
- **Target:** **Enroll 100,000 Bima Sakhi in 12 months** to financially empower women and 200,000 over a period of three years as part of women empowerment drive.
- **Beneficiaries:** Women in the age group of **18-70 years**, who are **Class-10 pass**.
- Under the scheme, women will receive **specialised training and a stipend for the first three years**.
- Women will get a monthly stipend during the training: ₹7,000 in the first year, ₹6,000 in the second year, and ₹5,000 in the third year.
- Following the completion of the training, women can serve as **LIC agents** and the **graduate Bima Sakhis** would have the opportunity to qualify for development officer roles in LIC.
- Each **Bima Sakhi** will have a target of insuring **2 individuals every month** or 24 individuals in a year to earn the commission.
- Significance of the scheme: it will help to bridge the gap in insurance penetration in rural and semi-urban areas. It will foster financial independence among women while expanding LIC's outreach in promoting insurance as a tool for economic security.

SHe-Box (Sexual Harassment e-box) Portal

- **Launched by:** Ministry of Women and Child Development launched **to make Workplaces safer for Women**.
- It is a **Centralized platform** for registering and monitoring complaints of sexual harassment of women at workplace.
- **Objective:** Provide a single window access to every woman, (organised or unorganised sector) for registering complaint related to sexual harassment.
- The portal will ensure that complaints can be safely registered without personal information being publicly accessible. The SHe-Box portal can be accessed at <https://shebox.wcd.gov.in/>.
- It also has repository of Resources on Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013.

PM-WANI

- Launched in **2020** by the Department of Telecom (DoT), the PM-WANI framework aims to expand public Wi-Fi hotspots across India, particularly in **rural** areas.
- It allows local businesses, like shopkeepers, to set up **Wi-Fi hotspots**, providing affordable internet access and supporting the goals of the National Digital Communications Policy, 2018.

International Cooperative Alliance (ICA) Global Cooperative Conference

- Recently, **India hosted** the International Cooperative Alliance (ICA) Global Cooperative Conference in New Delhi for the **first time** in the organization's 130-year history.
- The **UN International Year of Cooperatives 2025** was launched at the event.

- The conference provides a platform for leaders, policymakers, and stakeholders to address issues, share practices, and strategies for advancing the cooperative movement.
- The theme of the conference was “Cooperatives Build Prosperity for All,” which aligns with the Indian Government’s vision of “*Sahkar Se Samriddhi*” (Prosperity through Cooperation).
- The event was organised by **Indian Farmers Fertiliser Cooperative Limited (IFFCO)** in collaboration with International Cooperative Alliance (ICA), AMUL, KRIBHCO (national level cooperative society), and the Government of India.
- A commemorative postal stamp featuring a **lotus** was launched. The five petals of the lotus represent the five elements of nature (Panchatatva), highlighting cooperatives’ commitment to environmental, social, and economic sustainability. Panchatatva includes earth, water, fire, air, and space.
- International Cooperative Alliance (ICA) was established in **1895** to promote the cooperative model. More than **306 organisations from 105 countries** are members of the ICA. ICA operates a **central office in Brussels, Belgium**, and four regional offices for Africa, the Americas, Asia-Pacific and Europe.

PM Vishwakarma Yojana

- Launched in 2023, to support traditional craftspeople and artisans across the country.
- It is a Central Sector Scheme which provides recognition to beneficiaries (traditional craftspeople) through a PM Vishwakarma Certificate and an ID Card.
- Stipend of Rs 500 for skill training per day and Rs 15,000 grant for the purchase of modern tools.
- Beneficiaries are eligible for collateral-free credit support of up to Rs 1 lakh (first tranche) and Rs 2 lakh (second tranche) at a low interest rate.

Digital Arrest

- Digital arrest involves cybercriminals posing as law enforcement agents (from the CBI, Narcotics Department, or Reserve Bank of India) who claim that the victim is involved in illegal activities like movement of drugs or a suspicious package. The victims are tricked into remaining under constant visual surveillance via Skype or other video conferencing platforms until the criminals’ demands are met.

Modus Operandi of Digital arrest

- Caller ID Spoofing: Scammers disguise their phone number to look like it is from a legitimate government office or police department. Scammers also reach out via video calls using WhatsApp or Skype.
- Intimidation: Victims are falsely accused of crimes like drug trafficking or money laundering, and are shown fake documents and setups that mimic police stations. The scammers use fear tactics, such as threatening for jail-term or property seizure, to create urgency.
- Isolation: Victims are instructed to remain on the call and not to contact anyone else. This creates a sense of urgency and fear. The fraudsters also use deepfake videos and fake arrest warrants to impersonate officials of law enforcement agencies.
- Demands for Money: The fraudsters demand immediate payment, often via gift cards, wire transfers, or cryptocurrency, which would make the money transfer difficult to trace. Some scammers ask for Aadhaar Details, Bank account details, and other personal information, which are later used for identity theft.
- Note: Digital arrest fraud cases have not only targeted the vulnerable groups, but also wealthy individuals as well.

No Detention Policy scrapped

- The Central Government has recently amended the Right to Education Act, 2009, *eliminating the no-detention policy* in schools governed by the Act. This includes Kendriya Vidyalayas, Jawahar Navodaya Vidyalayas, and other institutions under the Ministries of Defence and Tribal Affairs.
- No-Detention Policy: The policy, introduced under Section 16 of the Right to Education Act, 2009, *prevented the detention of students until Class 8*. The no-detention policy was intended to ensure that children received at least a minimum level of education.

Key Clause in the RTE Act, 2009:

- Section 16: No child shall be held back in any class until completing elementary education (Classes 1-8).
- Amended in 2019: To include a clause that allowed the “*appropriate government*” to decide on holding back children in Classes 5 and 8 based on academic performance.
 - Since then, 18 states and union territories (UTs) have abolished the no-detention policy.

Reasons for Scrapping the No-Detention Policy:

- Criticism of Academic Standards: Experts argued that the policy led to lower academic standards and reduced student accountability. It was seen as turning schools into places for mid-day meals rather than centers for learning.

- States' Feedback: Many states called for the removal of the policy to enhance quality and accountability in elementary education.
- National Alignment: The change aligns with the objectives of the National Education Policy (NEP) 2020, which focuses on holistic education.

About New rules

- Students who fail the annual exams in Classes 5 or 8 will receive extra help and be *allowed a re-examination within two months*. Failure in the re-exam may result in detention.
- Teachers and school leaders will offer targeted support, identify learning gaps, and closely monitor student progress.
- *No child can be expelled before completing Class 8*. Detailed records of detained students and their progress will be kept.

'Anna Chakra' and the SCAN

- The Union Minister of Consumer Affairs, Food, and Public Distribution recently launched two initiatives: 'Anna Chakra' and the SCAN (Subsidy Claim Application for NFSA) portal.

Anna Chakra

- It is a Public Distribution System (PDS) Supply Chain optimization tool that leverages advanced algorithms to identify optimal routes and ensure seamless movement of food grains.
- It is an initiative of the **Department of Food Public Distribution** developed in collaboration with the **World Food Programme (WFP) and IIT-Delhi**.
- It is Integrated with the **PM Gati Shakti platform and FOIS** (Freight Operations Information System) portal of the Railways through the **Unified Logistics Interface Platform (ULIP)**.
- Significance: This initiative enhances the speed and efficiency of the world's largest food security program, benefiting 81 crore people. It reduces fuel use, time, logistics costs, and transportation-related carbon emissions, offering environmental benefits.

SCAN (Subsidy Claim Application for NFSA) portal

- Aims to provide a single window submission of subsidy claims by states, claim scrutiny and approval by DFPD facilitating expeditious settlement process through end-to-end workflow automation.

Pradhan Mantri Shram Yogi Maandhan Yojana

- It is a Central Sector Pension Scheme launched in **2019**, administered by the Ministry of Labour and Employment, and Life Insurance Corporation of India (LIC) acts as the Pension Fund Manager.
- Target Beneficiaries: The scheme targets unorganised workers aged **18 to 40**, such as street vendors, domestic workers, construction labourers, and agricultural workers, with a monthly income up to Rs 15,000.
- Contribution: Workers are required to make monthly contributions (premium) ranging from Rs 55 to Rs 200, depending on their entry age, with the government matching their contribution.
- Pension Benefits: The scheme promises a pension of Rs 3,000 per month after the worker turns 60. However, if the worker dies before 60, there is no lump sum payment to their family.
- In case of the subscriber's demise, their spouse will receive 50% of the pension amount as family pension.

1st India Maritime Heritage Conclave (IMHC 2024)

- Recently, the 1st India Maritime Heritage Conclave (IMHC 2024) was organized at Yashobhoomi, Dwarka (New Delhi), by the Ministry of Ports, Shipping and Waterways, celebrating India's maritime legacy and contributions to global trade, while discussing future innovations.
- Theme: "Towards Understanding India's Position in Global Maritime History."
 - Focused on India's historical and contemporary contributions to global maritime trade, culture, and innovation.
- Leading maritime nations like **Greece, Italy, and the United Kingdom** participated, emphasizing the global significance of India's maritime heritage.
- A key highlight was the emphasis on the upcoming **National Maritime Heritage Complex (NMHC)** in **Lothal**, which will showcase India's ancient maritime techniques, such as shipbuilding and bead-making.

Reforming National Testing Agency (NTA)

- A government-appointed panel, led by former ISRO chairman K. Radhakrishnan, has recommended extensive reforms in the National Testing Agency (NTA).
- National Testing Agency: NTA was established in 2017 as a Society registered under the Indian Societies Registration Act, of 1860. It is a premier, specialist, autonomous and self-sustained testing organization to conduct entrance examinations for admission/fellowship in higher educational institutions. E.g., JEE (Main), CMAT, UGC - NET etc.

- **Governance:** NTA is chaired by an eminent educationist appointed by the Ministry of Education. The Director General is assisted by 9 verticals headed by academicians/ experts. The CEO is the Director General appointed by the Government.

Operation Greens Scheme

- It is a **central sector scheme** launched in **2018**, under the **Pradhan Mantri Kisan SAMPADA Yojana**.
- It aims **to stabilize the prices of perishable crops and enhance farmers' earnings** by drawing inspiration from "Operation Flood (White Revolution)".

Objectives:

- **Long-Term Interventions:** Enhance farmers' value realization through support for production clusters and Farmers Producer Organisations (FPOs).
 - Reduce post-harvest losses via farm gate infrastructure, agri-logistics, and storage facilities. z Boost food processing and value addition by linking production clusters with the market.
- **Short-Term Interventions:** Protect growers from distress sales and reduce post-harvest losses.
- **Implementation:** OG is implemented by the Ministry of Agriculture and Farmers Welfare, with funding provided by the National Agricultural Cooperative Marketing Federation of India (NAFED).
- **Expansion of Scope:** The OG scheme **initially focused on Tomato, Onion, and Potato (TOP)**.
- However, as part of the 15th Financial Commission Cycle (2021-26), its **scope expanded to include 22 perishable crops** such as fruits (e.g., Mango, Banana, Grapes), vegetables (e.g., Carrot, Beans, Okra), gourd family (e.g., Bottle Gourd, Bitter Gourd), and other crops like Garlic, Ginger, and Shrimp.

'Know Your Medicine' App:

- **Launched by:** Union Minister for Youth Affairs & Sports
- **About:** It is part of NADA India's broader mission to **raise anti-doping awareness and education**, equipping athletes with essential information to stay clean.
- NADA stands for National Anti-Doping Agency. It was set up as a registered society under the **Societies Registration Act of 1860** in November 2005.
- The app allows **users to easily verify whether** a specific medicine or its ingredients contain any substances listed as **prohibited by the World Anti-Doping Agency (WADA)**.

VISION Portal

- Union Minister Dr. Jitendra Singh inaugurated the **VISION Portal (Viksit Bharat Initiative for Student Innovation and Outreach Network)**.
- **Developed by:** **Utsav Foundation**, a non-profit organization based in Gurugram.
- **Aim:** to uplift underprivileged youth through education, skill development, and sustainable livelihoods.

PM Surya Ghar-Muft Bijli Yojana

- It is the **world's largest domestic rooftop solar scheme**, launched in February 2024.
- The scheme aims for **one crore installations by March 2027**.
- It is a **central scheme** to promote the adoption of **solar rooftop systems** by providing substantial financial subsidies and ensuring ease of installation.
- **Objective:** It aims to provide **free electricity to one crore households** in India, who opt to install roof top solar electricity units.
 - The households will be able to get **300 units** of electricity **free every month**.
- **Implementation Agencies:** The scheme will be executed at **two levels**.
 - **National Level:** Managed by the *National Programme Implementation Agency (NPIA)*.
 - **State Level:** Managed by *State Implementation Agencies (SIAs)*, which are the Distribution Utilities (DISCOMs) or Power/Energy Departments of the respective states or UTs.
- **Role of DISCOMs:** As SIAs, DISCOMs are responsible for facilitating various measures to promote rooftop solar adoption, including ensuring the availability of **net metres**, and conducting timely inspections and commissioning of installations.
- **Subsidy Structure:** The scheme provides subsidies to reduce the cost of installing solar rooftop systems. The subsidy is capped at a **maximum of 3kW capacity**.
 - **60% subsidy** for solar systems up to 2kW capacity.
 - **40% subsidy** for systems between 2kW to 3kW capacity.
- **Additional Features of the Scheme:**
 - **Model Solar Villages:** A "Model Solar Village" will be developed in each district to serve as a demonstration project and promote rooftop solar adoption in rural areas.

- Incentives for Local Bodies: Urban Local Bodies and Panchayati Raj Institutions will receive incentives to promote rooftop solar installations in their respective areas.

National Legal Metrology Portal (eMaap)

- **Department of Consumer Affairs** is developing eMaap **to integrate State Legal Metrology Departments and their portals into a unified National System.**
- Presently, State Governments are using their own portals for registration of packaged commodities, issue of licenses and verification/stamping of weighing & measuring instruments

About eMaap

- Aim: Streamline processes for issuing licenses, conducting verifications and managing enforcement and compliance.
- Benefits: Foster ease of doing business and Transparency in trade practices by minimizing compliance burdens, reducing paperwork under Legal Metrology Act, 2009.
 - Enables data-driven decision-making, streamlines enforcement activities, and facilitates policy formation, ensuring a robust and efficient regulatory framework.

NCERT & GOOGLE partnership

- Google has expanded its educational initiatives in India through a strategic partnership with the National Council for Educational Research and Training (NCERT). This collaboration aims to make quality education more accessible by launching YouTube channels in 29 Indian languages, including Indian Sign Language, for students in grades 1-12.

'Udaan Yatri Cafe' initiative

- To address growing concerns about overpriced food and beverages at airports, the Indian government has launched the 'Udaan Yatri Cafe' initiative.
- This project aims to offer affordable refreshments to passengers, starting with a pilot at Kolkata's Netaji Subhas Chandra Bose International Airport.
- The initiative was proposed after Rajya Sabha MP Raghav Chadha raised the issue in Parliament, emphasizing the need to reduce the financial burden on air travelers.

Other news related to Governance

- **PENCiL (Platform for Effective Enforcement for No Child Labour) portal**: it was launched in 2017 by the Ministry of Labour and Employment to ensure effective enforcement of the provisions of the Child and Adolescent Labour (Prohibition and Regulation) Act, 1986.
- **Ayush Visa** introduced in **2023** with four sub categories: Ayush Visa (AY-1), Ayush Attendant Visa (AY-2), e-Ayush Visa, and e-Ayush Attendant Visa. Its purpose is to allow foreigners to receive treatment through Ayush systems like therapeutic care and wellness in accredited hospitals or wellness centers.
- The Union Government has allocated Rs 3,295 crore for the development of 40 tourism projects across 23 states under the **Special Assistance to States for Capital Investment (SASCI)** - Development of Iconic Tourist Centres to Global Scale.
- The Union Cabinet has approved the continuation of the **Atal Innovation Mission (AIM)** under NITI Aayog with an enhanced budget of Rs. 2,750 crore, marking the launch of **AIM 2.0** to strengthen India's innovation ecosystem **until 2028**. **AIM was launched by NITI Aayog in 2016**, to promote innovation and entrepreneurship by fostering a problem-solving mindset in students and strengthening the entrepreneurial ecosystem in universities and research institutions.
- PM-DevINE, is a Central Sector Scheme introduced in the Union Budget 2022-23 with the aim of promoting rapid and holistic development in the North East Region (NER).
- **Pradhan Mantri Awas Yojana – Urban 2.0 (PMAY-U 2.0)** will provide financial aid to **1 crore** urban poor and middle-class families through States/UTs/PLIs for affordable housing in urban areas over **five years from 1st September 2024**. Preference will be given to widows, single women, persons with disabilities, senior citizens, transgenders, Scheduled Castes/Scheduled Tribes, minorities, and other vulnerable sections.
- Recently, the Ministry of Women and Child Development launched the **Bal Vivah Mukht Bharat Abhiyan**, a national campaign aimed at
 - eradicating child marriage in India. The campaign aligns with India's commitment to gender equality and the broader vision of a developed nation (Viksit Bharat) by 2047.
- The Union Minister for Chemicals and Fertilizers, **Shri JP Nadda**, launched the **"Scheme for Strengthening the Medical Device Industry,"** aimed at boosting the sector and making India self-reliant in medical devices. The scheme has a total outlay of Rs. 500 Crores.

- The Union Minister of Rural Development and Agriculture & Farmers' Welfare, Shri Shivraj Singh Chouhan, launched the third edition of the national **campaign "Nayi Chetna – Pahal Badlaav Ki"** which aims to combat gender-based violence across India, focusing on raising awareness, promoting community engagement, and strengthening support systems for victims.
- Union Minister for Education, Shri Dharmendra Pradhan, launched The **TeacherApp**, an innovative digital platform developed by Bharti Airtel Foundation to empower educators with the skills required to meet the evolving demands of 21st-century classrooms.
- Indian Railways launched '**Sanraksha**' **mobile application** to enhance the safety and security of passengers.
- The **13th National Seed Congress (NSC) 2024**, organized by the Ministry of Agriculture & Farmers' Welfare, was held at the International Rice Research Institute South Asia Regional Centre (ISARC), **Varanasi**, bringing together over 700 delegates from various sectors.
- The Indian government has launched the **Jalvahak incentive scheme** to encourage long-haul cargo transportation via national waterways. Aimed at decongesting road and rail networks and promoting sustainable transport, the scheme offers direct incentives for transporting goods over **300 km** on waterways.
- **Kisan Kavach**, India's first indigenous anti-pesticide bodysuit. Developed by *BRIC-inStem, Bangalore*, in collaboration with Sepio Health Pvt. Ltd., the suit aims to safeguard farmers from pesticide-induced health risks.
- On December 25, 2024, Defence Secretary Rajesh Kumar Singh launched the **Rashtraparv Website and Mobile App**, commemorating the birth anniversary of former Prime Minister Atal Bihari Vajpayee and marking Good Governance Day. The platform, developed by the Ministry of Defence, aims to provide a transparent and citizen-centric approach to the organization of key national events such as Republic Day, Beating Retreat, and Independence Day.

POLITY (Articles or Sections in News)

Medical negligence

- Often referred to as medical malpractice, it occurs when a healthcare provider does not meet the established standard of care for a patient, leading to harm, injury, or even death.
- Recently, the **Supreme Court has emphasized that medical professionals should not be held liable for medical negligence simply because a patient did not respond positively to surgery or treatment.**
- Liability can only be established if there is evidence showing that the doctor failed to exercise the necessary skill in performing their duties.

Supreme Court's ruling on LMV

- Recently, the Supreme Court ruled that a person holding a driving licence for a **light motor vehicle (LMV)** is also **entitled to drive a transport vehicle with an unladen weight upto 7,500 kg.**
- The SC upheld its 2017 verdict,
- which also permitted LMV licence holders to drive transport vehicles under 7,500 kg gross weight.
- The SC verdict challenged the practice of insurance companies rejecting claims in accidents involving transport vehicles driven by those with LMV licence.

Right of persons with disabilities (PWDs)

- Recently, The Supreme Court affirmed that the right to access environments, services, and opportunities for persons with disabilities (PWDs) is a human and fundamental right.
- Accessibility: The court urged the government to create universal accessible public and private spaces, services, and products as mandated in **Rule 15 of the Rights of Persons with Disabilities Rules, 2017.**
- Rule 15 covers accessibility of physical environment, transport, and information and communication technology.

Parliamentary Secretaries in State

- The Supreme Court stayed Himachal Pradesh High Court's direction which declared power to appoint chief parliamentary secretaries and parliamentary secretaries in the state as unconstitutional.
- Parliamentary Secretaries in State are appointed to assist ministers with parliamentary work.
- They often hold the rank of Minister of State and have the same entitlements and are assigned to a government department.
- Various high courts have deemed appointment of Parliamentary Secretaries as unconstitutional.
- Issues in Appointment: Appointment of Parliamentary Secretaries goes against **91st Amendment** of the Indian Constitution, which introduced Article 164(1A).
- Article **164(1A)** limits the total number of ministers, including the Chief Minister, to 15% of the state's legislative assembly members.

Ban on ULFA

- Recently, the Ministry of Home Affairs (MHA) extended the ban on the United Liberation Front of Asom (ULFA) for five more years under the Unlawful Activities Prevention Act, 1967 (UAPA).
- ULFA is an **armed militant organisation** operating in **Assam** that aims to secede Assam from India.
- ULFA was formed in **1979** to seek the “restoration of Assam’s sovereignty” through armed struggle.
- ULFA was first banned in 1990 and the ban has been renewed periodically, with the last extension in 2019.
- Section 35 of the UAPA, 1967** empowers the government to declare an organisation as unlawful or an individual as terrorist if it engages in activities promoting terrorism or secession.

Bulldozer justice

- Bulldozer justice refers to the practice of demolishing properties, often belonging to those accused of crimes, sometimes without following proper legal procedures.
- Article 142** of the Constitution empowers the Supreme Court to pass decrees and orders necessary for complete justice in any case.

Recent Supreme Court Guidelines on Bulldozer Justice under Article 142

- Providing Notice: A minimum of **15 days’ notice** must be given to the property owner or occupier before any demolition can proceed. The notice must clearly outline the details of the structure to be demolished and reasons for demolition.
- Fair Hearing: A scheduled date for a personal hearing to provide an opportunity for the affected party to contest the demolition or clarify the situation.
- Transparency: Authorities must notify the **local Collector or District Magistrate** via email upon serving the notice, with an auto-reply acknowledgment to avoid claims of backdating or tampering.
- Issuance of Final Order: The final order must include the owner’s or occupier’s arguments, the authority’s justification for demolition as the only option, and whether the entire or partial structure is to be demolished.
- Post-Final Order Period: If a demolition order is issued, the Supreme Court mandated a **15-day period** before implementation, allowing the owner or occupier to remove the structure or challenge the order in court.
- Documentation of Demolition: The authority must record the video of demolition and prepare an “inspection report” beforehand, along with a “demolition report” listing the personnel involved.
- Test for Dual Violations: The SC laid down a separate test for cases where a demolished property houses an accused but also violates municipal laws as an illegal construction. The SC stated that if only one structure is demolished while similar ones are untouched, it may suggest the motive is to penalise the accused, not remove an illegal construction.
- Exception: SC clarified that **its directions will not be applicable if there is any unauthorised structure in any public place** such as roads, streets, or footpaths, abutting railway lines or any river or water body and also to cases where there is an order for demolition made by a court of law.

Prior Sanction Required to Prosecute Public Servants for Money Laundering

- The Supreme Court upheld a decision by the Telangana High Court, mandating a prior govt sanction to prosecute public servants accused of money laundering charges (under the Prevention of Money Laundering Act / PMLA 2002).
- The Supreme Court dismissed a plea by the Enforcement Directorate (ED), which had challenged the Telangana high court’s verdict. The **Supreme Court for the very first time mandated that the Enforcement Directorate (ED) need to obtain prior sanction to prosecute public servants on money laundering charges**.

Section 197(1) of CrPC

- The decision reinforced the application of Section 197(1) of the Code of Criminal Procedure (CrPC) in PMLA cases. It mandates prior government sanction before prosecuting public servants, judges, or magistrates for actions performed in their official duties.
- This **aims to prevent malicious prosecutions and protect decision-making in good faith**.
- The sanction must come from the Central Government for Union-affiliated individuals and from the State Government for those in State affairs.
- Exceptions: Specific crimes, particularly those involving gender-based violence and sexual offences under the Indian Penal Code, 1860 (BNS, 2023) do not require prior sanction for prosecution of public servants.

Supreme Court’s decision regarding minority status of AMU

- The Supreme Court ruled that Aligarh Muslim University (AMU) has the right to claim minority status under Article 30 of the Constitution.

Let us understand it with the sequence of events

- Aligarh Muslim University (AMU) was formed through AMU Act 1920.

- In the **S. Azeez Basha versus Union of India 1967**, the Supreme Court held that AMU was a Central university and cannot be considered a minority institution as it came into existence through an Act of the central legislature (AMU Act 1920). To enjoy the status, it should have been both established and administered by the minority. This verdict also held that religious minorities did not have a right to administer educational institutions not established by them, and thus do not enjoy protection under Article 30(1) of the constitution.
- Subsequently, the **Parliament passed the AMU (Amendment) Act in 1981** to accord minority status to AMU. However, this amendment was struck down by the Allahabad High Court in AMU v. Malay Shukla case in 2006. The matter was then referred to a seven judge SC bench in 2019.
- **2024 verdict:** The **seven judge bench of Supreme Court (by 4:3 majority)**, overruled its **S. Azeez Basha vs. UOI (1967) judgment** which held that AMU cannot claim minority status under Article 30 (1) as it was established by a statute. It means, AMU can enjoy minority status even if it is formed through a statute (AMU act 1920).
- **Future course of action:** The Supreme court did not directly decide whether AMU is a minority institution and now referred 'issue of AMU's minority status under Article 30' to a **regular bench** based on principles established in this judgment.

SC Upholds UP Madarsa Act, 2004

- Recently, Supreme Court of India in **Anjum Qadri and Anr vs Union of India & Ors case**, upheld a landmark the constitutionality of the Uttar Pradesh Board of Madarsa Education Act, 2004.
- This ruling, authored by Chief Justice D.Y. Chandrachud, reverses the Allahabad High Court's March 22 judgment that struck down the Act, bringing relief to thousands of madarasas and lakhs of students.
- Uttar Pradesh Board of Madarsa Education Act, 2004: It is a legislative framework aimed at regulating and formalising madrasa education in the state of Uttar Pradesh. It ensured that madrasas operate within a set of defined educational standards and norms.

What Was the Supreme Court's Ruling on the UP Madarsa Act?

- The Allahabad High Court struck down the Madarsa Act, citing secularism as part of the Basic Structure doctrine. It argued that regulating religious education violates secularism and Article 21A (Right to Education).
- The Supreme Court clarified that the Basic Structure doctrine applies only to constitutional amendments, not ordinary laws like the Madarsa Act. This was supported by the 1975 Indira Nehru Gandhi judgment.
- Citing *S.R. Bommai v. Union of India* (1994), the Supreme Court emphasized that secularism ensures equal treatment of all religions. Recognizing madarasas safeguards minority educational rights without violating secular principles.
- The Supreme Court rejected claims that madarsa education violated Article 21A.
- In *Pramati Trust* (2014), the SC exempted minority institutions from the RTE Act's application.

Indira Nehru Gandhi vs Raj Narain Case, 1975

- The Supreme court had used the Basic Structure doctrine for the first time in the **Raj Narain case, 1975** to strike down a Constitutional Amendment. The judges on the Raj Narain Bench had differentiated between an ordinary statute and a Constitutional Amendment. Constitutional amendments are tested against the basic structure doctrine, not ordinary legislation.

State Finance Commissions (SFCs)

- SFCs are constitutional bodies established by states under **Article 243-I** of the Indian Constitution.
- As per Article 243-I, the Governor is required to constitute an SFC within one year from the enactment of the 73rd Constitutional Amendment Act, 1992 and every five years thereafter.
- Their primary role is to recommend the distribution of financial resources between the state government and its local bodies.
- In News: According to the Ministry of Panchayati Raj, all states, except Arunachal Pradesh have constituted State Finance commissions (SFCs).

Places of Worship (Special Provisions) Act, 1991

- The Places of Worship (Special Provisions) Act, 1991, aims to preserve the religious status of places of worship, preventing conversions between different religious denominations or within the same denomination. The Act seeks to maintain communal harmony by freezing the religious character of these places and preventing disputes over such conversions.
- Section 3: Prohibits the conversion of any place of worship, either in full or in part, from one religious denomination to another.
- Section 4(1): Mandates that the religious identity of a place of worship must remain unchanged from its status on 15th August 1947. Any attempt to alter the religious character is prohibited.

- Section 4(2): Terminates all ongoing legal proceedings concerning the conversion of a place of worship's religious character prior to 15th August 1947, and prevents the initiation of new cases challenging the religious status of such places.
- Section 5 (Exceptions): The specific dispute at Ayodhya (Babri Masjid-Ram Janmabhoomi), which was exempted from the Act.
- Besides the Ayodhya dispute, the Act also exempted:
 - Any place of worship which is an ancient and historical monument, or an archaeological site covered by the Ancient Monuments and Archaeological Sites and Remains Act, 1958.
 - Cases that have already been resolved or settled by mutual agreement.
 - Conversions that occurred before the Act's commencement
- Section 6 (Penalties): The Act establishes strict penalties for violations, including imprisonment of up to three years and fines for attempting to change the religious character of a place of worship.
- Supreme Court's Interpretation: In May 2022, the Supreme Court noted that inquiries can be allowed into the religious character of places of worship, as long as such inquiries don't lead to a change in the religious character.

Data for the 2024 Lok Sabha elections

- Recently, the Election Commission of India has released comprehensive data for the 2024 Lok Sabha elections to enhance transparency and accessibility for all stakeholders.
- Electors: There were 97,97,51,847 registered electors, marking a 7.43% increase from 91,19,50,734 in 2019.
- A total of 64.64 crore votes were cast, compared to 61.4 crore in 2019.
- Dhubri (Assam) recorded the highest turnout at 92.3%, while Srinagar (J&K) had the lowest at 38.7%, (up from 14.4% in 2019).
- NOTA received 63,71,839 votes (0.99%) in 2024, and transgender voter turnout stood at 27.09%.
- Polling Stations: In the 2024 Lok Sabha elections, there were 10,52,664 polling stations, an increase from 10,37,848 in 2019.
- Bihar saw the highest increase in polling stations, adding 4,739, followed by West Bengal (1,731). Repoll held only in 40 Polling Stations (0.0038% of Total Polling Stations) compared to 540 in 2019.
- Nominations: In the 2024 Lok Sabha elections, 12,459 nominations were filed, up from 11,692 in 2019.
- Malkajgiri (Telangana) had the highest with 114 nominations, while Dibrugarh (Assam) had the lowest with 3 nominations (excluding Surat).
- Women Empowerment: In the 2024 Lok Sabha elections, there were 47,63,11,240 female electors (48.62% of total electors), up from 43,85,37,911 (48.09%) in 2019.
- Highest percentage share of Female electors in 2024: Puducherry (53.03%) followed by Kerala (51.56%).
- Dhubri (Assam) recorded the highest female voter turnout at 92.17%, followed by Tamluk (West Bengal) with 87.57%.
- The number of female electors per 1,000 male electors increased to 946 in 2024, up from 926 in 2019.
- State with the highest number of Female Contesting candidates: Maharashtra (111) followed by UP (80) and Tamil Nadu (77).
- Inclusive Elections: In the 2024 Lok Sabha elections, third-gender electors rose by 23.5% to 48,272 (39,075 in 2019), with Tamil Nadu having the highest at 8,467.
- Voter turnout among transgender voters nearly doubled to 27.09% from 14.64% in 2019.
- The number of registered persons with disabilities (PwD) electors rose to 90,28,696, compared to 61,67,482 in 2019. 1,19,374 overseas electors were registered in 2024 (99,844 overseas electors in 2019).
- Results: In the 2024 Lok Sabha elections, six national parties participated, securing a combined vote share of 63.35% of the total valid votes.
- The Surat (Gujarat) constituency was uncontested. Of the 3,921 independent candidates, only 7 were elected. Independent candidates received 2.79% of the total valid votes, with 279 independent female candidates.
- Note: The winning candidate won the Surat Lok Sabha seat unopposed after the nomination of one candidate was rejected, an eight other candidates withdrew their nominations.

Protected Area Regime (PAR)

- The Union Home Ministry has **reimposed** the Protected Area Regime (PAR) in **Manipur, Mizoram, and Nagaland** due to rising security concerns over foreign influx from neighboring countries.
- About Protected Area Regime (PAR): The PAR is a set of regulations established under the **Foreigners (Protected Areas) Order, 1958**, which is aimed at regulating foreign visitors to areas that are considered strategically important or vulnerable to external threats, particularly in the northeastern states and other border regions of India.

Key Features of the PAR:

- **Restricted Access:** Foreigners are not allowed to visit areas under the PAR without prior government approval. To enter these areas, they must apply for and obtain a Protected Area Permit (PAP), which allows authorities to monitor the movement of foreign nationals in sensitive regions.
- The areas covered by the PAR are deemed sensitive due to their proximity to international borders or because of ethnic tensions, insurgency, or political instability.
- **Relaxations and Reimposition:** In the past, there have been temporary relaxations to encourage tourism in some regions, like in Manipur, Mizoram, and Nagaland, where the PAR was relaxed in 2010 for promoting tourism.
- However, such relaxations were reversed when security concerns arose, as seen with the recent reimposition of the PAR in these states.

Article 67(b): removal of Vice President

- Article 67(b) states that the Vice President may be removed if an **effective majority** “all the then members of Rajya Sabha” passes a resolution for his removal, which must then be “agreed to” by the Lok Sabha, with at least **14 days’ notice** given before moving the resolution.
- Upon the expiry of the 14-day period, Rajya Sabha will take up the resolution for discussion, following the procedure outlined in Article 67(b).
- There are no precedents to indicate if the resolution can be considered in the next session.
- Article 92 of the Constitution explicitly bars the Chairman or Deputy Chairman from presiding over proceedings while a resolution for their removal is under consideration.

POSH Act

- POSH Act stands for the ***Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013***.
- It was enacted by the Government of India to address the issue of sexual harassment in workplaces and ensure a safe and conducive environment for women.
- In news: Recently, a Public Interest Litigation (PIL) has been heard by the Supreme Court regarding applicability of Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 (POSH Act) in political parties.

Women in Parliament

- India: In the 18th Lok Sabha (2024-29), **74 women** were elected, constituting **13.6%** of its members.
 - This marks a slight decline from the 17th Lok Sabha, where women represented 14.4% of the members.
 - Additionally, women account for 14.05% of the Rajya Sabha.
- Global: As of April 2024, women make up 26.9% of lawmakers worldwide.

OTHER POLITY NEWS:

- Recently, the Supreme Court upheld the addition of **socialist and secular** to the Preamble inserted through the **42nd Amendment Act, 1976**.
- Recently, the Supreme Court (SC) ruled that **compassionate employment is not a vested right but a relief** measure for families after a government employee’s death.
- The Supreme Court (SC) of India has **quashed** the Telangana government’s land allotments to cooperative societies comprising Members of Parliament (MPs), Member of the Legislative Assembly (MLA), civil servants, and journalists, deeming it a violation of equality under **Article 14** of the Constitution. The SC criticized the land allotment to privileged groups at discounted rates, favoring the already privileged over marginalized communities.
- Election Commission of India (ECI) has pushed the maximum limit per polling station from 1,200 (in rural) and 1,400 (urban) to a **uniform 1,500 voters**, which has raised concerns regarding overcrowding of polling stations and hence the disenfranchisement.
- Recently, the Ministry of Home Affairs (MHA) has reimposed the Armed Forces Special Powers Act (AFSPA) in six police station areas of Manipur due to a volatile security situation and the active involvement of insurgent groups in violence. Manipur has been under AFSPA since 1980, with periodic reviews reflecting the changing security landscape.
- Recently, Tamil Nadu government introduced the “Repowering, Refurbishment, and Life Extension Policy” to replace old turbines and optimise wind energy use. However, wind energy generators have opposed the policy, approached the Madras High Court and got a stay.
- Recently, the Supreme Court (SC) of India criticised the Union government for not establishing the promised new Organised Crime Investigative Agency (OCIA) or enacting comprehensive anti-trafficking legislation since

its 2015 commitment. This failure has raised significant concerns about the effectiveness of the existing frameworks to tackle the growing menace of sex trafficking.

- **Khap Panchayats** are traditional community based councils primarily in North India, especially in Haryana and Uttar Pradesh, that function as informal judicial bodies.
- Recently, the Parliament passed the **Bharatiya Vayuyan Vidheyak (BVV) Bill, 2024**, which seeks to replace the Aircraft Act, 1934 (last amended in 2020), and bring major reforms to the aviation sector.
- Recently, the **Oilfields (Regulation and Development) Amendment Bill, 2024** was passed by the Rajya Sabha, aiming to encourage domestic production of petroleum and mineral oils while attracting private investment. This bill seeks to amend the existing Oilfields Act of 1948 by clearly delineating the governance of oil production from mining activities.
- Recently, the government initiated steps towards implementing “**One Nation, One Election**” by introducing two Constitution Amendment Bills namely One Nation One Election–The Constitution 129th Amendment Bill 2024 and the The Union Territories Laws Amendment Bill 2024 in Lok Sabha.
- The **Jharkhand High Court** has stayed the implementation of the Jharkhand State Employment of Local Candidates in Private Sector Company Act, 2021, which mandated a 75% reservation for local candidates in private-sector jobs with salaries up to Rs 40,000.
- The Supreme Court’s recent guidelines to **eliminate child marriages in Rajasthan by 2030** have provided a significant boost to civil society organizations working to combat this issue.

ECONOMY and AGRICULTURE NEWS

Mule bank account

- A mule account is a bank account used to facilitate illegal activities. A money mule is someone who transfers or moves illegally acquired money on behalf of someone else.
- Transnational cybercriminals use accounts of shell companies and individuals as mule accounts, exploiting the bulk payout facility provided by banks.

Sea ranching

- Sea ranching, or ocean ranching, is a type of fish farming **where juvenile fish are released into the ocean to grow naturally without protection or assistance before being harvested**.
- The **Kerala Fisheries Department** launched a sea ranching project off **Thiruvananthapuram**, with 10 lakh pompano and cobia fingerlings (marine fish species) to be released at 10 coastal locations to replenish marine fishery resources and support sustainable fishing.
- The project follows the artificial reef initiative under the Pradhan Mantri Matsya Sampada Yojana (PMMSY), aimed at enhancing marine biodiversity.

Digital Euro

- The European Central Bank (ECB) has introduced the **digital euro**.
- Digital Euro is a **central bank digital currency (CBDC)** issued directly by the ECB, enabling digital transactions without intermediaries like banks or payment gateways. It is aimed at revolutionizing payment systems.
- It will function as a digital version of cash that enables peer-to-peer transactions, even offline, while maintaining a level of anonymity similar to cash.
- CBDC is designed to lower transaction costs, including for micro-payments which are currently expensive with traditional banks.
- Note: The **Reserve Bank of India (RBI) launched the Digital Rupee (₹) in 2022, as a CBDC**.
- **CBDCs** are a digital form of a paper currency and unlike cryptocurrencies that operate in a regulatory vacuum, these are legal tenders issued and backed by a central bank.

Tuna Fish

- India plans to make the **Andaman and Nicobar Islands a tuna export hub**. Earlier, the Department of Fisheries notified the development of a Tuna Cluster in the region under the Pradhan Mantri Matsya Sampada Yojana (PMMSY).
- Tuna fish is large, fast-swimming fish with streamlined bodies and great agility. It belongs to the Thunnini tribe within the Scombridae family. There are over 15 species of tuna, including Bluefin, Yellowfin, Bigeye, and Skipjack. It is **high in protein, low in saturated fat, and rich in omega-3 fatty acids**, which promote heart health, brain function, and reduce inflammation. It also contains important vitamins and minerals like Vitamin D, B12, iron, and selenium.

Coffee production in India

- India produces two types of coffee, **Arabica** and **Robusta**, with **Karnataka as the largest producer**.
- In 2022-2023, India became the 8th largest coffee grower. By August 2024, coffee exports reached USD 1.19 billion.
- **Coffee Board of India** is a statutory organization constituted under the Coffee Act, 1942, and functions under the administrative control of the Ministry of Commerce and Industry. It is headquartered in Bengaluru.
- In news: The Coffee Board of India has launched a 10-year roadmap with the goal of doubling the country's coffee production and exports by 2034. The goal is to nearly triple coffee production from 3.7 lakh tonnes in 2024-25 to 9 lakh tonnes by 2047. The plan aims to identify 10,000 small farmers to grow specialty coffee for export, enabling them to sell at premium prices.

Tea production in India

- India is one of the top 5 tea exporters, accounting for 10% of global exports.
- In 2023-24, it exported 250.73 million kg of tea, with Assam, Darjeeling, and Nilgiri teas renowned globally.
- **Tea Board of India** was established under the Tea Act of 1953 as a statutory body of the Central Government under the Ministry of Commerce, has its head office in Kolkata, West Bengal, also has three overseas offices in London, Dubai, and Moscow.

RBI's Major Move: Repatriation of 100 Tonnes of Gold to India

- The Reserve Bank of India (RBI) recently moved over 100 tonnes of gold from the **UK** to its domestic vaults, marking the largest repatriation since the early 1990s.
- This decision emphasizes the RBI's evolving approach to gold reserve management and reflects confidence in India's economic stability.
- Bringing the gold back to India enhances logistical control and **reduces dependency on foreign storage**.
- By storing the gold domestically, the RBI **saves on storage fees** that would have otherwise been paid to foreign custodians, such as the Bank of England.
- This move, mitigated risks associated with holding reserves abroad.
- Note: As of March 2024, the RBI holds a total of 822.10 tonnes of gold. With this transfer, the quantity of gold stored domestically rose to approximately 408.31 tonnes, indicating a shift towards holding more reserves within India.
- Following this move, the RBI may consider repatriating additional gold to India.

World Bank increased its lending capacity

- Recently, the World Bank has increased its lending capacity **by 50%** through balance sheet optimisation, aiming to provide USD 150 billion over the next decade. This expansion has a strong focus on green projects, supporting climate action and the Sustainable Development Goals (SDGs).
- With current annual lending of USD 5 billion, India is one of the World Bank's largest clients, and will receive a major share of the increased funding, focusing on climate resilience, rural development, energy, healthcare, and digital education.

Domestic Systemically Important Banks (D-SIBs)

- Recently, the Reserve Bank of India (RBI) retained the **State Bank of India, HDFC Bank and ICICI Bank** as Domestic Systemically Important Banks (D-SIBs).
- The RBI had designated SBI and ICICI Bank as D-SIBs in 2015 and 2016, and HDFC Bank joined them in 2017.
- D-SIBs are banks that are considered 'Too Big to Fail' (TBTF) within the domestic economy due to their size, complexity, and interconnections with the financial system.

SC-appointed High Level Committee

- It was constituted by the Supreme Court (SC) in September 2024 under the **chairmanship of former Punjab and Haryana High Court judge Nawab Singh** to resolve the grievances of farmers agitating at the Shambhu border and suggesting possible solutions to this.

Findings of the committee

- The report finds that farmers earn a mere **Rs 27 per day** from agricultural activities, highlighting the stark poverty within the sector. The average monthly income of agricultural households is Rs 10,218, which is far below the basic living standards required for a decent life.
- Farmers in Punjab and Haryana are burdened with mounting debts.
- Non-institutional debt adds to the burden, accounting for 21.3% in Punjab and 32% in Haryana.

- Punjab and Haryana have experienced stagnation in agricultural growth, with annual growth rates of 2% and 3.38%, respectively, from 2014-15 to 2022-23, significantly below the national average.
- The report highlights that 46% of India's workforce is employed in agriculture, yet it contributes only 15% to the national income.
- Depleting water tables, droughts, erratic rainfall, and extreme weather conditions are aggravating the crisis, further threatening food security and agricultural productivity.

India scrapped Windfall tax

- The Indian government has abolished the windfall tax on **crude petroleum oil, petrol, diesel, and Aviation Turbine Fuel (ATF)**, effective December 2, 2024.
- Additionally, the **Road and Infrastructure Cess** on the export of petrol and diesel has been scrapped.
- Windfall tax was imposed on July 1, 2022, to curb abnormal profits by oil companies during the Russia-Ukraine war, the tax aimed to stabilize domestic supplies and fund welfare programs.

About Windfall tax:

- Windfall taxes are designed to tax the profits a company derives from an external, sometimes unprecedented event—for instance, the energy price-rise as a result of the Russia-Ukraine conflict.
- The United States Congressional Research Service defines a windfall as an unearned, unanticipated gain in income through no additional effort or expense.
- These are profits that cannot be attributed to something the firm actively did, like an investment strategy or an expansion of business.
- Governments typically levy a one-off tax retrospectively over and above the normal rates of tax on such profits, called windfall tax.

SORR

- The Reserve Bank of India (RBI) has announced the development of the Secured Overnight Rupee Rate (SORR) as a new benchmark for the interest rate derivatives market, based on secured money market transactions like market repo and tri-party repo (TREPS).
- SORR, to be developed with support from Financial Benchmarks India Limited (FBIL), aims to offer a trade-based, robust, and manipulation-resistant benchmark that reflects real market dynamics, unlike the Mumbai Inter-Bank Offer Rate (MIBOR), which relies on polling data.

OTHER ECONOMY NEWS

- On the occasion of Diwali and to mark its 30th anniversary, the National Stock Exchange of India (NSE) has launched its official mobile app, **NSEIndia**, and expanded its corporate website to support a total of 12 languages.
- The Department of Revenue, acting on recommendations from the Directorate General of Trade Remedies (DGTR), imposed a five-year anti-dumping duty of up to USD 557 per tonne on **Epichlorohydrin** imports from China, Korea, and Thailand to protect domestic industries from cheap imports. Epichlorohydrin, a colourless liquid with a strong garlic-like odour, is used in producing glycerol, elastomers, adhesives, and as a solvent for resins, paints, and lacquers.
- Recently, the Department of Investment and Public Asset Management (**DIPAM**) has introduced revised guidelines for Central Public Sector Enterprises (CPSEs), mandating a **minimum annual dividend payment of 30% of profit after tax (PAT) or 4% of net worth**, whichever is higher.
- **Centre for Processing Accelerated Corporate Exit (C-PACE)** was launched by the Ministry of Corporate Affairs (MCA) to centralise and streamline the process of company closure. It functions under the Registrar of Companies (RoC), an office under MCA.
- Recently, Indian scientists have developed **nano coated muriate of potash (nano fertilisers)** which can enhance the nutrient use efficiency (NUE) of fertilisers.
- **Development economics** is a branch of economics that focuses on the study of how countries can achieve sustained economic growth, reduce poverty, and improve the standard of living of their populations.
- Recently, **Coal India Limited (CIL)** marked its 50th Foundation Day. CIL functions under the Ministry of Coal and is headquartered in Kolkata. CIL is a State-owned coal mining corporation in India, responsible for producing and managing coal resources in the country. It was founded in 1975 and is the world's largest coal producer. CIL is classified as a '**Maharatna**' public sector enterprise and operates through 8 subsidiaries of which Mahanadi Coalfields Limited (MCL) is the largest.
- **Girdawari** is a crop harvest inspection, conducted by the **Patwari** to assess crop yield, quality, and changes in land conditions. Held twice yearly for Rabi and Kharif crops more than twice for areas under fruits and vegetables and is called Zaid Rabi and Zaid Kharif.

- The **India-Australia Economic Cooperation and Trade Agreement (ECTA)**, a foundational agreement, was signed and came into force in 2022. It is a limited trade agreement and is less comprehensive than CECA.
- A **wilful defaulter** is a borrower or guarantor who has intentionally failed to repay a loan, with an outstanding amount of Rs 25 lakh or more.
- A **large defaulter** refers to a borrower with an outstanding loan balance of Rs 1 crore or more, whose account has been classified as doubtful or a loss.
- **India has surpassed USD 1 trillion in Foreign Direct Investment (FDI) inflows since 2000**, highlighting its growing appeal as a global investment hub.
- **India's Top FDI Sources in 2023-24: Singapore > Mauritius > United States > Netherlands > Japan.**
- Union Finance Minister Nirmala Sitharaman inaugurated five specialized **"Nari Shakti" branches of Union Bank of India** in Bengaluru, Chennai, Visakhapatnam, and Jaipur. These branches aim to boost financial inclusion and support for women entrepreneurs, especially in the manufacturing and service sectors.
- **SBI Card** has reached a significant milestone by surpassing **20 million credit cards** in circulation. SBI becomes the **second-largest card issuer** in India, following HDFC Bank, which also reached the 20 million milestone in January 2024.
- The Reserve Bank of India (RBI), through its Innovation Hub (RBIH), has launched **MuleHunter.AI**, a cutting-edge AI tool designed to detect and flag mule bank accounts involved in illicit financial activities, particularly money laundering.
- The Reserve Bank of India (RBI) has announced a name **lookup facility for Real-Time Gross Settlement (RTGS) and National Electronic Funds Transfer (NEFT) systems**, aiming to reduce fraud and errors. This feature, similar to what Unified Payments Interface (UPI) and Immediate Payment Service (IMPS) offer, will allow remitters to verify the beneficiary's name before initiating transactions.

HISTORY, ART AND CULTURE

Siddi community

- Recently released film Rhythm of Damnam highlights the marginalised Siddi community in India.
- Descendants of **Bantu people of East Africa**, Siddi ancestors were largely brought to India as slaves by Arabs as early as the 7th Century, followed by the Portuguese and the British later on.
- Others were free people who came to India as merchants, sailors and mercenaries before the Portuguese slave trade went into overdrive.
- When slavery was abolished in the 18th and 19th Centuries, Siddis fled into the country's thick jungles, fearing recapture and torture.
- They exhibit Negroid physical traits. They are also known by different synonyms such as **Habshi** and **Badsha**.
- **ST Status:** In India, the Union government in 2003, classified Siddis under the list of Scheduled Tribes. They are also included in the Centre's list of Particularly Vulnerable Tribal Groups (PVTGs).
- *Dhamal and Rasda* are their folk dances.

Bodo Tribe

- Bodos are the **largest community among Assam's notified Scheduled Tribes**, making up about 5-6% of the state's population. In the late 1980s, the Bodos initiated a mass movement demanding a separate state for the Bodos.
- **Bodoland Territorial Region (BTR)** is an autonomous region in Assam consisting of four districts namely Kokrajhar, Chirang, Baksa and Udalguri. It is administered by an elected body known as the Bodoland Territorial Council.
- **In News:** Recently, the **1st Bodoland Mohotsav** was organised on the 15th and 16th November in New Delhi with the theme: *Peace and Harmony for Prosperous Bharat*. It celebrated the recovery of the region post the **Bodo Peace Accord (2020)** which resolved decades of conflict and violence.

Saint Francis Xavier

- Recently, the **decennial (every 10 years) exposition of the sacred relics of Saint Francis Xavier** began which will run until 5th January 2025.
- St Francis Xavier was a Spanish Jesuit missionary who arrived in Goa in 1542 to restore Christianity among the Portuguese settlers. His instrumental role of spreading Christianity across Asia earned him the title of 'Apostle of the Indies'.
- He died in 1552 on the island of Shangchuan off the coast of China, where he was first buried. In 1553, his body was exhumed and transported to Malacca. In 1554, the saint's body was shipped to Goa. Presently, Basilica of Bom Jesus hold the mortal remains of St Francis Xavier.

- The exposition of relics of St Francis Xavier is a tradition in Goa for many years. During the exposition, the silver glass casket holding the relics of the saint is lowered from its resting place in a private ceremony. Then, the relics are carried in a ceremonial procession from the Basilica to Se Cathedral for the devotees to venerate. The devotees see the body of the saint as a miracle since it has shown **minimal signs of decay** despite being buried several times.

Zonal Cultural Centres (ZCCs)

The Ministry of Culture has established 7 Zonal Cultural Centres (ZCCs) across the country to **preserve and promote various forms of folk art and culture of the tribals**.

- ZCCs aim to conserve and disseminate the diverse forms of arts and culture from different regions.
- Festivals such as Hornbill Festival (Nagaland), Octave, Tribal Dance Festival, Adi Bimb, Adi Sapta Pallav, Adi Lok Rang, and Adiwasi Mahotsav are organized through ZCCs.

Zonal Cultural Centres	Headquarter	Prominent examples of Tribal Art in India?
North Zone	Patiala	Warli Art
South Zone	Thanjavur	Gond Art
South Central Zone	Nagpur	Madhubani Painting
West Zone	Udaipur	Pattachitra Art
North Central Zone	Prayagraj	Santhal Art
Eastern Zone	Kolkata	
North East Zone	Dimapur	

Levirate and Sororate

- Levirate:** Levirate marriage is a custom where the brother of a deceased (or physically incapacitated) man can marry to his brother's widow, ensuring the continuation of the family line. It has been practiced in India by several tribes, including the Santhal and Munda.
 - During Vedic times, **niyoga**, the practice of a younger brother or kinsman marrying the widow of an elder brother, was practiced but later disallowed during the Gupta and earlier periods.
- Sororate** is the custom of a man marrying his wife's sister if his wife dies.

Livelihood issues with tribals

- Two women died and five others were taken ill after allegedly consuming gruel made of mango kernel in Odisha's Kandhamal district. The State government has ordered a probe into the incident.
- Mango kernels, the seeds left after juice extraction, contain cyanogenic glycosides like amygdalin, which release toxic hydrogen cyanide when consumed.
- This incident highlights a severe livelihood crisis among tribal communities. Tribal communities depend on wild and foraged foods mainly because of widespread and long-standing poverty.

Konark sun temple

- The 13th century Konark Sun Temple, near Puri in Odisha, was built by **King Narasimhadeva I** (1238–1264 AD). Its grand scale and intricate design symbolise the strength and cultural values of the Eastern Ganga Empire.
- Konark temple was declared a UNESCO world heritage site in 1984. It is built in the Odisha School form of temple architecture.
- In news: Recently, four sandstone replicas of the iconic **Konark wheels** from the Konark Temple have been installed at the Rashtrapati Bhavan's Cultural Centre and Amrit Udyan. This initiative is among various efforts to incorporate traditional cultural and historical elements into Rashtrapati Bhavan.

Maha Kumbh Mela 2025

- The Maha Kumbh Mela 2025, a sacred pilgrimage, will be held in Prayagraj from 13th January to 26th February 2025, drawing millions of pilgrims for spiritual purification, cultural celebration, and unity.
- Origins: During the Maurya and Gupta periods (4th century BCE to 6th century CE), the Kumbh Mela began as smaller gatherings of pilgrims from across the Indian subcontinent. Its significance increased with the rise of Hinduism, particularly under rulers like the Guptas who elevated its status.
- The word 'Kumbh' comes from the root 'kumbhak' (the sacred pitcher of elixir of immortality).
- Kumbha is the largest peaceful congregation of pilgrims on earth, during which participants bathe or take a dip in a sacred river. This gathering takes place at 4 different places, namely:
 - In Haridwar, on the banks of the Ganges.
 - In Ujjain, on the banks of Shipra.
 - In Nashik, on the banks of Godavari (Dakshin Ganga).

- In Prayagraj, at the confluence of the Ganges, the Yamuna, and the mythical invisible Saraswati.

Different Types of Kumbh:

- The Kumbh Mela is celebrated 4 times over a course of 12 years.
- At Haridwar and Prayagraj, Ardh-Kumbh Mela is held every 6th year.
- The Maha Kumbh Mela is celebrated at Prayag after 144 years (after 12 'Purna Kumbh Melas').
- Maagh Kumbh is celebrated every year in the month of Maagh (Jan-Feb) in Prayagraj.

Cumbum tank in Andhra Pradesh

- Recently, the Cumbum tank in Andhra Pradesh was in the news for its ancient water harvesting system.
- Cumbum tank is a medium irrigation project which is the 2nd largest man-made reservoir in Asia and the 3rd largest in the world.
- The tank was built by Vijayanagara Princess Varadharajamma (also known as Ruchidevi), the wife of Sri Krishna Devaraya during 1522-1524 AD. It was built by damming a gorge through which the Gundlakamma and Jampaleru rivers flow.

Raja Mahendra Pratap Singh

- He was born on 1st December 1886, in Hathras, Uttar Pradesh. He was a freedom fighter, revolutionary, writer, social reformer, and internationalist.
- He founded Prem Mahavidyalaya in 1909, a technical institute at Vrindavan, Uttar Pradesh. It is India's first polytechnic, to promote indigenous technical education.
- He was deeply involved in India's struggle for independence. In 1915, during World War I, he proclaimed the first **Provisional Government of India in Kabul**, Afghanistan, with himself as its president, opposing British colonial rule.
- He sought support from countries like Germany, Japan, and Russia for India's fight against British colonial rule.
- He is said to have met Vladimir Lenin in 1919, two years after the Bolshevik Revolution. He also formed the Executive Board of India in Japan in 1940 during the Second World War.
- He was **nominated for the Nobel Peace Prize in 1932** for his global advocacy for peace and his efforts to expose British atrocities in India and Afghanistan. The nomination described Raja as a "Hindu patriot", "editor of the World Federation", and "unofficial envoy of Afghanistan".
- In 1929, Mahendra Pratap launched the **World Federation in Berlin**, which later influenced the creation of the United Nations.
- After independence, he worked hard to promote the idea of Panchayati Raj and served as a Member of Parliament from Mathura (1957).

Gita Jayanti 2024

- On this day, devotees honour the teachings of Srimad Bhagavad-gita, imparted by Lord Krishna and strive to incorporate these timeless lessons into their daily lives.
- In 2024, Gita Jayanti was observed on December 11.
- On Gita Jayanti 2024, Bhopal and Kurukshetra achieved remarkable milestones.
- **Bhopal** set a **Guinness World Record** with over 5,000 Acharyas collectively reciting verses from the Bhagavad Gita, while **Kurukshetra** witnessed the participation of 1.5 crore people globally through a virtual platform.

Gadhimai Festival: Nepal

- The Gadhimai Festival, held every **five years** in southeastern Nepal, is one of the **world's most controversial** religious observances, known for the **mass slaughter of animals**.
- This event, rooted in centuries of tradition, draws hundreds of thousands of Hindus who believe the ritual will appease the Hindu goddess Gadhimai, bringing them prosperity.

Other History and Culture news

- During Deepotsav 2024, **Ayodhya set two Guinness World Records** with the largest display of oil lamps, lighting over **2.5 million diyas along the Saryu River**, and for the **most people performing diya rotation** simultaneously.
- Gujarat's iconic handicraft, '**Gharchola**,' has been awarded the **Geographical Indication (GI) tag** by the Union government.
- Karnataka has celebrated the Bali **Padyami festival (Bali Pratipada)** on marking the fourth day of Deepavali. This festival commemorates the return of the Asura king, Bali Chakravarty, from *Pathala Loka* to *Bhuloka*, a journey made possible by the boon granted to him by Lord Vishnu during his Vamana Avatar.

- Recently, a research scholar died when a pit collapsed on her during a research excavation at **Lothal**, a Harappan site. Located in the Bhal region of Gujarat, Lothal is one of the southernmost sites of the Harappan civilization. It is believed to have been built in 2200 BC. It was discovered in **1954** by **SR Rao**.
- Recently, the **first Asian Buddhist Summit (ABS)** was organised by India's Ministry of Culture and the International Buddhist Confederation (IBC) in **New Delhi**, India
- Recently, 24 pairs of prehistoric Megalithic footprints and a human figure have been discovered in **Madikkai, Kerala** which is believed to date back to the Megalithic period.
- Tulasi Raghvendra Hegde, a 15-year-old prodigy, has gained recognition as a leading Yakshagana performer. Recently awarded the Young Achiever Award 2024 by the Rotary Club of Madras East. **Yakshagana is a traditional folk dance-drama from coastal Karnataka**, combining dance, music, song, and elaborate costumes.
- The Archaeological Survey of India (ASI) has initiated efforts to uncover the remnants of an **80-pillar as**
- sembly hall at the Mauryan archaeological site of Kumhrar, Patna.** Emperor Ashoka (268–232 BCE) is believed to have convened the 3rd Buddhist Council in this hall, aiming to unify the fragmented Buddhist sangha and propagate Dhamma (Buddhist teachings).
- Nagaland is known as the land of festivals, and the Hornbill festival is referred to as the festival of festivals. **Hornbill Festival** is named after the hornbill bird, a symbol of fidelity, beauty, and grace in Naga folklore. Recently, The Prime Minister of India has congratulated the people of Nagaland on the completion of 25 years of the Hornbill Festival.
- Japan** has been announced as the official partner country for the 25th edition of Nagaland's renowned Hornbill Festival, alongside Wales, which was confirmed earlier.
- Ningol Chakkouba**, one of the most significant festivals of the Meitei community in Manipur, was celebrated across the state with immense religious fervor and joy.
- Manipur** recently commemorated **Nupi Lal Numit 2024**, a significant event honoring the courage and resilience of the women who fought for justice and freedom in the **Nupi Lal uprisings of 1904 and 1939**.
- Uttarakhand, observes a unique festival known as **Igas Bagwal**. This festival, also called **Budhi Diwali** or **Harboddhni Ekadashi**, is celebrated in the mountainous regions with reverence and joy, precisely 11 days after Diwali.
- In a major development, the United States has returned over 1,400 looted artifacts worth \$10 million to India as part of an ongoing initiative to repatriate stolen cultural items from South and Southeast Asia.
- Bali in Indonesia celebrated a hindu festival '**Ngusaba Goreng**' a two-week-long Thanksgiving festival celebrating a rich harvest.
- Ladakhi Losar**, marking the New Year in the Tibetan calendar, is a vibrant festival celebrated with great enthusiasm across Ladakh.
- The **Kagyed Chaam Dance Festival**, one of Sikkim's most revered Buddhist celebrations, is held annually at Tsuklakhang Palace in Gangtok. Marked by elaborate masked dances performed by Buddhist monks and lamas, the festival symbolizes the destruction of negative forces and the ushering in of peace and prosperity for the new year.

APPOINTMENTS

Person	Appointed as
Donald Trump	re-elected as the 47th President of the United States.
Justice Sanjiv Khanna	51st Chief Justice of India , administered the oath of office by President. He succeeded Justice D.Y. Chandrachud. As per the convention, the senior most judge of the Supreme Court is designated as the CJI. The seniority is measured by the length of service on the Supreme Court.
K Sanjay Murthy	Appointed as Comptroller and Auditor General (CAG) of India under Article 148 of COI. He succeeded <u>Girish Chandra Murmu</u> . The CAG of India is appointed by the President of India by a warrant under his hand and seal. The officeholder serves a term of six years or until the age of 65 , whichever is earlier. The CAG takes an oath to uphold the Constitution and perform duties impartially, without fear or favour. CAG removal is possible by the President on the same grounds and process as a Supreme Court judge. The CAG is <u>ineligible for any further office</u> under the Government of India or any state after leaving office
Sanjay Malhotra	Appointed as the 26th Governor of the RBI by the Appointments Committee of the Cabinet. He succeeded Shaktikanta Das. Before this, he was serving as Revenue Secretary in the Finance Ministry.

Justice (Retd.) V Ramasubramanian (former Supreme Court judge)	Appointed as Chairperson of the National Human Rights Commission (NHRC) by the President of India. The post had been vacant since Justice (Retd.) Arun Kumar Mishra completed his tenure on 1st June 2024.
Harsha Vardhan Agarwal	President of the Federation of Indian Chambers of Commerce and Industry (FICCI).
Jay Shah	Youngest (at 36) Chairman of the International Cricket Council (ICC).
Justice Gurmeet Singh Sandhawalia	appointment of as the new Chief Justice of the Himachal Pradesh High Court . His appointment comes after a delay of more than three months and after the retirement of Justice Rajiv Shakdher in October 2024.
Hemant Soren (Jharkhand Mukti Morcha / JMM)	Sworn in as Chief Minister of Jharkhand. This follows the victory of the INDIA bloc, comprising Jharkhand Mukti Morcha (JMM), Congress, Rashtriya Janata Dal (RJD), and CPI (ML), in the recent state elections.
Justice D. Krishnakumar	Chief Justice of the High Court of Manipur.
Dr. Navinchandra Ramgoolam	Appointed as new Prime Minister of Mauritius for third time. He succeeded Pravind Jugnauth.
Tayyab Ikram (from Pakistan)	re-elected as the President of the International Hockey Federation (FIH) for a second consecutive term at the 49th FIH Congress in Muscat, Oman.
Dr. Jacqueline d'Arros Hughes	Secretary General of the World Agriculture Forum (WAF)
Maia Sandu	Elected as President of Moldova for a second term. She is Pro West.
Alix Didier Fils-Aime	sworn in as Haiti's new prime minister.
Valdecy Urquiza	<u>Brazilian Federal Police Commissioner</u> Valdecy Urquiza has been elected as the new Secretary General of Interpol at the organization's 92nd General Assembly, held in Glasgow, Scotland.
G. Balasubramanian	High Commissioner of India to the Republic of Maldives,
Dinesh Bhatia	Ambassador of India to Brazil.
Justice Murdu Nirupa Bindushini Fernando	sworn in as the Chief Justice of Sri Lanka on December 2, 2024.
Netumbo Nandi-Ndaitwah (NNN)	She made history by becoming Namibia's first female president.
Devajit Saikia	Former Assam cricketer Devajit Saikia has been named the acting secretary of the Board of Control for Cricket in India (BCCI) , filling the vacancy left by Jay Shah, who recently assumed the role of International Cricket Council (ICC) chairman.
Harmeet Kaur Dhillon	a prominent Indian-American lawyer, has been nominated by US President-elect Donald Trump as the Assistant Attorney General for Civil Rights at the Department of Justice.
Preeti Lobana	Appointed as Manager and Vice President for India by Tech giant Google .
Justice Madan B Lokur (Retd. Supreme Court Judge)	Appointed as Chairperson of the United Nations Internal Justice Council (IJC) by UN Secretary-General António Guterres.
Vitul Kumar (IPS)	Director General (DG) of the Central Reserve Police Force (CRPF).

- **India and France** have been re-elected as the **president** and **co-president** of the International Solar Alliance (ISA), respectively, at the seventh ISA assembly held in New Delhi.
- **Sonu Sood**, the celebrated actor, humanitarian, and philanthropist, has taken on an exciting new role as the Brand Ambassador and Honorary Tourism Advisor for Thailand.

SCIENCE AND TECHNOLOGY

Novel reassortant strain of the H5N1

- Cambodia has recently detected a **novel reassortant strain of the H5N1 avian influenza virus**.
- This strain, resulting from genetic mixing (with other strains of avian influenza virus), has raised concerns globally due to its potential for increased infectivity and adaptability.
- Health authorities are advocating for enhanced surveillance and monitoring to mitigate any potential threat to human health.

- **H5N1** is one of several influenza viruses that causes a highly infectious respiratory disease in birds called avian influenza (or “**bird flu**”). H5N1 bird flu was **first identified in geese in China in 1996**. It can infect people who work with infected animals or their byproducts (e.g., raw milk), such as dairy workers.
- The virus can spread from infected **mammals to humans** but does not transmit from person to person.
- The influenza virus is a single-stranded RNA virus with a lipid-containing envelope.

LignoSat

- In a groundbreaking move towards sustainable space exploration, Japanese scientists from Kyoto University and Sumitomo Forestry have developed the world’s first wooden satellite, named LignoSat.
- Word “LignoSat”, a fusion of “ligno” (the Latin word for wood) and “satellite”.
- Developed by: a team comprising members from Kyoto University and Sumitomo Forestry Co.
- Launch: Set to launch on a SpaceX rocket to the International Space Station (ISS).
- Mission purpose: The satellite aims to test wood’s durability in extreme space conditions (temperatures ranging from -100°C to 100°C) and its ability to shield semiconductors from space radiation.
- Material benefits: Wood is lightweight and resistant to shattering. Wooden satellites are viewed as more environmentally friendly upon reentering the Earth’s atmosphere at the conclusion of their mission. Unlike conventional metal satellites, which pose air pollution risks due to the generation of metal particles during reentry, wooden satellites mitigate these concerns. Conventional satellites made of aluminium can damage the ozone layer when they burn up in the atmosphere.
- Future vision: Seen as a potential step towards building wooden structures, planting trees, and constructing sustainable habitats on the Moon and Mars.

Coeliac Disease

- It is an **autoimmune condition** triggered by **gluten** that damages the small intestine.
- Gluten, a protein complex primarily found in wheat, barley, and rye, is celebrated for its utility in the food industry but is infamous for causing gluten-related disorders. Gluten resists complete digestion due to the enzyme protease being inefficient in breaking it down. Undigested gluten may lead to gastrointestinal disorders.

High-altitude sickness (HAS) or Acute Mountain Sickness (AMS)

- High-altitude sickness occurs when individuals ascend rapidly to elevations above 2,400 meters, without adequate acclimatisation. As altitude rises, both air pressure and oxygen levels drop, causing hypoxia, which is a shortage of oxygen in the body’s tissues. Symptoms include headaches, nausea, fatigue, and shortness of breath.
- Severe cases of HAS/AMS can lead to **High Altitude Pulmonary Edema (HAPE)** and **High Altitude Cerebral Edema (HACE)**, both life-threatening conditions requiring immediate descent. HAPE causes lung fluid buildup, and worsening breathing, while HACE leads to confusion, hallucinations, and coma.

How body adapts / acclimatize while traveling to high altitudes ?

- At high altitudes, the body adapts by increasing breathing (can cause hyperventilation) and producing more red blood cells, thickening the blood and straining the heart. **HAPE** causes lung fluid buildup, and worsening breathing, while **HACE** leads to confusion, hallucinations, and coma.
- **In News**: A trekker from Kerala named **Amal Mohan**, died during a trek in Uttarakhand while attempting to climb **Garuda Peak** at 6268m.

India’s GSAT-N2 Satellite launched by SpaceX

- Recently, **SpaceX Falcon-9 rocket**, launches India’s GSAT-N2 Satellite at **Space Launch Complex 40, Cape Canaveral Space Force Station, Florida**.
- Falcon-9 launched the GSAT-N2 (GSAT-20) into a **geosynchronous transfer orbit (GTO)**, an elliptical orbit with an altitude of around 37,000 km, which is the first step toward reaching a geosynchronous or geostationary orbit (GSO).
- It is the first-ever collaboration between Elon Musk’s SpaceX and India.

About GSAT-N2 (GSAT-20)

- This satellite belongs to NewSpace India Limited (NSIL), which is the commercial arm of ISRO.
- Mission Objective: It enhances broadband and in-flight connectivity across India, including remote regions like Andaman & Nicobar and Lakshadweep islands.
- It is part of India’s space sector reforms initiated in June 2020.
- Predecessor: GSAT-24 (June 2022), entirely secured by Tata Play.

Nafithromycin

- India has achieved a groundbreaking milestone in the **fight against antimicrobial resistance (AMR)** with the development of Nafithromycin, the **country’s first indigenous macrolide antibiotic**.

- Nafithromycin was developed with support from the **Biotechnology Industry Research Assistance Council (BIRAC)** and brought to market by Wockhardt under the **brand name Mignaf**.
- Nafithromycin is the first new antibiotic in its class in over 30 years, marking a breakthrough in the fight against AMR.
- It is designed to treat Community-Acquired Bacterial Pneumonia (CABP), caused by drug-resistant bacteria like *Streptococcus pneumoniae*.

India Adopts CubeSat Standard

- Recently, India adopted the global CubeSat standard, marking a significant step in its ambition to enhance its footprint in the global space economy.
- By adopting this standard, **India aims to foster innovation and reduce development and launch costs**.
- CubeSats are a class of research spacecraft called **nanosatellites**.
- CubeSats are built to standard dimensions (Units or “U”) of 10 cm x 10 cm x 10 cm.
- They typically **weigh less than 1.33 kg** (3 lbs) per Unit.

Who is implementing the CubeSat standard in India?

- The Bureau of Indian Standards (BIS), under the Department of Consumer Affairs, is responsible for implementing this standard as part of the government’s initiative to open up the space sector to private participation.
- BIS helps the educational and research organisations to develop CubeSats with commercial components, offering a cost-effective satellite alternative. E.g. Indian universities, with ISRO support, have launched several student-built satellites. Notable examples like **JUGNU** (IIT Kanpur) and **KalamSAT** (Space Kidz India).

Thalassemia

- Thalassemia is an **inherited blood disorder** that reduces the body’s ability to produce normal hemoglobin, leading to fewer healthy red blood cells and anemia.
- Symptoms range from growth issues, delayed puberty, and bone abnormalities in mild cases to poor appetite, jaundice, dark urine, and facial bone irregularities in severe cases.
- In news: A critical shortage of **Desferal** (deferoxamine) in Delhi government hospitals has put thalassemia patients at risk of severe complications from iron overload, as the drug is essential for those unable to tolerate oral chelators.

Ghost guns

- Ghost guns are untraceable firearms assembled at home, often using kits or 3D-printed parts.
- These weapons lack serial numbers, making them **difficult for law enforcement to track**.
- Ghost guns pose serious safety risks, with advocacy groups labeling them the “fastest-growing gun safety problem.”

Dharani

- The Indian Institute of Technology, Madras has released **3D high resolution images of human foetal brain**, achieving a major landmark in the domain of brain mapping technology.
- Dharani is the largest publicly available digital dataset of the human foetal brain. It is a complete atlas of the human brain with researchers providing detailed insights into brain development from the second trimester of the foetus.
- Dharani has been developed with less than one-tenth of the initial funds that were used to create the US-based Allen Brain Atlas.
- It will help in improving current foetal imaging techniques, early diagnosis and treatment of health conditions affecting the brain.
- It signifies advancement in neuroscience research, providing insights into neurological disorders like autism, cerebral palsy and mental health issues like depression and bipolar disorder.

Traditional Computing vs Quantum Computing

- Traditional computers process information as “**bits**,” each representing either a 1 or a 0, to perform calculations.
- In contrast, quantum computers leverage “**qubits**,” which can exist as both 1 and 0 simultaneously, harnessing the principles of quantum mechanics. This unique property allows qubits to exist in multiple states at once, enabling exponential increases in computational power.
- Note: Google has unveiled a new quantum computer featuring a chip called **Willow**, capable of performing calculations in under five minutes that would take the most advanced supercomputers over 10 septillion years (a length of time that exceeds the age of the known universe). This achievement, described as “**quantum**

supremacy,” signifies that Google’s quantum computer can perform tasks beyond the reach of traditional computers.

GSEC in Hyderabad

- Hyderabad has been chosen as the site for **India’s first Google Safety Engineering Centre (GSEC)**, marking a significant milestone in the country’s cybersecurity landscape.
- GSEC, Hyderabad will be the first of its kind in the Asia-Pacific region, and only the **5th globally**, following similar facilities in Dublin, Munich, and Malaga.
- GSEC will specialise in **advanced research, Artificial Intelligence (AI)-driven security solutions, and skill development** while addressing India’s unique cybersecurity challenges. The project is expected to bring thousands of direct and indirect employment opportunities to Hyderabad and Telangana.
- Hyderabad is already home to five major tech companies: Alphabet (Google), Microsoft, Apple, Amazon, and Meta.

NISAR Mission

- NISAR (**NASA-ISRO Synthetic Aperture Radar**) is a joint Earth observation satellite mission developed by **NASA and ISRO** under a bilateral agreement signed in 2014.
- The satellite is scheduled for launch in **June 2025** from the Satish Dhawan Space Centre, Andhra Pradesh, aboard ISRO’s Geosynchronous Satellite Launch Vehicle Mark II (**GSLV Mk II**).
- It marks the first-ever collaboration of its kind between India and the United States in radar-based Earth monitoring from space.
- NISAR aims to **map the entire Earth’s surface every 12 days**, enabling high-frequency, precise, and repeat observations. It will monitor ecosystem changes, ice sheet dynamics, vegetation patterns, sea level rise, and groundwater variation, and will track natural hazards like earthquakes, volcanoes, tsunamis, and landslides.

RNA editing

- RNA editing is the process of modifying Messenger RNA (mRNA) nucleotides, after Deoxyribonucleic acid (DNA) creates mRNA but before it begins protein synthesis.
- Recently, Wave Life Sciences, a biotechnology company in the US, became the first company to treat a genetic condition by editing Ribonucleic acid (RNA) at the clinical level.

Critical minerals

- The Ministry of Mines recently signed a Memorandum of Understanding (MoU) with the International Energy Agency (IEA) to strengthen cooperation in the critical minerals sector.
- Critical minerals are essential raw materials that are **crucial for the production of energy technologies** (like batteries, solar panels, and electric vehicles), advanced manufacturing, and national security. These include minerals such as **lithium, cobalt, rare earth elements, and nickel**.
- Need: India’s energy transition to renewable sources and its push for electric mobility and green technologies depend heavily on the availability of these critical minerals.
- India has **identified 30 critical minerals** based on their disruption potential, substitutability, cross-cutting usage, import reliance, and recycling rates. The states/ UTs housing these minerals are **Bihar, Gujarat, Jharkhand, Odisha, Tamil Nadu, Uttar Pradesh, Chhattisgarh, and Jammu and Kashmir**.

Coking coal

- Recently, a **NITI Aayog** report titled ‘*Enhancing Domestic Coking Coal Availability to Reduce the import of Coking Coal*’ **advocated coking coal to be included in the list of critical minerals**.
- Coking coal is a vital raw material for steel production, constituting approximately 42% of the cost of steel, which is crucial for infrastructure development and job-creating sectors in India. The availability of affordable coking coal is crucial for the economy.

GQ-RCP platform

- GQ-RCP stands for: **GQ Topology-Targeted Reliable Conformational Polymorphism**.
- Developed by: researchers at the Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR).
- Use: **for early and accurate detection of HIV**.
- The newly developed (**GQ-RCP**) platform, adapted from SARS-CoV-2 diagnostics, highlights the innovative capabilities of Indian research institutions.
- The **G-Quadruplex is a unique DNA structure** found in the HIV genome. Targeting GQ structures can enhance diagnostic accuracy. Researchers focused on this specific DNA configuration to improve detection methods.

MACE telescope: Ladakh

- Recently, the **Major Atmospheric Cherenkov Experiment (MACE) telescope** was inaugurated in **Hanle, Ladakh**, representing a significant advancement in gamma-ray astronomy.
- Positioned at an altitude of approximately 4.3 kilometers, MACE is the highest imaging Cherenkov telescope globally, making it the largest of its kind in Asia and the second-largest worldwide.
- It enables scientists **to explore gamma rays with energies exceeding 20 billion electron volts (eV)**, emitted from sources beyond the Milky Way, including pulsars, blazars, and gamma-ray bursts.
- When high-energy gamma rays enter Earth's atmosphere, they create electron-positron pairs, producing Cherenkov radiation. MACE captures this faint blue light (Cherenkov radiation) with its sophisticated equipment. Its light collector, composed of 356 mirror panels in a honeycomb structure, enhances stability and reflective area. ³/₄ Research Objectives: The primary goal is to study high-energy gamma rays from cosmic sources.
- MACE seeks to understand dark matter** by detecting gamma rays from weakly interacting massive particles (WIMP) annihilation events and investigating WIMPs, which may constitute much of the universe's mass.
- Institution Involved: **Bhabha Atomic Research Centre (BARC) and Indian Institute of Astrophysics.**
- Gamma rays** are high-energy electromagnetic radiation which can penetrate most materials, including human tissue, posing health risks. Gamma rays have the shortest wavelength and the highest energy.

Satyendra Nath Bose

- Born on 1st January 1894, in Calcutta (now Kolkata), Bose was a promising student, excelling in mathematics from an early age.
- Bose-Einstein Statistics: In 1924, Bose published a paper, "Planck's Law and the Hypothesis of Light Quanta," where he introduced a new way of counting particles, particularly **photons, as indistinguishable entities**.
- Albert Einstein recognized the significance of Bose's paper and expanded on his ideas, leading to the development of Bose-Einstein statistics and the discovery of **Bose-Einstein condensates**.
- Bose-Einstein statistics challenged the classical mechanics' assumption that particles are distinguishable, where each particle is considered unique and can be tracked individually.
- Bose-Einstein Statistics distinguishes between two classes of particles in quantum mechanics: **bosons** (named after SN Bose) and **fermions**.
- Satyendra Nath Bose, widely known as the **Father of the God Particle**, received the Padma Vibhushan in 1954. In 1959, he was named India's National Professor, the highest honour for a scholar, a position he held for 15 years.
- His contributions laid the foundation for key advancements in quantum mechanics, including the Bose-Einstein Condensate, and continue to shape modern physics

'One Day One Genome' initiative

- Launched by: Department of Biotechnology (DBT) and Biotechnology Research and Innovation Council (BRIC).
- It was launched on the 1st foundation day of BRIC at the National Institute of Immunology (NII), New Delhi.
- Aim: to publicly **release a fully annotated bacterial genome from India**, along with a detailed summary, infographics, and genome data.
- Potential Benefits:
 - Understanding microbial functions can lead to better waste management and pollution control strategies.
 - Insights into beneficial microbes can enhance crop yields and promote sustainable farming practices.
 - Identifying microbes with antimicrobial properties may lead to new treatments and drugs.

Axiom-4 mission

- Group Captain **Shubhanshu Shukla** has been selected as the prime mission pilot for the Axiom-4 mission, while Group Captain **Prasanth Balakrishnan Nair** has been selected as the back-up mission pilot.
- Axiom-4 is a **private spaceflight** to the International Space Station (ISS).
- The mission is in collaboration with NASA and is scheduled for launch in 2024. It will be the fourth flight of Axiom Space, following the successful missions of Axiom Mission 1, Axiom Mission 2, and Axiom Mission 3.
- The mission will use a **SpaceX Dragon spacecraft**, launched atop a **Falcon 9 rocket**.
- It is operated by Axiom Space and uses a SpaceX Crew Dragon spacecraft.
- It is expected to be a short-duration mission, lasting approximately **14 days**.
- During their time aboard the International Space Station (ISS), the crew will conduct scientific experiments, perform technology demonstrations, and engage in educational outreach.

- **Objectives:** Axiom-4 focuses on enabling commercial activities like space tourism in Low Earth Orbit (LEO). It aims to demonstrate the feasibility of commercial space stations as platforms for business and research.
- **About ISS:** The International Space Station (ISS) is a large, permanently crewed laboratory orbiting Earth at an altitude of approximately **400 kilometres**. The ISS is a collaborative effort involving **15 countries and 5 space agencies**: *NASA, Roscosmos, European Space Agency, JAXA, and Canadian Space Agency*.

Cloud Seeding / Artificial rain

- Cloud seeding, a weather modification technique, enhances precipitation by dispersing chemicals like **silver iodide (AgI), potassium iodide (KI), or dry ice (solid CO₂) into clouds**, which serve as nuclei for water droplet formation, leading to rainfall.
- This process facilitates the formation of ice crystals in clouds, which can lead to artificial rain.
- The technique is being considered as a potential solution to combat severe air pollution, particularly during periods of high Air Quality Index (AQI) readings.
- **In News:** Recently, the proposal for cloud seeding as a measure to combat air pollution in Delhi has gained attention due to the acute air quality crisis with the Air Quality Index (AQI) exceeding 450.

Pegasus Spyware

- Pegasus is a spyware developed by **NSO Group, an Israeli cybersecurity firm founded in 2010**. It is capable of hacking **iOS and Android devices** to extract data, record conversations, capture photos, and access app data. Spyware is a malicious software that secretly monitors and collects information from a device without the user's consent.

Features:

- **Advanced Exploitation:** It uses zero-day vulnerabilities to jailbreak iOS devices remotely while the Android version uses software like Framaroot for rooting devices.
 - A zero-day vulnerability is an undiscovered security flaw in software with no available defense or patch.
- **Rooting** is the process of unlocking or jailbreaking a device, such as a smartphone or tablet to gain administrative control.
- **Invisibility:** It operates covertly, with no visible signs except for the browser closing after clicking a phishing link.
- **Controversy:** Pegasus is controversial because, although meant to fight terrorism and crime, it has been used by governments to spy on journalists, opposition leaders, activists, and critics.
- **In News:** The Pegasus spyware has stirred controversy worldwide, including India, over its misuse for surveillance, raising serious privacy and fundamental rights concerns.

India

- A global collaborative investigation reported that over 300 verified Indian mobile numbers were targeted using Pegasus spyware developed by the Israeli NSO Group. It targeted ministers, opposition leaders, journalists, lawyers, businessmen, scientists, rights activists, and government officials.

SpaDeX Mission

- SpaDeX (Space Docking Experiment) is **ISRO's first satellite docking mission**.
- It involved two satellites: **SDX01 (Chaser)** and **SDX02 (Target)**, launched on **December 30, 2024**, into a low-Earth circular orbit.
- The satellites were initially separated by 20 km. The Chaser satellite gradually approached the Target, reducing the distance to 5 km, 1.5 km, 500 m, 225 m, 15 m, and finally 3 m before docking.
- India became the **fourth country** to achieve satellite docking, after the **US, Russia, and China**.
- Docking is vital for future missions like **Chandrayaan-4** and the **Bharatiya Antariksha Station**.
- **Space docking:** it is the intricate process of maneuvering two fast-moving spacecraft into the same orbit, bringing them closer, and joining them to form a single unit. This capability is pivotal for assembling large structures or transferring equipment, crew, or supplies in space. For instance, the International Space Station (ISS) was built using this technique, with various modules launched separately and docked in space. Continuous docking missions keep the ISS operational by delivering supplies, new crew members, and modules while facilitating the return of the older crew to Earth.

Quantum Satellite

- A quantum satellite is a **communications satellite** that employs quantum physics to secure its signals, making it highly resistant to interception. It utilizes quantum cryptography (a method that uses quantum mechanics to encrypt and transmit data), particularly Quantum Key Distribution (QKD), to protect data by detecting eavesdropping during transmission.

- **India's National Quantum Mission (NQM)** aims to launch a quantum satellite in 2-3 years, advancing secure communications through quantum physics. This initiative positions India at the forefront of next-gen technology.

ZIMSAT-2

- **Zimbabwe** has launched its second satellite, **ZIMSAT-2**, from the Vostochny Cosmodrome in Russia, a major milestone in the country's growing space programme.
- It follows the successful launch of Zimbabwe's first satellite, ZIMSAT-1, in November 2022, marking continued progress in space technology and innovation.

Nano Bubble Technology

- It is a cutting-edge method of **improving water quality** by using incredibly tiny bubbles, called nanobubbles. These bubbles are so small (**less than 200 nanometers in diameter**) that they are invisible to the naked eye.
- **Working:** Unlike regular bubbles that rise to the surface and pop, nanobubbles remain suspended in the water for a long time. This allows them to interact with pollutants and break them down.
- Nanobubbles have a strong negative charge, which helps them attract and break down impurities in the water. They can remove algae, organic waste, and even oil and grease.
- Nanobubbles can also increase the amount of oxygen dissolved in the water.

Advantages over Traditional Methods

- Chemical-free approach to water purification, making it environmentally friendly and safe for aquatic life.
- Nanobubble technology can be more energy-efficient, reducing operational costs.
- It can be applied to various water bodies, including lakes, ponds, aquariums, and even wastewater treatment plants.

Applications beyond Water Purification

- Nanobubbles can enhance plant growth by improving oxygen delivery to roots and increasing nutrient uptake.
- There's growing research on using nanobubbles for drug delivery, medical imaging, and even cancer treatment.
- Applications include cleaning industrial equipment, improving fermentation processes, and enhancing oil recovery.

In news:

- Union Minister of State for Environment, Forest, and Climate Change, Kirti Vardhan Singh, inaugurated a 15-day trial of **Nano Bubble Technology** at the **National Zoological Park in Delhi**. This initiative is aimed at improving the water quality in the zoo's ponds to benefit aquatic animals by removing algae, foul odors, and discoloration often caused by polluted water.

Snakebite as Notifiable Disease

- Ministry of health and family welfare (MoHFW) has designated snakebite cases and deaths as a 'notifiable disease'.
- Earlier, Ministry launched the **National Action Plan for Prevention and Control of Snakebite Envenoming (NAPSE)** to halve snakebite-related deaths and disabilities by 2030

What are notifiable diseases?

- It is any disease that is required by law to be reported to government authorities.
- Responsibility of notifying any disease and the implementation lies with the **state government**.
- The collation of information allows the authorities to monitor the disease, and provides early warning of possible outbreaks.
- Other notified diseases: **AIDS, hepatitis, dengue, etc.**
- WHO's International Health Regulations, require disease reporting to the WHO.
- Note: World Health Organization's (WHO) has set a target to half global snakebite deaths and injuries by 2030.

ISRO launched Proba-3 mission of the the European Space Agency

- **PSLV-C59** vehicle carried Proba-3 spacecraft into a highly elliptical orbit as a dedicated commercial mission of **NewSpace India Limited (NSIL)**.
- It was launched from Satish Dhawan Space Centre (SDSC-SHAR), Sriharikota
- It is ESA's first launch from India since Proba-1 mission in 2001.
- Polar Satellite Launch Vehicle (PSLV) is the third generation launch vehicle.
 - It is a four-stage vehicle, with multiple satellite launch capability and multiple orbit capability.

Proba-3 Mission

- An In-Orbit Demonstration (IOD) mission.
- Aim: Observe the Sun's corona through an innovative satellite formation flight.
- World's first precision formation-flying mission.

- In it, two satellites will fly together, maintaining a fixed configuration.
 - Focus of formation flying is to maintain a targeted orbit configuration.
- Consists of Coronagraph Spacecraft (CSC) and Occulter Spacecraft (OSC)

Benefits of Commercial Space Launches for India

- Increasing share in global Space economy: Currently, India constitutes 2-3% of the total.
- Revenue Generation: India generated over \$279 million in revenue from the launch of foreign satellites. (as of 2022)
- Soft Power: Commercial satellite launches are considered a form of soft power.
 - It can be leveraged in the geo-political sphere by fostering strong diplomatic ties.
- Other: May facilitate Technology transfer etc.

About NewSpace India Limited (NSIL)

- Department of Space set it up in 2019 to handle ISRO's commercial activities.
- Primary responsibility is to help Indian industries to take up high-technology space-related activities.
- Also enables ISRO to focus on future space activities.

Aditya L1 and Proba-3 missions

- India's Aditya L1 and the European Space Agency's (ESA) Proba-3 missions are set to revolutionize solar research with **joint observations** starting in 2025.
- Aditya L1, operational since January 2024 from the Lagrange point (L1) 1.5 million km from Earth, launched in September 2023.
- Proba-3 was launched on December 5, 2024, is the first mission involving two satellites flying in formation to simulate a solar eclipse, facilitating detailed studies of the Sun's corona.

Disease X

- A December 2024 outbreak in the Democratic Republic of Congo (DRC), causing over 400 deaths, raises concerns about Disease X. The DRC is the 2nd largest country in Africa and the 11th largest in the world.

About Disease X:

- Definition: A hypothetical term by WHO in 2018 for an unknown pathogen capable of triggering a global pandemic, highlighting the need for preparedness against emerging diseases.
- Origins: Emerged after the 2014–2016 West African Ebola epidemic.
- Sources: Can originate from viruses, bacteria, parasites, fungi, or prions. Over 300 emerging diseases since 1940, 70% zoonotic.
- Risk Factors: High biodiversity regions, weak healthcare (e.g., Congo Basin), global connectivity, zoonotic spillovers, deforestation, agriculture, antimicrobial resistance, bioterrorism, lab accidents, and climate change complicate predictions.

India's first diabetes biobank

- India's first diabetes biobank has been established in **Chennai**, a collaboration between the Indian Council of Medical Research (ICMR) and the Madras Diabetes Research Foundation (MDRF).
- This biobank, a crucial step in advancing scientific research, will collect, process, store, and distribute biological samples to study diabetes, its causes, variations, and related disorders, contributing to global health research.

OTHER SCIENCE NEWS:

- **NASA's Parker Solar Probe** recently set a historic record by flying closer to the Sun than any other man made object, reaching speeds of 430,000 mph and withstanding temperatures up to 982°C. **Launched in 2018**, it is a car-sized robotic spacecraft, named after **American solar astrophysicist Eugene Newman Parker**.
- **ISRO** announced the launch of its **analogue space mission in Leh, Ladakh**. This innovative mission aims to simulate life in an interplanetary habitat, addressing the challenges associated with establishing a base station beyond Earth.
- The **Sun** exhibits a unique rotational pattern called **differential rotation**, where different parts rotate at varying speeds. The Sun's rotation period varies by latitude, with the equator rotating in 26.5 days, the sunspot zone (16° north) in 27.3 days, and the poles in 31.1 days. However, unlike Sun, the Earth rotates at all latitudes every 24 hours. The reason of Sun's differential rotation is not clear.
- In **Uppada coast villages in Andhra Pradesh**, consanguineous marriages are causing conditions like cerebral palsy, Dandy-Walker Malformation (DWM), albinism, and other deformities. A **consanguineous marriage** is a union between two people who are related by blood, usually as second cousins or closer. **Inbreeding** is the genetic outcome of consanguineous marriage. Inbreeding increases the degree of homozygosity to the offspring and also the expression of recessive traits. In homozygosity, an individual inherits the same alleles for a particular gene from both parents leading to genetic disorders.

- The **Hindu Marriage Act prohibits Sapindas marriage** between two Hindus unless there is an established custom. A sapinda marriage involves individuals who share a specific degree of familial closeness.
- **Aphantasia**: a condition where individuals cannot visualize images in their mind.
- **Hyperphantasia**: a condition where individuals possess an exceptionally vivid imagination, often experiencing mental images as if they were real.
- **India's Space Sector**: India's space economy, currently at USD 8 billion, aims to reach USD 100 billion by 2040. The government is opening the space sector to private companies and has earmarked a Rs 1,000 crore venture capital fund to stimulate growth and innovation. Under the amended FDI policy, **100% FDI is allowed in the space sector**.
- The **3rd Indian Space Conclave in New Delhi** spotlighted India's expanding space capabilities, with a focus on Satellite Communication (Satcom) and Indo-European Union Space partnerships.
- **India's first Mars and Moon analog mission was inaugurated in Leh, Ladakh**, led by Indian Space Research Organisation (ISRO), the mission simulates extraterrestrial conditions for space habitat testing.
- **Allotrope** refers to one or more forms of a chemical element that occur in the same physical state. Carbon has four main allotropes namely **Diamond, Graphite, Fullerenes, and Graphene**.
- **A black hole triple system** consists of a central black hole and two orbiting stars, bound together by gravitational forces. It forms through a "direct collapse" process, where a massive star collapses inward without undergoing a supernova explosion, enabling nearby stars to remain gravitationally attached. A recent study has discovered the first black hole triple system, located 8,000 light-years away.
- **ecDNA**: ecDNA is a type of DNA that exists outside of chromosomes in the nucleus of cells. ecDNA forms when portions of DNA break away from chromosomes due to processes like *chromothripsis* (chromosomes are broken and rearranged) or errors in DNA replication, creating circular structures that exist independently within the nucleus. ecDNA is commonly found in cancer cells, where it can contain multiple copies of oncogenes, contributing to tumor growth, genetic diversity, and drug resistance. A recent study revealed that ecDNA plays a significant role in cancer progression and drug resistance.
- The term **Non-Alcoholic Fatty Liver Disease (NAFLD)** has been replaced by **Metabolic Dysfunction-Associated Steatotic Liver Disease (MASLD)**, reflecting a shift towards recognising metabolic dysfunction as the primary cause rather than the absence of alcohol. This change helps remove the stigma tied to alcohol use and better directs focus to underlying metabolic issues and abnormal cholesterol.
- Recently, a study revealed that **nanoplastics** derived from single-use plastic bottles (SUPBs) contribute to the spread of **antibiotic resistance (AR)**, presenting an overlooked public health risk. **Nanoplastics are solid particles of synthetic or heavily modified natural polymers with sizes ranging between 1 nm and 1000 nm**.
- **NASA and Microsoft** have collaborated to create "**Earth Copilot**," an AI-driven chatbot aimed at democratizing access to complex Earth Science data.
- The Indian Space Research Organisation (**ISRO**) has entered into a significant collaboration with the Australian Space Agency (ASA) to support India's first crewed spaceflight program, Gaganyaan.
- **India's first AI lab in space**, named **MOI-TD** (My Orbital Infrastructure – Technology Demonstrator), was launched by Hyderabad-based startup **TakeMe2Space**. This AI lab aims to process satellite data directly in space, reducing data transmission costs and latency. The MOI-TD lab was launched aboard **ISRO's PSLV C60 rocket**.
- **Gencast**: Google DeepMind has introduced a groundbreaking artificial intelligence (AI) model called 'GenCast' that is capable of providing highly accurate weather forecasts, surpassing the European Centre for Medium-Range Weather Forecasts (ECMWF) ENS, the leading operational weather forecast system.
- **OpenAI** has officially launched its much-anticipated AI video generation model, **Sora**, for paid subscribers. The model, introduced as Sora Turbo, allows users to generate up to 20-second-long videos in 1080p resolution.
- On December 12, 2024, **ISRO** successfully completed a critical milestone with the **sea-level hot test of its CE20 cryogenic engine** at the ISRO Propulsion Complex in Mahendragiri, Tamil Nadu.
- **Japan and India** have joined forces to tackle the growing challenge of space debris, marking a significant collaboration in the space sector. This partnership, centered around laser technology and space debris removal, also extends to lunar exploration, showcasing their commitment to joint space efforts.
- The Indian Space Research Organisation (ISRO) and the European Space Agency (ESA) have signed a landmark agreement to enhance collaboration in human space exploration.

DEFENCE

Exercise VAJRA PRAHAR 2024:

- It is a joint military exercise between Indian army and US army.
- The 2024 exercise (15th edition) conducted at Orchard Combat Training Centre in Idaho, USA.

- The Indian Army contingent was represented by **Special Forces units** and the US Army contingent by **Green Berets of US**.

Exercise GARUD SHAKTI

- It is **India-Indonesia Joint Special Forces Exercise/**
- Recently, **9th edition** of the exercise took place in **Cijantung, Jakarta**, Indonesia where Indian Army contingent of 25 skilled personnel from the **Parachute Regiment (Special Forces)** participated.

VINBAX 2024

- The
- **5th edition** of the **Vietnam-India** Bilateral Army Exercise, “VINBAX 2024,” held at both **Ambala and Chandimandir**, aiming to strengthen military cooperation and interoperability between the two nations.

Tri-service exercise, 'Poorvi Prahar'

- Recently, Indian Army has conducted a high-intensity tri-service exercise, 'Poorvi Prahar', in the forward areas of **Arunachal Pradesh**.
- It aims to hone the combat effectiveness of the **Army, Navy, and Air Force** in executing Integrated Joint Operations in the challenging mountainous terrain of the region, enhancing inter-service coordination and operational readiness.

Exercise 'Antariksha Abhyas'

- Recently, the Defence Space Agency under the Ministry of Defence conducted **India's first-ever Space Exercise** 'Antariksha Abhyas' in New Delhi.
- Objective: Simulating and analysing threats to and from space-based assets and services to secure national strategic objectives in space.

Exercise AUSTRALIND

- Recently, the **3rd edition** of Exercise AUSTRALIND commenced at the Foreign Training Node in Maharashtra.
- The exercise, conducted annually, alternates between **India and Australia**, aiming to enhance military cooperation and interoperability in joint operations.

Exercise, Sea Vigil-24

- The Indian Navy has conducted the **fourth edition** of its nationwide coastal defence exercise, Sea Vigil-24.
- This year's exercise will be the largest to date, covering India's extensive coastline and involving six government ministries and 21 organizations, showcasing an unprecedented level of participation.
- The concept of 'Sea Vigil' is to activate the Coastal Security apparatus across India and assess the overarching Coastal Defence mechanism.

Sanyukt Vimochan 2024'

- Recently, the Indian Army held the 'Sanyukt Vimochan 2024' **Humanitarian Assistance and Disaster Relief (HADR) exercise** in **Ahmedabad and Porbandar, Gujarat**.
- Theme: '**Cyclone in Coastal Region of Gujarat**'.
- Objective: To showcase India's readiness for disaster response and to strengthen multilateral cooperation in humanitarian assistance.
- Participation: Indian Army, Indian Navy, Indian Airforce, Indian Coast Guard, National Disaster Response Force, State Disaster Response Force and other Central & State Agencies.
- It had representatives from 15 organisations across nine friendly foreign countries.

Exercise HARIMAU SHAKTI

- The **4th edition** of the **India-Malaysia Joint Military Exercise**, HARIMAU SHAKTI, took place at Bentong Camp, Pahang district, Malaysia.
- This exercise, is an annual event designed to enhance the military cooperation between the two nations.

Exercise Desert Knight

- **India, France, and the UAE** have initiated the trilateral air combat exercise “Desert Knight” over the Arabian Sea.
- This operation aims to strengthen defence cooperation, enhance interoperability among their air forces, and prepare for complex combat scenarios.

CINBAX

- The **Indian Army and the Cambodian Army** have commenced their first-ever Joint Table Top Exercise, CINBAX, at the Foreign Training Node in Pune.

Exercise SLINEX 2024

- The **Sri Lanka-India Naval Exercise** (SLINEX) held at **Visakhapatnam** under the auspices of the Eastern Naval Command.
- Initiated in **2005**, SLINEX has grown in scope and importance over the years, strengthening the bilateral relationship between India and Sri Lanka.

2nd Indian Military Heritage Festival (IMHF)

- Recently, Chief of Defence Staff (CDS) General Anil Chauhan inaugurated the 2nd Indian Military Heritage Festival (IMHF) in New Delhi. The event also launched Project Shaurya Gatha, focusing on conserving and promoting India's military heritage.
- Organized by: **United Service Institution of India (USI)** – India's oldest defense think tank, based in New Delhi.
- Aim: The festival aimed to engage global and Indian think tanks, corporations, public and private sector undertakings, non-profits, academicians, and research scholars focusing on India's national security, foreign policy, military history, and military heritage.

About Project 'Shaurya Gatha'

- This initiative is a collaboration between the Department of Military Affairs & the United Service Institution (USI) of India. It aims to conserve and **promote India's military heritage through education and tourism**.

About Chief of Defence Staff (CDS):

- Its creation was recommended in 2001 by a Group of Ministers (GoM) that was tasked with studying the Kargil Review Committee (1999) report. **General Bipin Rawat was the first CDS** in the country and was appointed in 2019.

3rd edition MAHASAGAR

- Conducted by: it is a High-level **virtual interaction among maritime leaders** conducted by **Indian Navy**.
- MAHASAGAR which stands for vast ocean in Hindi, is the Indian Navy's flagship outreach for high-level virtual interaction between **Maritime Heads for Active Security And Growth for All in the Region**.
- The initiative, started by the Indian Navy, is conducted **bi-annually** (twice a year) and has garnered wide acceptance among the participating nations ever since its inception in 2023.
- This year's theme: "*Training Cooperation to Mitigate Common Maritime Security Challenges in the Indian Ocean Region (IOR)*".
- Participating countries: **Indian Ocean Region littorals:** Bangladesh, Comoros, Kenya, Madagascar, Maldives, Mauritius, Mozambique, Seychelles, Sri Lanka, Tanzania.

Long Range Land Attack Cruise Missile (LRLACM)

- Recently, DRDO has successfully conducted the maiden flight test of LRLACM from the Integrated Test Range at **Chandipur, Odisha**. The launch was executed using a mobile articulated launcher.
- LRLACM was developed by: the Aeronautical Development Establishment in Bengaluru, with significant contributions from other DRDO laboratories and Indian industry partners.

Features of LRLACM

- Precision Strike: The missile has a precision **strike range of 1,000 km**, ensuring accuracy and effectiveness in targeting strategic locations.
- Advanced Technology: It is equipped with advanced avionics and software, which enhance its reliability and operational efficiency. It demonstrates the ability to navigate through predetermined waypoints while performing various manoeuvres and operating effectively at different altitudes and speeds.
- Similarity: Similar to the US Tomahawk and Russia's Kalibr, the LRLACM excels in delivering precise, long-range strikes.
- Strategic Importance: Such missiles are critical for modern militaries, enabling stand-off attacks on strategic targets while ensuring the safety of the launch platform and personnel.

Pinaka System

- The Defence Research and Development Organisation (DRDO) has successfully completed the flight tests of the **Guided Pinaka Weapon System** as part of Provisional Staff Qualitative Requirements (PSQR) Validation Trials. The successful validation marks a significant step towards the system's **induction into service**, reinforcing India's efforts to modernize and strengthen its artillery capabilities.

- The Pinaka is a **multi-barrel rocket launcher system** developed by **DRDO's Armament Research and Development Establishment (ARDE)**.
- Named after Lord Shiva's bow, Pinaka is a versatile and high-precision rocket system.
- Initially designed to meet the requirements of the **Indian Army**, the system has undergone significant upgrades to enhance its range, accuracy, and overall performance.
- Phased Development:
 - **Pinaka Mk-I:** The basic version with a 38 km range and capable of firing multiple rocket salvos.
 - **Pinaka Mk-II:** An upgraded version with an extended range of up to 60 km.
- Extended Range Pinaka: The latest variant, with a range of **75 km**, capable of striking targets at longer distances with greater precision.

INS Tushil

- The Indian Navy has commissioned its latest multi-role stealth guided missile frigate, INS Tushil, in Kaliningrad, Russia.
- INS Tushil is an upgraded **Krivak III-class frigate** of **Project 1135.6**.
- INS Tushil, is the first of two upgraded frigates under a 2016 contract between the Indian Government and JSC Rosoboronexport (a Russian company).
- The name Tushil means "protector shield," reflects the Indian Navy's commitment to protecting maritime frontiers.
- It incorporates "stealth technology" to reduce radar visibility and underwater noise signatures.
- It is equipped with up to 26% Indian-made components, including indigenous systems such as surface-to-surface missiles, sonar systems, and more. The displacement of the ship is 3900 tons.
- INS Tushil is equipped with **BrahMos supersonic cruise missiles**, Shtil Surface to-Air Missiles, anti-submarine torpedoes, and electronic warfare systems.

About Project 1135.6

- The Indian and Russian governments in October 2016 signed an agreement to construct four additional P1135.6 class ships. Russia will supply two frigates (INS Tushil and INS Tamala), while India will build the other two.
- Project 1135.6 is also known as Talwar Class. The Talwar-class frigates are a class of stealth-guided missile frigates.

Adaptive Defence

- Recently, India's Defence Minister advocated to create an "Adaptive Defence" in the country to counter the new security challenges posed by the fast-changing world.
- Adaptive Defence: It is a **strategic approach where a nation's military and defence mechanisms continuously evolve to counter emerging threats**. It focuses on anticipating future threats, rather than merely reacting to past or current ones.
- Traditional notions of war are changing due to new threats such as **cyber-attacks and terrorism**. Modern warfare now includes non-traditional elements, demanding continuous adaptation.
- Emerging technologies like **Artificial Intelligence (AI), drones, and swarm technologies** are reshaping warfare and defence strategies

Project Akashteer

- It is a cutting-edge initiative designed to **automate air defense control and reporting processes** by digitizing them.
- It aims to deliver an unprecedented level of situational awareness and control for the force to ensure the safety of friendly aircraft and engage hostile aircraft in contested airspace.
- It will enable monitoring of low-level airspace over the battle areas of Indian Army and effectively control the Ground Based Air Defence Weapon Systems.
- Developed by **Bharat Electronics Limited (BEL)** - a Navratna PSU under the Ministry of Defence.

India's MH-60R Seahawk multi-role helicopters

- The United States has approved a \$1.17-billion deal for **support equipment and services** for **India's MH-60R Seahawk multi-role helicopters** under its **Foreign Military Sales programme**.
- India contracted **24 MH-60R helicopters** from the US in 2020 for \$2.2 billion; **nine have been inducted so far**.
- These helicopters are designed for anti-submarine and anti-surface warfare, search and rescue, medical evacuation, and logistical missions.
- These are equipped with AGM-114 Hellfire missiles, MK 54 torpedoes, advanced sensors, and avionics.

Drishti-10 drone

- Adani Defence has delivered the second Drishti-10 Starliner surveillance drone to the Indian Navy, enhancing the nation's maritime capabilities. This marks a significant leap in India's indigenous defence technology, underscoring the country's focus on self-reliance.
- The Drishti-10 drone is a **highly advanced intelligence, surveillance, and reconnaissance (ISR) platform** designed to monitor vast maritime territories, mitigate piracy, and provide over-the-horizon surveillance with unmatched endurance.

VORONEZH RADAR SYSTEM

- India is set to finalize a landmark **USD 4 billion** defense agreement with **Russia**, aimed at acquiring an advanced long-range early warning radar system that will elevate the nation's missile detection and air defense capabilities.
- The Voronezh radar is the current generation of Russian early-warning radar, providing long distance monitoring of airspace against ballistic missile attack and aircraft monitoring. It is a very long-range early warning radar system with a range of well over 8,000 kilometers. It is capable of identifying and tracking threats like ballistic missiles, fighter jets, and ICBMs.

INS Nirdeshak

- The Indian Navy has commissioned INS Nirdeshak, a state-of-the-art survey vessel, at Visakhapatnam Naval Dockyard.
- Constructed by: Garden Reach Shipbuilders & Engineers (GRSE) in Kolkata.
- INS Nirdeshak, the **second ship of the Survey Vessels (Large) (SVL) Project**, has been commissioned to enhance hydrographic surveys, navigation, and maritime safety using advanced systems like Multi-Beam Echo Sounders, and Autonomous Underwater Vehicles (AUVs).
- The **SVL Project** aims to modernize the Indian Navy's hydrographic survey fleet by replacing the aging Sandhayak class ships. The project comprises four ships; they are **Sandhayak, Nirdeshak, Ikshak, and Sanshodhak**.
- Indigenous Manufacturing: Built with over **80% indigenous content**, the project supports the government's Make in India and Atma Nirbhar Bharat initiatives.

Other Defence News

- For the very first time, the Indian Army has successfully installed **Optical fibre connectivity at Siachen** and **Daulet Beg Oldie (DBO)** to ensure high speed broadband connectivity.
- The Indian Coast Guard (ICG) has conducted 11th edition of the National Maritime Search and Rescue Exercises & Workshop (**SAREX-24**) in Kochi.
- Honorable President **Droupadi Murmu** embarked on her first visit to Indian Navy ships at sea aboard the indigenous aircraft carrier **INS Vikrant** on 7th November. She witnessed a series of advanced operational demonstrations, showcasing the Indian Navy's combat capabilities and maritime prowess.
- **India and Russia** have reached a significant agreement to jointly manufacture the **Pantsir air defence missile-gun system**, marking a major step in supporting India's Atmanirbhar Bharat initiative in the defence sector. The agreement was formalized through a Memorandum of Understanding (MoU) signed between India's Bharat Dynamics Ltd (BDL) and Russia's Rosoboronexport (ROE).
- The Ministry of Home Affairs (MHA) has approved the creation of the **Central Industrial Security Force's (CISF) first-ever all-women battalion**, announced on 12th November, 2024. This historic move aims to promote gender equality and inspire more women to contribute to the CISF's mission of securing the nation's strategic assets.
- In a move to strengthen Rajasthan's defence industrial base, the Army's Jaipur-based South Western Command has established a think tank named **Gyan Shakti**.
- **Hypersonic missile of USA:** The U.S. military has successfully tested its **Long-Range Hypersonic Weapon (LRHW)**, also known as "**Dark Eagle**," bringing it closer to being fielded as a crucial asset in modern warfare. The test, conducted at Cape Canaveral Space Force Station in Florida, demonstrated the missile's ability to travel at speeds exceeding **3,800 miles per hour (Mach 5)**, and its capability to strike distant and well-defended targets.
- The Indian Government has formed a **high-level committee under Defence Secretary Rajesh Kumar Singh** to assess the Indian Air Force's (IAF) capability development.

RANKING AND REPORTS

Global Nature Conservation Index-2024

- Developed by: Goldman Sonnenfeldt School of Sustainability and Climate Change at Ben-Gurion University and BioDB.com, a biodiversity database.
- India ranks **176th** and is among the five lowest-ranked countries, along with Kiribati (180), Turkey (179), Iraq (178), and Micronesia (177), out of 180 nations.
- It assesses four key markers: land management, biodiversity threats, capacity and governance, and future trends.
- India's low ranking is due to inefficient land management and increasing biodiversity threats.

QS Asia Rankings 2025: 2025

- It has been published annually since 2009 by Quacquarelli Symonds, which highlights the top universities in Asia each year.
- Total **11 indicators** used to compile the QS Asia University Rankings.
- This ranking assesses **984 institutions** covering 25 countries in Eastern, Southern, South-Eastern and Central Asia.
- **Peking University (Beijing) retains the top spot, The University of Hong Kong the second, with the National University of Singapore confirmed in third.**
- **India** boasts **two institutions within the top 50** and **7 in the top 100** of the QS Asia Rankings 2025, with the Indian Institute of Technology Delhi (IITD) leading at 44th place.
- The University of Petroleum and Energy Studies (UPES) achieved the most significant improvement among Indian institutions, climbing 70 spots to 148th.

QS World University Rankings 2025 for sustainability

- This ranking highlights universities excelling in environment and social responsibility through education and research. It is the third edition of the report.
- QS is a London-based global higher education analyst best known for its widely recognized QS World University Rankings.
- These rankings assess universities' contributions to sustainability, focusing on three pivotal pillars: Environmental Impact, Social Impact, and Governance. 78 Indian universities are featured in the 2025 rankings.
- **IIT Delhi: Ranked 1st in India and 171st globally.**
- **IIT Kharagpur:** Ranked 2nd in India and 202nd globally.
- **IIT Bombay:** Ranked 3rd in India and 234th globally.
- Environmental Impact: IIT Delhi (55) and IIT Kanpur (87) ranked in the global top 100.
- Environmental Sustainability: IIT Bombay is at top in India (ranks globally at 38th).
- Environmental Education: IISc is placed 32nd worldwide.
- Governance and Equality: Manipal Academy of Higher Education (MAHE) leads India in the Governance category and ranks highest in India for Equality (ranks globally at 390th).
- Social Impact: IIT Delhi ranked 362nd globally, with top performance in India in Employability and Outcomes (ranks globally at 116th).
- Knowledge Exchange: DU is at top in India (ranks globally at 121st).

Grievance Redressal Assessment index (GRAI) 2013

- Released by: Department of Administrative Reforms and Public Grievances (**DARPG**).
- Ranking: **Department of Agriculture and Farmers Welfare** topped the Ranking followed by **Department of Posting Group A**.
- About GRAI: it was conceptualized by DARPG based on recommendation of Parliamentary Standing Committee of Ministry of Personnel, Public Grievances and Pensions.
- **Index is based on Four Dimensions** (Efficiency, Feedback, Domain and Organizational Commitment) And **11 Indicators**, assessing grievance redressal mechanism adopted by Central Ministries and Departments.
- Objective: Highlight strengths and areas of improvement regarding grievance redressal mechanisms of various organizations.

Network Readiness Index (NRI) -2024

- It is co-published by **Portulans Institute and Saïd Business School, University of Oxford.**
- This index evaluates 133 economies using 54 variables across four key pillars namely *Technology, People, Governance, and Impact*.
- Theme 2024: **"Building a Digital Tomorrow: Public-Private Investments and Global Collaboration for Digital Readiness."**
- **India** climbed 11 ranks, securing the **49th position in NRI 2024.**

- India's score improved from 49.93 in 2023 (60th position) to 53.63 in 2024 (49th position), indicating substantial progress in various digital metrics and innovations.

India's Leadership:

- 1st rank in AI scientific publications, AI talent concentration, and ICT services exports.
- 2nd rank in FTTH/Building Internet subscriptions and Mobile broadband internet traffic.
- 4th rank in investment in telecommunication services.

The State of Food and Agriculture 2024' report

- Released by: Food and Agriculture Organization (FAO) of the UN
- Report emphasizes on value-driven transformation of agrifood systems and builds on the estimates of the previous edition on global hidden costs of agrifood systems (journey of food from farm to table).
- Hidden cost refers to external costs (i.e., negative externalities) or economic losses triggered by other market or policy failures.

Key findings of the report

- Hidden Costs: Industrial and diversifying agrifood systems contribute maximum to global quantified hidden costs (around 5.9 trillion 2020 PPP dollars), dominated by health hidden costs linked to non-communicable diseases.
- Unhealthy dietary patterns (like low intake of whole grains, high intake of sodium, etc.) account for 70% of all quantified hidden costs.
- Other contributing factors include: Social costs (due to undernourishment and poverty); environmental costs (emission of greenhouse gases, etc.).
- India-related findings: India's total hidden costs stands around \$1.3 trillion annually (3rd largest after China and the USA), largely driven by unhealthy dietary patterns.

Global Tuberculosis (TB) Report 2024

- Released by: World Health Organisation.
- Tuberculosis is an infectious disease caused by **bacteria** (*Mycobacterium tuberculosis*) and most commonly affects lungs and is curable as well as preventable. It spreads through the air when people with lung TB cough, sneeze or spit.

Key Findings of the Report

- In 2023, TB likely became the leading infectious killer globally, surpassing Covid-19.
- TB Treatment coverage: It has increased to 75% as against target of 90% by 2027

India specific findings

- The report shows that although India has made some progress, it continues to have the highest disease burden.
- India accounted for 26% of the global TB burden in 2023 and 26% of global TB related deaths.
- India ranks 1st globally** in burden of multidrug resistant/Rifampicin-resistant TB

Issues highlighted by Report

- Inadequate funding in low- and middle-income countries: It was merely US\$ 5.7 billion (in 2023) equivalent to only 26% of the global target of reaching US\$ 22 billion per year (2027).
- Funding in TB Research: It was US \$1 billion (2022) as against target of US\$5 billion (2027)
- Catastrophic health costs (>20% of annual household income): Around 50% of the TB-affected households globally face catastrophic costs, far above the WHO End TB Strategy target of zero.

India's Initiatives for TB Prevention

- Pradhan Mantri TB Mukh Bharat Abhiyan.
- Universal Drug Susceptibility Testing (UDST): To rule out drug resistance before or at the time of treatment initiation itself.
- Addition of newer drugs: E.g. Bedaquiline and Delamanid for management of drug resistant TB.

Adaptation Gap Report 2024

- Released by: United Nations Environment Programme (UNEP)
- Report provides annual assessment on progress in adaptation planning, implementation and finance.
- Adaptation Gap is the difference between actually implemented adaptation (adjustment measures to actual or expected climate) and a societally set goal, reflecting resource limitations and competing priorities.

Key Findings of Report

- Adaptation gap is estimated at US\$187-359 billion per year.
- International public adaptation finance flows to developing countries increased to US\$27.5 billion in 2022.
- This reflects progress towards Glasgow Climate Pact, which urged developed nations to at least double adaptation finance to developing countries from US\$19 billion (2019) by 2025.
- Significance of Adaptation: Global climate risk can be halved through ambitious adaptation.

- For instance, US\$16 billion invested in agriculture per year would prevent about 78 million people from climate change related starving or chronic hunger.

Recommendations for bridging adaptation gap

- Adopt an ambitious New Collective Quantified Goal for climate finance at COP29.
- Strengthening enabling factors, adapting new financial instruments, capacity building and technology transfer are central.
- Adaptation financing needs to shift from reactive, incremental, project-based financing to more anticipatory, strategic and transformational adaptation.

Key Initiatives for Adaptation

- Global
 - Paris Agreement: Global goal on adaptation aimed at enhancing adaptive capacity.
 - UAE Framework for Global Climate Resilience: Includes 11 global adaptation targets.
 - Adaptation Fund: To finance adaptation projects in developing country Parties to the Kyoto Protocol.
- India
 - National Action Plan on Climate Change (NAPCC): Includes eight national missions on climate change.
 - National Adaptation Fund for Climate Change (NAFCC): to finance and scale up adaptation action in vulnerable states.
 - Sectoral schemes like MISHTI & Amrit Dharohar.

Protected Planet Report 2024

- Released by: UNEP– World Conservation Monitoring Centre (UNEP WCMC)
- It is the first comprehensive evaluation of the global status of protected and conserved areas (PCA).
- It highlights both the progress made and the challenges ahead in achieving **Target 3 of the Kunming-Montreal Global Biodiversity Framework (KM-GBF)**.
- The KM-GBF was adopted at the 15th COP of the UN Convention on Biological Diversity (CBD).
- **Target 3 of KM-GBF:** Ensure and enable that by 2030 at least 30% terrestrial, inland water, coastal, and marine areas, especially those critical for biodiversity, are effectively conserved and managed through well-connected, ecologically representative, and equitably governed protected areas.
- **Progress:** 17.6% of land and inland waters, and 8.4% of oceans and coastal areas are under protection. While progress has been made, the increase is minimal (less than 0.5% in both realms) since 2020. To meet the 30% target by 2030, additional protection is needed: 12.4% more land needs to be protected and 21.6% more ocean needs to be safeguarded.

Assessing Universal Basic Literacy in India

- Recently, the 79th round of the National Sample Survey (NSS), conducted between July 2022 and June 2023, revealed that **95.9% of individuals aged 15–29 in India possess basic literacy and numeracy skills**.
- The survey assesses the literacy and basic numeracy skills of Indians focusing on reading, writing, and arithmetic abilities.
- In rural areas, 95.3% of individuals have basic literacy and numeracy skills, compared to 97.4% in urban areas.
- Specifically, 97.4% of rural males and 93.4% of rural females possess these skills, while in urban areas, 98% of males and 96.7% of females meet this standard.
- States like Mizoram (100%), Goa (99.9%), and Sikkim (99.9%) lead in literacy rates, while Bihar (91.9%) and Uttar Pradesh (92.3%) lag behind.

World Intellectual Property Indicators 2024 report

- Released by: World Intellectual Property Organization (WIPO)
- According to report, India experienced significant growth in intellectual property filings, with patents filings doubling between 2018 and 2023.

Other Key Findings related to India:

- Patents: **India is ranked 6th globally** with 64,500 Patent Filings and country's Patent-to-GDP ratio surged to 381 from 144 (2013 to 2023).
- Trademarks: India's IP office is second highest globally in trademarks and now India ranks 4th globally in trademark filings.
- Industrial Design Filing: Ranked 10th globally with a 36% increase in 2023, showing significant growth in creative design.
- The World Intellectual Property Organisation (WIPO) is one of the oldest specialized United Nations agencies, was established in 1967 to promote creative activity and protect intellectual property globally. It administers 26

international treaties and is headquartered in Geneva, Switzerland. **WIPO has 193 member states. India joined WIPO in 1975.**

India State of Forest Report 2023

- Recently, the Ministry of Environment, Forest and Climate Change has released the 'India State of Forest Report 2023' (ISFR 2023). The report shows a **marginal gain of 156 sq. km in forest cover, and a sizable increase of 1,289 sq km in tree cover since 2021.**
- About Report: The India State of Forest Report is a **biennial report** published by the **Forest Survey of India (FSI)**, an organisation of the Ministry of Environment, Forest & Climate Change.
 - FSI monitors India's forest and tree resources through periodic assessments and presents the findings in its biennial report.
- The first State of Forest report was brought out in 1987.** The current report, ISFR 2023 is 18th in the series.

Key Terms:

- Tree cover:** It is defined as all tree patches of size less than one hectare occurring outside the recorded forest area. This covers trees in all formations, including scattered trees.
- Forest area:** It denotes the legal status of the land as per the government records, whereas the term 'forest cover' indicates the presence of trees over any land.
- Forest carbon stock:** The amount of carbon that has been sequestered from the atmosphere and is now stored within the forest ecosystem, mainly within living biomass and soil, and to a lesser extent also in dead wood and litter.
- National Forest Inventory:** A systematic approach to generate national level estimates on growing stock, forest area and other forest resources parameters by doing regular inventory in selected sample districts in a cycle of two years.

Table: Forest and Tree Cover of India

Class	in km ²	
	Area	Percentage of GA
Forest Cover	7,15,342.61	21.76
Tree Cover	1,12,014.34	3.41
Total Forest and Tree Cover	8,27,356.95	25.17
Scrub	43,622.64	1.33
Non Forest	24,16,489.29	73.50
Geographical Area of the country	32,87,468.88	100.00

Key Findings of ISFR 2023:

- The **Forest and Tree cover** of India is **8,27,357 sq km** which is 25.17% of the geographical area of the country, consisting of:
 - 7,15,343 sq km (21.76%) as forest cover.
 - 1,12,014 sq km (3.41%) as tree cover.
- For the first time, **India's green cover has exceeded the 25% threshold.** Of this, 49.57% (4,10,175 sq km) is classified as **dense forests.**
- Increase in tree cover and forest cover:**
 - Sharpest **growth (0.5%) in tree cover** (from 2.91% in 2021 to 3.41% in 2023)
 - Marginal growth in **forest cover (0.05%)** since 2021.
 - Between 2003 and 2013, forest cover increased by 0.61%, from 20.62% to 21.23%.
 - In the next 10 years, it grew by only 0.53% to 21.76%.
- Total mangrove cover is 4,992 sq km in the country.
- Total bamboo bearing area is 1,54,670 sq km. (an increase from 2021).
- Total carbon stock in the country's forest is estimated to be **7,285.5 million tonnes** (an increase of 81.5 million tonnes as compared to 2021).
- India's carbon stock has reached 30.43 billion tonnes of CO₂ equivalent;** which indicates that as compared to the base year of 2005, India has already reached 2.29 billion tonnes of additional carbon sink as against the target of 2.5 to 3.0 billion tonnes by 2030.

Rankings of States & UTs:

- Top four states showing maximum increase in forest and tree cover: Chhattisgarh (684 sq km) > Uttar Pradesh (559 sq km) > Odisha > Rajasthan.
- Top three states showing maximum increase in forest cover: Mizoram (242 sq km) > Gujarat > Odisha.
- Area wise top three states having largest forest and tree cover: Madhya Pradesh (85,724 sq km) > Arunachal Pradesh > Maharashtra.

- Area wise top three states having largest forest cover: Madhya Pradesh (77,073 sq km) > Arunachal Pradesh > Chhattisgarh.
- In terms of percentage forest cover with respect to total geographical area: Lakshadweep (91.3 %) > Mizoram (85.3 %) > Andaman & Nicobar Island.
- **19 states/UTs** have **above 33%** of the geographical area under forest cover.
 - According to the **National Forest Policy of 1988**, 33% of India's geographical area is required to be forests.
- **8 states/UTs:** Mizoram, Lakshadweep, A & N Island, Arunachal Pradesh, Nagaland, Meghalaya, Tripura, and Manipur **have forest cover above 75%.**

Types of Forests:

- Forests: Irrespective of land use or ownership, tree patches measuring 1 hectare or more with a minimum canopy cover of 10% are counted as forests in India.
- Dense forests: Areas with a canopy density of 40% and above are considered dense forests.
- Open forests: Areas with canopy density of 10-40% are open forests (OF).
- Very dense forests: Since 2003, areas with at least 70% canopy density have been classified as very dense forests (VDF).

****Canopy density:** It is the percentage of an area that is covered by the crowns of trees. It's also known as forest canopy density (FCD) or crown cover. Canopy density is a key indicator of a forest's health and is used to assess the forest's condition and potential management actions.

Concerning findings of the Report:

- ISFR-2023 shows that **3,913 sq km of dense forests** (an area larger than Goa) have **disappeared in India** in just two years since 2021.
- India has witnessed the complete destruction of 24,651 sq km (more than 6.3%) of its dense forests in the two decades since 2003.
- The bulk of this loss has been offset by the rapid transformation of 15,530 sq km of non-forested or scantily forested land to dense or even very dense forests (during 2003-2023).
- However, this offset has been accomplished through Plantations, because natural forests do not grow this fast.

SIPRI Report on Global Arms Producers

- Recently, the Stockholm International Peace Research Institute (SIPRI) released its annual report on the world's 100 largest arms producers with three Indian firms among the top global arms manufacturers.
- Three Indian companies namely **Hindustan Aeronautics Limited** (Rank 43), **Bharat Electronics Limited** (Rank 67), and **Mazagon Dock Shipbuilders Ltd** (Rank 94) ranked among the Top 100 global arms producers.
- Major Global Producers: **US > China > Russia.**

Other reports

- Recently, the Asian Development Bank (ADB) released its **Asia-Pacific (APAC) Climate Report 2024**, highlighting alarming economic impacts of climate change on the Asia-Pacific region.
- Recently, the United Nations International Children's Emergency Fund (UNICEF) released the **State of the World's Children 2024 (SOWC 2024)** report that examines the forces and trends shaping children's future by 2050.
- **India records the highest number of road accident fatalities** globally with a reported road death rate of 250 per 10,000 km, higher than the rates in the United States (57), China (119) and Australia (11).
- In 2023, India recorded over 4.80 lakh road accidents which resulted in over 1.72 lakh deaths, marking a 2.6% increase compared to 1.68 lakh fatalities in 2022.
- Recently released, **World Bank's "International Debt Report 2024"** highlights a worsening debt crisis for developing nations, with 2023 marking the highest debt servicing levels in two decades, driven by rising interest rates and economic challenges.
- Recently, NITI Aayog released a **report on SAFE Accommodation: Worker Housing for Manufacturing Growth** that explores the crucial role of secure, affordable, flexible, and efficient (SAFE) accommodations for industrial workers.
- The Reserve Bank of India's (RBI) report, **State Finances – A Study of Budgets of 2024-25**, highlighted the progress made by state governments in fiscal consolidation, alongside significant challenges such as high debt levels and rising subsidies.
- The **Economic Advisory Council to the Prime Minister (EAC-PM)** released a working paper titled **"400 Million Dreams!"** which highlights a 12% decline in domestic migration since 2011. This shift, reflecting broader socio-economic changes, is attributed to improved economic opportunities and infrastructure in traditionally high migration source areas.

- A recent report titled the **2024 Arctic Report Card** by the National Oceanic and Atmospheric Administration (NOAA) reveals that the **Arctic, once a major carbon sink, is now becoming a carbon source due to ongoing climate induced warming.**
- The **EdelGive-Hurun India Philanthropy List 2024** reveals an inspiring rise in philanthropic contributions across India. At the top of the list is **Shiv Nadar, founder of HCL Technologies**, who continues to be India's most generous philanthropist. For the third time in five years, Nadar has led in donations, contributing ₹2,153 crore in FY 2024—translating to an average of ₹5.9 crore per day.
- **India has emerged as the global leader in mobile malware attacks**, surpassing the United States and Canada. A recent Zscaler ThreatLabz 2024 report revealed that India now accounts for 28% of global mobile malware attacks, up from third place last year.
- **India** has significantly improved its position in the World Economic Forum's (WEF) **Travel and Tourism Development Index (TTDI) 2024**, ranking **39th** among 119 countries.
- **Forbes** has unveiled its 21st annual list of the **World's 100 Most Powerful Women**. This year, **three Indian women** have made their mark on the global stage with remarkable achievements in their respective fields. They include **Nirmala Sitharaman, Roshni Nadar Malhotra, and Kiran Mazumdar-Shaw**, whose contributions to their industries have earned them prominent spots on the list.
- **India** has made remarkable progress in the **2024 Network Readiness Index (NRI)**, jumping 11 places from 60th in 2023 to **49th in 2024**, with an improved score of 53.63.

BIODIVERSITY, ENVIRONMENT & GEOGRAPHY

National Mission for Clean Ganga (NMCG)

- NMCG was registered as a society in 2011 under the Societies Registration Act 1860. It is the implementation wing of National Ganga Council (set in 2016; which replaced the National Ganga River Basin Authority (NRGBA)).
- The objective of the NMCG is to reduce pollution and ensure rejuvenation of the Ganga River.

Barak River

- Originates from the Manipur hills in Senapati district. It flows along the Nagaland-Manipur border, enters Assam, and then Bangladesh, where it is known as the Surma and Kushiara, and later as the Meghna (before receiving the combined flow of the Ganga and the Brahmaputra).
- The principal tributaries of Barak are the Jiri, the Dhaleswari, the Singla, the Longai, the Sonai and the Katakhal.
- In News: Three bodies found floating in Manipur's Barak River, in Jiribam district, are believed to be victims of the ongoing violence in the state.

Sendai Framework (2015-2030)

- It is an UN-backed framework that **focuses on reducing disaster risks through measures** such as better preparedness, disaster risk financing, and sustainable development.
- It was adopted at the Third United Nations World Conference on Disaster Risk Reduction, held in **2015 in Sendai, Miyagi, Japan**.

High Seas Treaty

- India signed the High Seas Treaty, marking a major milestone in international ocean governance.
- The High Seas Treaty, officially known as the **Biodiversity Beyond National Jurisdiction (BBNJ) Agreement**, **aims to protect marine ecosystems and promote sustainable use of resources in areas beyond national jurisdictions**, which are beyond the 200 nautical miles (370 km) or beyond Exclusive Economic Zones (EEZs).
- It is the third implementing agreement under UNCLOS, after treaties on deep-sea mining and fisheries management.
- Key goals include: Conserving marine biodiversity, sharing benefits from marine genetic resources, Requiring environmental impact assessments (EIAs) for harmful activities.

Avian botulism

- Recently, a mass death of migratory birds died at **Sambhar Lake** in Rajasthan, likely due to avian botulism.
- The outbreak is believed to be caused by high temperatures and reduced salinity in the lake.
- Avian botulism is a neuromuscular disease caused by toxins produced by the **bacterium Clostridium botulinum**.
- The disease affects wild birds, primarily waterfowl and fish eating birds, causing paralysis and death.

- Sambhar Lake, **India's largest saline wetland**, is located in the Nagaur and Jaipur districts of Rajasthan, bordered by the Aravalli hills. It is the source of most of Rajasthan's salt production. It was designated a Ramsar site in 1990 due to its ecological significance. It attracts thousands of migratory birds, including flamingos.

57th tiger reserve in India

- Recently, the **Ratapani Wildlife Sanctuary (M.P.)** has been officially declared as 57th tiger reserve in India.
- It has become **8th tiger reserve in Madhya Pradesh**. It is situated near the Vindhya hills, the sanctuary encompasses the Bhimbetka Rock Shelters, a UNESCO World Heritage Site.
- It was approved by the Ministry of Environment, Forest, and Climate Change (MoEF&CC) through the National Tiger Conservation Authority (NTCA).

Paris Agreement: 9 years completed

- The Paris Agreement, adopted on **12th December 2015**.
- It is a legally binding global agreement under the United Nations Framework Convention on Climate Change (UNFCCC) that was adopted in 2015 (COP 21).
- It aims **to combat climate change and limit global warming to well below 2 degree Celsius above pre-industrial levels, with an ambition to limit warming to 1.5 degree Celsius**.
- It **replaced the Kyoto Protocol** which was an earlier agreement to deal with climate change.
- Under the Paris Agreement, each country is required to submit and update their **Nationally Determined Contribution (NDCs) every 5 years**, outlining their plans for reducing greenhouse gas emissions and adapting to climate change.
- NDCs are pledges made by countries to reduce their greenhouse gas emissions and to adapt to the impacts of climate change.

Ken-Betwa Link Project

- Recently, Prime Minister Narendra Modi laid the foundation stone for the Ken-Betwa Link Project (KBLP) in **Khajuraho**, Madhya Pradesh.
- This Rs 45,000 crore initiative, part of the **National Perspective Plan (NPP)** for interlinking rivers, aims to resolve water scarcity in Bundelkhand.
- Bundelkhand is a geographical region, which spans 13 districts in Uttar Pradesh and Madhya Pradesh. Bundelkhand has long faced droughts and water shortages, forcing migration for employment.
- Ken-Betwa Link Project: The KBLP is India's first initiative under the NPP, formulated in 1980 for river interlinking, implemented by Ken-Betwa Link Project Authority. It **aims to transfer surplus water from the Ken River in Madhya Pradesh to the Betwa River in Uttar Pradesh**, both of which are tributaries of the Yamuna.
- Phase I: Construction of the **Daudhan Dam complex**, low-level and high-level tunnels, Ken-Betwa link canal, and powerhouses.
- Phase II: Development of the **Lower Orr Dam** located across the Orr River (a tributary of the Betwa), Bina Complex Project, and Kotha Barrage.
- Benefits: Irrigation for 6.3 lakh hectares annually. Drinking water supply for 62 lakh people. The project includes provisions for hydropower generation (100 Megawatt (MW)) and solar energy (27 MW).
- Concerns: The opposition has voiced concerns over the project's environmental impact, particularly on the **Panna Tiger Reserve**, which could see over 10% of its core area submerged.
- National Perspective Plan (NPP) for Interlinking Rivers: Formulated in 1980 by the Ministry of Irrigation (now Ministry of Jal Shakti), the NPP aims to develop water resources through the inter-basin transfer of water.

Solar energy project at Omkareshwar

- The PM also inaugurated **Madhya Pradesh's first floating solar energy project at Omkareshwar**, marking a significant step toward renewable energy adoption.

Hydrothermal Vents

- Hydrothermal vents are underwater hot springs found near the tectonic plates, where hot water and minerals from beneath the Earth's crust are expelled into the ocean.
- Hydrothermal vents were first discovered in 1977 near the Galapagos Islands, Ecuador.
- Significance: The deposits from hydrothermal venting are rich in copper, zinc, gold, silver, platinum, iron, cobalt, nickel, and other valuable minerals and metals.
- **In News**: **India's Deep Ocean Mission** recently achieved a milestone by imaging an active hydrothermal vent 4,500 meters below the Indian Ocean's surface.

Sacred Groves

- Sacred Groves are the tracts of virgin forests that are left untouched by the local inhabitants and are protected by the local people due to their culture and religious beliefs. Sacred groves are relic vegetation of once dominant flora.
- Sacred Groves in India: Over 1 million sacred forests and 100,000 to 150,000 sacred groves exist across India. It is prominent in Maharashtra, Karnataka, Kerala, Tamil Nadu, and Uttarakhand.
- Statutory Provision: Wild Life (Protection) Act, 1972 empowers State governments for declaration of any private or community land, as a community reserve, under which sacred groves can be declared as community reserves.
- National Forest Policy, 1988, backed by the **Godavarman Case, 1996**, encouraged communities with customary rights to protect and improve these forest patches on which they depend for their needs.
- Cultural Significance: It is integral to Hindu beliefs, promoting coexistence and reverence for nature.
- Role in Conservation: Practices like tree worship and strict prohibitions on logging and hunting align with biodiversity principles. Serve as refuges for diverse flora and fauna and maintain clean water ecosystems. They are examples of Other Effective Area-Based Conservation Measures (OECMs).
- In News: Recently, the Supreme Court directed the Union government to create a comprehensive policy for the protection of sacred groves across the country. The judgment was inspired from the **Piplantri Model** created in a Piplantri village in Raasthan's Rajsamand district.

Cyclone Fengal

- Fengal is a tropical cyclone which originated in the Bay of Bengal.
- **Low-intensity cyclonic storm** (75-95 kmph).
- It triggered **exceptionally heavy rain** (~500 mm in 24 hours) and **flooding** in Tamil Nadu and Puducherry.
- The name "Fengal" was chosen by Saudi Arabia and is rooted in Arabic, suggesting a meaning like "indifferent".

Cyclone Chido

- It was a Category 4 storm, caused widespread destruction in Mayotte before making landfall in Mozambique's Cabo Delgado province on December 15, 2024.
- Mayotte is an archipelago in the Indian Ocean between Madagascar and the coast of Mozambique. It's a department and region of France.

China's first atmospheric monitoring station in Antarctica

- China has inaugurated its first atmospheric monitoring station in Antarctica, marking a significant expansion of its research presence on the continent.
- Located in **Larsmann Hills, East Antarctica**, the **Zhongshan National Atmospheric Background Station** aims to provide continuous and long-term observations of atmospheric components, contributing valuable data on climate change and the impact of human activity on the environment.
- This station supports China's growing role in Antarctic research, aligning with its broader goals as a 'polar power.'

Research stations in Antarctica

- Currently, there are 70 permanent research stations scattered across Antarctica, representing 29 countries from every continent, according to media reports.
- **India has two active research stations** - **Maitri** and **Bharti** - in Antarctica. The first research station, **Dakshin Gangotri**, set up in 1983, had to be abandoned after it sank in the snow.
- The US has six stations while Australia has three.
- **China signed the Antarctic Treaty in 1983**. The treaty designates the continent as a natural reserve and prohibits commercial resource extraction.

India's Research station in Arctic: Himadri is India's first permanent Arctic research station located at Spitsbergen, Svalbard, Norway.

OTHER ENVIRONMENT NEWS

- **Typhoon Kong-rey** made landfall in **Taiwan**.
- Super **Typhoon Man-yi**, locally known as **Pepito**, has made a second landfall on the Philippines' main island of Luzon, bringing severe winds, torrential rains, and life-threatening storm surges.
- **Tropical Storm Sara** made landfall in northern **Honduras**, bringing heavy rain and the threat of life-threatening flooding to parts of Central America and southern Mexico.
- The **10th International Forest Fair**, held in **Bhopal**, Madhya Pradesh.

- **Mhadei wildlife sanctuary** is located near the Chorla Ghat in Goa. The Mhadei River flows through this sanctuary.
- A group of elephants in **Madhya Pradesh's Bandhavgarh Tiger Reserve (BTR)** reportedly died from suspected **kodo millet poisoning**.
- India has the largest number of wild Asian Elephants, estimated at 29,964 according to the 2017 census by Project Elephant. **Karnataka has the highest number of elephants**, followed by Assam and Kerala.
- Recently, **Mount Lewotobi Laki-Laki volcano**, located on the **Indonesian island of Flores**, erupted.
- **Mount Semeru volcano**, located in East Java, Indonesia, erupted recently.
- Recently, the **Titan Arum flower**, one of the world's largest flowers, bloomed in Australia. It grows over 10 feet tall and blooms once a decade.
- **Salt chimney**: These are vertical mineral structures formed by saline groundwater rising through the **Dead Sea**, crystallising salt upon contact. These chimneys are created by the upward flow of hypersaline brine from aquifers, which crystallizes upon contact with the Dead Sea's water.
- **Jim Corbett National Park**, located in Nainital district, Uttarakhand, is part of the Corbett Tiger Reserve. It was established in **1936** as Hailey National Park to protect the Bengal tiger, it is the **oldest national park in India** and the first area under the Project Tiger initiative in 1973.
- Recent research has revealed that **minke whales** can detect high-frequency sounds up to 90 kilohertz (kHz), a significant finding that enhances our understanding of these marine mammals.
- Recently, **Karnataka's king cobra species**, known locally as '**Kaalinga Sarpa**,' is officially named **Ophiophagus Kaalinga** in the scientific community. King cobras are diurnal (active during the day), feeding primarily on snakes like rat snakes, dhamans, and other cobras. The king cobra is the only snake that builds and guards a nest until the eggs hatch. Its venom is used in developing pain relievers like Cobroxin and Nyloxin.
- Recently, the government has imposed restrictions on the annual jatara (last Monday of Kartika month) of Beladakuppe Sri Mahadeshwaraswamy Temple which is in the core area of **Bandipur Tiger Reserve (BTR)**, located in **Karnataka**.
- **Leucism**: Recently, a rare leucistic peacock with white feathers was rescued in Coimbatore. The peacock's white feathers are due to leucism, a genetic condition that prevents melanin and other pigments from being deposited on feathers at normal levels which has resulted in dark eyes, pink bill, and feet of peacock. White Peacock is not a different species of peacock.
- **Laysan albatross** is a large, abundant seabird whose breeding range is centered in *Hawaii*. Like all albatrosses, they are accomplished fliers using dynamic soaring to cover great distances. They mainly feed at night and often far from breeding colonies. Snowy Albatross or Wandering Albatross (*Diomedea exulans*) is the largest flying seabird in terms of wingspan.
- **Wisdom**, the world's oldest known wild bird, a Laysan albatross, has once again made history by laying her first egg in four years at the age of 74.
- A magnitude 5.3 earthquake struck the **Eturnagaram forest area in Telangana**, originating from a depth of 40 km. This quake was associated with the historically seismic **Godavari fault system**.
- Recently, a study reveals that **California's San Joaquin Valley** has been **sinking** at a record pace due to overpumping groundwater, with some areas experiencing declines of over one foot per year since 2006.
- The National Board for Wildlife (NBWL) delayed a proposal from a company's subsidiary for oil exploration in the **Hollongapar Gibbon Sanctuary in Assam**, which is home to the **endangered hoolock gibbons (India's only ape species)**.
- Recently, the Odisha government **translocated a tigress** named Jamuna from **Tadoba Andhari Tiger Reserve in Maharashtra** to the **Similipal Tiger Reserve (STR) in Odisha**. Translocation was aimed at enhancing genetic diversity in Similipal, where there are concerns about inbreeding due to a small population.
- The Geological Survey of India wants **Dinosaur Fossil Park and Museum in Raiyoli village in Gujarat** to get a UNESCO Global Geoparks tag. In the early 1980s, geologists discovered large dinosaur bones and fossilised eggs here. It is one of the largest dinosaur egg hatcheries in the world, **ranking third globally** after Aix-en-Provence (France) and the Mongolian Gobi Desert.
- **Global plastic treaty** talks failed to reach a consensus at the 5th meeting of the United Nations(UN) Intergovernmental Negotiating Committee (INC-5) in **Busan, South Korea**. The delegations agreed that another session would be scheduled in 2025, tentatively being calling "INC 5.2," to finalize the treaty.
- At the **UNCCD COP16 in Riyadh**, the UN Convention to Combat Desertification (UNCCD) and the European Commission's Joint Research Centre launched the **World Drought Atlas** – a comprehensive global publication on drought risks and solutions.
- The **Ninetyeast Ridge**, a 5,000 km-long underwater mountain chain in the Indian Ocean, was formed by the Kerguelen hotspot(volcanic hotspot located at the Kerguelen Plateau in the Southern Indian Ocean).

- **Lake-effect snow** is a localized weather phenomenon characterized by heavy snowfall that occurs near large bodies of water, such as the Great Lakes in North America. It typically happens during colder months when cold air passes over relatively warmer lake surfaces, resulting in intense and narrow bands of snowfall.
- The Great Lakes, consisting of Superior, Michigan, Huron, Erie, and Ontario (from west to east), are among the most significant freshwater ecosystems in the world.
- Recently, California and Washington have approved **bans on octopus farming**. Hawaii is considering similar action against raising octopus, a member of Cephalopods, demand for food. Cephalopods are a class of ocean-dwelling intelligent invertebrates that includes cuttlefish, squid and octopus. Cephalopods are a broad class of molluscs. Their blood is blue due to copper-based **hemocyanin**, which is less efficient than iron based hemoglobin but highly effective in cold, low-oxygen environments.
- In a groundbreaking discovery, scientists have identified a **new fire-resilient species of Dicliptera** in the Northern Western Ghats of India, named **Dicliptera polymorpha**.
- The **National Mission for Clean Ganga (NMCG)** has launched a "**Dolphin Ambulance**" to rescue and rehabilitate injured Ganga Dolphins. This initiative, officially named "Advancing Rescue System for the Protection of Stranded Ganges River Dolphins," aims to provide timely care for stranded dolphins and raise public awareness about their conservation.
- India has achieved a significant milestone in wildlife conservation with the **first-ever satellite tagging of a Ganges River Dolphin** (Platanista gangetica), conducted in Assam.
- Botanists from the Botanical Survey of India, led by scientist L. Rasingam, have discovered a new flowering plant species, **Crinum andhricum**, in the Eastern Ghats of Andhra Pradesh.
- **India's tiger population** has grown remarkably, reaching 3,682 in 2022 from 1,411 in 2006, doubling in just over 15 years. The rise reflects a significant annual increase of 6% in consistently monitored areas, with numbers rising from 2,967 in 2018.
- The **Gympie-Gympie**, scientifically known as Dendrocnide moroides, is notorious as the **most toxic plant** in the world, primarily found in rainforests of Australia, Indonesia, and the Moluccas.

AWARDS AND HONOURS

Nobel Prize 2024

- It is an international award administered by the Nobel Foundation in Stockholm, Sweden, and based on the last will of Alfred Nobel (in 1895).
- Instituted in 1901, initially awarded in five categories (Physics, Chemistry, Physiology or Medicine, Literature, and Peace) to people for the greatest benefit to humankind in preceding year.
- Note: In 1968, Sveriges Riksbank (Sweden's central bank) established the **Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel**.
- Now, Nobel Prize is annually awarded in 6 fields. These awards are presented annually by:
 - The **Royal Swedish Academy of Sciences** (Physics, Chemistry, Economics)
 - The **Nobel Assembly at the Karolinska Institute** (Medicine)
 - The **Swedish Academy** (Literature)
 - The **Norwegian Nobel Committee** (Peace)
- The prizes are awarded on **December 10**, the anniversary of Nobel's death, with ceremonies in Stockholm and Oslo. Each recipient, known as a laureate, receives a green gold medal plated with 24 karat gold, a diploma, and a monetary award. The current amount is at **SEK 11 million per full Nobel Prize**.
- A Nobel Prize can be awarded to up to **three laureates** who share the prize money.

Field	Nobel Prize Winners 2024	Awarded For
Physiology or Medicine	Victor Ambros (USA) and Gary Ruvkun (USA)	Discovery of microRNA and its pivotal role in post-transcriptional gene regulation.
Physics	John J. Hopfield (USA) and Geoffrey E. Hinton (British-Canadian)	Discoveries and inventions that enable machine learning within artificial neural networks .
Chemistry	David Baker (USA), and Demis Hassabis (British) and John Jumper (USA)	David Baker for computational protein design, and jointly to Demis Hassabis and John M. Jumper for protein structure prediction.
Literature	Han Kang (South Korean)	For her intense poetic prose that confronts historical traumas and exposes the fragility of human life.
Peace	Nihon Hidankyō (Japanese Organization)	For its efforts to achieve a world free of nuclear weapons.
Economic Sciences	Daron Acemoglu, Simon Johnson & James A. Robinson (USA)	For studies of how institutions are formed and affect prosperity.

2024 Booker Prize

- The 2024 Booker Prize was awarded to **British author Samantha Harvey** for her novel **Orbital**.
- **Orbital** is the **first space book to win the Booker Prize**. It explores Earth through the experiences of six astronauts aboard the International Space Station (ISS), witnessing 16 sunrises and sunsets daily.
- It is the **second-shortest novel** in Booker Prize history, with the shortest being *Offshore* by Penelope Fitzgerald (132 pages). Harvey is the first woman to win the Booker Prize since Margaret Atwood in 2019.

About Booker Prize

- The Booker Prize is one of the most prestigious awards in literature. It was **established in 1969 in UK**.
- It is awarded annually to the best sustained work of **fiction**.
- Initially awarded to writers from Commonwealth nations. Now **open to writers worldwide**, regardless of origin.
- It honors the **best novel written in English** and **published in the United Kingdom or Ireland**.
- The **winner receives £50,000**, in addition to the **£2,500 granted to each of the six shortlisted authors**.
- Both the winner and the shortlisted authors gain worldwide recognition and can anticipate a significant boost in book sales.

34th Vyas Samman 2024

- Awarded to: **Hindi writer Suryabala** for her novel ***Kaun Des Ko Vasi: Venu Ki Diary***. Published in 2018, the novel delves into cultural conflicts and identity struggles faced by Indian youth in America.
- Vyas Samman: Instituted in **1991** by the **KK Birla Foundation**, the Vyas Samman honors outstanding **Hindi literary works** from the past decade, offering a cash prize of **₹4 lakh**, a citation, and a plaque.

Ballon d'Or awards 2024

- Best male footballer: **Rodri** from Spain (also play for club- Manchester City).
 - Rodri becomes the first Spanish player since 1960 to win Ballon d'Or.
- Best female footballer: **Aitana Bonmatí** from Spain (also play for club- FC Barcelona)
 - Aitana Bonmatí had also won it in 2023.
- Lionel Messi (Argentina) holds the record for the most Ballon d'Or awards, having won it eight times.
- Cristiano Ronaldo (Portugal) has won the prestigious best footballer award five times.

Other Awards:

- Men's Club of the Year: Real Madrid.
- Women's Club of the Year: FC Barcelona.
- The Ballon d'Or is an annual football award presented by magazine France Football since 1956 to honour the best-performing player of the previous season.

Narendra Modi got 2nd-highest national award of Nigeria

- Recently, Nigeria conferred its 2nd-highest national award, the **Grand Commander of the Order of the Niger (GCON)**, on India's Prime Minister Narendra Modi.
- India's Prime Minister became the 2nd foreign dignitary to receive the distinction after **Queen Elizabeth**, who was conferred the award in 1969.
- **Nigeria** is often called the "Giant of Africa" and is the most populous country in Africa. It is the largest economy and the richest oil resource center of the African continent. It is located in West Africa and opens in the Atlantic Ocean. It is bordered by Niger, Chad, Cameroon, and Benin.
- Note: Prime Minister Narendra Modi presented Nigerian President Bola Ahmed Tinubu with a **Silofar Panchamrit Kalash**, a stunning example of Kolhapur's traditional metal craftsmanship, during his visit to Nigeria. The kalash, made of high-quality silver, features intricate engravings typical of Kolhapur's renowned metalwork, with designs that include floral motifs, deities, and traditional patterns.

Turner Prize 2024

- Winner: Indian origin artist **Jasleen Kaur** for her exhibition **"Alter Altar"** that pays tribute to her family history of migration to Scotland.
- The only other Indian origin artist to have won the prize was sculptor Anish Kapoor in 1991.
- Alter Altar featured everyday objects like a doily covered car and family photos, blending cultural symbols to explore the Sikh concept of Miri Piri (political-spiritual balance), offering new perspectives on coexistence through art.
- About Turner Prize: The prize is named after **English painter JMW Turner**, known for his expressive colouring, imaginative landscapes and dramatic depiction of lights. The prize was first awarded in **1984** and founded by a group called the Patrons of New Art. It is awarded to a British artist working globally or to an

immigrant working in Britain. It is given based on the recommendation of a jury, selected every year by UK's Tate Gallery. A prize of **25,000 Pounds is given to the winner** while the shortlisted artists get 10,000 Pounds.

Order of Mubarak Al Kabeer

- Indian **PM Narendra** Modi was awarded the 'Order of Mubarak Al Kabeer,' the **highest honor of Kuwait**, in recognition of his contributions to strengthening India-Kuwait bilateral ties.
- Order of Mubarak Al Kabeer is conferred on Heads of State, sovereigns of foreign countries, and members of royal families.
- Instituted in 1974, the award honors Mubarak Al Sabah, also known as Mubarak Al-Kabeer, who ruled Kuwait from 1896 to 1915. Mubarak Al Sabah played a pivotal role in shaping Kuwait's future, securing greater autonomy from the Ottoman Empire.
- Previous recipients of the Order of Mubarak Al-Kabeer include notable figures such as Queen Elizabeth II, former US Presidents George HW Bush and Bill Clinton, King Salman of Saudi Arabia, and former French President Nicolas Sarkozy.

Dominica Award of Honour to PM Modi

- Sylvanie Burton, President of the Commonwealth of Dominica conferred the highest National Award- "Dominica Award of Honour" on Prime Minister Shri Narendra Modi, for his statesmanship, support to Dominica during the Covid 19 pandemic and his commitment to strengthening India and Dominica ties.

Guyana's highest civilian honour to PM Modi

- Prime Minister Narendra Modi was conferred with Guyana's highest civilian honour, '**The Order of Excellence**', by President Mohamed Irfaan Ali.

Denmark's first Miss Universe

- The 73rd Miss Universe pageant held in **Mexico** marked a historic milestone for Denmark as **Victoria Kjaer Theilvig** was crowned the Denmark's first-ever Miss Universe.

Indira Gandhi Prize for Peace, Disarmament, and Development 2023

- The Prize was awarded to Daniel Barenboim and Ali Abu Awwad
- **Daniel Barenboim** is an Argentine-Israeli music conductor, who received the prize for his efforts to promote peace through musical and cultural dialogue initiatives.
- **Ali Abu Awwad**, a Palestinian peace activist received the award for his advocacy for dialogue through Roots, an organization he founded after serving time in an Israeli jail.

About Indira Gandhi Peace Prize

- The Indira Gandhi Peace Prize, also called the Indira Gandhi Prize for Peace, Disarmament, and Development, is a prestigious award presented by the **Indira Gandhi Memorial Trust**.
- It was founded in 1986 in honor of Indira Gandhi, India's former Prime Minister.
- The prize includes a cash award of **Rs 2.5 million (25 lakh Rs)** and a citation.
- Individuals or organizations who have made outstanding contributions to the promotion of international peace, development, and a new international economic order are eligible for the prize. It also recognizes efforts to ensure that scientific discoveries are applied to the greater good of humanity and to expand the scope of freedom.
- The winners are selected from a list of national and international nominees.

Aster Guardians Global Nursing Award

- It is an international award that recognizes nurses who are deemed to have made exceptional contributions to the field of nursing, and the medical field in general.
- It is presented by **Aster DM Healthcare Limited**- a multinational private hospital network registered in Bengaluru, India. The award was founded in 2021 and it carries a purse of **2 Cr Rs**.
- **2024 award: Maria Victoria Juan from the Philippines** receives the Award. As the chief nurse of the Philippines army, she was responsible for initiating the first aeromedical evacuation system in the Armed Forces of Philippines (AFP), greatly improving survival rates by enabling rapid evacuation and early treatment of casualties, especially in conflict areas.

55th International Film Festival of India (IFFI) 2024

- Venue: Dr. Shyama Prasad Mukherjee Indoor Stadium, Goa.
- Theme 2024: "**Young Filmmakers: The Future is Now**"
- Country of Focus: **Australia**

- It showcased over 195 films.
- Satyajit Ray Lifetime Achievement Award: given to Veteran **Australian filmmaker Phillip Noyce**, renowned for his acclaimed works such as *Clear and Present Danger*, *Salt*, and *Rabbit-Proof Fence*.
- Other felicitations: Veteran Indian filmmaker **Ramesh Sippy** and celebrated actress **Jaya Prada** were felicitated for their remarkable contributions to Indian cinema.

Golden Peacock Award: Best Film

- The prestigious **Golden Peacock Award for Best Feature Film** was awarded to the **Lithuanian film “Toxic”**, directed by Saulė Bliuvaitė.

Silver Peacock Awards

- Best Director: Bogdan Muresanu for *The New Year That Never Came* (Romania).
- Best Actor (Male): Clément Faveau for *Holy Cow* (France).
- Best Actor (Female): Jointly awarded to Vesta Matulytė and Ieva Rupeikaitė for *Toxic* (Lithuania).

Special Jury Award

- French filmmaker Louise Courvoisier received the Special Jury Award for her film *Holy Cow*.
 - ICFT-UNESCO Gandhi Medal
- The Georgian film “*Crossing*” by Levan Akin was honored for promoting peace and non-violence.
 - Best Debut Film
- The award for Best Debut Feature Film was won by Sarah Friedland for *Familiar Touch* (USA).

Honouring Indian Talent

- The newly introduced award for **Best Debut Director of Indian Feature Film** went to **Navjot Bandiwadkar** for the Marathi film *Gharat Ganpati*.
- The **Best Web Series (OTT) award** was presented to the **Marathi series “Lampan”**, directed by Nipun Dharmadhikari.
- Actor **Vikrant Massey** was honored with the **Indian Film Personality of the Year Award** for his exceptional contributions to Indian cinema.

OTHER AWARDS

- **Anil Pradhan** has been awarded the prestigious **Rohini Nayyar Prize for 2024**, recognizing his impactful contributions to rural development in India.
- The **FIH Hockey Star Awards 2024** ceremony, which took place on November 8, 2024, in **Muscat, Oman**, celebrated the top performers in international hockey. Indian hockey team captain **Harmanpreet Singh** was named the **Men’s Player of the Year**, while legendary goalkeeper **PR Sreejesh** was awarded the **Men’s Goalkeeper of the Year**.
- The Indian women’s junior hockey team successfully defended their **Women’s Junior Asia Cup** title by defeating China 3-2 in the final held in Muscat, Oman.
- Coal India Limited (CIL), under the aegis of the Ministry of Coal, has achieved a remarkable milestone by receiving the prestigious **Green World Environment Award 2024** in the Corporate Social Responsibility (CSR) category. Alongside this accolade, CIL was also honoured with the title of Green World Ambassador, reflecting its commitment to sustainability and social welfare.
- **General Upendra Dwivedi**, the Chief of Army Staff (COAS) of the Indian Army, was recently conferred with the **title of Honorary General of the Nepal Army** by the President of Nepal, Ramchandra Paudel.
- Prime Minister **Narendra Modi** was honored in absentia with the ‘**Dr. Martin Luther King Jr. Global Peace Award for Minority Upliftment**’, recognizing his efforts in inclusive development and minority welfare.
- **Ang Lee**, the celebrated Taiwanese American filmmaker, has been named the recipient of the Directors Guild of America (DGA) 2025 Lifetime Achievement Award.
- The Indian film “**The Kumbaya Story**” has achieved international recognition by winning the Transforming Society Short Film category at the 13th tve Global Sustainability Film Awards (GSFA).
- **Kiran Mazumdar-Shaw**, Chairperson of Biocon Group, was awarded the prestigious **Jamsetji Tata Award** by the Indian Society for Quality (ISQ) for her exceptional contributions to the biosciences sector in India.
- **Caitlin Sandra Neil**, a 19-year-old Indian-American teenager born in Chennai, India, has been crowned Miss India USA 2024.
- President Droupadi Murmu presented the **Pradhan Mantri Rashtriya Bal Puraskar 2024** on December 26, 2024, to 17 exceptional children from across India. These awards honor remarkable achievements in seven categories: *art and culture, bravery, innovation, science and technology, social service, sports, and environment*.

BOOKS and Authors

Book	Author
Friends – India’s Closest Strategic Partners	Prof. Sreeram Chaulia
Speaking with Nature: The Origins of Indian Environmentalism	Ramachandra Guha
‘Maa-Mother’	Dr. Davendra Kumar Dhodawat
My Beloved Life	Amitava Kumar
Dalai Lama’s Secret to Happiness	Dr. Dinesh Shahra
‘BRING IT ON: The Incredible Story of My Life’, (a memoir)	Dr. Deepa Malik (India’s most celebrated para-athlete)

OBITUARY / DEATHS

Dr. Manmohan Singh	He was born on 26th September 1932 in Gah, Punjab (now in Pakistan). He also served as RBI Governor (1982–1985). In 1991, then Prime Minister P.V. Narasimha Rao, along with Finance Minister Dr. Manmohan Singh, initiated the LPG reforms (Liberalization, Privatization, and Globalization) (also known as Rao-Manmohan Model). Served as India’s 14th PM (2004-14) and was key architect of the 1991 economic reforms. He was the fourth longest-serving PM after Jawaharlal Nehru, Indira Gandhi and Narendra Modi.
Zakir Hussain	He was legendary tabla maestro who won four Grammy Awards , including three at the 66 th Grammy Awards in 2024. He also received Padma Shri (1988), Padma Bhushan (2002), and Padma Vibhushan (2023). He died of Idiopathic Pulmonary Fibrosis (IPF) - a chronic lung disease which causes the air sacs in the lungs to become scarred and fibrous, disrupting their ability to exchange oxygen efficiently. The tissues around alveoli in the lungs become thick and stiff.
Bibek Debroy	He was a prominent economist and chairman of the Prime Minister’s Economic Advisory Council (EAC-PM).
Jimmy Carter	39th President of the United States , who had gained respect for his global peace efforts, winning the Nobel Peace Prize in 2002 .
Sharda Sinha	Legendary folk singer, known fondly as the “Bihar Kokila” (Nightingale of Bihar).
Harinder Singh Sodhi	Celebrated Polo player of India, fondly known as ‘ Billy ’.
Pandit Ram Narayan	renowned Hindustani musician and Legendary sarangi player . He was a recipient of the prestigious Padma Vibhushan and Sangeet Natak Akademi Award.
Varadarao Kamalakara Rao	legendary artist and scholar in Mridangam (an ancient percussion instrument originating from the Indian subcontinent) He dedicated his life to Indian classical music especially Carnatic music.
Brigadier Raj Manchanda	He was an Indian squash player . He won six straight National Squash Championships from 1977 to 1982.
Professor Amiya Kumar Bagchi	, a prominent economic historian and macroeconomist.
Justice Harjit Singh Bedi	former Supreme Court judge and ex-Chief Justice of the Bombay High Court.
Madan Mohan Somtiya	a dedicated freedom fighter and prominent member of the Mewar Praja Mandal.
Breyten Breytenbach	a South African-born poet, memoirist, writer and former political prisoner.
John Tinniswood	world’s oldest man (112 years) from UK.
Neale Fraser	one of Australia’s most celebrated tennis players. His contributions as a player and as a Davis Cup captain marked a golden era for Australian tennis. Fraser won a total of 19 Grand Slam titles and led Australia to eight Davis Cup victories.
SM Krishna	He had held several crucial positions, including those of Chief Minister of Karnataka, Union Minister for External Affairs, and Governor of Maharashtra. Known for his significant contributions to the growth of Bengaluru, Krishna was often hailed as the “ architect of Brand Bengaluru .” Over a career spanning nearly six decades, Krishna.
Tulsi Gowda	an <u>environmentalist from Karnataka</u> celebrated for her exceptional dedication to afforestation and ecological preservation. She was affectionately known as the “ Tree Goddess .”
Om Prakash Chautala	veteran politician and former Chief Minister of Haryana.

SPORTS

Syed Modi India International Super 300 tournament (badminton)

- Venue: Lucknow
- Winner (women): **PV Sindhu** beat China's Luo Yu Wu (Sindhu joins compatriot Saina Nehwal as a three-time winner).
- Winner (Men): **Lakshya Sen** won his maiden title after defeating Singapore's Jia Heng Jason Teh.
- Note: **Treesa Jolly and Gaytri Gopichand**, becoming the first ever Indian women's pair to win the title here since its inception in 2009.

FIFA men 2030 and 2034

- FIFA has officially announced the hosts for the '2030' & '2034' Men's Football World Cups.
- **Spain, Portugal, and Morocco will jointly host the 2030 tournament**, with additional matches in Argentina, Paraguay, and Uruguay to commemorate the centenary of the competition.
- **Saudi Arabia has been chosen to host the 2034 tournament**.

Syed Mushtaq Ali Trophy (SMAT) 2024 (cricket)

- **Mumbai** defeated Madhya Pradesh by five wickets and claim the Syed Mushtaq Ali Trophy (SMAT) 2024.
- This win marks Mumbai's second SMAT title, their first being in 2022.

OTHER SPORTS NEWS

- Olympic wrestler **Bajrang Punia** **suspended for four years by NADA** for refusing doping test.
- **Kaamya Karthikeyan**, a 17-year-old student from Navy Children School in Mumbai, has etched her name in history by becoming the **youngest female in the world to conquer the Seven Summits**. This remarkable achievement includes scaling the highest peaks across all seven continents.
- The **Indian Olympic Association (IOA)** submitted a formal Letter of Intent to the International Olympic Committee (IOC), expressing the nation's **desire to host the 2036 Olympic Games**. Only three Asian countries have ever hosted the Olympics- **China, South Korea and Japan**, with Japan hosting the games twice in 1964 and 2020.
- Ravindra Jadeja surpassed Ishant Sharma and became the fifth-highest wicket-taker for India in Test cricket.
 - First four are: Anil Kumble, Ravichandran Ashwin, Kapil Dev.
- Indian wicketkeeper-batter **Wriddhiman Saha** has officially announced his **retirement** from all formats of cricket.
- Indian professional boxer **Mandeep Jangra** claimed the World Boxing Federation's super featherweight world title after defeating Britain's Conor McIntosh in an intense match in the Cayman Islands.
- **Max Verstappen** won Brazil Grand Prix Formula 1.
- **4th LG Cup Horse Polo-2024** Tournament was held at newly constructed Polo Stadium at **Goshan, Drass**.
- Olympic medallist, PV Sindhu, laid the foundation stone for the **PV Sindhu Centre for Badminton and Sports Excellence** in **Chinna Gadili village** on the outskirts of **Visakhapatnam**.
- **Pankaj Advani**, the veteran Indian cueist (billiardist), has once again showcased his mastery in the sport by securing his **28th world title**.
- **Tim Southee**, New Zealand's all-time leading wicket-taker, has announced his decision to retire from international cricket.
- **Prajesh Gunneswaran**, the Indian tennis star who won a bronze medal in singles at the 2018 Jakarta Asian Games, announced his retirement from professional tennis.
- The **Dubai Sports Council** has appointed four global sports icons as its **Sports Ambassadors**, including former Indian cricketer **Harbhajan Singh** and renowned tennis player **Sania Mirza**.
- **Odisha** emerged victorious in 14th Hockey India Senior National Championship, defeating two-time champion Haryana 5-1 in the final held at the SDAT-Mayor Radhakrishnan Stadium, Chennai.
- **Magnus Carlsen**, the World No. 1 chess player from Norway, won the Tata Steel Chess India tournament, held in Kolkata.
- **India's Women's Hockey Team** successfully defended their title at the **Women's Asian Champions Trophy**, defeating China 1-0 in the final.
- Double Olympic champion **Alistair Brownlee**, a key figure in the rise of British triathlon, announced his retirement from the sport.
- **Italy** claimed its **fifth Billie Jean King Cup title** by defeating Slovakia 2-0 in the final held in Malaga, Spain. This cup is the premier international team competition in women's tennis.

- In a remarkable feat for Indian wrestling, **Reetika Hooda** clinched the gold medal in the women's 76kg category at the World Military Championships, becoming the second Indian woman to win gold at the event.
- **Anders Antonsen** became the first Danish player to win the men's singles title at the China Masters (badminton).
- **IPL 2025 season** auctions were held in **Jeddah, Saudi Arabia** with the auction purse for each franchise set at ₹120 crore (US\$14 million), highest in the history of IPL. **Rishabh Pant** became the most expensive player ever, joining Lucknow Super Giants for Rs 27 crore. Shreyas Iyer was signed by Punjab Kings for Rs 26.75 crore.
- **Emma McKeon**, a legendary swimmer from Australia, announced her retirement. She leaves an unparalleled legacy as Australia's most decorated Olympian, with 14 medals, including six golds, earned across three Summer Olympics. Her historic **seven-medal performance at Tokyo 2020** solidified her status as one of the greatest Olympians of all time.
- **Siddarth Kaul**, a 34-year-old fast bowler, announced his retirement from **Indian cricket**, marking the end of a 17-year-long career. He represented India in six international matches (three ODIs and three T20Is).
- **India's Pavan Kampelli** has made history by securing a **bronze** medal in **eFootball** at the 2024 Asian Esports Games held in Bangkok.
- **Arjun Erigaisi** (from Telangana) has become the second Indian, after Viswanathan Anand, and the 16th worldwide to reach the **prestigious ELO rating of 2800**. The 21-year-old Grandmaster, who also won gold at the Chess Olympiad, now ranks fourth in the world.
- In a thrilling showdown in Muscat, the **Indian men's junior hockey team defeated Pakistan** to secure their **fifth Junior Asia Cup title** and their third consecutive championship on December 4, 2024.
- **Bangladesh U-19** successfully defended their **Asia Cup title (cricket)** with an impressive 59-run victory over India in the final.
- Nine-year-old **Aarit Kapil**, a budding chess prodigy from Delhi, made history by becoming the youngest Indian to defeat a chess Grandmaster (Raset Ziatdinov, a 66-year-old Grandmaster from the United States).
- Indian driver **Kush Maini** made history by becoming the **first Indian to win the FIA FORMULA 2 Constructors' World Championship**, a monumental achievement in the world of motorsport.
- In **20th Asian Women's Handball Championship**, **Japan** clinching their second-ever championship title by defeating South Korea 25-24 in a thrilling final.
- Pakistan's star all-rounder **Imad Wasim** announced his retirement from international cricket.
- **Jasprit Bumrah** surpassed Kapil Dev and becomes India's highest (52) wicket-taker in Test cricket on Australian soil.
- **Jasprit Bumrah** achieved a remarkable milestone, becoming the fastest Indian bowler to reach 200 wickets in Test cricket during the Border-Gavaskar Trophy at the MCG in Melbourne.
- **Ravichandran Ashwin**, one of India's premier spinners, has announced his **retirement** from international cricket at the end of the third Border-Gavaskar Trophy Test in Brisbane on December 18, 2024.
- **Nat Sciver-Brunt** of England smashed the **fastest Test century by a woman in women's Test cricket**, scoring her century off just 96 balls.
- The **Indian men's hockey team** has clinched the **fifth** spot in the latest **FIH world rankings**, following a stellar performance at the 2024 Paris Olympics, where they secured back-to-back Olympic medals for the first time since 1972.
- India's wicketkeeper-batter **Richa Ghosh** etched her name in history by smashing the **joint-fastest fifty in women's T20Is**.
- Punjab's top order batter, **Anmolpreet Singh**, scripted a history by scoring a **third fastest List A century in just 35 balls** during Vijay Hazare Trophy match against Arunachal Pradesh in Ahmedabad. This incredible feat places him behind only Jake Fraser McGurk (29 Balls) and AB de villiers (31 Balls) in all time records for List A centuries.
- **India** clinched the inaugural **U10 Women's Asia cup T20 title** by defeating Bangladesh by 41 runs in the final held at the Bayuemas Oval, Kuala Lumpur.
- India has been announced as the host of the International Shooting Sport Federation (ISSF) Junior World Cup Rifle/Pistol/Shotgun 2025.
- Russian Tennis Player, **Daniil Savelev** has been handed a two-year **suspension** for violating doping regulations.
- India's badminton star, **Lakshya Sen**, showcased his talent with an impressive third-place finish at the inaugural King Cup International Badminton Open held in Bangkok, Thailand.
- **Koneru Humpy**, the pioneering force in Indian women's chess, scripted another chapter of glory by winning her second Women's World Rapid Chess Championship title in New York at the age of 37.

- **Hemanth Muddappa**, known as the “**Drag King**” in Indian motorsport, achieved an extraordinary feat by winning a triple crown in the final round of the MMSC FMSCI Indian National Motorcycle Drag Racing Championship at the Madras International Circuit (MIC).
- **Kerala** achieved a historic milestone by winning their first-ever Senior National Men’s Handball Championship title. Kerala defeated Chandigarh in the final.
- On 29th December, 2024 the **Haryana Steelers** achieved a historic milestone by clinching their **first-ever Pro Kabaddi League (PKL)** title. The Steelers defeated the Patna Pirates in a thrilling final at the Shree Shiv Chhatrapati Sports Complex in Pune, with a commanding 32-23 victory.

IMPORTANT DAYS

29 October: Ayurveda Day

6 November: International Day for the Prevention of Exploitation of the Environment in War and Armed Conflict.

7 November: National Cancer Awareness Day

- This day dedicated to increasing awareness about cancer prevention, early detection, and treatment.
- The day also pays homage to the renowned **Polish-French scientist Marie Curie**, whose work in discovering radioactive elements laid the foundation for **radiation therapy**, a critical tool in modern cancer treatment.

8 November: World Radiology Day,

- This day honours the contributions of **Wilhelm Conrad Röntgen**, the German physicist who discovered **X-rays** in 1895. This monumental discovery has since revolutionized medical diagnosis and treatment by providing non-invasive ways to see inside the human body.

The International Week of Science and Peace (IWOSP)

- It is celebrated annually from **November 9 to 15** promoting the role of science and technology in fostering global peace and cooperation.

10 November: World Immunisation Day

India’s initiatives

- **Universal Immunization Programme (UIP):** Initially launched as the Expanded Programme on Immunization in 1978, it was rebranded as the UIP in 1985 when coverage expanded from urban to rural areas.
- **Mission Indradhanush (MI):** MI was launched in December 2014 with a goal of achieving 90% full immunisation coverage.
- **U-WIN Portal:** It is a digital platform designed to streamline vaccine delivery and record keeping, enabling easy access and management of immunisation records. It allows for ‘Anytime Access’ and ‘Anywhere’ vaccination, offering flexible scheduling options for recipients. It also generates a universal QR-based eVaccination Certificate and provides the option to create an Ayushman Bharat Health Account (ABHA) ID.

11 November: the National Education Day (NED)

- The Government of India first declared NED in 2008 to honour Azad’s birth anniversary (11th November 1888).
- Maulana Abul Kalam served as India’s first Education Minister. He played a pivotal role in establishing the University Grants Commission (UGC) and All India Council for Technical Education (AICTE).
- He also founded the Council of Scientific and Industrial Research (CSIR), Sahitya Academy, Lalit Kala Academy, Sangeet Natak Academy, Indian Council for Cultural Relations (ICCR), IIT Kharagpur

14 November: World Diabetes Day

- 2024 theme, “**Breaking Barriers, Bridging Gaps**”.

15 November: Janjatiya Gaurav Diwas

- Celebrated since 2021, this day marks the **birth anniversary of Birsa Munda**, a revered tribal leader and freedom fighter.
- The Prime Minister of India released a commemorative coin and postal stamp in honour of Birsa Munda, paying tribute to his enduring legacy.
- A commemorative postage stamp on “**Sickle Cell Eradication - 2047**” was unveiled in Madhya Pradesh. The initiative aligns with India’s broader commitment to eradicating sickle cell anemia, a hereditary blood disorder, by 2047, particularly focusing on tribal communities, which are disproportionately affected.

16 November: National Press Day

- This day is observed every year to commemorate the establishment of the Press Council of India (PCI) in 1966.

19 November: World Toilet Day

- 2024 Theme: ‘*Toilets-A Place for Peace*’ which emphasizes that billions of people face heightened threats to sanitation due to conflict, climate change, natural disasters, and systemic neglect.
- Observed annually since 2013, this day is a United Nations initiative raising awareness about the global sanitation crisis and promoting safe, accessible toilets as part of Sustainable Development Goal 6: Ensuring water and sanitation for all by 2030.

India’s scenario

- Swachh Bharat Mission (SBM) (Grameen): 75% of villages in India achieved Open Defecation Free (ODF) Plus(+) status under Phase II of the SBM Grameen.
- SBM-Urban: 63.63 lakh household latrines and 6.36 lakh community toilets were constructed under SBM-Urban.

19 November: National Integration Day

- This day is observed to mark the birth anniversary of the first woman Prime Minister of India, Indira Gandhi.
- The day aims to motivate people about keeping unity, peace, love, and brotherhood among them.

20 November: World Children’s Day

- Theme 2024: “*Listen to the Future*”

25 November: International Day for the Elimination of Violence against Women.**26 November: Constitution day (earlier, National Law Day)**

- On 26th November 1949, the Constituent Assembly of India adopted the Constitution of India, which came into effect on 26th January 1950.
- The Ministry of Social Justice and Empowerment on 19th November, 2015, notified the decision of the Government of India to celebrate 26 November as 'Constitution Day'.
- On 26th November 2024, marking Samvidhan Diwas and the 75th anniversary of the adoption of the Indian Constitution, President Droupadi Murmu unveiled the **Sanskrit and Maithili translations** of the Indian Constitution in New Delhi.

26 November: National Milk Day

- This day marks the birth anniversary of **Dr. Verghese Kurien**, also known as the Father of the White Revolution in India, whose initiatives helped transform India into the largest milk producer in the world.

29 November: International Day of Solidarity with the Palestinian People

- The day was established by the United Nations General Assembly (UNGA) in 1977 to highlight the inalienable rights of the Palestinian people and promote support for achieving peace in the region.

1 December: World AIDS Day

- 2024 Theme: “*Take the rights path: My health, my right!*”.
- AIDS stands for Acquired Immune Deficiency Syndrome.
- Causative virus of AIDS: **HIV (Human Immunodeficiency Virus)**, which attacks the immune system, targeting CD4 cells (white blood cells, vital for the immune system).
- Transmission: HIV It spreads through unprotected sex, infected blood, and sharing needles.
- Cure: While there is no cure, **antiretroviral therapy (ART)** can suppress the virus and help restore CD4 cells.
- In India, over 2.5 million people live with HIV, with a 44% reduction in new infections since 2010.
- The Global AIDS Update 2023 highlights a decline in new infections, aiming to eliminate AIDS by 2030.

1 December, 2024: 60th raising day of Border Security Force (BSF)

- BSF was established in **1965** following the India-Pakistan war to enhance border security.
- BSF works under the administrative control of the Ministry of Home Affairs.
- The BSF, comprising approximately 2.6 lakh personnel, is deployed on the Indo-Pakistan International Border, Indo-Bangladesh International Border, Line of Control (LoC) along with the Indian Army and in Anti-Naxal Operations regions.

4 December: Indian Navy Day

- Theme 2024: **“Strength and Power through Innovation and Indigenization”**.
- This day honors the 1971 Indo-Pakistan War and **Operation Trident**, which highlighted the Indian Navy’s strategic success in attacking Pakistan’s Karachi port.

4 December: World Wildlife Conservation Day

- India, a megadiverse country with only 2.4% of the world’s land area, accounts for 7-8% of all recorded species, including 91,000 species of animals.
- India hosts 4 out of 34 globally recognized biodiversity hotspots, namely the *Himalayas, Indo-Burma, Western Ghats-Sri Lanka, and Sundaland*.

4 December: International Cheetah Day

- Celebrated since 2010, this day is dedicated to emphasizing global efforts to prevent the cheetah’s extinction and promote its conservation. American zoologist, **Dr. Laurie Marker**, founder of the Cheetah Conservation Fund in 1991, designated this day in honor of *Khayam*, a cheetah she raised.
- Namibia has the world’s largest population of cheetahs.

5 December: World Soil Day

- Theme 2024: **Caring for soils: measure, monitor, manage**.
- Adopted by the UN General Assembly in December 2013, the first World Soil Day was observed in 2014.
- 5th December marks the birth anniversary of the late King Bhumibol Adulyadej of Thailand, a key supporter of this initiative.
- In India, **Mitti Bachao** (Save the Soil) Movement started in Hoshangabad (Narmadapuram), Madhya Pradesh in 1977 against soil degradation caused by the Tawa Dam in Madhya Pradesh.

6 December: 69th Mahaparinirvan Diwas

- It was observed to commemorate the death anniversary of Bharat Ratna Dr. Bhimrao Ramji Ambedkar, the chief architect of the Indian Constitution and a stalwart for social justice.
- The term “Mahaparinirvan” stems from Buddhist philosophy, symbolizing liberation from the cycle of birth and death, marking the most sacred day in the Buddhist calendar.

7 December: Armed Forces Flag Day, India

- This day is dedicated to honouring the soldiers and veterans of India’s armed forces.
- The day recognizes not only the sacrifices of fallen soldiers but also the contributions of their families, especially the war-disabled soldiers and War Widows (**Veer Naris**).

7 December: International Civil Aviation Day (ICAD)

- First celebrated in 1994 to mark the 50th anniversary of the signing of the Chicago Convention.

10 December: Human Rights Day

- 2024 Theme: **“Our Rights, Our Future, Right Now”**.
- Human Rights Day was established in 1950 to commemorate the Universal Declaration of Human Rights (UDHR), adopted by the United Nations on 10th December, 1948, which outlined fundamental human rights for all.

11 December: International Mountain Day 2024

- Theme 2024: **Mountain solutions for a sustainable future – innovation, adaptation and youth**.

16 December: Vijay Diwas

- This year marks the 53rd anniversary of its victory in the **Bangladesh Liberation War, 1971** and the creation of Bangladesh.
- The 53rd Vijay Diwas celebrations at Fort William, Kolkata, saw a Bangladeshi delegation, including **Mukti Joddhas** (who were part of the guerrilla resistance force in East Pakistan), recount their memories of the 1971 Liberation War.

20 December: 61st Raising Day of the Sashastra Seema Bal (SSB)

- It was celebrated on December 20, 2024, at **Ranidanga, Siliguri, West Bengal**.

- SSB is a part of the Central Armed Police Forces (CAPF) and guards India's border with **Nepal** (1,751 km) and **Bhutan** (699 km). It was established as the Special Service Bureau in May 1963, in the aftermath of the Chinese aggression in 1962. It comes under the aegis of the Ministry of Home Affairs.
- SSB is the first central paramilitary force that included women in its ranks.
- SSB is one of the seven paramilitary forces in India (Others 6: Assam Rifles, Border Security Force, Central Industrial Security Force, Central Reserve Police Force, Indo Tibetan Border Police and National Security Guard).

21 December: World Meditation Day

- The UN General Assembly (UNGA) has unanimously adopted a resolution declaring December 21 as World Meditation Day, co-sponsored by India and supported by countries like Liechtenstein, Sri Lanka, Nepal, Mexico, and Andorra.
- This resolution emphasizes meditation's role in achieving comprehensive well-being, inner peace, and coping with modern challenges such as stress and anxiety.

23 December: National Farmers' Day (Kisan Diwas)

- This day is celebrated to honor farmers and commemorate the birth anniversary of **Sri Chaudhary Charan Singh**.
- Known as the 'Kisan Leader,' his birth anniversary is celebrated as 'Kisan Diwas' since 2001 for his contributions to Indian agriculture and rural development.
- He was an Indian politician and a freedom fighter who served as the **5th Prime Minister of India** (1979-80). He also served as Deputy Prime Minister (January July 1979) and Chief Minister of Uttar Pradesh twice.

24 December National Consumer Day in India.

- Theme 2024: "Virtual Hearings & Digital Access to Consumer Justice".
- This day commemorates the enactment of the Consumer Protection Act of 1986, a landmark legislation that redefined consumer rights in the country.

25 December: Good Governance Day

- Theme 2024: "India's Path to a Viksit Bharat: Empowering Citizens through Good Governance and Digitalisation."
- It was started in the year **2014** to honor the birth anniversary of former Prime Minister Atal Bihari Vajpayee.
- Note: The birth anniversary of Pt. Madan Mohan Malaviya is also observed on 25th December.

Initiatives were Launched on Good Governance Day 2024

- New iGOT Karmayogi Dashboard: It allows Ministry/ Department/Organization (MDO) leaders and state administrators to monitor the progress and effectiveness of their entities more efficiently.
- 1600th iGOT Karmayogi Course: It aims to create a learning ecosystem for government employees, promoting continuous development and lifelong learning.
- Viksit Panchayat Initiative: It aims to strengthen PRIs' ability to deliver quality services, ensure effective governance, and empower Panchayat leaders with essential skills.
- CPGRAMS Annual Report, 2024: It underscores the progress made in enhancing the effectiveness of public service delivery through a robust grievance redressal mechanism.

STATE'S NEWS

Himachal Pradesh

Durgesh Aranya Zoological Park

- Recently, Himachal Pradesh Chief Minister Sukhvinder Singh Sukhu announced that the Durgesh Aranya Zoological Park, located in the **Bankhandi area of Kangra's Dehra assembly** constituency, will be the **first zoo in India to receive certification from the Indian Green Building Council (IGBC)**. This certification will recognize the zoo's commitment to sustainable and eco-friendly infrastructure, setting a precedent for conservation efforts in the country.
- The Central Zoo Authority (CZA) has approved 34 enclosures within the park's Van Vaibhav Path and Biodiversity Court, which will house 73 animal species, including the Asiatic lion, hog deer, crocodile, monitor lizard, gharial, and various birds.
- The project aligns with the state government's focus on promoting eco-tourism and sustainable development, reinforcing **Kangra's status as the "Tourism Capital" of Himachal Pradesh**.

Indian Green Building Council:

- IGBC is India's Premier certification body, headquartered in **Hyderabad**. IGBC is the founding member of the World Green Building Council discussing global issues at COP and similar global platforms. IGBC was formed in 2001 as part of the Confederation of Indian Industry (CII).
- The IGBC rating systems are voluntary, consensus-based, market-driven programs. The rating systems are based on the **five elements** of nature.
- **Vision**: The vision of IGBC is to facilitate India's emergence as a global leader in green buildings and green-built environments by 2025. In a span of the last 2 decades, CII-IGBC through its multi-pronged approach could facilitate in bringing about a paradigm shift in the way buildings are conceived and designed across various forms of built environment.

Other states

- **Andhra Pradesh has reversed a 30-year-old two-child policy**, that prevented people with more than two children from participating in local elections. The government argued that the state was facing the challenges of a rapidly aging population and a declining fertility rate (less than 1.5), which could have serious long term economic (shortage of labour force) and social consequences.
- **Masali**, a village in Gujarat's Banaskantha district, has become **India's first 'solar village' located near the border**, marking a significant achievement in the country's renewable energy initiatives. Situated 40 kilometers from the Pakistan border, this milestone follows India's broader efforts to make border areas more energy-efficient and self-sustaining.
- **Dhudmaras**, a village in Kanger Valley National Park (KVNP) in Chhattisgarh's Bastar district, has been selected to participate in the Best Tourism Village Upgrade Programme (BTVUP) under the United Nations Tourism for Rural Development Programme (UNTRDP) by the **UN World Tourism Organisation (UNWTO)**. This recognition marks its potential as a hub for eco-tourism and sustainable development.
- **Madhya Pradesh** cabinet, chaired by Chief Minister Mohan Yadav, approved a **35 percent reservation for women in all state government recruitments**.
- **Madhya Pradesh** has earned global recognition as one of the Wall Street Journal's **"Go-To Global Destinations for 2025,"** showcasing its rich heritage, unique wildlife, and natural beauty. With iconic UNESCO World Heritage Sites like Khajuraho, Panna, and Bandhavgarh, as well as an array of vibrant cultural experiences, Madhya Pradesh is solidifying its position on the global tourism map.
- **Sultanganj** railway station in Bihar's Bhagalpur district is set to be renamed in honor of the revered Hindu shrine, **Ajgaibinath Dham**.
- **Delhi Metro** has introduced a **new bike taxi service**, available for booking through the official Delhi Metro app, DMRC Momentum (**Delhi Sarthi 2.0**).
- Arvind Kejriwal, unveiled the **Dr Ambedkar Samman Scholarship**, a scheme designed to fund Dalit students from Delhi who wish to pursue higher education in top foreign universities.
- **Delhi** Chief Minister Arvind Kejriwal has unveiled the **Mukhya Mantri Mahila Samman Yojana**, promising to increase financial assistance for eligible women from ₹1,000 to ₹2,100 per month post-elections.
- President Droupadi Murmu inaugurated the Swami Vivekananda Vidya Mandir school at Zanda Chowk in Silvassa.
- Uttarakhand CM Pushkar Singh Dhami inaugurated the **Jauljibi Mela 2024** in Pithoragarh, calling it an "invaluable heritage" of the state.
- **Uttarakhand** will become the **first Indian state to fully implement the Uniform Civil Code (UCC)** starting January 2025, fulfilling a key promise made by Chief Minister Pushkar Singh Dhami during the 2022 assembly elections.
- **Sarai Kale Khan Chowk in Delhi** has been renamed as **Birsa Munda Chowk** to commemorate the 150th birth anniversary of the tribal freedom fighter.
- The Assam government officially **renamed the Karimganj district to Sribhumi**, along with its headquarters town, Karimganj, which will now be called Sribhumi town.
- Uttar Pradesh government has declared the Maha Kumbh area in Prayagraj as a new district, named the **Maha Kumbh Mela district**, ahead of the grand religious event scheduled for January 2025.
- **West Bengal's tourism sector** has received international recognition with UNESCO declaring it a top destination for heritage tourism.
- In a landmark move, Uber has launched Asia's first water transport service, **Uber Shikara**, in the scenic Dal Lake in Srinagar, Jammu and Kashmir.
- **Bihar's alarming decline in its sex ratio at birth**, now at **882** females per 1,000 males, has prompted urgent government action.
- **Gujarat** Chief Minister Bhupendra Patel launched the **SWAR (Speech and Written Analysis Resource) platform**, aiming to enhance communication and accessibility for citizens by overcoming language barriers.

MISCELLANEOUS (in News)

<p>Time magazine has named Donald Trump as its Person of the Year for 2024, marking the second time he has received this prestigious recognition.</p>
<p>Elon Musk, the CEO of Tesla and SpaceX, has recently made history by becoming the first individual to surpass a net worth of \$400 billion, according to the Bloomberg Billionaires Index.</p>
<p>On November 18, 2024, the <u>Competition Commission of India</u> (CCI) fined Meta ₹213.14 crore and banned WhatsApp from sharing user data for five years. This action followed concerns over WhatsApp's 2021 privacy policy, which allegedly abused Meta's dominant market position in India's digital ecosystem.</p>
<p>Recently, the Bharat National Cyber Security Exercise (Bharat NCX 2024) was inaugurated to fortify India's cybersecurity resilience.</p>
<p>The tragic case of Anna Sebastian, a chartered accountant who is reported to have died due to work related stress, underscores the urgent need to address the toxic workplace culture in India, highlighting the continued exploitation of workers.</p>
<p>The Ministry of Ports, Shipping and Waterways, in collaboration with the Observer Research Foundation (ORF), organised the inaugural Sagarmanthan: The Great Oceans Dialogue, highlighting key developments in India's maritime sector, focusing on maritime logistics, ports, and shipping.</p>
<p>Femicide is defined as an intentional killing with a gender-related motivation. It is driven by discrimination against women and girls, unequal power relations, gender stereotypes or harmful social norms. It is different from homicide, where the motivation may not be gender-related.</p>
<p>Mediation is a process where a neutral mediator facilitates communication between parties to help them reach a mutual agreement, without making decisions for them.</p> <p>The <u>Mediation Act, 2023</u> mandates the creation of the Mediation Council of India (MCI). Although the government aimed to set up the MCI by the end of 2023, its formation has been delayed.</p>
<p>The Anusandhan National Research Foundation (ANRF) has launched the <u>Partnerships for Accelerated Innovation and Research (PAIR) Program</u> to enhance research capabilities in Indian universities.</p>
<p>SAMBANDH is a WhatsApp-based chatbot, allows defence veterans to easily report and resolve grievances. The platform has helped address over 1,700 cases in less than a year.</p>
<p>The Maori Tribe is an indigenous tribe who have inhabited New Zealand. The haka is a traditional Maori dance, performed by warriors on the battlefield or to welcome others, involving chanting, facial expressions, and hand movements. It represents Maori identity and has become a symbol of resistance.</p> <p>Recently, <u>Hana-Rawhiti Kareariki Maipi-Clarke</u>, the youngest sitting Member of Parliament in New Zealand, who is representing a Maori tribe in the country, staged a haka protest against the <u>Treaty Principles Bill</u>, which seeks to reinterpret the 1840 Treaty of Waitangi.</p>
<p>Recently, the UK House of Commons voted in favour of the Terminally Ill Adults (End of Life) Bill, allowing terminally ill patients to request assistance to end their own lives.</p>
<p>A study published in journal Nature found that the <u>aviation sector</u> is one of the top <u>global contributors to greenhouse gas emissions</u>, with private jets having a much higher carbon footprint per passenger.</p>
<p>Golan Heights: Israel captured most of the Golan Heights from Syria in the 1967 Six-Day War. Syria's attempt to retake it during the 1973 war failed. Rainwater from the Golan's catchment feeds into the Jordan River.</p> <p>Israel recently approved a settlement expansion plan in the Golan Heights, allocating over \$11.13 million to boost population and infrastructure in the region.</p>
<p>Recently, the Union Home Minister announced that by March 2026, India will be completely free from maoist insurgency (Naxalism) using the three-pronged strategy.</p>
<p>Union Home Minister and Minister of Cooperation, Shri Amit Shah, chaired the 32nd meeting of the 'Kendriya Hindi Samiti' in New Delhi. The Kendriya Hindi Samiti is the <u>apex body</u> responsible for providing guidelines for the development and promotion of the Hindi language across the country.</p>
<p>Collins Dictionary announced "brat" as its Word of the Year for 2024. The word, redefined by British singer Charli XCX has come to represent a "confident, independent, and hedonistic attitude." Originally used to describe a misbehaving child, "brat" now embodies a culturally resonant spirit of self-expression and rebellion that resonates globally, with notable support from US presidential candidate Kamala Harris.</p>
<p>Merriam-Webster's announcement of "polarization" as the 2024 Word of the Year.</p>
<p>Cairn Oil & Gas, a part of Vedanta Group, has become the first oil and gas producer in India to join the United Nations Environment Programme's Oil & Gas Methane Partnership (OGMP) 2.0. By signing this agreement, Cairn committed to reducing methane emissions effectively, marking a significant step towards environmental sustainability in the oil and gas sector.</p>
<p>Royal Enfield has recently unveiled its highly anticipated <u>electric vehicle (EV) brand</u>, "Flying Flea", an homage to one of the brand's most iconic models. The original Flying Flea was a compact, lightweight motorcycle designed in the 1940s for military use during World War II.</p>
<p>The Department of Justice launched the 'Hamara Samvidhan, Hamara Samman' campaign to celebrate 75 years of India as a Republic and the adoption of its Constitution.</p>
<p>26th December 2024, marked the 20th anniversary of the 2004 Indian Ocean earthquake and tsunami. The earthquake had a magnitude of 9.1, making it the third-largest earthquake. The earthquake originated in the Sunda Trench, where the Indo-</p>

Australian plate subducts beneath the Burma microplate (part of the Eurasian plate). The earthquake's tremors were felt across Indonesia, Bangladesh, India, Malaysia, Maldives, Myanmar, Singapore, Sri Lanka, and Thailand. In Car Nicobar, the Indian air force base was completely destroyed, underscoring the scale of destruction.

Coca-Cola has announced a strategic partnership with Jubilant Bhartia Group, selling a 40% stake in Hindustan Coca-Cola Holdings (HCHH) for ₹12,500 crore.

In a significant **Indo-Kazakh collaboration**, IREL (India) Limited, a CPSU under the Department of Atomic Energy (DAE), and Kazakhstan's Ust-Kamenogorsk Titanium and Magnesium Plant JSC (UKTMP JSC) have inked a joint venture agreement to establish **IREUK Titanium Limited**, aimed at producing **titanium slag in Odisha, India**.

Operation Tamarisk was a covert intelligence operation that took place during the Cold War, a period marked by fierce rivalry between the United States and the Soviet Union.

Australia is set to implement a significant move by banning social media access for children under 16, starting in November.

GMR Hyderabad International Airport Limited (GHIAL) has received global recognition at the prestigious 'Airport Excellence Awards' during the Saudi Airport Exhibition 2024, at the Riyadh International Convention and Exhibition Center.

Iraq is conducting its first nationwide census since 1987.

The **Supreme Court of Bangladesh** has stayed a High Court verdict that declared '**Joy Bangla**' as the country's national slogan. The slogan, popularized by Sheikh Mujibur Rahman during Bangladesh's liberation movement, had been officially recognized as the national slogan under the previous government led by his daughter, Sheikh Hasina.

Northern Coalfields Limited (NCL), under the Ministry of Coal's guidance, has launched the '**CHARAK**' project – **Community Health: A Responsive Action** for **Koylanchal**, aimed at providing free treatment for economically weaker sections suffering from life-threatening diseases.

Nvidia has recently announced the launch of its **Jetson Orin Nano Super Generative AI supercomputer**, marking a significant advancement in affordable AI solutions.

Dubai has unveiled the **world's largest gold bar**, setting a **new Guinness World Record** on December 7-8, 2024. Weighing 300.12 kg, the bar is valued at approximately \$25 million (₹211 crore).

"**Pinfenon**" (S) (R) is the world's first patented animal supplement designed to lower cardiac disorder in canines.

Italy recently granted citizenship to Argentine President Javier Milei based on his Italian ancestry, sparking a wave of criticism in Argentina.

Azerbaijan Airlines plane, an **Embraer 190 jet**, crashed near the city of Aktau in Kazakhstan after being rerouted due to heavy fog. The plane, traveling from Baku, Azerbaijan, to Grozny, Russia, was carrying 62 passengers and five crew members. While the emergency landing was forced, the crash left several passengers injured.

The UN's World Meteorological Organization (WMO) has issued a "red alert" on climate change, warning that 2024 is set to be the hottest year on record.

The **Indian Army** has launched the **Indian Army AI Incubation Centre (IAAIC) in Bengaluru**, marking a significant leap towards modernizing its operations and enhancing its technological capabilities.

The **10th World Ayurveda Congress (WAC 2024)** and Arogya Expo were inaugurated in **Dehradun**, marking a historic milestone in the global promotion of Ayurveda.

The Kho Kho Federation of India (KKFI) has officially appointed Bollywood superstar **Salman Khan** as the brand ambassador for the inaugural Kho Kho World Cup, which will be held in New Delhi from January 13 to 19, 2025.

India emerges as 3rd largest exporter in smartphone market.

Former International Monetary Fund (IMF) Chief **Rodrigo Rato** has been sentenced to nearly five years in a prison by a Madrid-court for corruption related offences.

NTPC Ltd., India's largest integrated power utility, celebrated its **50th Raising Day**, marking five decades of pioneering growth, innovation, and sustainable energy development.

The Ministry of Culture, in partnership with France Museums Développement (FMD), has launched an ambitious project to build the **Yuga Yugeen Bharat National Museum** in New Delhi, which will be the **world's largest museum**, surpassing the Louvre in Paris.

China has approved the construction of the **world's largest dam on the Yarlung Zangbo (Brahmaputra) in Tibet**, close to the Indian border. Estimated at \$137 billion, this project raises strategic and environmental concerns for India and Bangladesh. The massive hydropower dam, located at a tectonic boundary prone to earthquakes, has been touted as safe by Chinese authorities, who emphasize ecological protection and advanced engineering techniques.

Kenyan President William Ruto announced on November 21, 2024, the cancellation of multimillion-dollar deals with Indian business tycoon Gautam Adani, citing concerns over bribery and fraud allegations.

Union Minister for Road Transport and Highways, Nitin Gadkari, inaugurated **India's first bio-bitumen-based National Highway stretch on NH-44 in Mansar, Nagpur, Maharashtra**. This stretch is a milestone in India's road development sector, being the first to employ **lignin-based bio-bitumen technology**.

China has introduced the **CR450, the world's fastest high-speed train prototype**, with test speeds reaching **450 km/h**. Surpassing the current CR400 Fuxing trains (350 km/h), the CR450 marks a breakthrough in rail technology, combining speed with advancements in energy efficiency, safety, and passenger comfort. This innovation aligns with China's ambitious plans to expand its high-speed rail network to 70,000 km by 2035.

Pavai Kapadia became first Indian director to secure a **nomination** for Best Motion Picture (Non-English Language) at the **82nd Golden Globe Awards**. These nominations underscore the global impact of Indian cinema and Kapadia's exceptional storytelling. Her film **All We Imagine As Light** earned her this historic recognition.

On Christmas Eve 2024, **President Joe Biden** signed a historic law **officially designating the bald eagle as the national bird of the United States**. Although the bald eagle has been an enduring emblem of the country, appearing on the Great Seal of the US since 1782, it was never formally recognized as the national bird until this legislation.

Bharati Kolli, a 43-year-old woman from Vizianagaram district in Andhra Pradesh, has been recognized as one of the **Rising Star Women Leaders of Banking for 2024** by the renowned women's group, Women We Admire.

Two UK universities, Queen's University Belfast and Coventry University, have filed applications to set up international campuses at Gujarat's **GIFT City**, continuing the trend initiated by Australian institutions.

After a career spanning nearly two decades, acclaimed actor **Vikrant Massey** has announced his retirement from acting at the age of 37.

Rishikesh in Uttarakhand is called "**Yoga Capital of the World**".

Glass Child Syndrome, refers to the **emotional and psychological challenges faced by siblings of children with chronic illnesses or disabilities**.

India International Science Festival (IISF) 2024, India's largest science celebration, took place at IIT Guwahati, Assam.

Vice President **Shri Jagdeep Dhankhar** inaugurated the **GSI Geoscience Museum in Gwalior**.

The **18th Elephant and Tourism Festival** took place in **Sauraha, Chitwan, Nepal**.

The Indian Army has unveiled a **statue of Chhatrapati Shivaji Maharaj at Pangong Tso in Ladakh**, marking a significant strategic and cultural assertion near the India-China border.

The **Galathea Bay port in Great Nicobar Island** was designated as **India's 13th major port**.

This follows the establishment of **Kamarajar Port (Ennore Port) in Tamil Nadu** as the **12th major port** a quarter century earlier.

TEST SERIES cum
Online and offline batches for
UPSC, HPAS, Naib Tehsildar, Allied services
are available.
For more information,
Kindly Contact: 7018596250, 9805332278,
RANA ACADEMY SHIMLA