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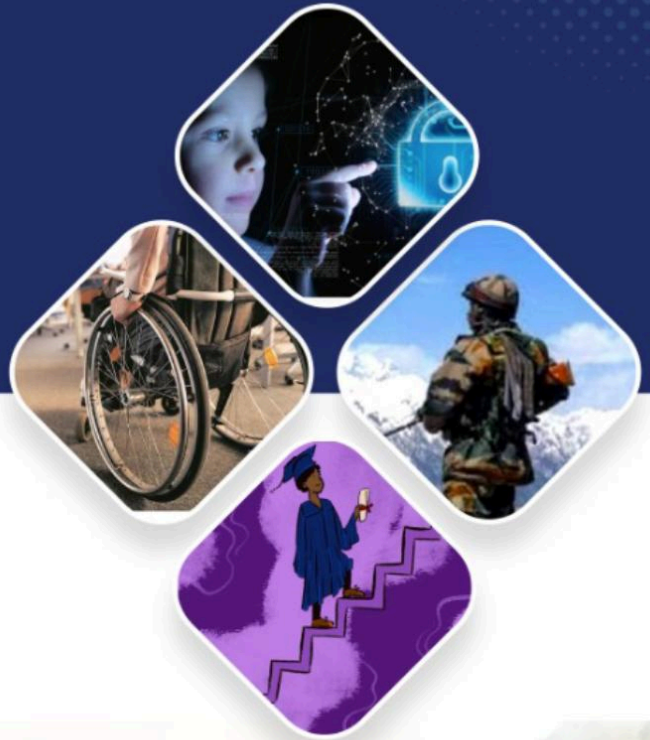
JULY, 2024

▶ **What is the Gender Gap in Education**

▶ **Guidelines to Prevent Stereotyping and Discrimination of PwDs**

▶ **Using Children's Personal Data Legally and Securely**

▶ **J&K Terror Attack: Dealing with Pakistan Without Playing Tit-for-Tat**

▶ **Climate Resilient Agriculture**

Mains Daily Analysis 3

General Studies- I 3

General Studies II 16

General Studies III 38

General Studies- I

1. An Outlining of Urban Transformation Strategies

Context
- **Urbanisation in India has been a defining trend of the 21st century**, with cities becoming the epicentres of economic and social development.
- Home to approximately 500 million people, which accounts for about 36% of India's population, **urban areas are witnessing a steady population growth rate** of 2% to 2.5% annually.
- Recognising the growing pace of urbanisation and the crucial role of cities as growth hubs, **the new government's maiden Budget introduces a variety of initiatives aimed at creating planned development and growth in urban areas.**

Strategies Outlined in the Budget to Address the City Development
- **Proposal to Expand the PMAY Scheme in Urban Areas**
  - Since its implementation in 2015, the Pradhan Mantri Awas Yojana (Urban) has made significant strides.
  - Thus far, **this scheme has provided around 8.5 million housing units** for the Economically Weaker Sections (EWS) and Middle-Income Groups (MIG), with an investment of approximately ₹8 lakh crore.
  - The **Budget proposes to boost this scheme by supporting the construction of an additional 10 million housing units in urban areas**, involving an investment of ₹10 lakh crore, including ₹2.2 lakh crore in central assistance over the next five years.
  - **For the current year, ₹30,171 crore has been allocated**, part of which will subsidise interest to facilitate affordable loans.
- **Housing Plans for Migrant Workers in Cities**
  - **For the migrant population** working in industries, **the Budget addresses the acute need for adequate housing through the introduction of new rental housing** with dormitory-type accommodations for industrial workers.
  - This **initiative is planned to be developed in a public-private partnership (PPP) mode, with upfront financial support under the Viability Gap Funding (VGF) scheme**, covering 20% from the central government and potentially similar support from state governments.
- **Development and Upgradation of Core Infrastructure Requirements**
  - Urban infrastructure, encompassing water supply, sanitation, roads, and sewerage systems, is fundamental to city development.
  - The **Atal Mission for Rejuvenation and Urban Transformation (AMRUT) has allocated ₹8,000 crore for these purposes.**
  - Although this amount may appear modest, **the finance minister has announced the availability of the VGF window** for projects undertaken as commercial ventures in PPP mode.
  - **Given cities' familiarity with the PPP model, this provision could accelerate the development and upgrading of essential infrastructure.**
  - Additionally, **the Budget speech highlights a significant investment of ₹11.11 lakh crore for capital expenditure in infrastructure,** including highways and other sectors, from which cities can benefit.
  - **A provision of ₹1.50 lakh crore is also made available to states as an interest-free loan** for infrastructure development, which states could use for urban projects.

Some Other Key Announcements Related to Smart Cities, Planned City Development

- **Smart Cities and Digital Transformation**
  - o Launched in 2015, **the Smart Cities Mission received ₹8,000 crore in budgetary support in 2023-24, which has been reduced to ₹2,400 crore for 2024-25** to meet residual commitments.
  - o However, **a new initiative, the National Urban Digital Mission (NUDM), has been introduced with a provision of ₹1,150 crore**, focusing on the digitization of property and tax records and their management with GIS mapping.
  - o This **digital transformation will enable urban local bodies to manage their finances more effectively and assist property owners.**
- **Planned City Development**
  - o The **Budget emphasises the importance of planned city development,** allocating ₹25,653 crore as the normal 'Finance Commission Grant' for municipalities.
  - o **Additionally, ₹500 crore has been set aside for the incubation of new cities**. The **development of mass rapid transit systems allows cities to pursue transit-oriented development,** where dense development around transit hubs can occur without overwhelming road traffic.
  - o **Enhanced focus on economic and transit planning**, alongside orderly development of peri-urban areas using town planning schemes, is proposed.
  - o The **Budget also allocates ₹1,300 crore to encourage electric bus systems in cities**, addressing the challenge of high upfront costs and promoting eco-friendly transportation.
- **Solid Waste Management**
  - o Solid waste management (SWM) poses one of the biggest challenges for urban areas.
  - o The **Budget proposes introducing bankable projects for SWM in collaboration with state governments and financial institutions**, leveraging the VGF for this purpose.
  - o Cities like Indore, Madhya Pradesh, have demonstrated how SWM can become financially viable, providing a model for others to follow.
- **Street Vending and Economic Opportunities**
  - o The **Street Vendors Act, 2014,** aimed at regulating street vendors and protecting their rights, envisages creating street-vending plans and zones.
  - o The **Budget proposes developing 100 weekly 'haats' or street food hubs in select cities.**
  - o This initiative aims to make street vending a healthy and safe option for both consumers and vendors.
  - o **States are encouraged to facilitate the preparation of street-vending plans** and the development of 'haats' according to local needs.

Purpose of Newly Launched National Urban Digital Mission (NUDM)
- **Digitisation of Property and Tax Records**
  - o The NUDM **aims to digitise property records and tax management systems**, ensuring transparency, accuracy, and efficiency.
  - o Digital records make it easier for property owners to access information and conduct transactions, while also aiding municipal bodies in maintaining up-to-date records and improving revenue collection.
- **Geographic Information System (GIS) Mapping**
  - o **Integrating GIS mapping into urban planning** and management **allows for a more precise understanding of spatial data.**
  - o This **technology helps in monitoring land use**, planning infrastructure, and managing resources more effectively.
  - o **GIS mapping supports better decision-making processes** by providing detailed visual representations of urban areas.
- **Financial Management**

- o **Improved financial management through digital tools enables urban local bodies to streamline their budgeting**, expenditure tracking, and revenue generation.
- o **By leveraging digital platforms**, municipalities can enhance their financial health, ensuring **that funds are utilised efficiently for urban development projects.**

Challenges and Future Prospects
- **Funding and Resource Allocation**
  - o Adequate **funding and resource allocation are critical** to the success of these initiatives.
  - o Ensuring **consistent financial support from both central and state governments is essential** for sustained progress.
- **Capacity Building**
  - o Building the **capacity of urban local bodies to implement and manage digital solutions is vital.**
  - o This includes training municipal staff, enhancing technical expertise, and fostering a culture of innovation.
- **Interoperability and Integration**
  - o Ensuring that **various digital systems and platforms are interoperable and integrated seamlessly** is crucial for effective urban management.
  - o This requires standardization of technologies and collaborative efforts among different stakeholders.
- **Data Privacy and Security**
  - o As cities collect and process vast amounts of data, **safeguarding privacy and ensuring data security are paramount.**
  - o **Robust cybersecurity measures must be implemented** to protect sensitive information and maintain public trust.

Conclusion
- **The Budget presents a comprehensive approach to urban development**, combining financial provisions and procedural strategies to promote planned urbanisation.
- However, **the successful implementation of these initiatives depends on the vision and determination of cities,** represented by municipalities, and guided by state governments.
- **Crucially, the participation of citizens remains the cornerstone for the success** of any city's development strategy.

2. What is the Gender Gap in Education?

Why in the News?
The World Economic Forum (WEF) report of 2024 on global gender gaps recently ranked India at **129 out of 146 economies**, with a decline in the education sector being one of the reasons for India's rank slipping a couple of places this year.

Global Gender Gap Report:
- The World Economic Forum's Global Gender Gap Report is an annual publication that **evaluates the progress towards gender equality worldwide**.
- Established in 2006, this report offers a comprehensive analysis of gender-based disparities across four key areas:
  - o **Economic Participation and Opportunity,**
  - o **Educational Attainment,**
  - o **Health and Survival, and**

- o **Political Empowerment**.

- **Key Components of the Report:**
  - o **Economic Participation and Opportunity**:
    - ▪ This dimension assesses gender disparities in the workplace, including **labor force participation, wage equality for similar work**, and the presence of women in high-ranking roles across industries.
  - o **Educational Attainment**:
    - ▪ This category measures the gap between men and women in terms of access to education.
    - ▪ It evaluates literacy rates and the enrolment levels in primary, secondary, and tertiary education.
  - o **Health and Survival**:
    - ▪ This area examines life expectancy and sex ratio at birth to understand the disparities in health outcomes between genders.
  - o **Political Empowerment**:
    - ▪ This dimension looks at the representation of women in **political decision-making positions**, including the proportion of women in parliamentary seats and ministerial roles.
  - **Methodology:**
    - o The **report uses a scoring system ranging from 0 to 1, where 1 indicates full parity between men and women and 0 indicates absolute disparity.**
    - o Countries are ranked based on their scores in each of the four categories, and an overall rank is assigned to each country.

Global Gender Gap 2024 Report:
- The World Economic Forum 2024 report on global gender gaps **highlights significant disparities in education, ranking India 129th out of 146 countries, partly due to a decline in educational attainment indicators**.
- This represents a drop from the previous year, where India had a perfect score in educational parity.

Key Findings and Statistics w.r.t Education Attainment:
- o **Enrolment and Literacy Rates:**
  - ▪ Despite high enrolment rates for women in primary, secondary, and tertiary education, the literacy rate gap between men and women stands at 17.2 percentage points.
  - ▪ The latest figures show that girls constitute 48% of the school population, with a slight decline in secondary education but a higher retention rate at the higher secondary level.
- o **Higher Education:**
  - ▪ The Gross Enrolment Ratio (GER) for women in higher education is 28.5%, slightly above the male GER of 28.3%.
  - ▪ Female enrolment has increased by 32% since 2014-15.

- **Influencing Factors:**
  - o **Infrastructure Development:**
    - ▪ Building more schools, especially since the mid-90s, has significantly boosted girls' enrolment.
    - ▪ However, regional disparities persist, with some states lagging in secondary education infrastructure.
  - o **Female Teachers:**
    - ▪ The presence of women teachers positively impacts girls' enrolment.
    - ▪ Schools with only male teachers face lower enrolment of girls due to parental concerns.
  - o **Transportation and Sanitation:**
    - ▪ Free transport and the provision of cycles have helped increase enrolment.

- However, inadequate sanitation facilities, particularly for menstruating girls, remain a major barrier.

- **Future Challenges:**
  - **Higher Secondary and College Education:**
    - While some states report higher enrolment of girls in higher secondary education, concerns are rising about boys dropping out.
  - **STEM Education:**
    - Women make up only 42.5% of students in STEM fields, highlighting the need for targeted encouragement.
  - **Adult Literacy:**
    - The 2011 Census data reveals a significant gender gap in adult literacy, with only 64.63% of women being literate compared to 80.88% of men.

- **Recommendations:**
  - **Improving School Infrastructure:**
    - Continued investment in building and maintaining school facilities, especially in rural areas.
  - **Increasing Female Teacher Presence:**
    - Recruiting and retaining more female teachers to create a comfortable learning environment for girls.
  - **Enhanced Sanitation Facilities:**
    - Ensuring proper maintenance of washrooms to prevent dropouts among older girls.
  - **Focus on Foundational Literacy:**
    - Strengthening foundational literacy programs and extending education to rural women to bridge the adult literacy gap.

By addressing these challenges, India can make significant strides toward closing the gender gap in education and achieving greater gender parity in the coming years.

3. Guidelines to Prevent Stereotyping and Discrimination of PwDs

Why in News?

The Supreme Court in a landmark ruling laid down comprehensive guidelines to **prevent stereotyping and discrimination of persons with disabilities (PwDs) in visual media, including films and documentaries.**

The SC issued guidelines while hearing a plea to **ban the film Aaankh Micholi for derogatory portrayal of PwDs.** However, the SC refused to interfere with CBFC's decision to clear movie for public screening.

What is the SC's Ruling Against the Insensitive Representation of PwDs?

- The SC emphasised the **need for authentic and respectful representation** of individuals with disabilities in films and media.
- The bench highlighted the **importance of inclusivity and realism** in cinematic portrayals, underlining the societal impact of such representations.
- **The SC said that the creative freedom** of the filmmaker cannot include the freedom to lampoon, stereotype, misrepresent or disparage those already marginalised.
- The court recognised the **influential role of cinema in shaping public perceptions** and stressed that inaccurate or stereotypical portrayals can perpetuate harmful misconceptions.
- According to **Article 14** of the Indian Constitution, stereotyping is an antithesis of dignity and anti-discrimination rule.

- Therefore, there must be a clear distinction between '**disability humour**' which helps in understanding the disabled and '**disablement humour**' which denigrates it.

What is the Significance of the Ruling?
- The ruling has been welcomed by the industry insiders and disability rights activists as a **crucial step towards changing the narrative around disability in India**.
- The ruling also aligns with the broader goals of **the Rights of Persons with Disabilities (RPwD) Act 2016,** which seeks to protect and promote the rights and dignity of PwDs in all spheres of life.
- The SC emphasised on the **human rights** model of disability rights, making the government and private parties obliged to facilitate full and effective participation of PwDs in society.
  - Models under which disability rights are looked at, are of two types - **medical and social models.**
  - **The human rights model** is an evolution of the social model and says that people with disability are a part of society and have the same rights as everyone else.

What are the Shortcomings of the Ruling?
- The human rights model is an abstract idea and difficult to implement.
- The guidelines are limited to visual media.
- The judgement may go against the spirit of '**creative freedom.'**

Way Forward - 7-Points Guidelines to Prevent Stereotyping and Discrimination of PwDs:
- The SC expects filmmakers to adhere to these 7-point guidelines while representing PwDs in the visual media.
- **The 7-point guidelines are -**
  - To avoid words (like words crippled, etc) which lead to institutional discrimination and **negative self-image.**
  - **To avoid language** which overlooks the social barriers.
  - Creators must check for **adequate medical info** about an impairment like night blindness which may increase discrimination.
  - **Such info should not be based on myths.** For example, stereotypes show that impaired persons have enhanced sensory superpowers.
  - Creators must practice the principle of "**nothing about us, without us**," and involve PwDs in the creation and assessment of visual media content.
  - As per the convention to protect rights of PWDs, PwDs must be portrayed in the visual media after consultation with their **rights advocacy groups**.
  - There must be **training and sensitisation programmes** for creators.

4. On World Population Day, A Plan for National Well-Being

Context
- **On this World Population Day, it is time to reflect on India's journey in family planning** and reaffirm our commitment to addressing the challenges that lie ahead.
- As endorsed in the UN International Conference on Population Development (ICPD) in May, **India has not only provided leadership to the ICPD agenda but has also demonstrated progress through improved family planning services.**
- Therefore, it is **important to have an assessment of evolution of family planning programmes and their impact on growth and development.**

An Overview of Shifts in India's Family Planning Trends

- In India, a **significant trend has emerged: people are opting for smaller families**, averaging just two children.
- This **shift reflects a notable change over the past decade**, during which more than half of women (57 percent) in their reproductive age (15 to 49 years) have actively used modern contraceptives.
- The **widespread use of contraceptives underscores the success of India's family planning programme**.
- However, **family planning extends beyond contraception; it is integral to the health and well-being of communities** and empowers women by providing them with rights and choices.
- With **369 million young people aged 10-24, India stands on the brink of a transformative demographic shift.**

Evolution of Family Planning Programmes in India

- **Early Beginnings and Clinic-Based Approaches**
  - India was **one of the first countries to launch a national family planning programme in 1952**.
  - Initially, **the programme was predominantly clinic-based**, focusing on providing contraceptive services through established healthcare facilities.
  - This **phase marked the beginning of government-led efforts to address population growth** and promote family planning to improve public health and economic stability.
- **Shift Towards Target-Oriented Methods**
  - In the subsequent decades, **the programme shifted towards more aggressive, target-oriented methods.**
  - The **government set specific numerical targets** for contraceptive acceptance and sterilizations, aiming to rapidly reduce birth rates.
  - **While this approach succeeded in increasing the adoption of family planning methods, it also faced criticism** for its coercive tactics and lack of emphasis on voluntary participation and informed choice.
- **Voluntary Adoption and Rights-Based Approach**
  - **Responding to the criticisms** of the target-oriented phase, **India's family planning programme began to emphasise voluntary adoption** of contraceptive methods.
  - The **shift towards a rights-based approach focused on respecting individuals' reproductive rights** and providing a broader range of contraceptive options.
  - This **transition underscored the importance of informed choice and aimed to empower women** and couples to make decisions about their reproductive health.
- **Integration with Health Initiatives**
  - **In 2012, the Reproductive, Maternal, Newborn, Child, and Adolescent Health (RMNCH+A) approach was introduced,** integrating family planning with other health initiatives.
  - This **holistic approach recognised that family planning is intricately linked with broader health outcomes.**
  - **By combining efforts to improve maternal and child health with family planning services, the programme aimed to create synergies** that would enhance overall health outcomes and reduce maternal and child morbidity and mortality.
- **Family Planning (FP) Campaigns in 2020 and 2030**
  - **India's commitment to global family planning initiatives was further solidified** with its participation in the **FP2020 and subsequent FP2030 campaigns.**
  - These initiatives focused on expanding access to family planning information and services, particularly for marginalized and underserved populations.
  - **They aimed to ensure that more women and girls could exercise their reproductive rights** and have access to a full range of contraceptive methods.
- **Expanding Contraceptive Choices and Quality Assurance**

- The **evolution of India's family planning programme has also seen an expansion in the range of contraceptive choices** available to the population.
- **Modern reversible contraceptives, such as condoms, intrauterine contraceptive devices (IUCDs),** oral pills, and injectable contraceptives, **are now widely available.**
- **Pilot programmes are also introducing subdermal implants** and subcutaneous injections to further broaden the options.
- **Ensuring the quality of these services has become a priority**, with efforts to provide comprehensive training to healthcare providers and implement robust quality assurance mechanisms.

Family Planning Impact on Growth and Development
- The **growth and development of a country** are **linked to population dynamics.**
- The **aim is to maintain and achieve replacement levels of fertility** both nationally and sub-nationally.
- **India has already achieved a replacement level of fertility at the national level (TFR 2.0),** and 31 states/UTs have already achieved this milestone as per NFHS-5 (2019-21).
- **Family planning has also been recognised globally** as reducing maternal and child morbidity and mortality.

Mission Parivar Vikas, Its Expansion and Innovation in Family Planning Services
- **Mission Parivar Vikas (MPV)**
  - This is **one of the flagship family planning programmes of the government,** was launched in 2016.
  - The **aim is to increase access to contraceptives and family planning services in 146 high fertility districts** across seven states (Bihar, MP, Rajasthan, UP, Chhattisgarh, Jharkhand, and Assam).
  - **The approach uses awareness campaigns such as Saarthi Vaahans (awareness on wheels) and Saas Bahu Sammelens** to address social barriers for young women accessing contraceptives, **and providing Nayi Pahel kits to newly married couples to sensitise them about responsible parenthood practices.**
- **Expansion and Innovation in Family Planning Services**
  - **Improvements in the uptake of modern contraceptives in the MPV districts led to the government's decision** to scale up this programme to all districts of the seven states and in six Northeastern states in 2021.
  - Currently, **the National Planning programme offers a variety of reversible modern contraceptives,** including condoms, intrauterine contraceptive devices, oral pills, MPA injections, and more.
  - **In 10 states, covering two districts each, subdermal implants and subcutaneous injections are in the rollout stage**, with plans for further extension.

Way Forward: Need to Reaffirm Commitment to Overcoming Barriers
- As India commemorates World Population Day 2024, themed "**Healthy Timing and Spacing of Pregnancy for the Health and Well-being of Mother and Child,**" India acknowledges the efforts of state counterparts and the relentless dedication of our health workforce.
- This **includes ANMs, ASHAs, and other ground-level functionaries** who are at the forefront of delivering crucial services.
- The **government should reaffirm its commitment to overcoming barriers related to access, misconceptions about contraceptive methods**, lack of awareness, geographical and economic challenges, and restrictive social and cultural norms.
- **Substantial investments are being made to improve family planning service delivery**, including ensuring the availability of both temporary and long-term contraceptive methods.
- Additionally, **family planning services are being extended to the last mile through Ayushman Arogya Mandirs.**

Conclusion

- **India's demographic dividend must navigate the complexities** of sustainable development, urbanisation, and migration.
- **Integrating these factors into our policies ensures that demographic growth translates into a sustainable future** and inclusive prosperity and successful interventions must go together with niche strategies.
- **India should strive for a future where India's demographic dividend is fully realised, where every citizen has access to quality healthcare**, and where the health and well-being of our people are the foundation of our nation's progress and prosperity.

5. The case for a caste Census

Background:
Peter Drucker's quote, "Only what gets measured gets managed," highlights the necessity of collecting data on group identities to address discrimination effectively. This **approach is essential for informed policymaking and inclusive development.**
For example, Germany's census does not record racial data, disadvantaging Black communities. In response, Black people initiated the Afrozensus survey in 2020, revealing widespread, institutional anti-Black racism in Germany.

Census in India
- **About**
  o Population Census provides **basic statistics on state of human resources, demography, culture and economic structure at local, regional and national level.**
  o Beginning in the year 1872, when the first census was conducted non-synchronously, the census enumeration exercise in India is carried out in every 10 years.
    ▪ The **first synchronous census was taken under British rule in 1881, by W.C. Plowden, Census Commissioner of India.**
      o The responsibility of conducting the decadal census rests with the Office of the Registrar General and Census Commissioner of India, Ministry of Home Affairs.
- **Legal/Constitutional basis of Census in India**
  o Population census is listed in **Union List (entry 69)** of Seventh Schedule in Indian Constitution.
  o Census is conducted under the provisions of the **Census Act, 1948**.
- **Caste census**
  o **Caste was enumerated in British India Censuses (1881-1931).**
  o Post-Independence, the 1951 Census excluded caste enumeration except for SCs and STs, who continue to be counted.
  o In 1961, the GOI recommended states conduct their own surveys for state-specific OBC lists, as there were no central reservations for OBCs at that time.
  o Though Census is a Union subject, **the Collection of Statistics Act, 2008** allows States and local bodies to gather necessary data, as seen in Karnataka (2015) and Bihar (2023).

Need for caste Census
- **Social Imperative**
  o Caste remains a key social structure in India, evidenced by **low inter-caste marriages, prevalent caste surnames and marks, residential segregation, etc.**

- o Choices of candidates for elections and ministers for Cabinets continue to be dictated by caste considerations.
- **Legal Imperative**
  - o Constitutionally-mandated social justice policies, including **reservations in various sectors, require detailed caste data.**
  - o Although the Constitution mentions class instead of caste, the Supreme Court has ruled caste as a significant criterion for defining backward classes and supporting reservation policies.
- **Administrative Imperative**
  - o **Detailed caste data:**
    - helps correct wrongful caste inclusions/exclusions,
    - prevents dominant castes within reserved categories from monopolizing benefits,
    - aids in sub-categorizing castes, and
    - determines the creamy layer income/wealth criterion.
- **Moral Imperative**
  - o Lack of caste data has allowed elites among upper castes and dominant OBCs to disproportionately control national assets, income, and power.

Argument against caste census
- **Socially Divisive**
  - o Critics say it could deepen social divisions.
    - **However,** it should be noted that India has had deep social divides for nearly 3,000 years. Census counts of SCs and STs since 1951 haven't led to conflicts among these groups.
    - Additionally, the Census already includes potentially divisive categories like **religion, language, and region.**
    - Casteism will not wither away by not counting caste in the Census, any more than communalism, and regionalism will disappear by not enumerating religion, language and region.
- **Administrative Nightmare**
  - o Many opponents claim that that it is an administrative nightmare.
    - Despite concerns, caste enumeration is feasible.
    - Unlike the fuzzy concept of race, caste identity is clear.
    - The **GOI has successfully enumerated 1,234 SC castes and 698 ST tribes.**
    - Counting the 4,000-odd other castes, mostly state-specific, should not be overly problematic.
- **Fueling Demands for Increased Reservations**
  - o Opponents say that it would fuel demands for increased reservations.
  - o **Rather** than fueling demands, detailed caste data could help curb arbitrary reservation demands. It would allow for objective policymaking and informed debates on reservation claims from groups like Marathas, Patidars, and Jats.
  - o Governments often prefer vague data, allowing them to implement reservations arbitrarily for electoral gains.

The case for OBC inclusion in Census
- **Reservations for OBCs in education and public employment**
  - o The Constitution permits reservations for OBCs in education and public employment (**Articles 15(4) and 16(4)**), similar to SCs and STs.
  - o Following the Mandal Commission, OBCs also have reservations in the Central government.
  - o The Supreme Court's Indra Sawhney case (1992) ruling requires periodic revision of the OBC list, which is based on the 1931 Census.
- **No reservation in electoral constituencies for MPs and MLAs**

- While OBCs lack reservations in MP and MLA constituencies, the 73rd and 74th amendments (1993) mandate reservations in panchayats and municipalities for SCs, STs, and OBCs (**Articles 243D(6) and 243T(6)).**
  - Accurate caste-wise data of OBCs is needed for this, which the GOI should have collected in the 2001 Census but did not.
- **Judiciary demands caste-wise data to uphold reservations**
  - States **like Uttar Pradesh, Madhya Pradesh, Gujarat, Maharashtra, Karnataka, Odisha, and Jharkhand have faced judicial stays on OBC reservations in local elections due to the absence of caste-wise data.**
  - While the judiciary demands this data, the executive has avoided collecting it.

Attempt at caste Census failed

- In 2010, after significant lobbying, the Parliament unanimously resolved to include caste enumeration in the 2011 Census.
  - The **last caste enumeration in the 1931 Census identified 4,147 castes.**
- However, the Socio Economic and Caste Census (SECC)-2011, which was not conducted under the Census Act, 1948, failed due to poor design and execution, resulting in an implausible figure of 46 lakh castes.
- The SECC-2011's failure was because of the fact that it was not conducted under the Census Act, 1948 as the Act was not amended to include caste as a parameter.
- It was conducted through the Union Ministries of Rural Development and Urban Development which did not have prior experience of conducting sociological/anthropological surveys.
- Additionally, the questionnaire was poorly designed and asked open-ended questions about caste.
  - The enumerators couldn't distinguish between genuine castes, alternative caste names, larger caste groups, sub-castes, surnames, clan names, gotras, etc.

Way forward

- To address the failures of SECC-2011, the Census Act, 1948, should be amended to mandate caste enumeration, removing the discretion of the Union executive.
- Caste data should be collected during the regular Census by the Census Commissioner, with relevant questions added to the questionnaire.
- Sociological and anthropological experts should draft state-specific caste lists, publish them online for public input, and finalize them before providing them to enumerators.
- The questionnaire should include questions about sub-caste, caste, larger caste group, and caste surname.
- Using internet-enabled devices with preloaded details would simplify and ensure accurate data collection.

6. Abhaya mudra, Buddhist & Hindu cultural symbol conveying freedom from fear

Why in news?

In his first speech as the Leader of the Opposition in Lok Sabha, **Rahul Gandhi referred to the abhaya mudra, a gesture with a raised open palm that symbolizes reassurance and freedom from fear**. He said that the abhaya mudra was a common thread in the depictions of **Lord Shiva, Guru Nanak, and Jesus Christ, and also figured in Islam, Buddhism, and Jainism.**

Mudras in Buddhism

- **About Mudras**

- Mudras are a **non-verbal mode of communication and self-expression**, consisting of hand gestures and finger postures.
- They are symbolic sign-based finger patterns taking the place, but retaining the efficacy of the spoken word, and are used to evoke in the mind ideas symbolizing divine powers or the deities themselves.
- The composition of a mudra is based on certain movements of the fingers; in other words, **they constitute a highly stylized form of gestural communication.**

- **Mudras in Buddhism**
  - Mudras also represent the dominant themes in particular episodes of the Buddha's life, making the gestures useful as narrative and pedagogical devices for viewers familiar with the symbolism.
  - While there are a large number of esoteric mudras, over time Buddhist art has retained only five of them for the representations of the Buddha.
    - **Images of the Buddha which exhibit mudras other than these are extremely rare.**
  - The significance of these mudras can be gauged from the fact that **each of the five transcendental (Dhyani) Buddhas is assigned one of these mudras, and they are invariably depicted in visual arts with this particular mudra only.**

- **Five primary mudras**
  - **The abhaya mudra**
    - One of the five commonly depicted mudras in Buddhism, the **abhaya mudra is associated with the fifth Dhyani-Buddha, Amoghasiddhi.**
    - The gesture **symbolizes peace and friendship**, and denotes the acts of pacification, reassurance or protection.
    - It is performed using either the right hand or both hands, with the fingers outstretched, with the palms slightly cupped and facing the viewer.
  - **The dharmachakra mudra**
    - This **mudra is associated with the first Dhyani-Buddha, Vairochana**, who is one of the five aspects of Buddha according to the Tibetan concept of the five-Buddha families.
    - **Dharmachakra in Sanskrit means the 'Wheel of Dharma'.**
    - This mudra symbolizes one of the most important moments in the life of Buddha, the occasion when he preached to his companions the first **sermon after his Enlightenment in the Deer Park at Sarnath.**
    - In this mudra the thumb and index finger of both hands touch at their tips to form a circle.
    - This circle **represents the Wheel of Dharma**, or in metaphysical terms, the union of method and wisdom.
    - The three remaining fingers of the two hands remain extended.
  - **The bhumisparsha mudra**
    - It **symbolizes the moment of inception of the Buddha**, when the prince Siddhartha attained enlightenment under the pipal tree (also known as the bodhi tree).
    - Literally translated to "earth touching mudra," it is also often referred to as the "earth witness" and is usually associated with the **Dhyani-Buddha Akshobhya**.
    - The **figure depicting the mudra is always shown in the seated position, with the right hand reaching over the knee so that all five fingers extend downwards to touch the earth.**
    - The gesture is believed to be an invocation of the earth goddess, who witnessed the Buddha's ascendance to the state of enlightenment.
    - The mudra is also thought to proclaim the defeat of temptation and evil intention, personified by the demon king, and challenge his supremacy.
  - **The varada mudra**

- The varada mudra is associated with the **third Dhyani-Buddha Ratnasambhava.**
- It is depicted or performed in both the sitting and standing positions and is commonly known as the "boon-granting" mudra, or dana mudra.
- In India, this **mudra makes its earliest appearance in depictions of Avalokitesvar**a during the fourth and fifth centuries.
- The mudra is almost always depicted using the left hand, with the palm and all five fingers angled downward and facing the viewer.
  - **The dhyana mudra**
    - Dhyana, meaning "meditation" in Sanskrit, denotes a state of concentration and is most commonly associated with the **fourth Dhyani-Buddha**,
    - The **dhyana mudra is performed in the seated padmasana (cross-legged)** position and is usually depicted using both hands, with the hands held at the level of the stomach and resting on the thigh or lap; the right hand, with all fingers fully extended is placed palm-up over the similarly placed left hand.

Abhaya mudra in Hindu religion
- Over time, the abhaya mudra appeared in depictions of Hindu deities, and the Buddha himself was absorbed into the Hindu pantheon as the ninth avatar of the Puranic god Vishnu.
- As multiple traditions, practices, and cultural influences mingled in the great melting pot of the Indian subcontinent, mudras were seen in art and visual depictions of gods.
- The abhaya mudra was seen in divine depictions, most **commonly of Buddha, Shiva, Lord Vishnu, and Lord Ganesh.**
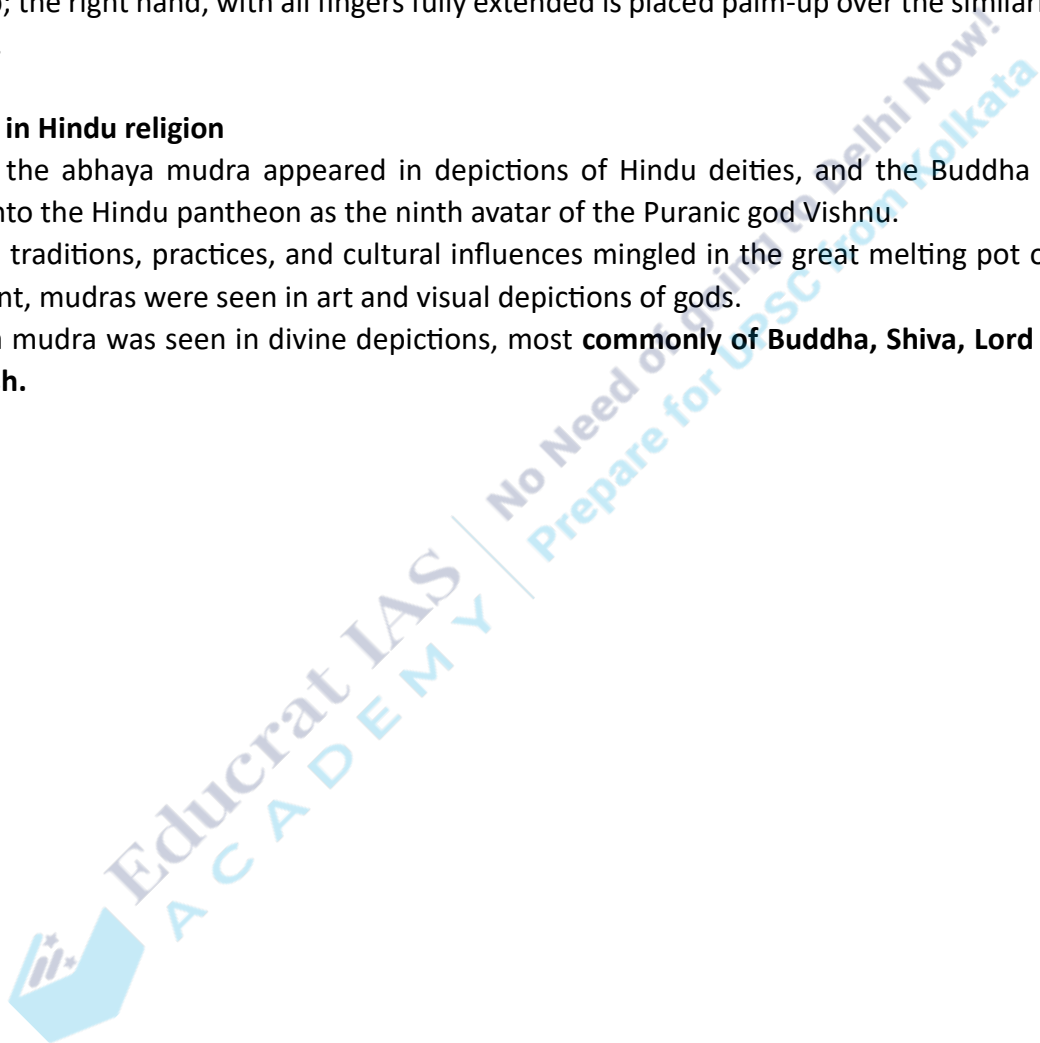
General Studies II

1. A Licence Raj for Digital Content Creators

Context
- The **advent of digital media has significantly transformed the political landscape in India**, as illustrated by two comprehensive CSDS-Lokniti surveys.
- **These surveys, encompassing a vast demographic of 642 million voters and 924 million broadband connections, reveal the increasing prominence of digital platforms** in shaping public opinion and political discourse.
- Despite the continuing dominance of television, **digital media is emerging as a crucial channel for political engagement,** particularly in influencing younger and more tech-savvy voters.

Digital Media Consumption Patterns
- The surveys indicate that a **substantial 29% of respondents engage with political content on digital platforms daily,** with an additional 18% doing so occasionally.
- Although **television remains the leading source of political information (42%), digital platforms surpass traditional newspapers (16.7%) and radio (6.9%)** in terms of daily political content consumption.
- **Platforms like WhatsApp (35.1%), YouTube (32.3%), Facebook (24.7%), Instagram (18.4%), and Twitter (6.5%) are frequently accessed by users for political updates,** suggesting a shift towards a content election or an influencer election.
- This **shift is characterised by the growing influence of digital media** over traditional forms of media.

An Analysis of the Political Influence of Digital Media
- **Emergence as a Political Force**
  - **Digital media has become an essential force in shaping political opinions** and behaviours, moving beyond traditional boundaries of political communication.
  - This **transformation is primarily due to the accessibility, interactivity, and proximity** that digital platforms offer.
  - Unlike television, newspapers, or radio, **digital media platforms allow users to engage with content in real-time,** providing a dynamic space for political discourse and activism.
- **Democratisation of Information**
  - **One of the most significant impacts** of digital media on politics is the **democratisation of information.**
  - **Social media platforms** like Facebook, Twitter, Instagram, and YouTube **enable individuals to access a diverse range of perspectives** and information sources.
  - **This has weakened the traditional gatekeeping role of mainstream media**, allowing for a broader spectrum of voices and opinions to be heard.
  - **For instance, political influencers and independent journalists can reach large audiences** without the backing of major media corporations.
- **Enhanced Political Participation**
  - Digital media has also enhanced political participation among citizens.
  - Platforms like WhatsApp, Twitter, and Facebook **serve as tools for organising and mobilising political activities.**
  - **For example, during election campaigns, political parties and candidates use these platforms to engage with voters**, share their manifestos, and respond to public concerns.
  - This direct line of communication creates a more engaged and informed electorate.
- **Influencer and Content-Driven Politics**
  - The rise of digital influencers **has introduced a new dimension to political campaigning and discourse.**

- o **Influencers with substantial followings on platforms such as YouTube and Instagram often wield significant sway** over their audiences.
- o **These influencers can shape public opinion** through their commentary, analyses, and endorsements.
- o **The 2024 Indian general election, for instance, saw a marked increase in the activity of digital influencers who scrutinised the BJP's campaign and policies,** contributing to a more informed and critical electorate.
- **Rapid Spread of Information and Misinformation**
  - o While the rapid spread of information on digital platforms can enhance political awareness, **it also poses the risk of misinformation and fake news.**
  - o The **virality of content on social media means that false information can spread quickly**, potentially influencing public opinion and electoral outcomes.
  - o This **dual-edged nature of digital media necessitates robust fact-checking mechanisms and digital literacy** among the populace to discern credible information from falsehoods.

Case Studies of Political Influence
- **2016 US Presidential Election**
  - o The **2016 US presidential election highlighted the impact of social media on electoral politics.**
  - o **Campaigns utilised platforms like Facebook and Twitter for targeted advertising** and voter engagement.
  - o Additionally, **the spread of misinformation and foreign interference through social media became central issues,** demonstrating both the power and vulnerabilities of digital platforms in political processes.
- **2014 and 2019 Indian General Elections**
  - o In India, **the BJP effectively leveraged digital media to engage with voters and propagate its message.**
  - o **The party's sophisticated use of WhatsApp, Facebook, and Twitter helped it connect with a vast electorate**, particularly young and first-time voters.
  - o This digital strategy was instrumental in the party's electoral successes in both 2014 and 2019.

Governmental Control and Regulatory Measures
- The **IT Rules, 2021, provided the initial legal framework for this control**, expanding MeitY's powers and granting MIB new authorities over digital news media and online entertainment streaming apps.
- **Despite these measures, the Union Government faced challenges in fully controlling digital content**, prompting further regulatory expansions.
- **In 2023, the creation of three Grievance Appellate Committees (GACs) marked the first expansion**, allowing officials from the Ministry of Home Affairs, MIB, and MeitY to manage appeals and issue content-related orders.
- **A subsequent amendment in 2023, granted the government the power to remove digital content deemed fake, false, and misleading**, although this amendment was stayed by the Supreme Court of India on March 21, 2024.

Key Highlights of the Broadcasting Services (Regulation) Bill, 2024
- In response to the limitations of the IT Rules, 2021, **the Union Government introduced the Broadcasting Services (Regulation) Bill, 2023,** aiming to further tighten control over digital media.
- **This bill, if enacted, would require digital creators commenting on politics or news to register and operate under MIB's discretion**, effectively increasing government oversight and diminishing transparency and accountability.
- The **Broadcasting Bill, 2024**, a revised version of the initial draft, **seeks to extend the government's command over digital media.**

- Key **highlights of the bill include classifying individual commentators as Digital News Broadcasters and content creators as OTT Broadcasters,** requiring registration once certain user thresholds are met.
- The **bill also introduces new compliances for online platforms and establishes a safe harbour regime** independent of the Information Technology Act, 2000.
- This **framework aims to enforce censorship through proactive compliances,** registrations, and fines, often relying on vague provisions that allow for arbitrary enforcement.

Implications for Democratic Expression: A License Raj for Digital Creators
- The Broadcasting Bill, 2024, **embodies a shift towards digital authoritarianism**, creating a **bureaucratic system designed to control online narratives.**
- This **approach contrasts with the administrative burden** of the notice-and-takedown model and **represents a significant threat to democratic expression.**
- The bill's provisions, if enforced, **could curtail the freedoms of digital creators and limit the diversity of political discourse in India.**

Conclusion
- **The rise of digital media as a powerful tool for political engagement underscores the need for balanced regulatory measures** that protect democratic freedoms while ensuring responsible use of digital platforms.
- **The Union Government's regulatory approach, as evidenced by the Broadcasting Bill, 2024, must carefully navigate these objectives** to avoid stifling the democratic potential of digital media.

2. Supreme Court begins week-long special Lok Adalat drive

Why in news?
The Supreme Court of India commenced a special Lok Adalat drive as part of its 75th anniversary celebrations.
From 2 p.m., the first seven Benches of the court, including a five-member Bench headed by Chief Justice D.Y. Chandrachud, transformed into Lok Adalats to amicably settle long-pending disputes. **The Lok Adalats started hearing these cases after the judges concluded their regular Bench duties for the day.**
This initiative, running until August 3, aims to expedite the resolution of various cases such as matrimonial disputes, property disputes, motor accident claims, land acquisition, compensation, and service and labour disputes.

Lok Adalat:
- **Background:**
  - National Legal Services Authority (NALSA) has been constituted under the **Legal Services Authorities Act, 1987,** and the **Chief Justice of India** is the Patron-in-Chief of NALSA.
  - It aims to provide **free Legal Services** to the weaker sections of the society and **to organise Lok Adalats** for amicable settlement of disputes.
  - Hence, the Lok Adalats have been given **statutory status** under the Legal Services Authorities Act, 1987.
- **About:**
  - Lok Adalat as the very name suggests means **people's court** (Lok - people, Adalat - court).
  - It is one of the **alternative dispute redressal mechanisms**, a forum where disputes or cases are settled or compromised amicably.

- o In a nutshell, it is a form of **party-based** (parties involved in the dispute) justice in which people and judges work together to resolve problems by **discussion, persuasion and mutual consent**, in order to provide **affordable and timely justice.**
- **Organization of Lok Adalat:**
  - o The State authority or district authority or the High Court legal services committee or Tehsil legal services committee (as the case may be) may organize Lok Adalat at such intervals and places as it thinks fit.
  - o **National Lok Adalats** are held at regular intervals, with Lok Adalats held throughout the country on a single day, in all courts from the Supreme Court to the Taluk Levels, where cases are disposed of in large numbers.
- **Composition:**
  - o **Every Lok Adalat organised for an area shall consist of -**
    - ▪ Serving or retired judicial officers.
    - ▪ Other persons as may be specified by the state/district authority or the High Court/Tehsil legal services committee or as the case may be, organising such Lok Adalats.
  - o The persons deciding the cases in the Lok Adalats are called the **Members of the Lok Adalats.** Role played by these members:
    - ▪ They have the **role of statutory conciliators only** and do not have any judicial role.
    - ▪ This means, they can **only persuade** (and shall not pressurize or coerce) the parties.
    - ▪ As a result, the Lok Adalat will not decide the subject on its own initiative, but rather on the basis of a **compromise or settlement** reached between the parties.
    - ▪ The members will assist the parties in reaching an amicable settlement of their dispute in an **unbiased and impartial way**.

- **Types of cases at Lok Adalat:**
  - o Transfer or change of land title cases, compoundable criminal offences, family disputes, encroachment on forest lands, land acquisition disputes, motor accident claims and cases which are not sub-judice.
  - o Provided that the Lok Adalat shall have no jurisdiction in respect of any matter or case relating to an offence not compoundable (can't be quashed) under any law.
- **Powers: Under the Legal Services Authorities Act, 1987 -**
  - o Lok Adalats shall have jurisdiction to determine and to arrive at a compromise or settlement between the parties to a dispute in respect of -
    - ▪ Any case pending before the court.
    - ▪ Any matter which is falling within the jurisdiction of and is not brought before any court for which the Lok Adalat is organised (pre-litigation stage).
  - o The award (decision) made by the Lok Adalats is deemed to be **a decree of a civil court.**
  - o Such award is **final and binding** on all parties and **no appeal** against such an award lies before any court of law.
  - o However, in exercising their right to litigate, the parties involved are free to approach the court with relevant jurisdiction and file a case by following the required procedure.
- **Court fee:**
  - o There is **no court fee** payable when a matter is filed in a Lok Adalat.
  - o The court fee originally paid in the court on the complaints or petition is also **refunded back** to the parties if a matter pending in the court of law is referred to the Lok Adalat and is later settled.

Difference between Lok Adalat and a law court:
- o In general, Lok Adalat is not a court in the traditional sense.

- o Lok Adalat is **a forum established by the people or interested parties** such as legal aid providers and public-spirited individuals to allow ordinary residents to air their grievances against state agencies or other citizens and seek an equitable resolution.

3. Right to be Forgotten

Why in News?
The Supreme Court agreed to hear a case by online legal chronicler (Indian Kanoon), whose outcome will likely shape the contours of the "right to be forgotten".
The online portal challenged a Madras HC order, which after reversing a trial court judgment convicting a person of sexual assault charges, had directed the portal to remove the conviction judgment.

What is the Right to be Forgotten?
- It is the right to have publicly available **personal information removed from the internet**, search engines, databases, websites or any other public platforms.
- One can seek this right when their personal information is **no longer necessary or relevant** and the presence of his/her digital footprint violates their **right to privacy.**
- This right has been recognised as a statutory right in the **EU** (as "right to erasure") under the General Data Protection Regulation (**GDPR**) and has been upheld by a number of courts in the UK and elsewhere in Europe.

How is the 'Right to be Forgotten' Interpreted in India?
- **Position in India:**
  - o In India, there is **no statutory framework** that prescribes the right to be forgotten.
  - o However, the **Personal Data Protection Bill 2019** and **court rulings** have expressly recognised this right.
- **The Personal Data Protection (PDP) Bill 2019:**
  - o The Bill gave an individual the right to restrict or prevent the continued disclosure of their personal data when such data -
    - Has served the purpose for which it was collected.
    - Was made with the individual's consent, which has since been withdrawn.
    - Was made contrary to the PDP Bill or any law in force.
- **The court rulings:**
  - o The SC in the landmark **KS Puttaswamy or Right to privacy judgement** (2017) recognised that the right to control his/her own life would also encompass his/her **right to control their existence on the internet.**
  - o Since the right to privacy verdict, high courts have taken a broader view of the issue. **For example,**
    - In 2019, the Delhi HC said the "right to be forgotten" and "right to be left alone" are **inherent aspects of the right to privacy.**
    - In 2021, the Delhi HC extended the right to be forgotten to even a **criminal case** by ruling to take down search results relating to an American law student (acquitted in a customs case).
    - In 2020, the Orissa HC held that the right to be forgotten is a thorny issue in terms of practicality and technological nuances and **needs a widespread debate**.

When can the 'Right to be Forgotten' be Asserted?
- The SC of India clarified in its right to privacy decision that -
  - o An individual should be able to remove his/her personal data, if such data or information is **no longer necessary, relevant** or **incorrect and serves no legitimate interest.**
  - o This right **cannot be exercised** where the information or data is

- Necessary for exercising the right of freedom of expression,
- In compliance with legal obligations,
- In public interest, etc.
  - o The Delhi HC also noted that the **right to privacy should be balanced with the right to information of the public** and maintenance of transparency in judicial records.
  - o Therefore, the issue underscores **the tension between the "right to be forgotten" of the acquitted person and citizens' "right to be informed"**.

Questions to be Addressed by the SC in the 'Right to be Forgotten' Case:
- The top court has to decide whether the right to be forgotten is **a fundamental right** and, if so, **how it relates to other fundamental rights** guaranteed by the Constitution of India.
- **Two questions before the SC:**
  - o Can a person, upon reversal of his conviction in a criminal case by a higher court, demand erasure from the websites the earlier judgement that had convicted him/her?
  - o Would a higher court that acquits an accused in a criminal case (by reversing the earlier judgement) be within its jurisdiction to order a web portal to expunge the earlier conviction judgement to honour the acquitted person's right to be forgotten?

4. Using Children's Personal Data Legally and Securely

Context
- **The Indian school education system** stands as one of the **most expansive and intricate ecosystems globally.**
- It **encompasses approximately 15 lakh schools, 97 lakh teachers, and nearly 26.5 crore students** from pre-primary to higher secondary levels.
- This vast system includes stakeholders from varied socioeconomic backgrounds, **which adds to its complexity and richness and therefore adherence to the principles of data privacy and data minimisation is particularly pertinent** given the sensitive nature of children's personal data.

Key Functions of Unified District Information System for Education Plus (UDISE+)
- **Data Collection, Management and Real-Time Updates**
  - o UDISE+ is **designed to collect comprehensive data from schools** across the country.
  - o This **includes information on school infrastructure, teacher demographics, student enrolment,** and academic performance.
  - o By **integrating this data into a centralised system, UDISE+ provides a holistic view** of the education landscape in India.
  - o One of the standout features of UDISE+ is its **ability to provide real-time updates.**
  - o **This means that any changes in school infrastructure, staff, or student enrolment can be quickly reflected** in the system.
  - o **Such immediacy ensures that policymakers have the most current information** when making decisions.
- **Resource Allocation, Monitoring and Evaluation**
  - o With accurate and up-to-date data, **UDISE+ facilitates more effective resource allocation**.
  - o Whether it is the distribution of textbooks, deployment of teachers, or infrastructure development, **resources can be directed to areas where they are most needed**, enhancing the overall quality of education.
  - o **UDISE+ enables continuous monitoring and evaluation of educational programs** and policies.

- o **By tracking progress and identifying trends, the Ministry of Education can assess the effectiveness of its initiatives** and make necessary adjustments to achieve desired outcomes.
- **Educational Trends Mapping and Policy Formulation**
  - o The **platform is instrumental in mapping educational trends** across the country.
  - o This **includes tracking enrolment rates, dropout rates, gender parity, and academic achievements.**
  - o Such data is crucial for identifying gaps and areas that require targeted interventions.
  - o The insights gained from UDISE+ data are invaluable for policy formulation.
  - o **The Ministry can develop and implement policies that are evidence-based and tailored to the specific needs of different regions** and demographics, ultimately improving the quality of education.

The Linkage of UDISE+ and the National Education Policy 2020 and Its Benefits

- **UDISE+ and the National Education Policy 2020**
  - o In **alignment with the National Education Policy (NEP) 2020, UDISE+ incorporates the Automated Permanent Academic Account Registry (APAAR).**
  - o APAAR **serves as a unique identifier for each student**, allowing for the consolidation of academic credentials and demographic information in one place.
  - o This **integration ensures that every student's educational journey is tracked accurately,** facilitating seamless transitions between different levels of education.
- **Enhancing Ease of Schooling**
  - o The **linkage between UDISE+ and APAAR is central to enhancing the ease of schooling**.
  - o **Automating student admissions helps reduce dropout rates** during critical transitional phases, such as moving from primary to secondary education.
  - o **This automation also improves opportunities for continuing education** by making the admission process smoother and more accessible.
- **Collaborations with Ed-Tech Companies**
  - o **UDISE+ frequently collaborates with ed-tech companies** and entities like DigiLocker.
  - o These **collaborations integrate modern technological solutions** into the education system, providing digital infrastructure for storing and accessing academic records securely.

Concerns Surrounding UDISE+ and Solution

- **Data Privacy and Security**
  - o While UDISE+ significantly improves data management and policy formulation, **it also brings challenges related to data privacy and security.**
  - o There are **numerous potential pressure points wherein non-compliance of the involved actors may materialise.**
  - o For instance, **there is limited guidance on what constitutes verifiable parental consent. Consent from parents for minors' data**, sought under the UDISE+/APAAR regime, may violate this requirement.
  - o Moreover, **the DPDP Act emphasises the importance of collecting personal data for specified legitimate purposes only.**
  - o Sharing children's data under UDISE+ for a purpose incremental to the authorised one could violate this statutory requirement.
  - o **The interlinking of data raises concerns about the exposure of student information** to various actors within the educational ecosystem.
  - o The **platform's reliance on personal data, including Aadhaar information, necessitates stringent measures** to protect sensitive information.

- **Solution: Adherence to SC's Puttaswamy Judgement**

- The Supreme Court's recognition of the right to privacy as a fundamental right in the Justice K.S. Puttaswamy (Retd.) v. Union of India (2018) case laid down a three-part test for assessing the impact of state action on citizens' privacy rights.
  - The test includes **legitimate state interest in restricting the right, necessity and proportionality of the restriction to achieve the interest, and the restriction being imposed by law.**
  - **Aadhaar integration in APAAR/UDISE+ must comply with these conditions**, with due caution to prevent data theft and cyber breaches.

The Need for Specific Protocols to Handle Children's Data in Indian Education System
- **Lack of Specific Mechanism for Sharing Children's Data**
  - When it comes to sharing children's personal data without a clear purpose, **involving third parties like DigiLocker can create uncertainty about their roles.**
  - It is necessary to identify who is responsible for data (data fiduciary), who processes it (data processor), and whose data it is (data principal) to assign liability, but this has not been done yet.
  - **APAAR's privacy policy includes some data security and handling rules,** but it lacks specific protocols for sharing children's data for unspecified purposes.
- **No Clarity on Legal Responsibilities**
  - **Both the data policy and the annual report state that the Ministry is not legally responsible** for the disclosure or accuracy of data shared on UDISE+.
  - **The privacy policy directs complaints to a grievance officer**, but it is unclear how legal responsibility is assigned or handled.
  - **This shows a clear lack of a proper complaint system** for those whose data is collected and shared under APAAR.
  - There are many questions about how different systems work together, consent, and how complaints are handled.
  - **Developing standard operating procedures, both technical and legal, within a strong governance framework is urgently needed.**
  - These protocols will help ensure data accuracy and establish legal responsibilities for everyone involved.

Conclusion
- **The Indian school education system, with its vast and diverse ecosystem, requires robust mechanisms** to manage and protect the personal data of millions of students.
- **Standard operating procedures, both technical and legal**, under a comprehensive governance framework, **are essential to preserve data authenticity and enforce legal obligations** for stakeholders.
- **Implementing such protocols will create a conscientious approach to sharing, using, and retaining children's personal data,** ensuring it is done lawfully and securely.

5. The Geo-Calculus of the Moscow Visit

Context
- Two weeks after PM Modi's visit to Russia, **the U.S. and Europe are still reacting to the evident warmth between Modi and Russian President Vladimir Putin.**
- This **visit amidst the ongoing Ukraine war drew criticism** from Ukrainian President Volodymyr Zelenskyy and disappointment from U.S. officials.
- Despite **India asserting its freedom of choice, it has attempted to reassure that its fundamental worldview remains unchanged.**

- However, PM Modi's visit to Russia carries significant implications, suggesting that something may indeed have shifted.

The Significance of PM's Russia Visit and Assessment on Conflict in Ukraine
- **Timing and Significance of the Visit**
  - The **timing of PM Modi's visit to Russia is significant, occurring two years after the onset of the conflict in Ukraine.**
  - This **delay in direct engagement with Russia post-invasion reflects a nuanced approach** to a complex geopolitical landscape.
  - Initially, **after Russia invaded Ukraine, the PM abstained from the annual India-Russia summits** in 2022 and 2023.
  - During this period, **India's public stance was encapsulated in PM Modi's statement to Putin at the Shanghai Cooperation Organisation (SCO) summit in Uzbekistan** in September 2022: **this era is not of war.**
  - This **declaration indicated India's disapproval of the conflict without directly condemning Russia,** maintaining a delicate balance in international relations.
- **Gradual Transformation of the Conflict**
  - As the war in Ukraine progressed, the nature of the conflict transformed. **The Russian military faced severe setbacks in the initial stages**, including a failed offensive on Kyiv and a significant underestimation of Ukrainian resistance.
  - President Zelenskyy and the Ukrainian defences demonstrated resilience, defying Russian expectations.
  - The conflict also saw a desperate Russian draft targeting the youth, leading many Moscow elites to flee the country.
  - Additionally, **the Russian military suffered massive casualties and questions arose regarding the effectiveness of Russian military hardware** against the advanced equipment supplied to Ukraine by NATO countries.
  - **Despite these challenges, Russia managed to stabilise its position**, particularly in the eastern regions of Ukraine that it occupied and later integrated into its territory through constitutional amendments.
  - This **strategic entrenchment has allowed Russia to maintain control over these areas,** creating a de facto situation on the ground.

Factors Behind India's Decision to Re-Engage with Russia
- **U.S. Political Dynamics and Strategic Calculations**
  - New Delhi seems to have factored in the political dynamics in Washington.
  - Even before U.S. President Joe Biden announced his decision not to seek re-election, **there were indications that his potential challenger, former President Donald Trump, might adopt a less confrontational stance towards Moscow** and reduce U.S. support for Kyiv.
  - This anticipated shift in U.S. policy further influences India's strategic calculations.
- **An Acknowledgement of the End of Worst Phase for Russia**
  - **Modi's visit to Russia can thus be interpreted as an acknowledgment that Russia has endured the worst phases of the conflict** and that it is now prudent for India to re-engage with Moscow to prevent further deterioration of bilateral ties.
  - The **language used in the India-Russia joint statement during Modi's visit reflects subtle shifts in India's position.**
  - The **reference to the conflict around Ukraine rather than in Ukraine subtly acknowledges Russian territorial claims.**

- Furthermore, **the joint statement's appreciation for peace proposals "in accordance with international law and on the basis of the UN Charter" signals a convergence of views between India and Russia** on the framework for resolving the conflict.

India's Position at the United Nations on Ukraine War
- **India's consistent refusal to criticise Russia for the war is evident in its voting record** at the UN.
- **India has abstained from over 20 votes condemning Russia**, including the most recent one on July 11 at the UN General Assembly, which called on Russia to ceasefire following missile attacks targeting civilian infrastructure, including a children's hospital.
- **Despite high-level engagements with Ukraine**, such as meetings with President Zelenskyy and a visit by Ukraine's Foreign Minister Dmytro Kuleba to India in March 2024, **New Delhi has been cautious in its responses to Kyiv's requests.**
- **For instance, India has hesitated to allow Indian companies to provide construction, medical devices, and telecom infrastructure to the Ukrainian government**, limiting its assistance to humanitarian aid.
- **This restraint indicates India's unwillingness to provoke Russia**, highlighting the delicate balance it seeks to maintain in its foreign policy.

Geopolitical and Geo-Economics Factors Behind India's Re-Engagement with Russia
- **Keeping Russia Away from China**
  - The geopolitical signalling of the visit extends beyond India-Russia relations.
  - **By visiting Moscow** shortly after cancelling a trip to Astana, Kazakhstan, for the SCO Summit, **PM Modi demonstrated a willingness to forgo a joint appearance with Chinese President Xi Jinping but not with Mr. Putin.**
  - This contrasts with western messaging, which urges China to reduce its support for Russia.
  - **India's priority remains keeping Russia on its side** amid continuing tensions with China at the Line of Actual Control, despite its partnerships with western countries in the Indo-Pacific.
- **A Reminder to the West: India Has Other Options**
  - **The U.S.'s recent actions have also given New Delhi pause**. The Biden administration has forged AUKUS (Australia-UK-US) for nuclear submarines.
  - The **US engaged Quad Plus countries such as New Zealand, South Korea, Vietnam, and the Philippines, and hosted the "AP-4"** (Australia, New Zealand, South Korea, and Japan) during the NATO summit in Washington, coinciding with the Modi-Putin summit.
  - **New Delhi risks limiting its utility to Indo-Pacific partners compared to these other groups** by refusing to make the Quad (India, Japan, Australia, U.S.) a strategic concept.
  - **Whether the Modi government can convince its partners to infuse new energy into the Quad remains to be seen,** with a Quad Foreign Ministers' meeting and a possible Quad summit later this year in New Delhi.
  - **In this context, the Russia visit asserted India's strategic autonomy** and reminded that India has other options.
- **The Geo-Economics Factor**
  - PM Modi's Russian visit must be considered in its geo-economic context.
  - **Regardless of battlefield outcomes in Ukraine, western sanctions against Russia will likely persist,** and so will India's supply of discounted Russian oil.
  - **These imports have significantly boosted India-Russia trade, growing by 66% to $65 billion** last year and another 20% in the first quarter of 2024.
  - Sustaining this growth requires developing payment mechanisms for oil imports.
  - **The Modi-Putin summit addressed this issue** with action items in nine specific areas, prioritising circumventing western sanctions.

- **Energy Supplies and Commodity Exports**
  - o The **joint statement on cooperation in Russia's Far East aims to increase energy supplies and commodity exports** using the yet-to-be-operationalised Chennai-Vladivostok maritime corridor.
  - o **These measures will help rationalise the trade imbalance and develop mutual investments,** such as Rosneft's controlling stake in the Gujarat-based Vadinar refinery and Indian public sector units' stakes in Russian oil fields.
  - o **Despite financial implications, the U.S. and Europe have avoided sanctioning these transactions**, accepting Vadinar-processed Russian oil products as Indian products.
  - o **New Delhi surmises that more such deals could be safely pursued** in the future.

Conclusion
- **These calculations could be disrupted by developments in the Ukraine war,** the Russian economy's struggle with sanctions, and post-election shifts in the U.S.
- **However, the enduring message** from PM Modi's Moscow visit is the **solid bet his government has placed on India-Russia ties.**
- **This visit underscores India's strategic autonomy, highlights its geopolitical manoeuvring, and reinforces its geo-economic strategies**, ensuring that India's relationship with Russia remains a cornerstone of its foreign policy.

6. Big Brother to Brother, A Nepal-India Reset

Context
- **Relations between India and Nepal have seen significant turbulence since 2015**, a year marked by the leadership of Prime Ministers Narendra Modi of India and Khadga Prasad Oli of Nepal.
- **This period has been characterised by diplomatic strains**, economic blockades, and geopolitical manoeuvrings that have left a lasting impact on the bilateral relationship.
- However, **the current political landscape presents an opportunity** to recalibrate and stabilise these relations, **with both leaders once again at the helm of their respective governments.**

An Analysis of India-Nepal Bilateral Turbulence: Reasons, Implications and Efforts to Restore Ties
- **Nepal's New Constitution and India's Reaction**
  - o **In 2015, Nepal's Constituent Assembly adopted a new Constitution**, marking a significant milestone in the country's political development.
  - o This **new Constitution was intended to solidify Nepal's transition to a federal democratic republic** following a decade-long civil war and subsequent political turmoil.
  - o However, **its promulgation was met with considerable controversy** and opposition, **particularly from India.**
  - o **India had expressed concerns about certain provisions in the Constitution, primarily related to the representation and rights of the Madhesi community,** an ethnic group predominantly residing in the Tarai plains near the India-Nepal border.
- **The Blockade**
  - o **In response to the adoption of the Constitution, India imposed an unofficial blockade** on Nepal, severely restricting the flow of goods, including essential supplies like fuel, medicine, and food.
  - o **The blockade, which began in late September 2015, lasted for nearly six months** and had devastating effects on Nepal's economy and its population's daily lives.
  - o The **landlocked nation, heavily dependent on imports from India**, faced acute shortages, leading to widespread hardship and unrest.

- o The **official Indian stance was that the blockade was a result of protests by the Madhesi activists** who had blockaded key entry points along the border.
- o However, **many in Nepal and international observers believed that the Indian government had a direct hand** in enforcing the blockade **as a means to exert pressure on Kathmandu** to amend the Constitution.

- **Political and Economic Implications of the Blockade**
  - o The **blockade not only strained diplomatic ties but also had profound political and economic repercussions.**
  - o It **disrupted daily life in Nepal, with hospitals running out of essential medicines**, schools closing due to lack of fuel, and businesses suffering from the scarcity of goods.
  - o The **blockade worsened the challenges Nepal was already facing in the aftermath of the devastating April 2015 earthquake**, which had caused widespread destruction and loss of life.
  - o Politically, **the blockade strengthened nationalist sentiments in Nepal** and led to a shift in its foreign policy orientation.
  - o **PM Khadga Prasad Oli**, who came to power shortly before the blockade, **leveraged the crisis to bolster ties with China.**

- **Diplomatic Efforts to Restore Ties and Unresolved Issues**
  - o Following the lifting of the blockade in early 2016, **efforts were made to mend the strained relationship between India and Nepal.**
  - o **High-level visits and diplomatic engagements aimed to rebuild trust and cooperation.** However, the legacy of the blockade continued to cast a long shadow over bilateral ties.
  - o The **blockade highlighted the complexities of the India-Nepal relationship,** underscoring issues of mutual dependence, sovereignty, and geopolitical manoeuvring.
  - o The **unresolved grievances of the Madhesi community remained a contentious issue,** affecting Nepal's internal stability and its relations with India.

Post Blockade Diplomatic and Political Strains between India and Nepal

- **Post-Blockade Tensions and Territorial Disputes**
  - o Despite diplomatic efforts to resolve the fallout from the blockade, **the relationship remained strained due to unresolved territorial disputes** and nationalistic rhetoric from both sides.
  - o **In October 2019, India published an updated political map that included the Limpiyadhura-Kalapani region**, an area also **claimed by Nepal.**
  - o In response, **Nepal's Parliament amended its Constitution to incorporate the Limpiyadhura-Kalapani region into its own map.**
  - o This **unilateral action by Nepal escalated the dispute**, highlighting the deep-seated mistrust and sensitivity surrounding border issues.

- **Increasing Indian Involvement in Nepali Politics**
  - o During this period of heightened tensions, **India increased its involvement in Nepal's political and governance issues.**
  - o This **involvement manifested in several ways, including political pressure, diplomatic engagements, and support for certain political factions** within Nepal.
  - o **India's actions were seen by many in Nepal as interference in its internal affairs**, which **contradicted the principles of non-interference** and mutual respect outlined in the **Panchsheel doctrine.**
  - o India's **engagement extended beyond formal diplomatic channels. The Rashtriya Swayamsevak Sangh (RSS) and the Bharatiya Janata Party (BJP) actively promoted a Hindutva agenda within Nepal**, aiming to align Nepal's political and cultural landscape more closely with their vision of India.

- **Perceived Overreach and Power Dynamics**
  - o **India's involvement** in Nepal's internal politics **was perceived as overreach by many Nepalis.**

- o This **perception was compounded by India's actions during the blockade**, which were seen as punitive and coercive.
- o The **blockade had left a deep scar on Nepal**, and India's continued involvement in its political affairs was viewed with suspicion and resentment.
- o The **power dynamics between the two countries were starkly illustrated during the tenure of Prime Minister Pushpa Kamal Dahal** ('Prachanda'). Dahal, the leader of the Maoist party, faced criticism for his perceived subservience to India.
- o **During his visits to India, Dahal was reluctant to address contentious issues, such as the air routes for Nepal's international airports**, the territorial dispute over Limpiyadhura-Kalapani, and the report of the Eminent Persons' Group (EPG).

Moving Forward: Opportunities and Challenges
- **Recalibrating Diplomatic Relations**
  - o With Prime Minister Narendra Modi securing a third term in India and Khadga Prasad Oli reclaiming leadership in Nepal, **both countries have a chance to reset their bilateral relationship.**
  - o This **fresh start could focus on building trust, addressing unresolved issues**, and fostering a more cooperative and respectful partnership.
  - o **Regular high-level engagements** between the two countries **can help in addressing misunderstandings and building trust.**
  - o **Summit meetings, foreign minister dialogues, and joint commissions can serve as platforms to discuss bilateral issues** and explore areas of mutual interest.
- **Addressing Territorial Disputes**
  - o **The territorial disputes**, particularly over the Limpiyadhura-Kalapani region, **need a nuanced and diplomatic approach.**
  - o **Both countries should prioritise dialogue** and negotiations to find a mutually acceptable solution.
  - o **Engaging in continuous and structured bilateral talks** with a focus on resolving the territorial disputes is
  - o These discussions should be based on historical documents, maps, and mutually agreed principles to reach a fair resolution.
- **Economic Cooperation and Trade**
  - o **Economic cooperation is a key area** where both India and Nepal can benefit immensely. Strengthening economic ties can create a win-win situation, creating growth and development in both countries.
  - o **Reviewing and updating trade agreements to facilitate smoother and more efficient trade can boost economic relations.**
  - o Reducing tariffs, addressing non-tariff barriers, and improving customs procedures can enhance bilateral trade.

Conclusion
- For India and Nepal to achieve a stable and positive relationship, **a shift in approach is necessary.**
- **Developing mutual understanding and cooperation can transform** the open border between the two countries into a model for regional peace and connectivity.
- This **change would likely lead to a politically stable and economically vibrant Nepal, benefiting India's own security and economic interests.**

7. SC Judgment on the Muslim Women's Right to Maintenance: The Battle in Court, From 1980 to 2024

Context

- **The Supreme Court of India has recently issued a landmark judgment** in the case of Mohd Abdul Samad vs The State of Telangana.
- This **judgement has significantly strengthened the rights of divorced Muslim women to claim maintenance** under Section 125 of the Code of Criminal Procedure (CrPC), 1973.
- This **decision represents a pivotal moment in the ongoing legal journey, reaffirming the socially beneficial provision that allows women to seek maintenance**, thereby providing clarity and justice after decades of ambiguity and legal contention.

The Shah Bano Case and its Aftermath

- The **issue of maintenance rights for divorced Muslim women first gained national attention with the SC ruling in the** Shah Bano **case in 1985** (Mohd Ahmed Khan vs Shah Bano Begum).
- In this case, **the Court upheld the right of a divorced Muslim woman to claim maintenance** under Section 125 of the CrPC, which led to a significant political and social uproar.
- In response, **the Indian Parliament enacted the Muslim Women (Protection of Rights on Divorce) Act (MWA) in 1986.**
- The Act provided for maintenance during the iddat period (the waiting period following a divorce) and a fair and reasonable provision for the future.

The Legal Conundrum Surrounding the Maintenance Rights of Divorced Muslim Women in India

- **Conflicting Judgments and Legal Ambiguity**
  o The **MWA was perceived by many as a regressive step,** as it was believed to limit the maintenance rights of divorced Muslim women to the iddat period (a few months post-divorce) and mandate a 'fair and reasonable provision' for their future within this period.
  o **The introduction of the MWA led to considerable confusion and conflicting interpretations** by various high courts.
  o **Some courts ruled that the MWA provided a more comprehensive and special remedy** that should be exclusively followed, effectively nullifying the applicability of Section 125 of the CrPC to divorced Muslim women.
  o **Other courts maintained that Section 125, being a secular provision, continued to be available to all women** irrespective of their religion, thus including divorced Muslim women.

- **High Courts' Divergent Rulings**
  o **Exclusive Applicability of MWA**
    ▪ Some high courts held that since the **MWA was specifically enacted for divorced Muslim women,** it should take precedence over the CrPC.
    ▪ This **interpretation suggested that the remedies provided under the MWA were both special and exhaustive**, thereby excluding the application of Section 125 of the CrPC to divorced Muslim women.
  o **Concurrent Applicability**
    ▪ **Other high courts ruled that the two legal provisions could coexist**. They argued that Section 125 of the CrPC, being a secular and beneficial legislation, was intended to provide maintenance to all women, including those divorced under Muslim personal law.
    ▪ **These courts emphasised that the CrPC aimed at preventing destitution** and vagrancy, objectives that should not be overridden by the MWA.
  o **Hierarchy of Laws**
    ▪ **Another line of reasoning was based on the principle of lex specialis**, which suggests that a specific law (MWA) should prevail over a general law (CrPC).

- However, **this approach was complicated by the fact that the CrPC is a procedural law with a broad social welfare mandate**, while the MWA is a personal law specific to Muslim women.

- **SC's Clarification**
  - The **legal ambiguity and conflicting high court judgments necessitated a definitive ruling** by the SC.
  - **In the** Mohd Abdul Samad **case, the SC provided much-needed clarity** by unequivocally stating that the enactment of the MWA did not extinguish the rights of divorced Muslim women under Section 125 of the CrPC.
  - The **SC emphasised that Section 125 is a secular provision designed to prevent vagrancy and destitution** by ensuring that women unable to maintain themselves receive maintenance.
  - **It is a socially beneficial provision that should not be negated by the MWA**.
  - The **Court held that while the MWA provides specific rights** and remedies, it **does not override or negate the broader and more inclusive protections offered under the CrPC.**

The Case of Mohd Abdul Samad vs The State of Telangana and the SC Verdict
- **About the Case**
  - In this case, **a deserted wife approached the family court in Telangana for maintenance under Section 125,** and the court awarded her Rs 20,000 as monthly maintenance.
  - Subsequently, **her husband divorced her and contested her right to claim maintenance under Section 125**, arguing that her rights were now governed by the MWA.
  - The **Telangana High Court rejected the husband's arguments but reduced the maintenance amount to Rs 10,000 per month**. The husband then appealed to the Supreme Court.
- **SC Verdict**
  - **On July 10, a bench comprising Justices B V Nagarathna and Augustine George Masih upheld the wife's right to claim maintenance** under Section 125 of the CrPC.
  - The Court ruled that this right is not nullified by the enactment of the MWA, emphasizing the socially beneficial nature of Section 125.
  - **This judgment has thus put to rest the prevailing controversy** and reinforced the maintenance rights of divorced Muslim women.

Existing Precedents and Interpretations Surrounding Maintenance Rights for Divorced Muslim Women in India
- **The Danial Latifi Case (2001)**
  - In this case **the constitutional validity of the MWA was challenged.**
  - The **petitioners argued that the MWA violated the fundamental rights of Muslim women** by limiting their maintenance rights.
  - A **five-judge Constitution Bench of the SC examined these arguments and provided a landmark judgment** that balanced the provisions of the MWA with the constitutional mandate of equality and non-discrimination.
  - The **SC upheld the constitutional validity of the MWA**, affirming that **it did not violate the fundamental rights enshrined in Articles 14 (Right to Equality), 15 (Prohibition of Discrimination), and 21 (Right to Life)** of the Indian Constitution.
  - **The Court ruled that MVA should not be limited to the iddat period but must encompass the future needs** of the divorced wife.
- **Sabra Shamim vs Maqsood Ansari (2004)**
  - The **Allahabad HC reiterated that the MWA does not take away the right of a divorced Muslim woman** to claim maintenance under Section 125 of the CrPC.
  - It emphasised that the provisions of the CrPC are available to all women, irrespective of their religion.

- **Iqbal Bano vs State of UP (2007)**
  - The **SC held that a divorced Muslim woman has the option to either proceed under the provisions of the MWA or under Section 125 of the CrPC**, thereby reaffirming the concurrent applicability of both legal frameworks.
  - **Shamim Bano vs Asraf Khan (2014)**
  - **The SC once again upheld the right of a divorced Muslim woman to claim maintenance under Section 125,** stating that the beneficial provisions of the CrPC are available to all women, including those governed by personal laws.

Conclusion
- The **SC's judgment in** Mohd Abdul Samad vs The State of Telangana **is a significant step** towards ensuring justice and equality for divorced Muslim women.
- **By upholding their right to claim maintenance under Section 125 of the CrPC, the Court has clarified a long-standing legal ambiguity** and reinforced the secular and socially beneficial intent of the law.
- **This decision not only provides legal clarity but also affirms the fundamental rights of all women,** contributing to the broader goal of social justice and welfare in India.

8. Why States Must Reconsider Their Demand for Special Category Status

Context
- **Special Category Status (SCS) has played a crucial role in addressing regional disparities,** its future remains uncertain amidst evolving political and economic landscapes.
- **Leaders of aspiring states push for SCS for political reasons** without thoroughly assessing the net benefits.
- The **challenge lies in finding a balanced approach** that continues to support underprivileged states while ensuring equitable development across the country.

The Concept of SCS and Role of the National Development Council (NDC) and Finance Commission (FC)
- The concept of SCS was **introduced in 1969 during the Fourth Five-Year Plan by the Planning Commission**, aiming to address the disparities in development among Indian states.
- The **NDC played a significant role in this process by providing plan assistance to states** using **the Gadgil formula**, which gave higher weightage to population and economic deprivation.
- This **formula ensured that 30 percent of funds were reserved for SCS states.**
- The **FC also recognised the importance of SCS** and incorporated it into their budgetary deficit considerations and tax devolution criteria.
- **These states benefited from a funding model where 90 percent of centrally-sponsored schemes were grants** and the remaining 10 percent were loans, unlike other states which received 60 or 75 percent grants.

Additional Benefits of Special Category Status
- **Concession in Taxes**
  - **SCS states receive significant relief in excise duties**, which are taxes levied on the manufacture of goods within the country.
  - This **relief helps local industries by reducing their tax burden**, encouraging industrial development and investment in these states.
  - **Concessions in customs duties,** which are taxes imposed on imported goods, **lower the cost of imported raw materials** and goods for industries in SCS states.

- o This **reduction makes it more economical for businesses to operate and expand in these regions**, fostering economic growth.
- o **These lower tax rates make the states more attractive** to both individuals and businesses, encouraging investment and the establishment of new enterprises.
- **Higher Central Plan Status**
  - o **SCS states receive 90 percent of the funding for centrally sponsored schemes as grants,** with only 10 percent provided as loans.
  - o In contrast, **other states receive 60 or 75 percent as grants** and the remaining amount as loans.
  - o This **favourable funding structure greatly reduces the financial burden on SCS states,** enabling them to undertake more development projects.
  - o The **higher central assistance provides SCS states with greater flexibility** in utilising funds for various developmental projects.
  - o This **flexibility allows states to tailor the use of funds to address their specific needs** and challenges effectively.
- **Enhanced Financial Transfers**
  - o The **Finance Commission's criteria for tax devolution have often favoured SCS states,** ensuring a higher share of central taxes is transferred to them.
  - o This **higher share helps compensate for their developmental lag and geographical disadvantages.**
  - o The **Finance Commission also considers the budgetary deficits of SCS** states more favourably.
  - o This **consideration results in additional financial support to cover gaps in their budgets,** ensuring they can maintain essential public services and infrastructure projects.

Transition to NITI Aayog and Current Scenario
- With the replacement of the Planning Commission by NITI Aayog, **the mechanism for central plan assistance has changed.**
- Now, **all Centre-to-state transfers are managed through the Finance Commission,** except for specific central sector and centrally sponsored schemes.
- While the structural framework has evolved, **the core objective of supporting underprivileged states remains.**
- The **transition has introduced a more streamlined and accountable process for fund allocation,** with a focus on performance-based incentives and outcome-oriented funding.
- However, **the fundamental benefits that SCS states received in terms of financial support and tax concessions continue to play a crucial role** in their development trajectories.

Recommendations of the 14th and 15th Finance Commissions
- **Acknowledgment of Demands and Concerns by 14th FC**
  - o The **14th Finance Commission did not consider SCS in its recommendations,** though it acknowledged the demands and concerns of various states.
  - o **It proposed higher allocations for northeastern states**, Uttarakhand, and Himachal Pradesh, continuing the trend of higher grants and lower cost-sharing for central projects.
  - o **Special grants were also sanctioned to address specific challenges** faced by these states.
- **No Mention of SCS in 15th FC**
  - o The **15th Finance Commission did not explicitly mention SCS but allocated 10.5 percent of devolved taxes to the northeastern and hilly states**, accounting for only 5.2 percent of the population.
  - o **This decision resulted in lower shares for southern and western states.**
  - o The **Commission also considered factors like ecology and area,** leading to a higher share of divisible taxes for these states.

- The **shift to using the 2011 Census population data, as opposed to the 1971 data, further increased their share** due to higher population growth in SCS states, except Himachal Pradesh.

Challenges and Future Considerations
- **Political Controversies and Bargaining**
  - One of the most significant challenges with SCS is **its transformation into a tool for political bargaining.**
  - The **increased presence of regional parties in the central government has intensified demands for SCS**, often driven by political rather than developmental motives.
  - This **politicisation of SCS complicates the objective assessment** of which states genuinely need special assistance.
- **Fiscal Implications**
  - The **central government faces budgetary constraints** and must balance the need for supporting SCS states with other fiscal responsibilities.
  - **Allocating a significant portion of funds to SCS states can strain the overall budget.**
  - **Ensuring equity among states is a challenge**, as other states may perceive the benefits to SCS states as unfair, leading to demands for similar concessions.
  - This **can create regional tensions and calls for a re-evaluation of the SCS framework.**
- **Administrative Challenges**
  - Ensuring **that SCS states effectively utilise the funds and benefits provided is crucial and mismanagement** or under utilisation can negate the intended developmental impacts.
  - **There needs to be a robust framework for transparency and accountability** in the allocation and utilisation of funds.
  - This **includes regular audits and assessments to ensure that the benefits are reaching the intended targets.**
- **Establishing Clear, Updated Criteria**
  - The **government should develop an inclusive framework** that considers a wide range of factors, including economic performance, social development indices, and ecological vulnerabilities.
  - Also, **there is a need to establish a mechanism for regular review** and updating of the criteria to ensure they remain relevant and effective in addressing emerging challenges.
- **Strengthening Institutional Mechanisms**
  - **Strengthening institutional mechanisms** to ensure transparency, accountability, and effective utilisation of **resources is crucial.**
  - **Implementing robust monitoring systems** to track the progress and impact of SCS benefits, ensuring they **are used effectively for intended purposes.**
  - Building the capacity of state governments to manage and implement projects efficiently, ensuring that the benefits of SCS are fully realised.

Conclusion
- **The future of SCS in India depends on addressing its current challenges** and evolving the framework to meet contemporary needs.
- **By establishing clear, updated criteria, strengthening institutional mechanisms**, and developing regional cooperation, **SCS can continue to play a pivotal role in ensuring balanced regional development.**
- **The focus must remain on equitable growth, transparency, and accountability to achieve the intended socio-economic transformation** of underprivileged states.

9. India Pitches for Infusing New Energies into BIMSTEC Grouping

Why in the News?

India has called on the seven-nation Bay of Bengal Initiative for Multi-sectoral Technical and Economic Cooperation (BIMSTEC) grouping to infuse new energies, resources, and a fresh commitment to bolster cooperation among the Bay of Bengal countries.

About BIMSTEC:

- **The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) is a regional organization founded in 1997** to promote economic cooperation and technical collaboration among countries bordering the Bay of Bengal.
- The BIMSTEC region is **home to more than 1.7 billion people** which constitute around 23% of the global population.
- **Member Countries:**
  - **Bangladesh, Bhutan, India, Myanmar, Nepal, Sri Lanka, Thailand**
- **Objectives:**
  - Foster economic growth and development.
  - Enhance regional connectivity and integration.
  - Promote cooperation across various sectors such as trade, technology, energy, and transportation.
- **Priority Sectors:**
  - **Trade and Investment:** Boosting intra-regional trade and investments.
  - **Technology:** Sharing technological advancements.
  - **Energy:** Collaborating on renewable and sustainable energy projects.
  - **Transportation:** Improving regional connectivity.
  - **Tourism:** Promoting cultural and tourism exchanges.
  - **Agriculture:** Enhancing agricultural practices and ensuring food security.
  - **Fisheries:** Ensuring sustainable fisheries management.
- **Trade Dynamics:**
  - According to industry insiders, Intra-regional trade among BIMSTEC countries is above US$40 billion and the **potential trade opportunity evolving the BIMSTEC nations seems to be as high as US$250 billion**.
  - Notably, BIMSTEC countries constitute around 3.8% of world trade meaning that it has an immense potential to be a game-changer of the global south economy.
  - Presently, about 60% of BIMSTEC's combined GDP at present comes from trade.
  - Currently, **India's export share in BIMSTEC is about 50% (US$21 billion)**, followed by Thailand 30% (US$12.2 billion) and Myanmar 14% (US$6.1 billion).
  - **Over 40% of BIMSTEC's intra-regional trade is ocean-borne**, demonstrating the need for maritime connectivity.
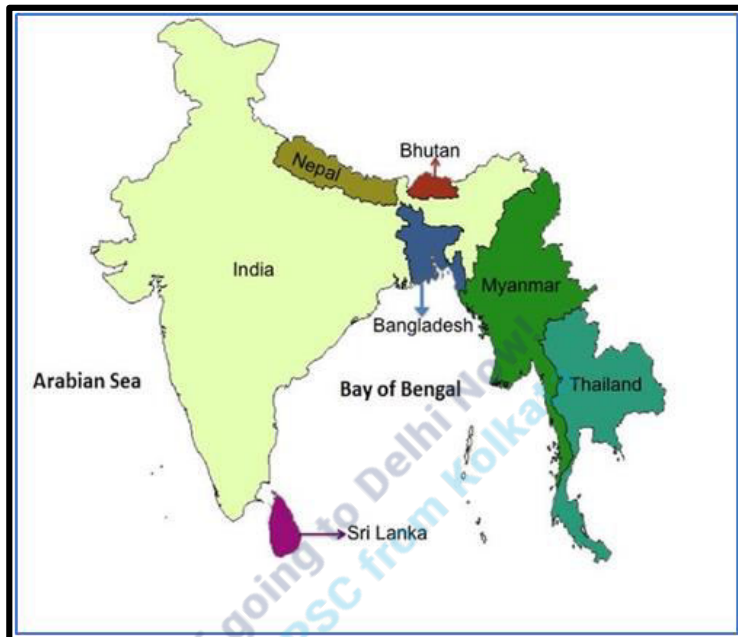
Challenges for BIMSTEC as an Organisation:

- Intra-regional trade and investment are relatively lower in the BIMSTEC region as compared to other regional blocs.
- One of the major reasons for this low level of trade and investment is **inadequate infrastructure**.

- Moreover, **lack of connectivity and information dissemination** in the region appears as a common barrier for tap BIMSTEC-led opportunities.
- Regarding border trade, lack of telecommunication links, parking space, warehouses and cold storage, accommodation facilities and power are major constraints.

News Summary:
- India has urged the BIMSTEC group to bring **new energy, resources, and commitment to enhance cooperation among its member countries.**
- This call was made by External Affairs Minister S. Jaishankar during a two-day retreat with his counterparts from the seven BIMSTEC nations: **India, Sri Lanka, Bangladesh, Myanmar, Thailand, Nepal, and Bhutan.**
- Discussions on the first day included topics such as connectivity, trade and business collaboration, health and space cooperation, digital public infrastructure, capacity building, and societal exchanges.
- Jaishankar emphasized that **BIMSTEC aligns with India's 'Neighbourhood First' policy, 'Act East Policy,' and 'SAGAR' vision, focusing on the Bay of Bengal region**.
- He highlighted the need to realize the collaborative potential of the region and conveyed a strong message of determination to enhance cooperation among the member countries.

10. Spiritual Orientation, Religious Practices and Courts

Context
- The **constant debate over the intersection of religion and law** often brings to the forefront the **complexity and sensitivity involved in adjudicating religious practices.**
- In the Indian context, **religion has been a cornerstone of societal existence**, with a pronounced religiosity among its population.
- Therefore, **it is important to examine the judicial order in** Navin Kumar (2024) **by Justice G.R. Swaminathan of the Madras High Court**, which permitted the religious practice of angapradakshinam, and the broader implications of judicial intervention in religious practices.

Angapradakshinam and the Court's Ruling
- **Angapradakshinam is a ritual that involves devotees rolling over banana leaves on which others have partaken food,** specifically in the context of the Sri Sadasiva Brahmendral temple in Tamil Nadu.
- This practice, **previously restricted by a 2015 order from Justice S. Manikumar due to concerns of caste discrimination.**
- **Recently it was allowed by Justice Swaminathan, who argued that the ritual did not exclusively involve Dalits** but included participants from various castes.
- **Justice Swaminathan's decision relied heavily on constitutional provisions**, asserting that the petitioner's right to practice his religion (**Article 25**) and his right to privacy and human dignity (**Article 21**) were upheld by this practice.

Implication of the Order: Revival of the Debate on Essential Religious Practices
- The order has **reignited debates on several fronts**: the definition of religion, the criteria for determining essential religious practices, and the judiciary's consistency in such determinations.
- **Justice Swaminathan, in his detailed judgment, cited several Supreme Court rulings** to assert that angapradakshinam was an established religious practice.
- **However, unlike similar cases, the court did not rigorously scrutinise whether the practice was essential** and integral to Hinduism or merely a superstitious act.

- This **lack of scrutiny raises questions about the judiciary's approach** to defining essential religious practices.

An Analysis of Judicial Consistency and the Essential Practices Doctrine
- **Origin and Early Application**
  - The doctrine was first articulated in the landmark case of The Commissioner, Hindu Religious Endowments, Madras v. Sri Lakshmindra Thirtha Swamiar of Sri Shirur Mutt **(1954).**
  - The **Supreme Court of India held that Article 25 protects not only religious beliefs but also the outward expressions** of those beliefs through rituals and ceremonies.
  - The **Court stated that what constitutes an essential part of religion should be determined with reference** to the doctrines of that religion itself.
  - This **case set a precedent for future determinations** of essential religious practices.
  - **Despite the clear principles laid out in the** Shirur Mutt **case, subsequent judgments have often deviated** from this standard, leading to inconsistent applications of the Essential Practices Doctrine.
- **The Durgah Committee, Ajmer v. Syed Hussain Ali (1961)**
  - In this case, **the Supreme Court took a more restrictive approach** and the Court ruled that only those practices which are essential and integral to the religion are protected under Article 25, and not every practice that claims religious significance.
  - **The Court differentiated between practices that are superstitious and those that are essential,** marking a shift from a broad to a narrower interpretation of protected religious practices.
- **Gramsabha of Village BattisShirala (2014)**
  - In Gramsabha of Village BattisShirala, **a sect claimed that capturing and worshipping a live cobra during the festival of Nag Panchami was an essential religious practice.**
  - The Court, however, relied on more general texts of the Dharmashastra, which did not mention such a practice, and ruled that it was not an essential practice.
  - This **decision demonstrated the Court's willingness to interpret religious texts broadly** rather than deferring to specific sectarian claims.
- **Mohammed Fasi v. State of Kerala (1985)**
  - The **Kerala High Court in** Mohammed Fasi **faced the question of whether a Muslim policeman could grow a beard as part of his religious practice.**
  - The **Court dismissed the claim, noting that some Muslim dignitaries do not sport beards**, and the petitioner himself had not always worn a beard.
  - The **Court did not examine Islamic texts in depth to determine the essentiality of the practice,** relying instead on empirical observations.
  - This **case highlighted the Court's reliance on practical considerations** over religious doctrines.
- **Acharya Jagdishwarananda Avadhuta v. Commissioner of Police, Calcutta (2004)**
  - In this case, the **Calcutta High Court initially ruled that the tandava dance was an essential practice of the Ananda Margi faith.**
  - The **Supreme Court, however, overruled this decision**, noting that the dance was adopted into the faith only in 1966, despite the faith itself being established in 1955.
  - The **Court's reasoning suggested that a practice could not be considered essential if it was not part of the religion from its inception**, thus freezing religious practices in time and ignoring their evolutionary nature.
- **Ismail Faruqui v. Union of India (1995)**
  - The Faruqui **case dealt with the acquisition of land where the Babri Masjid once stood.**
  - The **Supreme Court held that while offering prayers is an essential Islamic practice, doing so in a mosque is not,** unless the mosque holds specific religious significance.

- o **This judgment overlooked the central role of congregational prayers in Islam and the significance of mosques in facilitating these prayers**, showcasing the Court's inconsistent application of the essential practices test.

Way Forward: The Need for a Coherent Approach
- **Avoid Theological Judgments:** The court **should focus on legal and constitutional principles** rather than delving into theological interpretations, thus maintaining judicial impartiality and respect for religious autonomy.
- **Consider Evolution of Practices:** Judges **should recognise that religious practices can evolve over time and that contemporary practices may hold significance** even if they were not present at the religion's inception.
- **Uphold Constitutional Values:** The **court should ensure that all religious practices, even those deemed essential, conform to constitutional values** such as public order, health, and morality, balancing religious freedom with other fundamental rights.

Conclusion
- **The Essential Practices Doctrine remains a crucial yet contentious aspect of judicial adjudication in India** and a balance is essential for maintaining the secular and pluralistic fabric of Indian society.
- **While it aims to protect genuine religious practices, its inconsistent application has led to confusion** and controversy.
- **A more coherent and principled approach is needed to ensure that religious freedoms are protected** without compromising constitutional values.
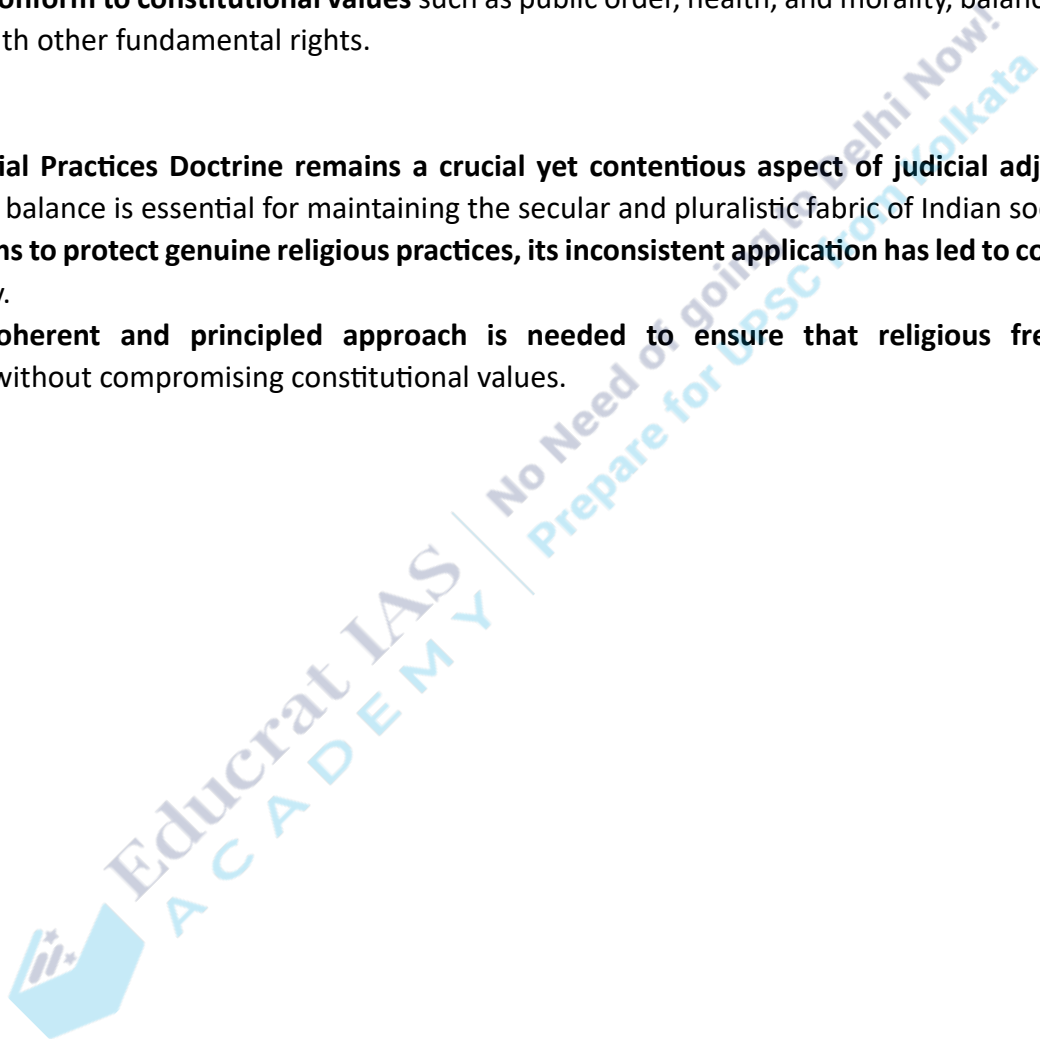
General Studies III

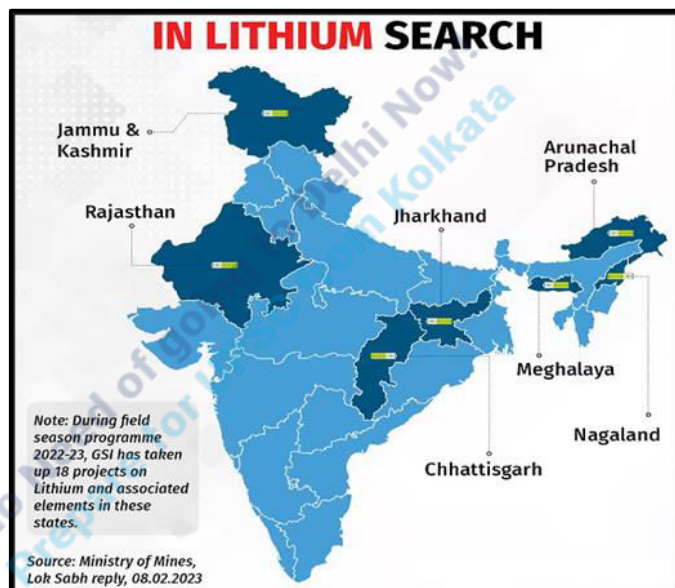## 1. Status of Lithium Reserves and Exploration in India

Why in News?

The Ministry of Mines was forced to scrap the auction for the lithium block in Jammu and Kashmir's (J&K's) Reasi district for the second time, following weak investor response.

This comes nearly 18 months after then Mines Secretary announced the discovery of an inferred deposit of 5.9 million tonnes of lithium ore in Reasi, expected to be among the largest deposits in the world.
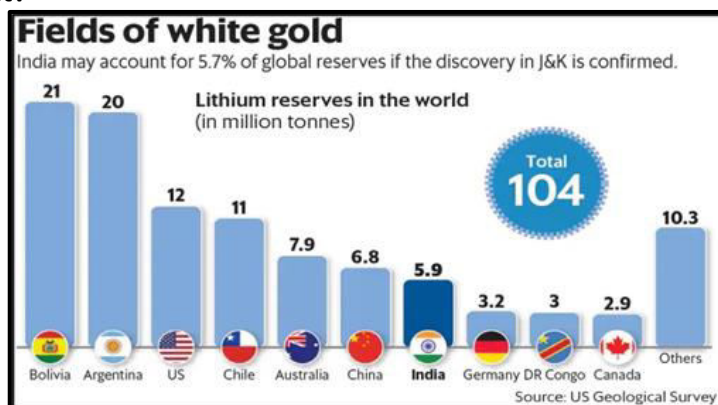
Lithium Reserves in India:

- **Lithium** is a soft, silvery-white **non-ferrous metal** and is **one of the key components in rechargeable batteries** for mobile phones, laptops, digital cameras and electric vehicles.
  - It is also used in some non-rechargeable batteries for things like **heart pacemakers, toys and clocks.**
- The Geological Survey of India (GSI) had for the **first time in India's history** established Lithium inferred resources of 5.9 million tonnes in **Jammu and Kashmir's Reasi district.**
- Months after India's first lithium reserves, **the GSI has found another reserve of the crucial mineral** in Degana in Rajasthan's Nagaur district.
  - These reserves are believed to be much bigger in quantity (than found in J&K) and **can meet 80% of the total country's demand.**

Note: During field season programme 2022-23, GSI has taken up 18 projects on Lithium and associated elements in these states.

Source: Ministry of Mines, Lok Sabh reply, 08.02.2023

Why Access to or Control over Lithium is Important?

- **India's electric-vehicle (EV) market** was valued at $383.5 million in 2021, and is expected to expand to $152.21 billion in 2030.
- **India imported 450 million units of lithium batteries** valued at $929.26 million (₹6,600 crore) in 2019-2020.
- **The ongoing global transition** to low-carbon economies, the rapid expansion of AI and 5G networks will greatly **reshape global and regional geopolitics** in favour of those possessing and producing lithium.

Fields of white gold
India may account for 5.7% of global reserves if the discovery in J&K is confirmed.

Lithium reserves in the world (in million tonnes)
Total 104
Source: US Geological Survey

What is the Reason Behind Investors Staying Away from Li Block Auctions?

- **Difficulties around extracting and processing lithium:** From hard rock pegmatite deposits.
- **Underdeveloped mineral reporting standards:** Used in tender documents.
- **Other complaints of prospective bidders**:
  - Bid documents have limited information of the block,
  - Block being too small to apply modern mineral systems-based tools,

- o No clarity on whether any beneficiation study had been conducted to assess the feasibility of extracting and processing lithium from the resources identified in J&K,
- o Absence of an investor-friendly resource classification code, etc.

What is the Status of Other Lithium Deposits in India?
- **In Chhattisgarh:**
  - o The Ministry of Mines successfully **auctioned off India's first lithium block** in Chhattisgarh's **Korba** district recently.
  - o Also, a private exploration company funded by the National Mineral Exploration Trust (NMET) has found hard rock lithium deposits ranging from 168 to 295 parts per million (ppm) in **Korba**.
- **In other states:**
  - o Lithium exploration in other states **has not been as fruitful**.
  - o **In Manipur,** efforts to explore lithium in Kamjong district were stalled due to resistance from locals in the area.
  - o **In Ladakh's Merak block**, very close to the border between India and China, a lithium exploration funded by NMET yielded results that are not encouraging.
  - o **In Assam's Dhubri and Kokrajhar districts,** the NMET recommended to drop the plan of upgradation of a lithium exploration.

Way Ahead to Boost Li Exploration in India:
- **Need to improve reporting standards:**
  - o **Clarity on the economic viability of mining lithium** is important as the extraction process is expensive, and with global lithium prices falling significantly, miners are increasingly eager to maintain their margins.
  - o India's current resource classification rules are largely based on the **UN Framework Classification for Resources (UNFC),** which do not provide sufficient information to determine the economic viability of mining a mineral block.
  - o Most regulatory bodies across the world adhere to the **Committee for Mineral Reserves International Reporting Standards (CRIRSCO)** template, which requires the reporting of economically viable reserves.
  - o Hence, India should adopt CRIRSCO-aligned internationally-compliant mineral reporting standards to attract private investment in the sector.
- **Allocation to the government companies:**
  - o The blocks that have not received the bare minimum bids should be allocated to the government companies for prospecting or mining operations.
  - o This is allowed under the Mines and Minerals (Development and Regulation) (MMDR) Act.
- **Global best practices:** In **Chile**, the government has designated lithium as a **strategic resource** and its development has been made the **exclusive prerogative of the state**.

2. Ethanol Used In Petrol Now More From Maize, Damaged Foodgrains Than Sugar

Why in the News?
In the current supply year, from November 2023 to October 2024**, sugar mills and distilleries provided 401 crore litres of ethanol to oil marketing companies by June 30.**
Of this total, 211 crore litres (52.7%) were produced using maize and damaged food grains (primarily broken or old rice unfit for human consumption).

The remaining 190 crore litres were derived from sugarcane-based feedstocks, including molasses and whole juice/syrup.

About Biofuel:
- **Biofuel is a fuel that is produced over a short time span from biomass**, rather than by the very slow natural processes involved in the formation of fossil fuels, such as oil.
- Since biomass can be used as a fuel directly (e.g., wood logs), some people use the words biomass and biofuel interchangeably.
- However, the **word biofuel is usually reserved for liquid or gaseous fuels**, used for transportation.
- Most of biofuel consumption occurs as a blend with refined petroleum products such as **gasoline, diesel fuel, heating oil, and kerosene-type jet fuel.**
  - However, some biofuels do not require blending with their petroleum counterparts and are referred to as drop-in biofuels.
- **The most common biofuels now are:**
  - **Bioalcohols** such as ethanol, propanol, and butanol (a substitute for petrol/gasoline);
  - **Biodiesel** (a substitute for diesel);
  - **Bio-oils** (substitutes for kerosene).

Generations of Biofuel:
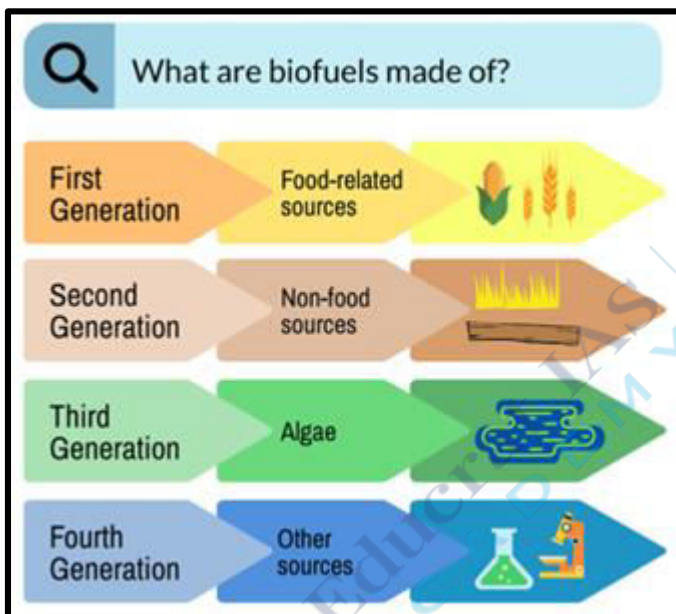
What is Ethanol Blending?
- Ethanol is a **biofuel, naturally produced by the fermentation of sugars by yeasts or by petrochemical processes like ethylene hydration**.
- Ethanol is high in oxygen content, allowing an engine to more thoroughly combust fuel.
- In ethanol blending, a blended motor fuel containing ethyl alcohol derived from agricultural products is blended with petrol specifically.

How is Ethanol Produced?
- In India, the nodal department for the promotion of fuel-grade ethanol-producing distilleries is the **Department of Food and Public Distribution** (DFPD).
- Ethanol is produced or procured from sugarcane-based raw materials which are – **C & B heavy molasses, sugarcane juice, sugar syrup, surplus rice with Food Corporation of India (FCI) and maize.**
- A paper released by the NITI Aayog stated, that in 2019, over 110 billion liters of ethanol fuel was produced globally.

o The **US and Brazil account for 84% of the global production followed by the European Union, China, India, Canada and Thailand**.

What are the Benefits of Ethanol Blending?

- Presently, India imports over 85 per cent of its oil requirement and ethanol blending could help in reducing dependency on petroleum.
- In 2020-21, the net import of petroleum in India was 185 million tones at **USD 551 billion**.
- Thus, ethanol blending can help in saving billions of dollars for the country and reduce import dependency.
- Also, ethanol is a less polluting fuel and equally efficient at a lower cost than petrol.

India's Biofuel Policy:

- In 2021-22, the **Central government amended the Biofuel Policy (2018) to set a target of country-wide blending rates of 20% ethanol and 5% biodiesel by 2025**.
- According to the Roadmap for ethanol blending in India 2020-2025 report from NITI Aayog, **India will need to increase ethanol production capacity from the expected 3.3 billion liters (in 2020–2021) to at least 10.2 billion liters (5.5 billion liters from sugarcane and 4.7 billion liters from grains) by 2025**.

Ethanol Used In Petrol Now More From Maize, Damaged Foodgrains Than Sugar:

- During the current supply year (November 2023 to October 2024), sugar mills and distilleries have supplied 401 crore litres of ethanol to oil marketing companies up to June 30.
- Of this total, 211 crore litres, or 52.7%, were produced using maize and damaged foodgrains (primarily broken or old rice unsuitable for human consumption).
- The remaining 190 crore litres were derived from sugarcane-based feedstocks, including molasses and whole juice/syrup.

ETHANOL SUPPLIED TO OIL MARKETING COMPANIES
First time that use of grains in making ethanol has crossed 50%

Supply Year	C-Heavy Molasses	B-Heavy Molasses	Sugarcane Juice	Surplus Rice	Damaged Grains	Maize	TOTAL
2013-14	38	0	0	0	0	0	38 (1.60)
2014-15	67	0	0	0	0	0	67 (2.33)
2015-16	111	0	0	0	0	0	111 (3.51)
2016-17	67	0	0	0	0	0	67 (2.07)
2017-18	151	0	0	0	0	0	151 (4.22)
2018-19	146	33	1	0	10	0	189 (4.92)
2019-20	74	68	15	0	16	0	173 (5.00)
2020-21	39	183	39	2	39	0	302 (8.10)
2021-22	11	265	85	49	24	0	434 (10.02)
2022-23	6	235	128	74	32	32	506 (12.06)
2023-24*	39	95	56	0	76	135	401 (13.00)

Figures in crore litres; Supply years are Dec-Nov, Dec-Oct for 2022-23 and Nov-Oct for 2023-24; *Nov-June; Figures in buckets are blending percentages.

- This is the first time that the contribution of grains to India's ethanol production has surpassed 50% — from 27.1% in 2022-23, 16.7% in 2021-22, 13.6% in 2020-21, 9.2% in 2019-20, 5% in 2018-19 and zero in 2017-18.

Reasons Behind this Positive Change:

- Until 2017-18, ethanol production in India was limited to C-heavy molasses, a sugar industry byproduct.
- The **Ethanol Blended Petrol (EBP) program expanded in 2018-19 under the current government, allowing production from B-heavy molasses and whole cane juice/syrup, with mills receiving higher prices to offset reduced sugar production.**
- The program further diversified when mills began using grains like surplus and damaged rice from the Food Corporation of India (FCI).
- From July 2023, the government stopped supplying FCI rice and restricted the use of cane juice and B-heavy molasses due to concerns over cereal and sugar inflation.
- Consequently, **maize has become the primary ethanol feedstock, incentivized by a higher ex-distillery price of Rs 71.86 per litre**.

- The EBP program now uses multiple feedstocks to meet ethanol demand, benefiting maize farmers in states like Karnataka and Bihar.
- However, poultry and livestock feed industries report a domestic maize shortage, with production at 36 million tonnes against a requirement of 41 million tonnes.
- The government has allowed 0.5 million tonnes of maize imports at a 15% concessional duty, but the industry seeks up to 5 million tonnes of imports at zero duty.

3. Pros and Cons of Natural Farming in India

Why in News?
In her Budget proposals for 2024-25, the Union Finance Minister announced that in the next two years, one crore farmers across the country will be initiated into natural farming supported by certification and branding.

What is Natural, Organic and Zero-Budget Natural Farming (ZBNF)?
- Natural farming and organic farming, both come under **agroecological practices** (which guides public policies towards sustainable agriculture and food systems) and are terms used interchangeably in India.
- **In natural farming** the focus is on the **use of bio inputs prepared from farm and local ecosystems** instead of purchasing those from outside.
  - o **ZBNF** is one of the many methods of natural farming, popularised by agriculturist Subash Palekar.
  - o According to the approach, a mixture of natural inputs like cow urine and dung, jaggery, lime, neem, etc., are used to **improve soil health, nutrients and reduce input costs**.
  - o It also restores environmental health and mitigates and/or reduces greenhouse gas emissions.
- **Organic farming** is defined more from a perspective of product certification. What binds organic and natural farming is the **thrust on the absence of application of chemical fertilisers/ pesticides during cultivation**.

Government Initiatives to Promote Natural Farming in India:
- **Paramparagat Krishi Vikas Yojana (PKVY):**
  - o It was launched in **2015**, as an extended component of Soil Health Management (SHM) under the Centrally Sponsored Scheme (CSS), **National Mission on Sustainable Agriculture (NMSA)**.
  - o PKVY aims at supporting and promoting organic farming, in turn resulting in improvement of soil health.
- **Bharatiya Prakritik Krishi Paddhati (BPKP)/ZBNF:**
  - o **It is a sub-scheme of the PKVY** and was launched with a total outlay of ₹4,645 crore for six years (2019-20 to 2024-25).
  - o **It aims at promoting traditional indigenous practices,** which give freedom to farmers from externally purchased inputs.
  - o Under BPKP, financial assistance of Rs 12200/ha for 3 years is provided for cluster formation, capacity building and continuous hand holding by trained personnel, certification and residue analysis.
  - o Its vision is to cover 12 lakh ha in 600 major blocks of 2000 hectares in different states.
- **National Mission on Natural Farming (NMNF):**
  - o The Union Agriculture Ministry has been **preparing to launch** the Mission to motivate farmers to adopt chemical-free farming and draw them towards adopting natural farming willingly on the system's merit.
  - o The success of the NMNF will require a **behavioural change** in farmers to shift from chemical-based inputs to cow-based, locally-produced inputs.

Challenges and Concerns Regarding Natural Farming:

- **Reduction in yields:**
  - While Andhra Pradesh emerges as a forerunner in adopting ZBNF with encouraging results, there are concerns about the sustainability and yield (productivity) potential of this farming method.
  - Findings of agro-scientists of the ICAR-IIFSR highlights a **59% decline in wheat yields and a 32% decline in basmati rice yield** compared to integrated crop management.
- **May adversely impact food supply:**
  - Agriculture and food experts have their reservations surrounding a large-scale transition from chemical farming to natural farming in a country like India.
  - This is because it is a challenging task to meet the demands of **expanding food needs** in a country with a population as huge as India.
- **Lessons from Sri Lanka:**
  - A couple of years ago, neighbouring Sri Lanka went through economic and political turmoil after it decided to turn completely organic, and banned the import of chemical fertilisers.
  - The government's policy shift had severe consequences with farmers struggling to get natural fertilisers.
  - **They faced a reduction in yields** of key crops including rice, putting the country's food security at risk.
  - **A sharp price escalation** was witnessed in the country, resulting in huge **protests and unrest.**

Union Budget 2024-25 Announcements wrt Natural Farming:

- In the next two years, **one crore farmers across the country will be initiated into natural farming** supported by certification and branding.
  - **Its implementation** will be through scientific institutions and willing gram panchayats. Besides, 10,000 **need-based bio-input resource centres** will be established.
- **The need for the shift** - from targeting the area coverage to number of farmers now - was felt as 30-40% of about 10 lakh farmers re-shifted to chemical farming after 3 years when they received complete financial incentives under the BPKP.

Way Forward Ensuring Gradual Adoption of Natural Farming in India:

- **Rigorous scientific tests of natural farming**: Especially surrounding the crop yields should be held before its nationwide implementation to allay the fear of potential risk to national food security.
- **Natural farming at a localised level:** Because, adopting it at a large scale may not be a successful model.
- **First, natural farming can be used to grow supplementary foodstuffs: Instead of growing staples like wheat and rice.**

4. India's Illegal Coal Mining Problem

Why in the News?

On July 13, three workers died of asphyxiation in an illegal coal mine near Bhet village in Gujarat's Surendranagar district. The workers were not equipped with helmets, masks, or other safety gear. An FIR revealed that the accused failed to provide essential safety equipment, leading to the workers inhaling toxic gas. The police have charged four individuals with culpable homicide not amounting to murder.

India's Coal Reserves:

- India holds **fifth-largest coal reserves in the world**.
- Commercial coal-mining industry has been in operation since 1774, launched by the East India Company along the Damodar River in West Bengal.

- 70 per cent of India's coal supply comes from the states of Jharkhand, Chhattisgarh, Odisha, West Bengal and Madhya Pradesh.
- State-owned **Coal India Limited** has a virtual monopoly on coal mines in India, which produce roughly 75 per cent of the coal burned in India's coal-fired power stations.

Why Illegal Coal Mining is Rampant in India?
- Illegal coal mining persists in India due to a combination of **economic, social, political, and regulatory factors.**
- **Despite efforts to curb this activity, several key elements contribute to its prevalence:**
  - **High Demand for Coal:**
    - Coal is essential for 55% of India's energy needs
    - The legal supply often falls short of demand, leading to an illegal supply chain.
  - **Economic Necessity:**
    - Coal-rich areas often coincide with regions facing poverty and unemployment.
    - Illegal mining provides an income source for local populations.
  - **Weak Regulation and Enforcement:**
    - Remote mining areas suffer from inadequate monitoring and resource allocation.
    - Poor enforcement leads to the rise of "coal mafias" controlling illegal mining activities.
  - **Political Complicity:**
    - Allegations of political support for illegal mining are common.
    - Political figures have been accused of backing illegal operations, making eradication difficult.
  - **Rudimentary Mining Techniques:**
    - Illegal operations use basic methods like surface and rat-hole mining.
    - Minimal operational costs turn into significant profits, attracting more illegal miners.
  - **Safety and Health Hazards:**
    - Lack of safety equipment and protocols leads to frequent worker fatalities.
    - Poor structural support in illegal mines increases the risk of cave-ins and toxic exposure.

Challenges in Reducing Illegal Coal Mining:
- **Jurisdictional Issues:**
  - Law enforcement is a state responsibility, leading to blame-shifting between state and central governments.
- **Economic Dependencies:**
  - Local economies in coal-rich areas depend heavily on mining activities.
  - When legal mines close, illegal mining often continues to support the community.
- **Complex Legal Framework:**
  - The intricate legal system governing mining can lead to bureaucratic inefficiencies.
  - This complexity makes it easier for illegal mining to persist.

Conclusion:
- Illegal coal mining in India is a multifaceted issue driven by **high demand, economic necessity, weak enforcement, political support, and safety negligence.**
- The challenge is exacerbated by jurisdictional and legal complexities, making it a persistent problem despite regulatory efforts.
- Addressing these root causes is essential for effectively combating illegal coal mining in the country.

5. Climate Change Adaptation vs Mitigation Debate in the Economic Survey 2023-24

Why in News?

The Economic Survey has pointed to flaws and inequities in the global climate action regime and suggested alternative pathways that incorporate lifestyle and behavioural changes.

It also argued that adaptation should get at least as much importance as mitigation.

What's the Difference Between Climate Change Mitigation and Adaptation?

- As the climate crisis is increasingly distressing, climate actions fall into one of two broad categories: climate change adaptation and climate change mitigation.
- These terms **go hand-in-hand** while navigating through the climate crisis, **but they mean very different things.**
- **Climate change mitigation** means avoiding and reducing emissions of heat-trapping greenhouse gases into the atmosphere to prevent the planet from warming to more extreme temperatures.
- **Climate change adaptation** means altering human behaviour, systems, and ways of life to protect societies, economies, and the environment from the impacts of climate change.
- The more are the emissions reduced right now, the easier it will be to adapt to the changes that can no longer be avoided.
- **Mitigation actions will take decades** to affect rising temperatures, so adapting now to the change will continue to affect us in the foreseeable future.

The Economic Survey 2023-24 on Climate Change:

- **Ineffective and inequitable international framework for fighting climate change:**
  - It is evident from the fact that none of the targets set by the international framework for fighting climate change has ever been met.
  - **Developing nations were under undue pressure** to attain the 1.5 or 2°C temperature target due to an excessive obsession with this target.
  - **This has diverted their focus and resources away** from the more near-term imperatives of improving the lives of their people.
  - Hence, a warmer world is more equitable and resilient than a world in which the 1.5°C threshold was achieved at all costs.
  - However, it is unclear if the Economic Survey is hinting at a potential shift in India's energy transition trajectory.
- **Increasing resilience by giving adaptation as much importance as mitigation:**
  - This is because the impacts of climate change are already unfolding, and it is becoming increasingly clear that the **1.5°C target will be breached very soon.**
  - Since climate impacts cannot be stopped, the world must focus on rapid development and adaptation to increase resilience.
  - Hence, **rapid improvement in incomes and overall well-being** of the people is the best insurance against climate change.
- **Mitigation by rich and adaptation by developing countries:**
  - According to the counterargument, at these higher temperatures, the severity of climate impacts will intensify to the point that steps towards increasing resilience would be ineffective.
  - Hence, it is proposed that the rich and developed countries do the mitigation work while developing countries focus on adaptation.
- **Hypocrisy of the developed world:**
  - **For example,** despite having the greatest historical responsibility, the United States has lagged behind other nations in terms of carbon reduction.

- o The developed countries as a bloc have not fulfilled any of their emission reduction targets, or their commitments to provide finance or technology to the developing countries.
- o Calls for more aggressive climate action have been made in an attempt to shift the blame for these mistakes onto the rest of the world.
- o **The international climate architecture is more about preserving the existing world order and less about saving the planet.**
- o **For example,** the more equitable and effective Kyoto Protocol was eventually replaced by the Paris Agreement.
- o Scientific organisations such as the Intergovernmental Panel on Climate Change (IPCC) have strengthened the narrative of the developed countries.

What are the Alternative Approaches Focussing on Climate Change Adaptation?
- **Building climate resilient infrastructure:** For example, the Central Vista will be a huge improvement over the current set of buildings in the Central Secretariat complex.
- **Climate proofing:**
  - o Climate-proofing is the practice of reducing GHG emissions released from the implementation of a certain investment, as well as increasing its resilience to climate change impacts.
  - o **For example,** the Smart City mission contains several elements of climate proofing.
- **Lifestyle and behavioural changes:** For example, India's **Mission Life** calls for conscious consumption for the well-being of the planet.

6. Patent Ecosystem in India

Why in News?
For the first time, domestic patent applications in FY24 have surpassed those from foreign applicants, largely due to a surge in applications in fields like computer science, IT, pharmaceuticals, and chemicals.

Still, foreign entities hold a significant portion of the patents awarded in India - nearly two-thirds of all applications that are approved.

What is a Patent?
- **A patent is an exclusive right** provided by the government to the applicant for his/her disclosed invention of an industrial product or process that must be
  - o Novel,
  - o Non-obvious,
  - o Useful, and
  - o Patentable as defined by national law.
- **A patent provides a technological solution to a technical challenge**.
- The government grants legal protection to inventions for a limited time, i.e., **20 years from the date of filing.**
- What is and is not patentable in India is explicitly stated in **the Indian Patents Act 1970**.
  - o **The Controller General of Patents, Designs & Trademarks (CGPDTM)** is considered as the principal officer responsible for administering the patent system in India.

Domestic Patent Applications in India:

PATENT APPLICATIONS IN INDIA				PATENT APPROVALS BY INDIA		
	Indian applicants	Foreign applicants	% of foreign applicants		Indian patentee	Foreign patentee	% of foreigners holding patents
2022-23	43,301	39,519	47%	2022-23	9,239	24,895	72%
2021-22	29,508	36,932	55%	2021-22	6,397	23,676	78%
2020-21	24,326	34,167	58%	2020-21	5,629	22,756	80%
2019-20	20,843	35,625	63%	2019-20	4,003	20,933	83%
2018-19	17,005	33,654	66%	2018-19	2,511	12,772	83%

Source: Office of the Controller General of Patents, Designs & Trade Marks (CGPDTM)

- **Steadily increasing since FY19**: Residents' share of all requests submitted to the patent office increased from 34% in FY19 to 53% in FY24, when it came to patent applications.
- **Issues with domestic patent applications:**
  o These have **not yet translated into approvals** because of the quality of patent applications as well as the patent ecosystem in the country.
  o The quality of patent approval suffers from a lower number of patent examiners in the country (597 who approved over 1 lakh patents last year, whereas Germany has 821 and the US over 8,000 examiners).
  o Also, the trend is reflective of the fact that patents often come with **a built-in time lag due to various procedural timeliness**.

Foreign Patents in India:
- **Foreign patents approvals in India highest in any major economy globally:**
  o According to the CGPDTM data, patent approvals (an indicator of R&D activity) continue to be skewed in favour of foreign entities, with global IT giants (Qualcomm Inc., Samsung, Huawei and Apple) taking the lead.
  o Patents approved for non-resident Indians and entities stood at **76.46% in 2022**, which is among the highest in any major economy globally.
  o The World Intellectual Property Organization (WIPO) data showed that the comparable number in the case of **China** stood at 12.87%.

- **Reasons for high foreign patent in India:**
  o The wide gap between domestic and foreign patent holders **reflects the inefficiencies in India's R&D capabilities**.
    ▪ Lower R&D activity results from weak private investments and stagnant government spending.
      o This has also been fueled by **Patent Cooperation Treaty (PCT) and Paris Convention for the Protection of Industrial Property**, which is a source of **90%** of the patents filed by foreign entities.
- **India and PCT:**
  o In 1998, India ratified the PCT despite having any compulsion to do so.
  o Around 142 countries are members of PCT and it provides great ease for a multinational company (MNC) to file patents in multiple countries simultaneously.

India's R&D Spending and its Impact:
- **Stagnation in India's spending on R&D as a percentage of GDP:** As per World Bank data, it has slipped to 0.65% in 2022 (from 0.83% seen in 2008) and this is **much lower than the global average of 2.62%**.
- **Impact:**

- o This has resulted in Indian manufacturing **depending on imported machinery**, parts, and foreign technicians to fulfil export orders.
- o Notably, India has a **trade deficit** with 8 out of the top 10 trade partners. India's imports in FY24 from China alone crossed $100 billion.

Government Initiatives to Boost Intellectual Property (IP) Ecosystem in India:
- **Scheme for Startups Intellectual Property Protection (SIPP):**
  - o The scheme is designed to promote and mentor new and emerging technologies among Startups.
  - o It aids them in protecting and commercialising them by offering access to high-quality IP services and resources.
- **National Intellectual Property Rights (IPR) Policy:** It was launched in 2016 by the Union Ministry of Commerce and Industry's DPIIT to promote a more innovative and imaginative Bharat.
- **Draft Model Guidelines on Implementation of IPR Policy for Academic Institutions:** Its mission is -
  - o To establish an efficient, fair, and transparent administrative process for ownership control, assignment of IP rights, and
  - o Share revenues generated by IP created and owned by the academic institution.
- **National Intellectual Property Awareness Mission (NIPAM):** It aims to educate 1 million students on intellectual property and its rights.

7. Govt Considers Rs 50,000 Crore Scheme for Agricultural Reforms

Why in the News?
The Central Government is considering a new scheme with an outlay of Rs 50,000 crore to incentivize states to adopt agricultural reforms.

Problems Faced by the Agriculture Sector in India:
- **Access to Credit & Finance:**
  - o Small farmers struggle to get affordable loans, limiting their ability to buy modern equipment, quality seeds, and fertilizers, which affects their productivity.
- **Small Landholdings:**
  - o **Many farmers have small, fragmented plots, making it hard to use modern farming techniques and reducing productivity.**
- **Outdated Farming Practices:**
  - o Many farmers still use traditional methods due to limited information and resistance to change, hindering the adoption of advanced techniques.
- **Water Scarcity & Irrigation:**
  - o Dependence on monsoon rains makes agriculture vulnerable to droughts and inconsistent rainfall.
  - o Access to irrigation and water management is crucial, especially in areas with limited water resources.
- **Soil Degradation & Erosion:**
  - o Use of chemical fertilizers and pesticides, along with poor land use practices, degrades soil quality, leading to reduced fertility and productivity.
- **Inadequate Agricultural Infrastructure:**
  - o Lack of storage, cold chain facilities, good rural roads, and market access leads to post-harvest losses and higher production costs, limiting farmers' ability to get fair prices.
- **Market Volatility & Price Fluctuations:**
  - o Farmers face unstable prices due to weak market links and lack of price information, making them **vulnerable to exploitation and uncertain returns.**
- **Climate Change & Natural Disasters:**

- Predictable weather, climate change, and natural disasters like floods and droughts cause crop losses and increased risks for farmers.
- **Limited Access to Technology & Research:**
  - Farmers have limited access to modern technologies and research, hindering the adoption of innovative practices. They need better knowledge, training, and affordable technology solutions.
- **Lack of Farmers' Empowerment:**
  - Farmers often lack a voice in policy-making, leading to initiatives that may not address their specific challenges effectively.

About NITI Aayog's Proposal:
- **Proposal by NITI Aayog: Background**
  - Nearly three years after repealing its three farm laws in November 2021, the Union government is planning a new scheme with a budget of Rs 50,000 crore to encourage states to adopt agricultural reforms.
  - This initiative will provide **central funding for states to implement reforms in agriculture marketing, contract farming, and land leasing**.
  - The idea for this scheme was presented by NITI Aayog officials to the Prime Minister's Office.
  - The presentation, titled "**India's Amrit Kaal: Mobilising the nation to sustain fast growth**," covered various economic sectors.
  - Officials from the Ministry of Agriculture and NITI Aayog are discussing this scheme as part of their broader efforts to implement significant farm sector reforms during India's 'Amrit Kaal,' a period from 2022 to 2047.
- **Various reform measures under consideration**
  - Other reforms under consideration include passing the long-pending Seed Bill and increasing public investment in agriculture to 5% of Agriculture GVA (Gross Value Addition).
    - This proposal revisits an idea suggested by the **15th Finance Commission in its 2020-21 report, which recommended performance-based incentives for states implementing agricultural reforms**.
  - States could receive financial rewards if they adopted the Model Agricultural Produce and Livestock Marketing Act (2017), the Model Agricultural Produce and Livestock Contract Farming Act (2018), and the Model Agricultural Land Leasing Act (2016).
  - The 15th Finance Commission believed these reforms were essential to liberalize agricultural markets, promote competition, and attract private sector investment.
  - However, after the central government passed the three farm laws in 2020, the Commission revised its recommendations.
  - **The Commission's 2021-26 report emphasized four key areas for performance-based incentives:**
    - Land lease reforms,
    - Sustainable water use in agriculture,
    - Export promotion, and
    - Contributing to Atmanirbhar Bharat.
    - It had proposed Rs 45,000 crore for states undertaking agricultural reforms during this period.

8. SC to Examine Article 361 Granting Immunity to Governors

Why in News?
The Supreme Court of India has agreed to examine a plea filed by a woman staff member of the West Bengal Raj Bhawan, who has accused Governor (CV Ananda Bose) of sexual harassment.

The plea challenges the immunity granted to the governor of a state under **Article 361** of the Indian Constitution.

What is the Role of a Governor in India?

- **Some important constitutional provisions:**
  - Everything related to the office of Governor (appointment, powers, etc) have been discussed under **Part VI (Article 153 to Article 162)** of the Indian Constitution.
  - **Article 153:** There shall be a Governor for each State and the same person can be the Governor for two/more States.
  - **Article 154**: The executive power of the State shall be vested in the governor and shall be exercised by him/her in accordance with the Constitution of India.
  - **Article 155:** Governor of a State shall be appointed by the **President** by warrant under his hand and seal.
  - **Article 156:** The Governor shall hold office during the **pleasure of the President**, but his normal term of office will be **five**
- **Role:** It is stated that the Governor has a dual role - **s/he is the constitutional head of state** (bound by the advice of his/her council of ministers) and **s/he functions as a vital link** between the Union and the State govt.
- **Functioning of the office over the years:**
  - The Governor enjoys certain **discretionary powers** under the Constitution (**Article 163**), such as giving or withholding assent to a Bill passed by the state legislature, etc.
  - These powers enable governors to make critical decisions, particularly during times of political or administrative uncertainty.
  - However, these discretionary powers have resulted in **friction with the state government** as the Governors have been seen by opposition as **an agent of the Centre** acting on the behest of the central government.
- **Can governors' powers be reviewed?** Although these powers are constitutionally granted, they are **subject to judicial review** to ensure they are exercised within legal and proper bounds.

What is Article 361 of the Indian Constitution?

- **About Article 361:**
  - It grants the President of India and governors of state immunity from legal proceedings over the duration of their term in office.
  - **The article is an exception to Article 14** (right to equality) of the Constitution.
- **Description of Article 361:**
  - **Criminal proceedings:** No criminal cases can be initiated or continued against them, and no arrest or imprisonment orders can be issued by any court.
  - **Civil proceedings:** The Article mandates a two-month notice for any civil proceedings related to personal acts.
  - **No arrest or imprisonment:** The Article restricts any arrest or imprisonment orders during their term.
- **The aim of the Article:** To ensure that they are **not answerable to any court** for the exercise and performance of their official powers and duties, nor for any acts done in the course of these duties.

What is the Woman Petitioner Seeking?

- **Call for immediate investigation:**
  - An investigation is essential and cannot be deferred until the governor leaves office.
  - Hence, the immunity under Article 361 should not bar the investigation, especially given the time-sensitive nature of such probes.

- **Framing specific guidelines:** The plea asks for directions to frame specific guidelines under which governors enjoy immunity from criminal prosecution.
- **Questioning absolute immunity:**
  - The plea contends that the immunity under Article 361 **should not be absolute**, allowing illegal acts or acts that violate fundamental rights under Part III of the Constitution.
  - It argues that this immunity should not impair police powers to investigate the offence or name the perpetrator in a complaint or FIR.

Significance of the SC's Decision to Examine Immunity Granted under Article 361:
- It could have significant implications for -
  - The interpretation of constitutional protections for high office holders, and
  - The accountability mechanisms in place for addressing misconduct.

9. NITI Aayog Suggests Measures to Revitalize Electronics Industry

Why in news?
NITI Aayog has released a report titled "**Electronics: Powering India's Participation in Global Value Chains**". Through this report, the Aayog has recommended a slew of measures to help grow India's electronics sector from $100 billion to $500 billion by 2030.

Electronics sector in India
- **Background**
  - Presently, **India's electronics manufacturing primarily involves the final assembly of electronic good**s.
  - Brands and design firms have started increasingly outsourcing assembly, testing, and packaging tasks to Electronic Manufacturing Services (EMS) companies in India.
  - However, the ecosystem for design and component manufacturing is at a nascent stage.
- **Statistics**
  - India's electronics sector has experienced rapid growth, reaching USD 155 billion in FY23.
  - Production nearly doubled from USD 48 billion in FY17 to USD 101 billion in FY23, driven primarily by mobile phones, which now constitute 43% of total electronics production.
    - This comprises USD 86 billion in finished goods production and USD 15 billion in components manufacturing.
  - India has significantly reduced its reliance on smartphone imports, now manufacturing 99% domestically.
- **Global scenario**
  - The global electronics market, valued at USD 4.3 trillion, is dominated by countries like China, Taiwan, USA, South Korea, Vietnam and Malaysia.
  - India currently exports approximately **USD 25 billion annually**, representing **less than 1%** of the global share despite 4% share in global demand.
- **Various initiatives by the govt**
  - **100% FDI is allowed under the automatic route.**
    - In the case of defence electronics, FDI up to 49% is allowed through automatic route and beyond 49% requires government approval.
  - In order to position India as a global hub for ESDM, various schemes have been released. These include:
    - the Production Linked Incentive Scheme (PLI) for Large Scale Electronics Manufacturing;
    - Production Linked Incentive Scheme (PLI) for IT Hardware;

- Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors (SPECS);
- Modified Electronics Manufacturing Clusters Scheme (EMC 2.0).
  - o Additionally, the **Semicon India Program** with an incentive outlay of $10 Bn was launched with the vision to develop a sustainable semiconductor and display ecosystem in the country.
    - This **program will establish India as global hub for semiconductor and display manufacturing, promote self-reliance, strengthen resilience in global supply chains.**
  - o Other schemes such as – **Digital India, Make In India, Phased Manufacturing Program, Electronic Cluster Manufacturing Scheme, Electronics Development Fund** etc. have been launched to support the growth of this sector.

- **Challenges**
  - o **Relatively high import tariffs** lead to higher costs of input parts, making the assembled product uncompetitive in global market.
    - India currently has one of the most complex tariff structures with multiple tariff slabs at 0%, 5%, 10%, 15% and 20%+, along with variety of surcharges.
    - Not only it increases costs of several sub-assemblies and components, it also leads to misinterpretations and disputes, thereby increasing compliance costs.
  - o **Lack of robust electronics component ecosystem**
    - An ecosystem for high-complexity components such as SMD grade passives, semiconductors etc. does not currently exist.
  - o **Lack of access to the global demand** as it has failed to proactively attract top brands from different electronics segments to establish large-scale operations in India.
  - o **High cost of capital** due to India's relatively high cost of financing, which ranges from 9% to 13%.
    - India's tariffs are higher than China (4 per cent), Malaysia (3.5 per cent), and Mexico (2.7 per cent).
      - o Lack of R&D and design ecosystem
      - o Inadequate infrastructure facilities
      - o Inadequate talent and skilling

Key highlights of the report
- **USD 500 billion in electronics manufacturing by 2030**
  - o India should aim USD 500 billion in electronics manufacturing by 2030.
    - This ambitious target comprises USD 350 billion from finished goods manufacturing and USD 150 billion from components manufacturing.
  - o The report added that such growth would create employment for about 6 million people.
- **Projection in a business as usual (BAU) scenario**
  - o In a BAU scenario, the report noted that the projections indicate India's electronics manufacturing could escalate to USD 278 billion by FY30.
  - o This includes USD 253 billion from finished goods and USD 25 billion from components manufacturing.
- **Strategic interventions needed to achieve the goal of USD 500 billion by 2030**
  - o **These include:**
    - promoting components and capital goods manufacturing,
    - incentivising R&D and Design,
    - tariff rationalization,
    - skilling initiatives,
    - facilitation of technology transfers, and
    - infrastructure development to foster a robust electronics manufacturing ecosystem in India.
  - o The report emphasised scaling up production in established segments such as mobile phones and establishing foothold in component manufacturing.

- Additionally, it said there should be a strong focus on diversifying into emerging areas such as **wearables, IoT devices, and automotive electronics.**
  - To enhance competitiveness, India needs to localize high-tech components, strengthen design capabilities through R&D investments, and forge strategic partnerships with global technology leaders, the report noted.
  - The report also identified fiscal support to design-focussed companies alongside easing the process for technology transfer as key to boosting domestic electronics manufacturers' role in global value chains (GVCs).
  - It also provides suggestions around improving access to skilled labour, by expediting visa approvals for professional visiting for training purposes and setting up Electronics Skill Training Hubs, and easing processes around technology transfer.
  - There is a need to develop a mechanism to fast-track approvals under Press Note 3 (2020) for specific proposals where foreign companies are critical for ecosystem development.
    - Press Note 3 (PN3) of 2020 was a policy amendment issued by the Government of India in April 2020 to regulate foreign direct investment (FDI) in Indian companies.
    - The note was intended to protect Indian companies from opportunistic takeovers during the COVID-19 pandemic and to ensure national security.

10. Govt to Review Clean air Action Plan of Cities

Why in the News?
The review of air quality improvement action plans of 131 cities is likely to be held by the Government this month as part of the Centre's 100-day agenda.

About National Clean Air Programme (NCAP):
- National Clean Air Programme (NCAP) is a comprehensive initiative launched by the Government of India to tackle the pressing issue of air pollution across the country.
- Initiated in **January 2019** by the Ministry of Environment, Forest and Climate Change (MoEFCC), **NCAP aims to systematically reduce air pollution levels and improve air quality through a multi-pronged approach**.
- **Objectives**:
  - The primary objective of NCAP is to achieve a **40% reduction in particulate matter (PM2.5 and PM10) concentrations by 2026**, taking 2017 as the base year.
  - The program targets both short-term and long-term measures to mitigate air pollution across various sectors.

- **Key Features**:
  - **City-Specific Plans**:
    - NCAP focuses on **131 non-attainment cities identified by the Central Pollution Control Board (CPCB), where air quality standards have consistently been exceeded**.
    - Each city has developed customized action plans that address local sources of pollution, such as vehicular emissions, industrial discharges, dust from construction activities, and waste burning.
  - **Monitoring and Enforcement**:
    - Strengthening the existing air quality monitoring network with the addition of more monitoring stations and sensors to provide real-time data.
    - Enhancing enforcement of air quality regulations and ensuring strict compliance with emission norms.

- o **Public Awareness and Participation**:
  - ▪ Conducting awareness campaigns to educate citizens about the health impacts of air pollution and promoting community participation in pollution control activities.
  - ▪ Encouraging the adoption of cleaner technologies and practices by industries, businesses, and households.
- o **Inter-Agency Coordination**:
  - ▪ Facilitating coordination between various government departments, including transport, urban development, agriculture, and power, to implement integrated pollution control measures.
  - ▪ Establishing inter-ministerial task forces and committees to oversee the implementation and progress of the NCAP.
- o **Technological and Financial Support**:
  - ▪ Promoting the adoption of clean technologies through financial incentives and subsidies.
  - ▪ Allocating funds to states and municipalities to support the implementation of their respective action plans.
- o **Research and Development**:
  - ▪ Encouraging scientific research to develop innovative solutions for air pollution control.
  - ▪ Collaborating with academic institutions and research organizations to study the sources and health impacts of air pollution.
  - • **PRANA (Portal for Regulation of Air-pollution in Non-Attainment cities),** is a portal for monitoring of implementation of NCAP.

Progress & Challenges of NCAP:
- • **Air Information Centers and Pollution Forecasting:**
  - o **Goal:** Establish air information centres at central and regional levels by 2020.
  - o **Status:** Only the central PRANA portal by CPCB is functional.
  - o **Goal:** Implement air pollution forecasting systems in non-attainment cities by 2022.
  - o **Status:** Only Delhi has a functional system.
- • **Committee Setup and Utilization of Funds:**
  - o **Committees:** Proposed at various levels, but issues remain with functionality, transparency, and public information.
    - o **Fund Utilization:**
      - ▪ Of ₹1,253 crore allocated to 82 non-attainment cities, only ₹498 crore (40%) was used.
      - ▪ Of ₹9,610 crore allocated to 49 million-plus cities, ₹5,909 crore (62%) was utilized, indicating significant underutilization.
    - o **Monitoring Stations:**
      - ▪ **Goal:** Increase manual monitoring stations under NAMP from 703 to 1,500 by 2024.
      - ▪ **Status:** Only 931 manual stations operational, showing a critical shortfall.
    - o **Continuous Ambient Air Quality Monitoring Stations (CAAQMS):**
      - ▪ **Goal:** Establish 150 stations.
      - ▪ **Status:** 531 stations are operational, indicating very good progress.
    - o **Rural Monitoring Network:**
      - ▪ **Current:** 26 manual stations.
      - ▪ **Goal:** Set up 100 stations by 2024.
      - ▪ **Status:** Full realization of this goal seems difficult.
    - o **Source Apportionment:**
      - ▪ Only 44 out of 131 non-attainment cities conducted source apportionment studies.
    - o **Data Availability and Compliance:**

- **Data Availability:** 227 cities had over 75% data availability days in 2023, with 85 under NCAP and 142 not covered by NCAP.
- **PM10 Levels:** 78 NCAP cities and 118 non-NCAP cities exceeded National Ambient Air Quality Standards (NAAQS) for PM10.

Govt to Review Clean air Action Plan of Cities:
- The review of air quality improvement action plans of 131 cities is likely to be held by the Government this month as part of the Centre's 100-day agenda.
- The upcoming meeting will review the actions taken by city administrations in key areas like dust control, electric vehicle charging stations, public transport improvement, waste management, and urban greening.
- The **Ministry's review aims to ensure quick utilization of funds, especially as the National Green Tribunal scrutinizes the NCAP for unused funds**.
- Submissions to the tribunal revealed that **many cities spent funds on non-essential projects such as football grounds, water fountains, and desludging machines**.

11. Militancy on the rise in Jammu

Why in news?
Recent terrorist attacks in the Kathua district of Jammu and Kashmir (J&K) highlight a significant challenge for the Indian government.
On July 8, five Army soldiers were killed and five injured in an ambush by militants. This incident is part of a troubling trend, with five terror strikes in the Jammu division since June 9, resulting in the deaths of eight security personnel and 10 civilians.
These attacks indicate a shift in militant focus from the traditionally volatile Kashmir Valley to the previously more peaceful Jammu region.

New pattern emerging
- **Attempts to revive militancy in the Jammu region since the past three years**
  - o The recent attacks reflect a concerning pattern of renewed militancy in the Jammu region over the past three years, particularly in the Chenab Valley and south of the Pir Panjal.
  - o Districts such as **Doda, Kishtwar, Ramban, Kathua, Udhampur, Reasi, Rajouri, and Poonch have seen a resurgence in militant activity.**
  - o While the Kashmir Valley has historically experienced frequent terror incidents, the Jammu belt has been relatively peaceful for the past two decades.
  - o This revival of militancy in an area that was a hotbed in the late 1990s and early 2000s has alarmed the security establishment.
- **Statistics**
  - o Since 2021, the Jammu region has experienced 31 terror incidents, resulting in the deaths of 47 security forces and 19 civilians, along with 48 terrorists killed.
  - o In contrast, the Kashmir Valley has reported 263 terror incidents, with 68 security forces and 75 civilians killed, and 417 terrorists neutralized.
  - o While the number of incidents in Jammu is significantly lower than in the Valley, the increased frequency and targeted nature of attacks on pilgrims and security forces in Jammu are particularly concerning.

How is the infiltration happening?

- o The **192-km international border (IB) along Jammu is secured by the Border Security Force (BSF), while the 740-km Line of Control (LoC) in the Kashmir Valley and parts of Jammu is under Army control.**
- o Despite security measures, tough terrain, forested areas along the LoC, and vulnerable patches along the IB may have facilitated fresh infiltration.
- o The recent attacks in the Kathua belt, including the July 8 ambush, occurred on an old infiltration route used by militants two decades ago.

Reasons behind this new emerging pattern
- **Thinning of the security grid after Galwan incident**
  - o After the 2020 Galwan clashes in eastern Ladakh, which resulted in the deaths of 20 soldiers, a significant number of Army personnel were redeployed from Jammu to the China border, weakening the security grid in Jammu.
  - o Security experts suggest that this has made the region more vulnerable to attacks.
- **India is being engaged at two fronts**
  - o Hostile elements aim to strain India on both the western (Pakistan) and northern (China) fronts.
  - o With heightened alert in the Kashmir Valley and reduced opportunities for state-sponsored terrorists there, Jammu, with its lowered guard, becomes a more convenient target.
- **Aftermath of the abrogation of Article 370**
  - o Following the abrogation of Article 370 in August 2019, the government has touted successes in the Kashmir Valley, evidenced by **zero stone-throwing incidents, no strikes, and a tourism boom.**
  - o However, renewed terrorism in Jammu challenges this narrative and might aim to stabilize militant presence in the Valley while stirring insecurity in Jammu.
- **Demography of the region**
  - o The area's demography also raises concerns about potential communal tensions and social unrest due to these attacks.
- **Opportunities for terrorists in Jammu region**
  - o The Rajouri-Poonch area had a thinner concentration of security forces.
  - o **This region is equidistant from Shopian and Kulgam in Kashmir, and the Line of Control with Pakistan, making it easier to move between the three regions.**
    - ▪ It was highly unlikely that security forces and police from all three regions would simultaneously launch an operation against the militants.
  - o **Areas in the Pir Panjal range and to its south are also easier to access.**
    - ▪ Any militant crossing over from the lower heights of Jammu have to traverse through multiple high ranges like Pir Panjal before they reach Kashmir Valley.
    - ▪ This challenges their logistical preparations and motivation.
    - ▪ Hence shorter and intense contacts have become the norm in the Jammu region
  - o Terror incidents away from the Valley, where militant ranks have been staring at a leadership vacuum, are high visibility strikes, intended to inflict maximum damage.
- **Drying up of the human intelligence**
  - o One of the reasons why forces may have not been able to anticipate the attacks is the drying up of the human intelligence or their network of informers.
    - ▪ Human intelligence is very important in counter-insurgency operations.
    - ▪ Even with all their reliance on gadgets and smart ways to avoid surveillance, the terrorists visit the nearest human settlement in order to get logistical support for their survival.
    - ▪ This is where the role of human intelligence becomes important.
  - o While militants and their network of overground workers continue to exist, the informers are missing.

- Many security experts attribute the dried-up human intelligence to authorities taking the prevailing peace for guaranteed.
- As per them, the new officers who got transferred to the region didn't work as hard as they should have on their informer network.

Way forward
- A whole generation that fought the terrorists are in their 60s and 70s now. There is no such connect with the younger generation, it will take time to build that trust with the civilians.
- The Village Defence Guards/Committees (VDGs) are also being revived since December 2022.
  o The VDGs had to be discontinued amid allegations of crimes such as abduction and rape committed by the members.

12. J&K Terror Attack: Dealing with Pakistan Without Playing Tit-for-Tat

Context
- **In recent days, Jammu and Kashmir have witnessed a tragic escalation in violence**, with seven security personnel losing their lives to terrorism.
- **This resurgence of terror**, closely following a series of four attacks in June, **underscores the persistent and unresolved issue of Pakistan-sponsored terrorism in the region.**
- **Despite various peace initiatives** and a decade of aggressive strategies, **India's efforts to eradicate this menace remain unfulfilled.**

The Reality of Pakistan Sponsored Terrorism in Jammu & Kashmir
- **Historical Context**
  o **The conflict** over Jammu and Kashmir **dates to the partition of India and Pakistan in 1947.**
  o **Pakistan has consistently questioned the legitimacy of Jammu and Kashmir's accession** to India, and this dispute has been a central element of its foreign and domestic policy.
  o **Over the decades, Pakistan has supported various militant groups to wage a proxy war against India**, aiming to destabilise the region and internationalize the Kashmir issue.
- **Persistent Support for Terrorism**
  o Despite facing significant internal challenges and international scrutiny, **Pakistan's support for terrorism has remained steadfast.**
  o The **Pakistani state has been known to provide training, funding, and logistical support to terrorist organisations** operating in Jammu and Kashmir.
  o Groups such as **Jaish-e-Mohammed (JeM) and Lashkar-e-Taiba (LeT) have carried out numerous attacks with the backing of Pakistan's Inter-Services Intelligence (ISI).**
  o These **groups not only receive material support but also benefit from the strategic depth and safe havens** provided within Pakistan's borders.
- **The Strategic Objective**
  o **Pakistan's strategic objective** in supporting terrorism in Jammu and Kashmir is
  o Firstly, it **aims to keep the Kashmir issue alive internationally**, drawing attention to what it frames as an unresolved territorial dispute.
  o Secondly, **by fomenting unrest, Pakistan seeks to weaken India's control over the region**, thereby attempting to force India into negotiations under terms favourable to Pakistan.

The Challenge of Reducing Tensions between India and Pakistan
- **Historical Animosities and Distrust**

- o The long-standing animosity between India and Pakistan dates to the partition in 1947, which led to violent conflicts and mass migrations.
  - o This **historical backdrop has developed deep-seated distrust and hostility**, manifesting in multiple wars and skirmishes over the decades, most notably over the contested region of Jammu and Kashmir.
  - o **Each nation views the other's intentions with suspicion**, making genuine dialogue and reconciliation exceedingly difficult.
- **Political Constraints and Public Sentiment**
  - o In India, **the slogan terror and talks cannot go together has resonated deeply with the public,** especially in light of repeated terror attacks attributed to Pakistani-backed groups.
  - o This **sentiment restricts the Indian government's ability to engage in dialogue without appearing to compromise** on national security or public anger.
  - o **In Pakistan, political instability and polarisation further complicate the situation.**
  - o The former Prime Minister Imran Khan's government, for instance, adopted a hardline stance following **India's revocation of Jammu and Kashmir's special status in 2019.**
  - o **Khan's call for India to reverse this move** as a precondition for dialogue has **created a diplomatic deadlock.**
- **The Role of the Military and Strategic Calculations**
  - o The **Pakistani military plays a crucial role in shaping the country's policy towards India.**
  - o Historically, **the military has maintained an adversarial posture**, viewing India as a primary threat.
  - o **This perspective influences Pakistan's support for non-state actors** as strategic assets to counterbalance India's conventional military superiority.
- **Economic and Trade Dynamics**
  - o **Trade between India and Pakistan has the potential to build mutual dependencies** and foster better relations.
  - o However, **following the revocation of Article 370, Pakistan suspended trade with India,** exacerbating economic difficulties.
  - o The **pressure from Pakistani industries to resume trade highlights the potential benefits**, but political and military considerations have so far outweighed economic incentives.
- **External Influences and Geopolitical Factors**
  - o The **growing China-Pakistan economic and military partnership adds another layer of complexity.**
  - o **China's strategic interests in the region**, particularly through the China-Pakistan Economic Corridor (CPEC), **influence Pakistan's policies towards India.**
  - o Conversely, **India's closer ties with the United States and other Western countries impact its approach towards Pakistan.**

Ways Ahead to Address the Persistent Threat of Pakistan-Sponsored Terrorism in Jammu and Kashmir
- **Enhanced Security Infrastructure**
  - o Strengthening the security infrastructure in Jammu and Kashmir is paramount.
  - o This **includes improving intelligence-gathering capabilities, modernising equipment, and increasing the presence of well-trained security forces.**
  - o **Utilising advanced technology such as drones, surveillance systems, and cyber intelligence can provide a strategic advantage** in pre-empting and thwarting terrorist activities.
- **Community Engagement**
  - o **Building trust with the local population is critical.** Effective counter-terrorism strategies must involve community engagement programs that encourage cooperation with security forces.
  - o **Providing avenues for local employment, improving infrastructure, and ensuring access to education and healthcare can reduce the appeal of militancy** and create a more stable environment.
- **Targeted Operations**

- o **Conducting targeted operations** against known terrorist operatives and **their networks is crucial.**
- o These operations must be precise to minimize collateral damage and avoid alienating the local population.
- o **Special forces and counter-insurgency units should be employed to carry out these missions** with surgical precision.
- **Bilateral Dialogue**
  - o Despite the challenges, sustained diplomatic efforts to engage Pakistan in dialogue are necessary.
  - o **This involves both formal and informal channels**, where confidence-building measures can be explored.
  - o **Addressing Pakistan's security concerns and economic interests may provide a foundation** for reducing hostilities and fostering cooperation.
- **Leveraging International Forums**
  - o Utilising international forums such as the United Nations, the Financial Action Task Force (FATF), and other multilateral organisations **can help exert pressure on Pakistan to curb its support for terrorism.**
  - o **Diplomatic efforts should aim to highlight Pakistan's involvement in cross-border terrorism** and seek international support for India's counter-terrorism initiatives.
- **Regional Cooperation**
  - o Engaging with neighbouring countries and regional powers such as China, Afghanistan, and **Iran can help isolate the sources of terrorism**.
  - o **Regional cooperation mechanisms can be established to enhance intelligence sharing, coordinate counter-terrorism operations**, and address the broader security dynamics in South Asia.
- **Track-II Diplomacy**
  - o **Encouraging back-channel or Track-II diplomacy involving former diplomats**, military officers, and influential civil society members from both countries can help create a conducive environment for official dialogue.
  - o **These informal interactions can address sensitive issues**, build mutual understanding, and lay the groundwork for formal negotiations.

Conclusion
- **Pakistan's involvement in terrorism in Jammu and Kashmir is a deeply entrenched** policy shaped by historical, political, and strategic factors.
- **Despite facing international pressure** and internal challenges, **Pakistan has not fundamentally altered its support for militant groups.**
- **This reality underscores the complexity of the issue and the need for a multifaceted approach that includes both robust security measures and sustained diplomatic efforts** to address the root causes of the conflict and achieve long-term stability in the region.

13. Why India Needs to Reset Its Trade Policy

Context
- **India's resistance to expanding the World Trade Organisation's (WTO) negotiation agenda**, particularly in e-commerce, trade, climate change, and investment facilitation, **has sparked significant debate.**
- The **country's stance is primarily rooted in preserving policy flexibility** for its economic development strategies.
- **While this approach suits traditional sectors** like agriculture and fisheries, **it may hinder seizing new opportunities in emerging fields** such as the digital economy and high-tech manufacturing, which are the signature strategies of its Vikas Bharat vision.

Reason Behind India's Resistance to WTO Expansion and Its Drawbacks

- **To Maintain Policy Flexibility**
  - India's resistance to the expansion of the WTO's negotiation agenda is **primarily driven by a desire to maintain policy flexibility for its economic development strategies.**
  - This **cautious approach is particularly beneficial for traditional sectors such as agriculture and fisheries**, where preserving policy autonomy is essential to protect the livelihoods of millions of small farmers and fishermen.
  - These **sectors are highly sensitive to international competition and volatile global markets,** necessitating a protective stance to ensure food security and sustainable rural development.

- **Drawbacks of India's Resistance**
  - This resistance to liberalising trade policies c**an have significant drawbacks, particularly when it comes to capitalising on emerging opportunities in the digital economy** and high-tech manufacturing.
  - These sectors are **rapidly transforming the global economic landscape,** driven by advancements in technology, innovation, and the increasing integration of digital platforms in business operations.
  - **The digital economy encompasses a broad range of activities**, including e-commerce, digital services, fintech, and artificial intelligence, all of which present immense growth potential for India.
  - Therefore, **India's resistance to WTO's expansion can have impact on India's Vision 2047 document.**

Key Components of India's Vision 2047

- **Digital Infrastructure Development**
  - Building robust digital infrastructure, including widespread internet connectivity, advanced data centres, and secure digital payment systems, is **crucial for supporting the digital economy.**
  - This **infrastructure will enable businesses to operate efficiently**, facilitate e-commerce, and provide digital services to a broader population.

- **Innovation and R&D**
  - **Investing in innovation and R&D is essential for developing cutting-edge technologies** and maintaining a competitive edge in high-tech manufacturing.
  - This **involves fostering a culture of innovation**, providing incentives for research institutions and private enterprises, and creating an ecosystem that supports startups and technological advancements.

- **Skilled Workforce**
  - **Developing a highly skilled workforce is critical** for the growth of the digital economy and high-tech manufacturing.
  - This **requires comprehensive educational reforms**, vocational training programs, and initiatives to upskill the existing workforce in emerging technologies.

- **Regulatory Reforms**
  - Implementing regulatory reforms that promote ease of doing business, ensure data protection, and create a conducive environment for digital enterprises is vital.
  - **These reforms should align with global standards to attract foreign investment** and facilitate international trade.

- **Sustainable Development**
  - **Integrating sustainability into economic growth strategies is essential** for long-term development.
  - This **includes promoting green technologies, reducing carbon emissions, and adopting practices** that ensure environmental sustainability.

Why India Needs to Reset its Policy

- **To Navigate Global Economic Governance Effectively**
  - The **global economic governance landscape is evolving**, influenced by geoeconomics, emerging technologies, resilient global value chains, and environmental sustainability.
  - **As a rising economy, India has substantial stakes in this new paradigm.**
  - While achieving a new global equilibrium will not be without friction, **India's growing global stature necessitates that it plays a constructive role and asserts its distinct personality** in managing differences amidst these changes.
- **To Sustain Technology-Driven Economic Growth**
  - **India's evolving domestic policy reforms aim to promote global integration** by developing technology-driven and environmentally sustainable economic growth.
  - The **country is a favoured destination for global investors**, securing the third position in attracting foreign direct investment (FDI) in 2022, after the US and China.
  - **India aims to boost goods exports to $1 trillion by 2030**, positioning itself as a manufacturing powerhouse.
  - Concurrently, **its e-commerce market is expected to surge to $350 billion by 2030.**
  - **Despite the current e-commerce routed exports constituting only 1 percent of total exports,** the global e-commerce routed exports are predicted to reach $2 trillion by 2030, offering **India substantial opportunities for export growth.**
- **To Leverage E-Commerce Opportunities**
  - The **aspiration to leverage e-commerce opportunities has driven regulatory reforms in India,** promoting digitisation, transparency, and operational efficiency in the business landscape.
  - **These initiatives have led to significant reforms** in data protection, consumer rights, competition, and taxation, nurturing a conducive ecosystem for e-commerce enterprises.
  - **India's data protection regulations aim to align with global standards.**
  - **The country is committed to a low-carbon, resilient, and equitable transition, targeting net zero carbon emissions by 2070** and making significant strides in improving energy access and reducing greenhouse gas emissions.

Way Forward
- **Shift from Defensive to Proactive Engagement**
  - In India's evolving export-led economic growth model, **the emphasis on maintaining the unrestricted right to pursue domestic policies should shift towards seeking policy predictability in key destination markets like the US, the EU,** and Japan, particularly in high-tech sectors.
  - **India must shed its hesitancy and actively participate in WTO negotiations concerning e-commerce, trade,** climate change, and investment facilitation.
- **Move Towards Present Imperatives**
  - The **historical context that initially shaped India's strategy has significantly changed since the 1991 economic crisis**.
  - This prompted policy reforms that dismantled trade barriers, attracted foreign investments, and spurred economic expansion.
  - **In the present context, India must adeptly manage its growth trajectory by emphasising digitisation,** sustainable development, and resilient value chains to bolster its manufacturing sector.
  - **Seeking international consensus on rules and disciplines related to emerging economic** issues and navigating the evolving geo-economic landscape **is in the country's best interest.**
- **Active Global Participation**
  - **India's active participation in WTO discussions is crucial** for successful bilateral engagement with major markets.

- o **Participation in these discussions will also enable India to build a leadership position** in the Global South.
- o The **country's lack of engagement has not deterred other nations from forging consensus among major economies regarding new regulations** in disruptive technologies or unilateral carbon border adjustment measures that could harm Indian business interests.
- **Abandon Traditional Defensive Approach**
- o Going forward, **it is time for India to break away from its traditionally defensive positions.**
- o Between 2000 and 2007, India's trade-to-GDP ratio surged from 12 percent to 23 percent, stabilising at this level.
- o **To achieve ambitious export targets and accelerate GDP growth, the country aims for a higher trade-to-GDP ratio**, ideally between 30-35 percent.

Conclusion
- **India's forward-looking approach** to shaping multilateral disciplines in trade and investment has been **demonstrated through its active participation in G20 forums and bilateral trade and investment negotiations** with economically advanced nations.
- A **similar proactive engagement strategy should extend to WTO negotiations,** pivotal for achieving national economic development objectives.

14. Significance of Primary Agriculture Credit Societies

Why in the News?
- Union Minister of Home Affairs and Cooperation Amit Shah urged stakeholders in cooperative societies to support the establishment of primary agricultural credit societies (PACS) in all villages and blocks of the country.

What is a Primary Agricultural Credit Society (PACS)?
- PACS are village level **cooperative credit societies** that serve as the last link in a three-tier cooperative credit structure headed by the **State Cooperative Banks (SCB)** at the state level.
- o Credit from the SCBs is transferred to the **District Central Cooperative Banks (DCCBs)**, that operate at the district level.
- o The DCCBs work with PACS, which deal directly with farmers.
- Since these are cooperative bodies, individual farmers are members of the PACS, and office-bearers are elected from within them. A village can have multiple PACS.
- PACSs **provide short-term, and medium-term agricultural loans to the farmers for the various agricultural and farming activities**.

Number of PACS in India:
- The first PACS was formed in **1904**.
- Currently, there are more than 1,00,000 PACS in the country with a huge member base of more than 13 crore farmers.
- However, **only 65,000 of them are functional**.

Significance of PACS:
- The attraction of the PACS lies in the **last mile connectivity they offer**.
- For farmers, timely access to capital is necessary at the start of their agricultural activities.
- PACS have the capacity to **extend credit with minimal paperwork within a short time**.

- With other scheduled commercial banks, farmers have often complained of tedious paperwork and red tape.
- For farmers, PACS provide strength in numbers, as most of the paperwork is taken care of by the office-bearer of the PACS.
- In the case of scheduled commercial banks, farmers have to individually meet the requirement and often have to take the help of agents to get their loans sanctioned.

Challenges Faced by PACS:
- Since PACS are cooperative bodies, **political compulsions often trump financial discipline**, and the recovery of loans is hit.
- **Many committees have pointed out various issues plaguing the cooperative system such as;**
  - Lack of active participation by the members,
  - Lack of professionalism,
  - Absence of corporate governance,
  - Bureaucratisation,
  - Ageing and unenthusiastic employees.

News Summary:
- Addressing a programme at Gandhinagar marking the 102nd International Day of Cooperatives in Gandhinagar, Union Minister Amit Shah said that the Government will set up primary agricultural credit societies (PACS) in all villages and blocks of the country.
  - Currently, **there are 2 lakh such gram panchayats which lack PACS**.
- He further appealed to all cooperative societies to open bank accounts with local district and state cooperative banks, as well as buy from local dairies, to strengthen the cooperative sector.
- He said that the cooperation ministry has undertaken a drive to "establish 2 lakh dairies and PACS" for the 2 lakh gram panchayats which he says lack such facilities.
- He added that this move is in addition to an established database which identifies cooperative societies across the country.
- In March 2024, the Government had launched the National Cooperative Database and released the '**National Cooperative Database 2023: A Report**'.
- The database aims to identify and address the gaps through a comprehensive analysis.
- He said that the Centre has decided **to ensure formation of Primary Agricultural Credit Societies in every village by 2029**.
- He said that the **Government will come out with a new national cooperative policy within a month**.
- The new policy, replacing the existing one formulated in 2002, will seek to further strengthen cooperative movement in the country.

15. Climate Resilient Agriculture

Why in the News?
The Union government plans to unveil a framework to promote climate-resilient agriculture in 50,000 villages located in climatically-vulnerable districts.

About Climate Resilient Agriculture:
- Climate Resilient Agriculture (CRA) refers to farming practices and strategies designed to withstand and adapt to the changing climate.
- In India, where agriculture is a major part of the economy and livelihood for millions, CRA is essential to ensure food security, economic stability, and sustainable development.

- There are 11 National Missions as part of the Union Government's **National Action Plan on Climate Change** (NAPCC).
- **National Mission for Sustainable Agriculture** is one of them.

Key Components / Features of CRA:
- **Diversified Cropping Systems:**
  - **Mixed Cropping:** Growing multiple crops on the same land to reduce the risk of crop failure due to extreme weather.
  - **Crop Rotation:** Changing the type of crop grown in a particular field each season to improve soil health and reduce pests.
- **Improved Water Management:**
  - **Rainwater Harvesting:** Collecting and storing rainwater for use during dry periods.
  - **Efficient Irrigation:** Using methods like drip irrigation to minimize water wastage and ensure crops get the right amount of water.
- **Soil Health Enhancement:**
  - **Organic Farming:** Using natural fertilizers and pesticides to maintain soil fertility and health.
  - **Conservation Tillage:** Minimizing soil disturbance to maintain soil structure and reduce erosion.
- **Adoption of Stress-Tolerant Crop Varieties:**
  - Developing and planting crop varieties that can withstand drought, floods, and other climate extremes.
- **Agroforestry:**
  - Integrating trees and shrubs into farming systems to protect crops, enhance biodiversity, and improve soil and water quality.
- **Weather and Climate Services:**
  - Providing farmers with accurate weather forecasts and climate information to help them plan their activities better and reduce risks.
- **Risk Management and Insurance:**
  - Offering crop insurance schemes to protect farmers against losses due to extreme weather events.

Benefits of CRA:
- **Increased Productivity:** By using resilient practices, farmers can maintain or even increase their crop yields despite adverse weather conditions.
- **Enhanced Livelihoods:** Stable agricultural production ensures a consistent income for farmers and reduces poverty.
- **Environmental Sustainability:** CRA practices promote the sustainable use of natural resources, ensuring long-term agricultural productivity.
- **Food Security:** With reliable agricultural output, the availability of food is more secure, benefiting the entire population.

Challenges & Solutions:
- **Awareness and Education:** Educating farmers about CRA practices is crucial. Extension services and farmer training programs can bridge this gap.
- **Access to Resources:** Ensuring farmers have access to resilient crop varieties, efficient irrigation systems, and other necessary inputs.
- **Policy Support:** Government policies and programs that support CRA initiatives, provide subsidies, and facilitate research and development in climate-resilient technologies.

ICAR's Climate Smart Agriculture Program:

- The Indian Council of Agricultural Research (ICAR) is running a research program called the "**Consortium for Scaling-Up Climate Smart Agriculture (CSA) in South Asia (C-SUCSeS)**." This program aims to:
  - Increase agricultural production and productivity in a sustainable way.
  - Improve food security, nutrition, and income in the South Asian Association for Regional Cooperation (SAARC) region.
- The program also brings together agricultural research centers and extension agencies in the SAARC region to develop and share knowledge about climate-smart technologies and best practices.
- South Asian governments have agreed to explore the idea of a regional seed bank, regional testing and certification of seeds, and a framework for sharing plant genetic material and seeds.
- India collaborates with both **SAARC** and the **Association of Southeast Asian Nations** (ASEAN). To help SAARC countries develop their skills, ICAR and SAARC organize regional training programs together.
- The government has committed to increasing investment, promoting research and development, facilitating technical cooperation, and applying innovative and reliable technologies in agriculture.
- These efforts aim to boost productivity and ensure food and nutritional security in the South Asian region.

Climate-resilient agriculture in 50,000 villages:
- The Union government plans to unveil a framework to promote climate-resilient agriculture in 50,000 villages located in climatically-vulnerable districts.
- Officials will select 50,000 villages from 310 districts that have already been identified as climatically-vulnerable. These 310 districts are spread across 27 states, with Uttar Pradesh accounting for the most districts (48), followed by Rajasthan (27).
- The initiative is part of a national programme on climate-resilient agriculture, which the Ministry of Agriculture and Farmers' Welfare plans to launch as part of a **100-day agenda**.
- The Indian Council of Agricultural Research has developed more than 2,000 such varieties for improving food production.

1 JULY

1. ABHYAS: It is a High Speed Expendable Aerial Target (HEAT). It has been **designed by DRDO's Aeronautical Development Establishment, Bengaluru,** and developed through Production Agencies - Hindustan Aeronautics Limited & Larsen & Toubro. It offers a realistic threat scenario for weapon systems practice. **This indigenous system is designed for autonomous flying with the help of an autopilot, a laptop-based Ground Control System for aircraft integration, pre-flight checks, and autonomous flight**. It also has a feature to record data during flight for post-flight analysis. The booster has been designed by Advanced Systems Laboratory and the navigation system by Research Centre Imarat.

2. Bhuvan Panchayat geoportal 4.0: It is an online geospatial data and services dissemination platform to support integration and utilisation of space-based information into governance and research initiatives involving **spatial planning up to Gram Panchayat level. Developed by: This WebGIS platform developed by NRSC, ISRO.**

It **enables visualisation, analysis, sharing of web map service (WMS) services** of all thematic data products generated at 1:10k under the Space based Information Support for Decentralized Planning (SISDP) project.

National Database for Emergency Management (NDEM) portal: It provides a **comprehensive uniform, structured, multi-scale scale geospatial database for the entire country** for situational assessment and effective decision-making during disasters/ emergency situations. It **acts as a national level geo-portal to provide space-based information with the amalgamation of DSS tools and services of disaster forecasting organisations** with value addition addressing all natural disasters in all phases of disasters for an effective Disaster Risk Reduction in the Country. It will **also act as a Disaster Recovery and Data Provider node for the Integrated Control Room for Emergency Response (ICR-ER) being established by MHA, New Delhi.**

3. Rhisotope Project: Recently, South African scientists injected radioactive material into live rhinoceros horns under the Rhisotope Project to curb poaching. It was st**arted in 2021 in South Africa. It aims to make the rhinoceros horns easier to detect at border posts and render them useless for human consumptio**n. The project involves inserting two tiny radioactive chips into the horns of 20 rhinos. The low-dose radioactive material is designed to be detectable by radiation sensors at international borders without harming the animals or the environment. **The radioactive material is expected to last five years on the horn, making it a more cost-effective solution than dehorning every 18 months**. Additionally, the team sprayed 11,000 microdots on each treated horn for further identification. The team of scientists will take follow-up blood samples to ensure the rhinoceroses are effectively protected**. South Africa, home to the majority of the world's rhinos, has been battling a poaching crisis driven by demand from Asia, where rhino horns are used in traditional medicine.**

4. India's Bioeconomy recorded 12 times increase in last 10 years: Union Minister Dr Jitendra Singh inaugurates the **'National Plant Computational Biology & Bioinformatics Facility' at National Institute of Plant Genome research (NIPGR) marking the Silver Jubilee celebrations of the Institute in New Delhi**. He also announced the release of 'ADVIKA', a new superior drought tolerant, climate smart chickpea variety, which is notified in the Gazette and available for widespread production. **India produces 74% of the global chickpea output** and it can be a good source of foreign exchange earnings.

2 JULY

1. Santhal Rebellion: The 169th anniversary of the Santhal rebellion is celebrated. **June 30 is celebrated as Hool diwas every year in commemoration of rebellion.**

About Santhal Rebellion (1855-1856)
➤ **Leaders:** Siddho, Kanho, Chand, and Bhairav, along with sisters Phulo and Jhano.

- ➤ **Location:** Rajmahal Hills
- ➤ **Cause:** exploitation and oppression of the Santhals by British colonial authorities and moneylenders.

Karl Marx has referred to it as India's first organised mass revolution in his book Notes on Indian History. The Santhal Pargana Tenancy Act of 1876 enacted by the British after the rebellion. T**he territories called 'Santhal Paraganas' were created. It became illegal for a Santhal to transfer land to a non-Santhal.**

2. Shyok River: Five soldiers died after a tank was swept away by Shyok river in Ladakh. It is a **right tributary of the Indus River.** Originates from the Rimo glacier and joined by Nubra River from the north**. Shyok and Nubra are the main rivers of Nubra Valley.** Drains northern Karakoram mountains. **Its placer deposit contains Gold**. **Shyok village on its riverbank is the last Indian village on the road to Daulat Beg Oldie (DBO),** a military base near the India-China border.

3. Liberalised Remittances Scheme
Genesis: Introduced in 2004
Benefit: all resident individuals, including minors, are allowed to freely remit up to USD 2,50,000 per financial year for any permissible current or capital account transaction or a combination of both.
There are no restrictions on the frequency of remittances under it. **The Scheme is not available to corporates, partnership firms, Hindu Undivided Family (HUF), Trusts etc.**

3 JULY

1. Steel Slag: Guidelines for Utilization and Processing of Steel Slag in Road Construction, released by Central Road Research Institute (CRRI).

About Steel slag
It is a solid waste generated in the process of steel making. It is **composed of oxides of calcium, iron, silicon, magnesium, etc.**
Key Applications: Road base course material (Steel Slag Road Technology (SSRT)), Blending material for Portland cement, Fertilizer and soil improvement etc.

Benefits of SSRT
Technical: Improved durability of road; improved skid resistance; Economical than bituminous etc.

Environmental: Utilization of 19 million tons of steel slag waste, generated annually; Reduction of carbon footprint in road construction.

2. Megafauna: Archaeologists discovered world's oldest known 41,000-year-old ostrich nest in Andhra Pradesh. It could provide key information about the extinction of megafauna in the Indian subcontinent.

About Megafauna
The term megafauna describes animals above a certain weight threshold (generally above 50 kg). **Megafauna may be classified based on their dietary type as megaherbivores (plant-eaters), megacarnivores (meat-eaters), and megaomnivores (who eat both plants and meat).** Anthropogenic pressures on megafauna since the Late Pleistocene have resulted in dramatic losses, especially in the megaherbivores and megacarnivores. Some extinct megafaunal species include **woolly mammoths, sabre-toothed tigers, giant sloths etc.**

3. Snowblind Malware: It is a malware that targets Android devices to steal banking and other sensitive information. **Malware, or malicious software, is any program or file that's intentionally harmful to a computer, network or server.** People usually get this virus by downloading a malicious app that looks legitimate. It repackages an app to avoid detection and misuses accessibility features to steal sensitive information and control the app remotely.

4. Araku Arabica Coffee - Grows in the hilly tracks of **Andhra Pradesh and Odisha**. **Accredited with Geographical Indication (GI) Tag in 2019.** Takes its name from Araku Valley, situated in the Eastern Ghats (Andhra Pradesh). Weather of the valley with its hot days and cold nights along with the iron-rich soil allows the coffee to ripen slowly and gives it aromatic richness and taste. **Produced by the tribals with emphasis on organic approach with use of organic manures, green manuring and organic pest management practices.**

4 JULY

1. Expunction in Parliament: Certain portions of speech from opposition leaders were expunged from the record of parliament. **Expunction means deletion of words, phrases or expressions** from the proceedings

or records for being **defamatory or indecent or unparliamentary or undignified.**

About Expunction

Presiding officer of the house (Speaker in Lok Sabha and Chairman in Rajya Sabha) has the authority to decide which portion will be expunged. **Rule 380 and 381 of the Rules of Procedure in Lok Sabha and Rule 261 and 262 of the Rules of Procedure in Rajya Sabha details provisions related to expunction to prevent misuse of freedom of speech guaranteed inside Parliament.** Article 105(2) of the Constitution protects Members of Parliament from any court proceeding for anything said in parliament.

2. Rudram-1- Air-to-Surface missile developed by DRDO for Indian Air Force (IAF).

Features:
Launch platform: Sukhoi-30MKI fighter jets. It has **Inertial Navigation Systems (INS)-GPS navigation and Passive Homing Head for final attack**, allowing it to accurately hit radiation-emitting targets.
Range: Height ranging from 500 meters to 15 km, and can hit radiation-emitting targets within 250 km
Significance: Allows IAF to conduct Suppression of Enemy Air Defence (SEAD) operations deep within enemy territory, neutralizing critical air defense installations.

3. UN Convention on the Rights of Persons with Disabilities (UN-CRPD): 17th session of the Conference of State Parties to UN-CRPD took place in New York with the **theme "Rethinking disability inclusion in the current international juncture and ahead of the Summit of the Future ''.**

About CRPD

Adopted in New **York in 2006 and entered into force in 2008.**
Objective: To promote, protect and ensure the full and equal enjoyment of all human rights and fundamental freedoms by all persons with disabilities, and to **promote respect for their inherent dignity.** Persons with disabilities include those who have long-term physical, mental, intellectual or sensory impairments.
Members: It has 164 Signatories (including India).

4. Syntrichia Caninervis: Scientists have found a desert moss - Syntrichia Caninervis - which is able to withstand Mars-like environment conditions. **Mosses are small, non-vascular flowerless plants in the taxonomic division Bryophyta.**
Mosses are commonly found in moist-shady locations and are distributed throughout the world except in salt water.

About Syntrichia Caninervis:

It is widespread in some of Earth's harshest locations including **Antarctica and the Mojave Desert.** It could be the **first possible pioneer species for the colonization of Mars.**

5 JULY

1. Cabinet Committees: The Union government constituted eight Cabinet committees.

About Cabinet committees

These are constituted under the **Transaction of Business Rules, 1961.** The cabinet makes use of the committee system to facilitate decision-making in specific areas.

These include cabinet committees on:
➤ Appointments
➤ Accommodation
➤ Economic Affairs
➤ Parliamentary Affairs
➤ Political Affairs
➤ Security
➤ Investment and Growth
➤ Skill, employment and livelihood

2. Apatani Tribe- The **tribe found in Ziro valley** and known for their effective traditional village council called bulyañ. **Region of tribe has been included in UNESCO's Tentative List as living Cultural Landscape** (where man and environment have harmoniously existed together in a state of interdependence).
Major Festival: Dree and Myok
Key Dance: Daminda, and Pree dance

3. Agricultural and Processed Food Products Export Development Authority (APEDA)- New Zealand has denied India's request for a certification trademark equivalent to a geographical indication (GI) tag on

basmati rice as it is grown outside of India also. Earlier, on the same ground rejected by Australia.

About APEDA

Established under the Agricultural and Processed Food Products Export Development Authority Act, 1985. **Promotes exports and takes care of GI registration for Indian products abroad, filing the certification of trademark applications.** Serves as the Secretariat to the National Accreditation Board, overseeing the accreditation of Certification Bodies for organic exports under the National Programme for Organic Production.

4. Pachathuruthu Project: Recently, Kerala's Chief Minister asserted that the Pachathuruthu initiative will play a key role in achieving ambitious Net Zero Carbon target of State.

About Pachathuruthu project: Aims to create man-made mini-forests. Initiative will help in protecting natural forest biodiversity by planting a variety of indigenous plants in barren lands. Also, it will **aid in carbon sequestration, mitigating the impact of urban heat island etc.** These projects are planned by mobilizing the masses through participatory campaigns and through coordination and leadership of the Local Self-Government Institutions.

8 JULY

1. Abhay Mudra- 'Abhaya mudra' was referred to by the Leader of Opposition in his speech. **Symbol of fearlessness.** It is **displayed by the fifth Dhyani Buddha, Amoghasiddhi** and the posture used by Buddha to tame a mad elephant.

2. Groynes: They are shore protection structures built perpendicular to the shoreline of coast or river. Groynes trap sediments from longshore drift so that the coast behind the sand layer is protected from erosion. **Rock, wood, steel and sand-filled bags are often used for constructing groynes.**

Functions: Reduced erosion, greater wave energy dissipation and long-term stabilization of coastlines.

Other methods of coastal protection: Seawalls with tetrapods (Mumbai), Offshore Reefs, Breakwater, Beach Nourishments etc.

3. ISI Mark- Government makes Indian Standards Institution (ISI) mark mandatory for stainless steel and aluminium kitchen utensils through a Quality Control Order. **ISI Mark is developed by Bureau of Indian Standards (BIS), assuring of product quality and safety.**

About BIS

BIS is the **National Standard Body of India established under the BIS Act, 2016.** It aims at harmonious development of the activities of standardization, marking and quality certification of goods.

Other BIS Standards:
➢ **Hallmark:** Official guarantee of purity or fineness of precious metal articles.
➢ **Eco Mark:** Labelling of environment friendly products.

9 JULY

1. Denisovan: Scientists have identified bone remains found in a Tibetan Baishiya Karst Cave as belonging to a Denisovan individual.

About Denisovans

An extinct species of hominid and a close relative to modern humans. **May have ranged from Siberia to Southeast Asia during the last Ice Age.** DNA evidence suggests Denisovans are related to both Neanderthals and modern humans, and may have interbred with both. **Share a common ancestor - Homo heidelbergensis** (most likely lived in Africa) - with both modern humans and Neanderthals.

2. Pangong Tso (Lake): As per Satellite images it has been claimed that China is digging in close to Pangong Tso in Eastern Ladakh to build some structure.

About Pangong Tso

Located at 4,350m altitude and is an endorheic (landlocked). **World's highest saltwater lake. One-third of the lake lies in India and the other two-thirds in China.** Change colors (appears blue, green and red at different times). Neither a part of the Indus River basin, nor a Ramsar Site. **Acts as an important breeding ground for a variety of birds including a number of migratory birds.** Formerly, Pangong lake had an outlet to Shyok River (tributary of Indus) but it was closed off due to natural damming.

3. Transposon: A recent paper published by researchers at the University of California emphasized on the role of transposons in gene-editing.

About Transposons
Transposons, or jumping genes, are **DNA sequences that can change their position within a genome.**
Discovered by: Noble Laureate Barbara McClintock.
Function: Transposons can reversibly alter gene expression depending on their insertion points.
Prevalence: Over 45% of the human genome consists of transposable elements.
Role in Evolution: Transposons are crucial for genetic diversity and evolution, capable of turning genes on or off using epigenetic mechanisms. Can also cause mutations leading to diseases.

4. Vaquita (Phocoena sinus): A recent survey revealed a devastating decline in population of endangered marine mammal, the Vaquita.

About Vaquita
It is the **smallest and now most endangered species of the cetacean order.**
It is a **toothed whale, like dolphins and sperm whales, as opposed to whales with baleen** (Baleen is a filter-feeding system inside the mouths), such as the blue whale.
It is **endemic to the Gulf of California** where it lives in the shallow waters bordering the Colorado estuary.
IUCN Conservation Status: Critically endangered.
Threats: Low reproductive rate and limited geographical distribution make it highly vulnerable to human disturbances

11 JULY

1. Mitochondrial Disease (Mito)- New IVF procedure called mitochondrial donation (currently under trial in Australia) offers a cure to Mito. **Mitochondria is the Powerhouse of the cells producing 90% of the energy needed to sustain life.**

About Mito
Inherited metabolic condition caused by genetic mutation in the DNA. It **impairs the ability of mitochondria to convert food and oxygen into energy. Two Kinds (as there are two types of DNA):**
Nuclear DNA, inherited from both parents.
DNA of the mitochondria, passed down through the mother.

2. Fly Ash- Fly ash is a **byproduct from burning pulverized coal in thermal power generating plants**. As per the Ministry of Environment, Forest and Climate Change notification of 2009, the term "**fly ash" means and includes, all ash generated such as Electrostatic Precipitator (ESP) ash, dry fly ash, bottom ash, pond ash and mound ash**. Its composition includes silicon dioxide (SiO_2), calcium oxide (CaO), and aluminium oxide (Al_2O_3).
Uses: Manufacture of building materials, replacement of cement, enhancement of soil fertility etc.

3. Financial Inclusion Index: It is a comprehensive index incorporating details of **banking, investments, insurance, postal as well as the pension sector**. It captures the extent of financial inclusion across the country. **Single value index (0 to 100), where 0 is complete exclusion and 100 is full inclusion.** It includes three broad parameters viz., **Access (35%), Usage (45%), and Quality (20%).** It is published annually in July.

16 JULY

1. Wolbachia Bacteria: Recently, study has highlighted that Wolbachia bacteria had manipulated the wasp Encarsia formosa to entirely get rid of its males. **E. formosa wasps helps in controlling population of whiteflies, a major agricultural pest.**

About Wolbachia bacteria
Commonly found in nematodes and arthropods, especially insects. In insects, these are present in eggs but they are absent in the sperm. Due to this, females

can transmit them to their offspring whereas males can't. As a result, **Wolbachia have evolved ways to manipulate their insect hosts to produce more female than male progeny**. Tra gene of Wolbachia play key role in showing this feature.

Potential Application:

Mosquitoes with Wolbachia can be used to reduce numbers of target mosquito species, for example, **Ae. Aegypti mosquitoes.**

2. Makhana: Tropical and subtropical aquatic crop: Grown in stagnant perennial water bodies like **ponds, land depressions, oxbow lakes, etc. Its seed is also called as Black Diamond.**

Climatic Conditions: Temperature: 20 - 35 degree Celsius, Relative humidity 50% to 90%, Annual rainfall 100 cm - 250 cm.

Region: Native of South-East Asia and China & distributed to almost every part of world. India is largest producer in the world (largest producing state is Bihar)

Nutritional Benefits: Low fat content, high contents of carbohydrates, protein (15 - 20%) and minerals.

3. Monoclonal Antibodies: Monoclonal antibodies (moAbs or mAbs) are lab-made proteins mimicking natural antibodies. **Antibodies are parts of body's immune system which seeks out antigens (foreign materials) and destroy them.**

Applications:

Diagnostics (e.g., ELISA), Treating diseases (cancer, infections, autoimmune disorders, etc.)

Analyzing cell types in blood/tissue (with the use of fluorescent tags)

17 JULY

1. Indian Leopard: As per IUCN, **Indian leopard (Panthera pardus fusca) is suspected to have declined by 24.5% over the last three generations.**

About Indian Leopard

Habitat Distribution: India, Nepal, Bhutan, and parts of Pakistan, excluding mangrove forests and deserts.

Characteristics: Nocturnal animal, Skilled climbers, Solitary predators etc.

Status of Leopard in India (2022)- Leopard population is estimated at 13,874. **Top 3 states having the largest population of leopards are Madhya Pradesh, Maharashtra, and Karnataka.**

Protection Status:

IUCN- Vulnerable

Wildlife Protection Act 1972: Schedule 1

Threats: Habitat loss, fragmentation, human-wildlife conflict, poaching, and illegal trade.

2. Article 341: Supreme Court stated that the State can't alter the Schedule Caste (SC) List published under Article 341. The Court struck down Bihar Govt resolution to merge Economically Backward Class Community in SC List.

About Article 341

President can officially designate certain groups as Scheduled Castes for specific States or Union Territories. For States, this is done after consulting the Governor. The designation may include entire castes, races, tribes, or subgroups within these categories. **Parliament may by law include in or exclude from the list of Scheduled Castes.**

3. Electroencephalography (EEG): 2024 marks the 100th year of electroencephalography(EEG)

About EEG

It is a **medical test which measures brain electrical activity generated by neurons**. It uses small, metal discs called electrodes that attach to the scalp. Brain cells communicate via electrical impulses, and this activity shows up as wavy lines on an EEG recording.

Uses: Detecting epilepsy, neurological disorders, or any other brain related tumors, damage, etc.

4. Pheromone Traps: A pilot project by Central Institute for Cotton Research (CICR) - Indian Council of Agricultural Research (ICAR) deploys AI powered Pheromone traps, to protect cotton crops from Pink Bollworm pest infestation.

About Pheromone Traps

They uses chemical signals (pheromones) emitted by female moth to attract mate (hence catches only males of that species). **Traps can be used to monitor target pests in agriculture or in residential areas**. By constantly monitoring for insects, it may be possible to detect an infestation before it occurs.

1. Indian Council of Agricultural Research: Recently, 96th Foundation and Technology Day of Indian Council of Agricultural Research (ICAR) was celebrated.

About ICAR
Genesis: 1929 as a registered society under the Societies Registration Act, 1860. Formed based on the report of the Royal Commission on Agriculture
Objective: Coordinate, guide, and manage research and education in agriculture including horticulture, fisheries, and animal sciences in the entire country. It is an **autonomous organisation under Department of Agricultural Research and Education, Union Ministry of Agriculture and Farmers Welfare**
Headquarters: New Delhi.
Union Minister of Agriculture is the ex-officio President of the ICAR Society

2. CEPI:
Asia's first health research-related Pre-clinical Network Facility has been inaugurated in Faridabad (Haryana) under the Coalition of Epidemic Preparedness Innovations (CEPI). Genetically Defined Human Associated Microbial Culture Collection (Ge-HuMic) Facility has been also inaugurated.

About CEPI
Genesis: Launched in 2017 by **Norway and India, the Bill & Melinda Gates Foundation, World Economic Forum (WEF), etc.**
Aim: To accelerate the development of vaccines against emerging infectious diseases and enable equitable access to these vaccines.
Headquarters: Oslo, Norway

3. Inverse ETF: SEBI proposed to introduce a new asset class for investors which can offer investment strategies including **long-short equity funds and inverse ETFs.**

About Inverse ETF ('Short ETF' or 'Bear ETF')
It is an Exchange Traded Fund (ETF) constructed by using various derivatives to profit from a decline in the value of an underlying benchmark. **ETFs are marketable securities that track an index, a commodity, bonds, or a basket of assets like an Index Fund**. It gains from a drop in the value of an underlying benchmark. Only intended for short holding periods.

4. R21/Matrix-M- West African country Ivory Coast became the first country to roll out the new R21/Matrix-M malaria vaccine to children below 2 years. **Malaria is a life-threatening disease caused by a single-cell parasite of genus Plasmodium spread to humans by some types of mosquitoes.**

About R21/Matrix-M vaccine:
Second malaria vaccine recommended by WHO in 2023, after RTS, S/AS01 vaccine. **Developed by the University of Oxford, leveraging an adjuvant technology from Novavax.** Manufactured and scaled by the Serum Institute of India. Targets the plasmodium 'sporozoite', which is the first form of the malaria parasite entering the human body.

19 JULY

1. The Seine River: Paris mayor took pre-Olympics dip to prove Seine clean ahead of 2024 Games.

About the Seine
It's **France's second-longest river (after the Loire).** It flows in a Northwesterly direction through Paris before emptying into the English Channel at Le Havre.
Origin: Near Dijon, France.
Major tributaries: Marne, Aube and Yonne.
Significance: It's vital for transportation, commerce, and culture in France for centuries. **Paris, Banks of the Seine is a cultural UNESCO World Heritage Site as it comprises some of the iconic monuments like Saint-Chapelle, Notre Dame Cathedral and the Eiffel Tower.**

2. Chandipura virus
Also known as Chandipura vesiculovirus (CHPV), it is an Ribonucleic acid (RNA) virus belonging to the Rhabdoviridae family. It also includes the rabies virus. It was first identified in 1965 in Chandipura, a village in Maharashtra. It primarily affects children (aged 9 months-14 years) and has been associated with outbreaks of acute encephalitis in India.
Transmission: Spread through the sting of a vector-infected sandfly and is seen more in rural areas.
Symptoms: Fever, vomiting, loose motion and headache.

3. Lunar Cave

Researchers have found evidence of an underground cave on the moon that is accessible from the surface. **The cave was recorded at the Sea of Tranquillity, a large, dark, basaltic plains on lunar surface.**

About Lunar cave

Lunar caves are believed to be the underground passage ways formed through **volcanic processes that are connected to the pits covering the moon's surface. Significance of the discovery:** New insight into the evolution of the moon and lunar volcanism. Caves could provide shelter for future astronauts from radiation, micrometeorites, and temperature extremes.

4. Last Universal Common Ancestor (LUCA): Scientists suggest LUCA could have formed just 300 million years after Earth's formation.

About LUCA

Researchers believe all the three branches of life i.e. **bacteria, archaea, and eukarya have originated from a single microbe, called LUCA**. However, there is no fossil evidence to support the existence of LUCA.

Suggested Characteristics:

Anaerobic: Grew in an environment devoid of oxygen.
Thermophile: Heat loving microbe.
Metabolism: Depended upon hydrogen, carbon dioxide and nitrogen, turning them into compounds such as ammonia.

JULY 22

1. PM SVANidhi Scheme

Madhya Pradesh has secured the first place under the 'Best Performing State' category in PM SVANidhi scheme. PM SVANidhi (Street Vendor's AtmaNirbhar Nidhi) Central Sector Scheme under Ministry of Housing and Urban Affairs.

Objective: To facilitate street vendors to access affordable working capital loan for resuming their livelihoods activities, after easing of Covid lockdown.

Features

➤ Initial working capital loan of up to ₹10,000.
➤ Interest subsidy on timely/early repayment @7%.
➤ Monthly cashback incentive on digital transactions.

Targeted beneficiaries: Street vendors/ hawkers vending in urban areas, as on or before March 24, 2020

2. Article 361- It's an **exception to Article 14 (right to equality) where Presidents or governors are not answerable to any court for the exercise of powers and duties of their office.** However, Parliament can review the President's conduct through designated investigative bodies. (Article 61) They have immunity from criminal proceedings while in office and cannot be arrested or imprisoned by court order while in office. Civil suits against the President/Governor require two-month notice before filing.

23 JULY

1. UPSC Chairman (Article 316)

Appointment: By the President
Term: 6 years/ 65 years of age, whichever is earlier.
Eligibility: Held office for at least ten years either under the Government of India or under the Government of a State. He/she is ineligible for further employment either under the Government of India or under the Government of a State
Removal: By President, if he/she is an adjudged insolvent; engages during his term of office in any paid employment outside the duties of his office; unfit to continue in office by reason of infirmity of mind or body.

2. Zebra Mussel

Invasive "Zebra mussel" has been found for the first time in the Colorado river (USA). **Fingernail-sized mollusc, native to the Caspian and Black Seas and probably arrived in the Great Lakes in the 1980s via ballast water.**

About Zebra Mussel:

Habitat: Slow rivers, canals, lakes, water pipes etc.

Characteristics:

➤ **Feeding:** Uses filter feeders that siphon particles of plankton/algae from water.
➤ **Byssal threads:** Use root-like protein byssal threads to firmly attach to hard surfaces like rocks, native mussels, docks.
➤ **Biofouling:** Accumulation of adults on surface.

3. Bail Under UAPA- Supreme Court granted bail to an accused booked under the Unlawful Activities (Prevention) Act, 1967 (UAPA). The Court noted the accused had been in custody for 9 years and the trial was progressing slowly.

Bail Under UAPA
Law: Section 43D(5) of UAPA imposes strict conditions for bail, generally prohibiting it if the accusation seems prima facie true.
SC judgement: in K A Najeeb vs. Union of India (2021), SC held that UAPA's bail restrictions should not override constitutional rights **(Right to Life and Personal Liberty under Article 21).**

24 JULY

1. Green Climate Fund (GCF): GCF approves several projects in developing countries including a project in India (Financing Mitigation and Adaptation Projects (FMAP))

About FMAP
It is an **initiative of Small Industries Development Bank of India (SIDBI)**. It will extend loan to MSMEs, for projects such as renewable energy, energy efficiency, energy storage and e-mobility.

About Green Climate Fund
It is the world's largest dedicated climate fund. **Established under the Cancún Agreements in 2010.** Mandate is to foster a paradigm shift towards low emission, climate-resilient development pathways in developing countries. Operating entity of the financial mechanism of the **United Nations Framework Convention on Climate Change (UNFCCC).**

2. Probiotic
Probiotics are live microorganisms (bacteria and yeasts) that are intended to have health benefits when consumed or applied to body. Lactobacillus acidophilus (probiotic bacteria) naturally occurs in human gut and other parts of body. It **helps digestive system to break down sugars like lactose into lactic acid**. They can be found in yogurt and other fermented foods, dietary supplements, and beauty products.
Benefits: Improving intestinal tract health; Help body to maintain healthy community of microorganisms; stimulate systemic immune response etc.

3. Clarion-clipperton Zone (CCZ)
India will apply for **licences from International Seabed Authority (ISA) to explore deep-sea minerals in Clarion-clipperton Zone of Pacific Ocean for Critical Minerals.**

About Clarion-clipperton Zone:
It is a region spanning 5,000 kilometers across the central Pacific Ocean, at depths of 4,000 – 5,500 meters. It is **a vast area between Hawaii and Mexico, rich in polymetallic nodules. Polymetallic nodules are a potential mineral resource for copper, nickel, cobalt, iron, manganese, and rare earth elements.** These minerals are essential for electric vehicles and solar panels, including manganese, nickel, copper, and cobalt.

4. Greenium (or green premium)
Indian sovereign green bonds hardly received any Greenium from private investor's according to Economic Survey 2023-24. **Green bonds are debt instruments that fund specific projects/activities categorised as 'green' under national or international green taxonomies.**

About Greenium
It refers to pricing benefits based on the logic that investors are willing to pay extra or accept lower yields in exchange for sustainable impact (United Nations Development Programme (UNDP)). It is the **additional cost of choosing a clean technology over one that emits more greenhouse gases.**

25 JULY

1. Pradhan Mantri Janjatiya Unnat Gram Abhiyan
Aim is to bring improvement in the socio-economic condition of tribal communities. Scheme will adopt saturation coverage for tribal families in tribal- majority villages and aspirational districts. **Saturation approach aims to enhance capabilities and empower people through targeted interventions in education, health, and skill development.** Envisages to cover 63,000 villages and aims to benefit 5 crore tribal people across the country.

2. Macrolones
Researchers recently probed that how a class of synthetic drugs called macrolones disrupt bacterial cell

function to fight infectious diseases. **Macrolones can work two different ways i.e. either by interfering with protein production or corrupting DNA structure**. It makes drug resistance in bacteria difficult as bacteria would need to implement defenses to both attacks simultaneously. **Macrolones are synthetic antibiotics that combine the structures of two widely used antibiotics (Macrolids and Fluoroquinolones) with different mechanisms**. Macrolides, such as erythromycin, block the ribosome, the protein manufacturing factories of the cell. **Fluoroquinolones, such as ciprofloxacin, target a bacteria- specific enzyme called DNA gyrase.**

3. Shield-tailed Snake

Scientists have discovered a new species of Shield-tailed snake (Uropeltis Caudomaculata) in Western Ghats' Meghamalai-Munnar landscape.

About Shield-tail Snake

Shieldtail snakes belong to the **family Uropeltidae** and are endemic in peninsular India and Sri Lanka. There are over 62 species of Shield tailed snakes, of **which 44 species are found in India.**

Habitat: Inhabit hilly forests & occupy tunnels in the leaves, humus, rocks & logs.

Behavior: Spend most life underground. Come to the surface at night & active during rains.

4. Kalarippayattu

Union Ministry of Youth Affairs and Sports has recognised the Indian Kalarippayattu Federation as the Regional Sports Federation to promote 'Kalarippayattu' in the country.

About Kalarippayattu

Developed in Kerala, it is considered as one of the most ancient martial arts in the world. It is noted for its high-flying acrobatics, graceful movements, and employs deadly weapons at ease.

2 main styles:

Vadakkan or Nothern style predominantly practiced in the Malabar region of Kerala.

Thekken or Southern Style practiced mainly in the Travancore region.

26 JULY

1. MERCOSUR

Bolivia became a full member of MERCOSUR.

About MERCOSUR

It is **Southern Common Market (MERCOSUR for its Spanish initials) in Latin America**. It was established by Argentina, Brazil, Paraguay and Uruguay in 1991, and subsequently joined by Venezuela and Bolivia. Venezuela has been suspended since December 1, 2016.

Objective: facilitating the free movement of goods, services, capital and people among the four member countries.

India has a Preferential Trade Agreement with MERCOSUR.

2. Magnetotactic bacteria (MTB)

A study found that rock varnish in Ladakh, containing magnetofossils, could help identify habitable environments in space. **Magnetofossils are fossil remains of magnetic particles produced by MTB.**

About MTB

MTB are widespread, motile, diverse prokaryotes. **They biomineralize a unique organelle called the magnetosome (consists of magnetic iron mineral). These bacteria bacteria can orientate themselves within Earth's geomagnetic field.**

3. Artificial Reefs-
300 artificial reefs were deployed off the coast of Rameshwaram (Tamil Nadu).

About Artificial Reefs

These are technology interventions used to rehabilitate or improve natural habitats, increase productivity and manage aquatic resources including habitat enhancement. **Department of Fisheries is promoting it under Pradhan Mantri Matsya Sampada Yojana for rejuvenating coastal fisheries**

Advantages

➤ Reduce wave damage on coasts, help the **regeneration of marine ecosystems and acts as a carbon sink.**
➤ **Enhance recreational fisheries, and eco-tourism**, creating suitable areas for diving and reducing conflicts.
➤ Restricts bottom trawling in the near shore areas.

4. Sangameshwar Temple

Sangameshwar Temple is submerged due to flooding in Krishna river. **Sangameswara temple in Nandyal district (Andhra Pradesh) submerges annually in the backwaters of the Srisailam dam.**

Sangameshwar Temple

The Nagara-style temple is dedicated to the Lord Shiva. It was **built by the Chalukya dynasty on the confluence of rivers Krishna and Tungabhadra** along with five other tributaries (hence the name Sangameswara)

Other Sangameshwar Temples in India:

➢ Sri Ketaki Sangameshwara Swamy Temple, Telangana
➢ Sangameshwar temple, Bhavani, Tamil Nadu
➢ Sangameshwar temple, Karnataka (part of a Group of monuments at Pattadakal which is a UNESCO World Heritage Site).

30 JULY

1. Saffron

Erratic weather patterns such as a protracted dry spell, heatwaves, etc. have led to saffron farmers of J&K switching to apple and mustard plantations.

About Saffron

Fragrant stigmata found in the Crocus flowers. One of the most costly spices in the world as 75,000 flowers are needed to make one ounce of pure saffron. **Contains aromatic essential oil croncin and the colouring principle crocerin (yellow).**

Agronomic conditions required for saffron cultivation:

➢ Sub-temperate climate with altitude (1500-2250 meters)
➢ **Annual rainfall (30-40cm)** and remaining covered with snow in winter is conducive.
➢ Neutral/slightly alkaline well-drained loamy soil.

2. Oropouche Virus

Brazil recently reported the world's first death due to Oropouche virus.

About Oropouche Virus disease

It is caused by Oropouche virus (OROV), a segmented single- stranded RNA virus. Found to circulate in Central and South America and the Caribbean. **Transmitted to humans primarily through the Culicoides paraensis midge (found in forested areas and around water bodies), or Culex quinquefasciatus mosquitos.**

Symptoms: similar to dengue (fever, headache, joint stiffness, pain, nausea etc.) To date, there is no evidence of human-to-human OROV transmission.

There is no specific antiviral treatment or vaccine for Oropouche virus disease.

3. Charles Darwin's frog (Minervarya charlesdarwini)

New study reveals unique upside-down spawning behaviour.

About Minervarya Charlesdarwini Frog

It is **endemic to Andaman Island.**

Features

➢ **Intricate Calls:** to attract females
➢ **Upside down spawning:** defensive adaptation to protect the eggs.
➢ **IUCN Status:** Vulnerable
➢ **Threats:** Habitat Loss

4. PMGDISHA

Recently, Union Government informed the Parliament that under Pradhan Mantri Gramin Digital Saksharta Abhiyan (PMGDISHA), over 6 crore trained and over 4.7 crore candidates have been certified.

About PMGDISHA

Launched: In 2017 for digital literacy in rural India.
Implementing agency: CSC e-Governance Services India Limited.
Targeted beneficiaries: One person (age group of 14-60 years) from every eligible rural household.
Coverage: Applicable only for rural areas with a Gram Panchayat centric approach. 20-hour training covering digital devices, internet use, and cashless transactions in 22 scheduled languages and English. Third-party assessment by recognized agencies, with certificates uploaded to trainees' Digi-Locker accounts.

31 JULY

1. Central Water Commission (CWC):

CWC has been awarded GEEF (Global Energy and Environment Foundation) Global WaterTech Award under category 'Water Department of the Year'

recognising its role in hydro-meteorological data collection, flood forecasting, etc.

About CWC (HQ: New Delhi)

Established in 1945 on advice of Dr. B.R. Ambedkar. Headed by Chairman, an Ex-officio Secretary to Government of India. Premier Technical Organization functioning as an attached office of Ministry of Jal Shakti.

Three technical wings: Designs and Research Wing; Water Planning and Projects Wing; River Management Wing.

Aims to promote integrated and sustainable development and management of India's water resources by using state-of-the-art technology and competency and by coordinating all stakeholders

2. MQ-9B UAV

As per report, Defence Acquisition Council, chaired by Defence Minister, reviewed and approved amendments to the deal for 31 MQ-9B High Altitude Long Endurance (HALE) Unmanned Aerial Vehicles (UAV).

About MQ-9B UAV

It has two variants: SkyGuardian and SeaGuardian (Maritime variant).

Designed to fly over the horizon via satellite for up to 40 hours (SkyGuardian) and 30 hours (SeaGuardian).

Outfitted with the revolutionary **Lynx Multi-mode Radar, an advanced electro-optical/infrared (EO/IR) sensor, and automatic takeoff and landing.**

Weapons: Laser guided missiles, Anti-tank missiles, Anti-ship missiles etc.

Missions Capability: Humanitarian Assistance/Disaster Relief, Electronic Warfare, Anti-Surface Warfare, Anti-Submarine Warfare etc.

3. Clustered Regularly Interspaced Short Palindromic Repeats (CRISPR)/Cas9

Scientists **developed enhanced, precise and more efficient genome-editing system than existing CRISPR-Cas9 technologies.**

Scientists explored FnCas9 enzyme, derived from rancisella novicida bacteria, which is highly precise.

About CRISPR-Cas9

It is a **genome-editing tool that allows scientists to precisely cut and modify DNA sequences.**

It involves two key molecules:

A guide RNA designed to find and bind to specific part of target genome.

Cas9 (CRISPR-associated protein 9): It acts as molecular scissors that can cut two strands of DNA.

Applications: Treatment of cancer, hepatitis B, cardiovascular diseases; producing genetically modified organisms; enhance crop resilience etc.

4. Ideas4LiFE

Union Minister for Environment, Forest and Climate Change launched Ideas4LiFE portal.

About Ideas4LiFE portal

Aims to encourage and motivate students, faculty and research scholars to contribute their innovative ideas to global initiative of Mission LiFE. Focuses on bringing behavioral changes related to environment-friendly lifestyles.

Mission LiFE (Lifestyle for Environment)

Launched in 2022, focuses on bringing about behaviour changes in individuals for combatting climate change. **It is a global movement for transitioning from a model of destructive and mindless consumption to deliberate and mindful utilization of resources.**

PRESS INFORMATION BUREAU (PIB)

2 JULY

1. Rim of the Pacific (RIMPAC) Exercise: It is the **world's largest international maritime exercise, being held in Hawaii.** It is aimed at enhancing interoperability and building trust among the navies of friendly foreign countries. It is **led by the US Navy,** approx 29 countries are participating in the current edition of the multi-dimensional exercise.

2. US Presidential Election: The president and vice president are not elected directly by citizens in the US. Instead, they are chosen by "electors" through a process called the Electoral College. The **Electoral College is a process in which electors or representatives from each state cast their vote and determine who will be president**. Each state is given a number of electors based roughly on the size of its population. **There are a total of 538 electors selected according to each state's policy**. When people cast their vote, they are actually voting for electors. **The general elections take place every four years on the first Tuesday of November**. All states except Maine and Nebraska use a "winner-take-all" system. **In this system, the party of the candidate who receives the most votes is awarded all the state's electors, even if the margin of victory in the state's popular vote is small.** Following a general election, the slates of electors meet in their state capitals to cast their votes for president and vice president. The vote occurs on the Monday following the second Wednesday in December. The candidates who receive a majority, or more than half, of the votes become president and vice president. If no candidate receives a majority, **the President is elected by the House of Representatives, which may choose among the three candidates with the most electoral votes**. There are times when a candidate wins the presidency (electoral votes) but not the popular votes (voted by people during the general election). **The newly elected President and Vice President are inaugurated in January.**

3. Project-76: Under Project 76, the Warship Design Bureau of the Indian Navy is working on designing and developing the country's first indigenously conventional diesel-electric submarine. **The Indian Navy wants to build 12 submarines under Project 76.** Envisioned as air-independent propulsion (AIP)-equipped diesel-electric attack submarines, these submarines, expected to have a submerged displacement of 3,000 tons, represent a leap beyond their foreign-designed predecessors like Project-751 (India) and Project-75 submarines. **It aims to succeed the Sindhughosh (Kilo) class, emphasizing the Navy's commitment to maintaining a robust 3,000-ton class of submarines**. It is expected to feature some of the most advanced features such as, indigenous Weapon Control system and Lithium-ion batteries. It represents a pivotal milestone in India's pursuit of maritime supremacy, amalgamating top-tier French technology from Project 75 and the expertise of German/Spanish collaboration from Project 751 (India). **The objective is to initiate the construction of the prototype by 2028. This undertaking holds immense significance for India's submarine-building capabilities, aiming to reduce reliance on foreign Original Equipment Manufacturers (OEMs) for submarine design.**

4. IndiaAI Mission: The government of India is hosting the Global IndiaAI Summit 2024. The IndiaAI Mission aims to build a comprehensive ecosystem that **fosters AI innovation by democratizing computing access, enhancing data quality, developing indigenous AI capabilities, attracting top AI talent, enabling industry collaboration**, providing startup risk capital, ensuring socially impactful AI projects, and promoting ethical AI.

3 JULY

1. New Shepard Spacecraft: Jeff Bezos-led Blue Origin has partnered with the Space Exploration and Research Agency (SERA) to give common Indian citizens an opportunity to go into space in New Shepard spacecraft. **It is a suborbital space travel vehicle, offering a unique experience for both scientific research and space tourism**. It is named after Alan Shepard, the first American in space, New Shepard is a fully reusable rocket system designed for human spaceflight. **It consists of two main components: a reusable booster and a pressurized crew capsule**. The capsule can accommodate six passengers, providing each with a window seat to witness breathtaking views of Earth. Among its notable features are the largest windows ever flown in space, offering an unparalleled visual experience for astronauts. New Shepard's 11-

minute journey takes passengers beyond the Karman line. During the flight, passengers experience several minutes of weightlessness before making a controlled descent back to Earth aided by parachutes. In addition to its space tourism potential, New **Shepard serves as a valuable platform for scientific research.**

2. Artificial Intelligence (AI) washing: It is a deceptive promotional practice that **exaggerates or outright lies about a product or service's use of artificial intelligence (AI).**

Objective: To **capitalize on people's interest in AI and make an offering seem to be more cutting-edge than it really is.** For example, a company may claim their chatbot is "Powered by the latest AI technology" when in reality, it simply matches keywords with pre-written responses.

It is a **term derived from greenwashing, where companies exaggerate their environmental friendliness to appeal to customers**. Similarly, businesses that claim to have integrated AI into their products, when they're actually using less sophisticated technology, can be accused of AI washing. It is found that the companies had made false statements to their clients about providing 'expert AI-driven forecasts' and using machine learning to manage retail client portfolios.

Problems:

➤ AI washing can have concerning impacts for businesses, from **overpaying for technology and services to failing to meet operational objectives the AI was expected to help them achieve."**

➤ Meanwhile, for investors it can make it harder to identify genuinely innovative companies.

3. Project Nexus: It is a multilateral international initiative to **enable instant cross-border retail payments by interlinking domestic Fast Payments Systems (FPSs)**. Rather than requiring FPS operators to establish multiple custom connections for each country, Nexus provides a standardized, single-connection solution that enables seamless transactions across borders. With Nexus, an FPS operator can connect to a single network, enabling instant access to other countries within the network. **It was conceptualized by the Innovation Hub of the Bank for International Settlements (BIS). It aims to connect the**

FPSs of four ASEAN countries (Malaysia, Philippines, Singapore, and Thailand); and India, who would be the founding members and first mover countries of this platform. The platform, which can be extended to more countries, is expected to go live by 2026. When a new country joins Nexus, existing members are automatically connected to that country and vice versa. This means the network can expand at a near-zero marginal cost for existing members. By simplifying and unifying the payment infrastructure, **Project Nexus seeks to enhance efficiency, reduce costs and improve the accessibility of international payments.**

4. Metal oxide Nanocomposite: Metal oxide photocatalysis offers a sustainable solution for removing organic pollutants from water bodies**. Titanium dioxide (TiO2), zinc oxide (ZnO), and tungsten trioxide (WO3) are notable catalysts due to their high surface area and stability**. When exposed to light, they generate electron-hole pairs that degrade pollutants into harmless by-products. Factors affecting efficiency include choice of metal oxide, crystal structure, light parameters, pollutant concentration, pH, and catalyst loading. Optimizing these factors is crucial for maximizing degradation rates. **Nanocomposites have potential applications in catalysis, energy storage, sensors, optoelectronics, biomedical fields, coatings, and renewable energy production through water splitting.**

5 JULY

1. UN Office on Drugs and Crime (UNODC): It is a **global leader in the fight against illicit drugs and international crime,** in addition to being responsible for implementing the United Nations lead programme on terrorism. It was established in 1997 through a merger between the United Nations Drug Control Programme and the Centre for International Crime Prevention.

Headquarters: Vienna, Austria

UNODC works to educate people throughout the world about the dangers of drug abuse and to strengthen international action against illicit drug production and trafficking and drug-related crime. **In 2002, the UN General Assembly approved an expanded programme of activities for the Terrorism Prevention Branch of UNODC.** The activities focus on providing assistance to

States, on request, in ratifying and implementing the eighteen universal legal instruments against terrorism. **Funding:** It relies on voluntary contributions, mainly from governments, to carry out the majority of our work.

2. World Drug Report 2024: It is an annual report released by the UN Office on Drugs and Crime (UNODC).

Highlights of the Report:
The number of people who use drugs has risen to 292 million in 2022, a 20 percent increase over the past ten years. **Cannabis remains the most widely used drug worldwide followed by opioids, amphetamines, cocaine and ecstasy.** Nitazenes, a group of highly potent synthetic opioids, have recently emerged in several high-income countries, resulting in an increase in overdose deaths. Though an estimated 64 million people worldwide suffer from drug use disorders, only one in 11 is in treatment. **Women receive less access to treatment than men, with only one in 18 women with drug use disorders in treatment versus one in seven men.**

3. Exercise NOMADIC ELEPHANT: It is the **16th edition of the India-Mongolia Joint Military Exercise.** A Battalion of SIKKIM SCOUTS is representing the Indian contingent comprising of 45 personnel along with personnel from other arms and services. It is an **annual training event conducted alternatively in India and Mongolia. The last edition was conducted in Mongolia in July 2023.**

4. NIRMAN Portal: NIRMAN or "Noble Initiative for Rewarding Mains Aspirants of National Civil Services Examination (NIRMAN)" portal is a CSR scheme by Coal India Limited for meritorious youth of its operating districts who have cleared the Preliminary round of UPSC examination (for Civil Services & Forest Service) in 2024. **The scheme is aimed towards providing support of Rs 1,00,000/- to the UPSC Prelims examination qualified candidates** with annual family income less than 8 lakhs and belonging to Scheduled Caste, Scheduled Tribe, female or third gender; who are permanent residents of any of the 39 operational districts of CIL. **The entire application process is through a dedicated portal for ensuring full transparency and seamless screening of the applications.**

6 JULY

1. Sampoornata Abhiyan: NITI Aayog launched the 'Sampoornata Abhiyan' witnessing significant participation from citizens across the country. It **is a 3-month campaign to undertake a sustained effort to achieve saturation of 6 key indicators in Aspirational Districts and 6 key indicators in Aspirational Blocks across the country**. It seeks to achieve saturation in each of the 6 identified indicators in the 112 Aspirational Districts and 500 Aspirational Blocks under the Aspirational Districts Programme and Aspirational Blocks Programme.

2. Ullas - A Step Towards Literate India: ULLAS - Nav Bharat Saaksharta Karyakram, also known as the New India Literacy Programme (NILP). It **is a centrally sponsored initiative that aligns with the National Education Policy (#NEP) 2020.** It aims to empower adults aged 15 and above from all backgrounds who missed formal schooling, helping them integrate into society and contribute to the nation's growth.

3. European Council:
Role and Purpose: The European Council is the **institution of the European Union** that sets the general political direction and priorities of the EU.
Establishment: Formed in 1974 as an informal forum for discussion among heads of state or government of the EU member states. **Gained formal status and role under the Treaty of Maastricht** to provide political impetus and guidelines for the EU.
Headquarters: Located in Brussels, Belgium.
Membership: Composed of the heads of state or government of the 27 EU member states, the President of the European Council, and the President of the European Commission.
Meetings: Typically convenes four times a year, with the President able to call additional meetings to tackle urgent matters.
Decision-Making: Decisions are generally made by consensus, but in some cases, unanimity or qualified majority voting is used. Only heads of state or government have voting rights.

Functions:

- Sets the EU's overall political direction and priorities but does not pass laws.
- Handles complex or sensitive issues that cannot be resolved through lower levels of intergovernmental cooperation.
- Establishes the **EU's common foreign and security policy, considering strategic interests and defense implications.**
- Nominates and appoints candidates for significant EU roles, such as positions in the European Central Bank (ECB) and the European Commission.

8 JULY

1. SEHER Programme: NITI Aayog's Women Entrepreneurship platform and credit bure have collaborated to launch SEHER programme. It is a **comprehensive credit education program designed to enhance financial literacy and business skills among women entrepreneurs**. This initiative is expected to enable women to access the financial tools necessary for business growth and job creation. It is **an initiative of NITI Aayog's Women Entrepreneurship Platform (WEP) and TransUnion CIBIL**. This initiative supports WEP's goal of improving financing access for women in India's 63 million MSMEs.

2. 3D Hologram Technology: Japan issued its first new banknotes in two decades, yen packed with 3D hologram technology to fight counterfeiting. It is a **virtual three-dimensional image created by the interference of light beams that reflect real physical objects.** Holograms preserve the depth, parallax, and other properties of the original item. Unlike conventional 3D projections, holograms can be seen with the naked eye.

Principle: It uses the principles of interference and diffraction of light waves to record and reconstruct 3D images of objects. **There are two methods for creating holograms: computer-generated holograms for augmented reality glasses and actual holograms for optical displays.**

Application: It has a wide range of applications in medicine, the military, weather forecasting, virtual reality, digital art and security.

3. People's Biodiversity Register: Thazhakara has **become the first grama panchayat in Alappuzha and one of the first in Kerala to update and publish a** comprehensive **People's Biodiversity Register (PBR)** with the involvement of local communities. It serves as a comprehensive record of various aspects of biodiversity, including the conservation of habitats, preservation of land races, domesticated stocks and breeds of animals, micro-organisms, and the accumulation of knowledge related to the area's biological diversity. **The Biological Diversity Act (2002) mandates the development of Peoples' Biodiversity Registers (PBRs) at the local level to document as well as safe guard bioresources and associated knowledge**. As per the Biological Diversity Act 2002, Biodiversity Management Committees (BMCs) are created for "promoting conservation, sustainable use and documentation of biological diversity" by local bodies across the country. BMCs have been constituted by the local bodies in the States and Union Territories and are entrusted with the preparation of the PBRs in consultation with local communities. **It will play a crucial role in conservation, sustainable resource utilisation, and protection of traditional knowledge.**

Significance of PBR: It will help local bodies in preparing various projects in **agriculture, drinking water, and waste management, among other sectors, with a focus on biodiversity conservation** and equitable sharing of benefits.

9 JULY

1. Digital Bharat Nidhi: It would replace the erstwhile Universal Service Obligation Fund (USOF), which is a pool of funds generated by a 5 per cent Universal Service Levy charged upon all the telecom fund operators on their Adjusted Gross Revenue (AGR). This money would be used to fund the expansion of telecom networks in remote and rural areas.

Working of the Digital Bharat Nidhi (DBN):
As per the Telecom Act, contributions made by telecom companies towards the Digital Bharat Nidhi will first be credited to the Consolidated Fund of India (CFI). **All revenues that the government receives, including loans raised and all money received in repayment of loans, are credited to the CFI.** The government also incurs its expenditures from this fund. The Central government will deposit the collected funds to the DBN from time to time. **Funds collected under the DBN will be used to support universal service through promoting access to and delivery of**

telecommunication services in underserved rural, remote and urban areas; fund research and development of telecommunication services, technologies, and products; support pilot projects, consultancy assistance and advisory support for improving connectivity; and for the introduction of telecommunication services, technologies and products. The DBN shall fund schemes and projects for providing targeted access to telecommunication services for underserved groups of society such as women, persons with disabilities and economically and socially weaker sections, as per the draft rules.

Administration: The Centre will appoint an "administrator" who will select "DBN implementers" through "bidding" or invitation of applications from eligible persons. This so-called administrator will determine the modalities of providing funding to DBN implementers on a case-by-case basis, including but not limited to full funding, partial funding, co-funding, market risk mitigation and risk capital.

2. Copernicus Climate Centre Service (C3S): It is one of six thematic information services provided by the Copernicus Earth Observation Programme of the European Union. **Copernicus is an operational programme building on existing research infrastructures and knowledge available in Europe and elsewhere.** It supports society by providing authoritative information about the past, present and future climate in Europe and the rest of the World. **It aims to support European climate policies and actions, contributing to building a European society with more resilience against human-induced changing climate.** C3S relies on climate research carried out within the World Climate Research Programme (WCRP) and responds to user requirements defined by the Global Climate Observing System (GCOS). It is **implemented by the European Centre for Medium-Range Weather Forecasts (ECMWF) on behalf of the European Commission.**

3. Joint Parliamentary Committee: A Joint Parliamentary Committee (JPC) is set up by the Parliament for a special purpose, like for the detailed scrutiny of a subject or Bill. **It has members from both the Houses and from both the ruling parties and the opposition. Members of the JPC are decided by the Parliament.** There is no fixed number of members in the committee. It is dissolved after its term ends or its

task has been completed. The **recommendations made by the committee are in recommendatory in nature not binding on the government.**

Powers of the committee:
A JPC can obtain evidence of experts, public bodies, associations, individuals or interested parties suo motu or on requests made by them. If a witness fails to appear before a JPC in response to summons, his conduct constitutes a contempt of the House. Ministers are not generally called by the committees to give evidence. However, with the permission of the Speaker, the JPC can seek information on certain points from ministers and call the ministers. **The JPC can take oral and written evidence or call for documents in connection with a matter under its consideration.**

The Joint Parliamentary Committees are formed till date include the following cases:
➢ Bofors scandal (1987)
➢ Harshad Mehta Stock market scam (1992)
➢ Ketan Parekh share market scam (2001)
➢ Soft drink pesticide issue (2003) 2023
➢ 2G spectrum case (2011)
➢ VVIP Chopper scam (2013)
➢ Land Acquisition (2015)
➢ NRC (2016)
➢ Personal Data Protection Bill (2019)

10 JULY

1. Project PARI: The Project PARI (Public Art of India) aims to **stimulate dialogue, reflection, and inspiration, contributing to the dynamic cultural fabric of the nation.** It provides a platform to uplift the aesthetic and cultural outlook of Delhi while adding grandeur to the rich historical legacy of our national capital. The representation of Art in public spaces is particularly significant as it showcases the nation's rich and diverse cultural heritage. **The proposed sculptures being created for Project PARI include wide-ranging ideas such as paying tributes to nature, ideas inspired by the Natyashastra, Gandhi ji, toys of India, hospitality, ancient knowledge, Naad or Primeval Soun, Harmony of life, Kalpataru – the divine tree, etc**. Women artists have been an integral part of Project PARI and their participation in large numbers is a testimony of Bharat's NARI SHAKTI. **This initiative is**

being executed by the Lalit Kala Akademi, an autonomous institution under the Ministry of Culture.

2. Integrated Tribal Development Programme: Recently, the **National Bank for Agriculture and Rural Development (NABARD) launched an integrated tribal development programme in the Kulathupuzha grama panchayat in Kerala**. It is a flagship programme of NABARD for sustainable tribal livelihoods. It is **based on the 'wadi' model of tribal development, which has evolved with the support of national and international developmental agencies**. Projects under this programme are funded through Tribal Development Fund.

The objective of the Fund is to:
➢ **create replicable models of integrated development of tribal families on a participatory basis**, through the adoption of sustainable income-generating activities based on the potential of the area and the tribal needs;
➢ build and strengthen tribal institutions, which would enable the communities to be partners in **policy formulation, execution of programs and improve social and economic status;**
➢ build and strengthen producers' organizations.

3. ONE NATION, ONE ELECTION: Recently, **the Centre formed a panel under former President Ram Nath Kovind for simultaneous polls to Lok Sabha and State Assemblies**. Apart from canvassing support from various political parties and stakeholders, holding simultaneous elections to the Lok Sabha and State Assemblies would require at least five constitutional amendments and a large number of additional electronic voting machines (EVMs) and paper-trail machines.

The five amendments in the Constitution are as follows:
➢ **Article 83** relating to the duration of Houses of Parliament
➢ **Article 85** relating to the dissolution of the Lok Sabha by the President
➢ **Article 172** relating to the duration of the State legislatures
➢ **Article 174** relates to the dissolution of the State legislatures.

➢ **Article 356** relates to the imposition of the President's Rule in States.

4. Initiatives to preserve and promote languages, folk dance, Art and culture of tribals:
Young Talented Artists: to encourage and **recognize the young talents especially in the field of rare art forms**. Talented youngsters of the age group of 18-30 years are selected and given a onetime cash award of Rs. 10,000/.
Guru Shishya Parampara: transmitting our valued traditions to the coming generations. Disciples are trained under veterans in art forms which are rare and vanishing. Carry out the training programmes in 'Gurukula' tradition.
Institutional & Academic: The **National Gallery of Modern Art and the Lalit Kala Akademi** recognises and patronizes artists in all fields.
Inclusion in UNESCO's Heritage list- Some of the famous site paintings like Ajanta have been included in the list for protection and preserving arts. G.I tags are an excellent way for protection and preservation as it also provides a distinct recognition to arts and their forms.

Others:
➢ Scheme for Conservation of Wall Painting (1996-97)
➢ Tribal haats
➢ Ek Bharat Shresth Bharat program

14 JULY

1. Naavu Manujaru' Programme: The Karnataka government has ordered the implementation of 'Naavu Manujaru' programme from this academic year.
Objective: To **improve the capacity of the students to think independently and rationality** and understand the pros and cons of every issue. It will also be helpful for the overall development of the students. It is implemented in all government, aided and unaided primary and high schools of the State. Implementation of this programme would involve discussions and dialogues for two hours per week (with three periods of 40 minutes). It **involves discussion on social harmony and its significance, based on local and national festivals, folk games, sports**. The discussion also includes thoughts of social reformers, visiting and sharing information on outbound/local famous places,

cottage industries, discussion on nuclear and non-nuclear families, discussion on elimination of inequality and dialogue on constitutional values like equality, liberty and fraternity etc.

Implementing agency: The **Department of State Educational Research and Training (DSERT) is the implementation authority of this programme.**

2. Anand Marriage Act: It provides **statutory recognition of marriage rituals of the Sikh community in India.** The emergence of the Anand Marriage Act dates back to 1909 when the British Imperial Legislative Council passed legislation for the recognition of the Sikh wedding ceremony Anand Karaj. **The Act aimed to acknowledge and respect the customs and practices of the community. In 2012, the Parliament passed the Anand Marriage (Amendment) Bill, bringing Sikh traditional marriages under the purview of legal recognition.** While the central government approved the amendments, it was left for individual states and union territories to frame respective rules for the registration of Anand marriages.

Significance of the Act: It **provides statutory recognition to marriage rituals of Sikhs**, fulfilling their long-standing demand to not have to solemnise their marriages under the Hindu Marriage Act.

Recent implementation: • **'Jammu and Kashmir Anand Marriage Registration Rules, 2023' has been framed for the registration of "Anand marriages",** under which tehsildars concerned shall be the registrar of such marriages within their respective territorial jurisdiction, as per a government notification issued.

3. Veerangana Durgavati Tiger Reserve:

Location: It is spread across Sagar, Damoh and Narsinghpur districts of Madhya Pradesh.

It **encompasses areas within the Nauradehi Wildlife Sanctuary and Durgavati Wildlife Sanctuary.** It is the seventh tiger reserve in Madhya Pradesh. It is named for Rani Durgavati, the queen of the Gondi people.

Rivers: It straddles parts of the Narmada and Yamuna River basins.

The Singorgarh Fort is located within the reserve.

Vegetation: Dry deciduous type

A green corridor linking Panna Tiger Reserve (PTR) with Durgavati will be developed for the natural movement of the tiger to the new reserve.

JULY 12

1. Legal/Constitutional basis of Census in India:
Population census is listed in Union List (entry 69) of Seventh Schedule in Indian Constitution. Census is conducted under the provisions of the Census Act, 1948. **Caste was enumerated in British India Censuses (1881-1931).** Post-Independence, the 1951 Census excluded caste enumeration except for SCs and STs, who continue to be counted**. In 1961, the GOI recommended states conduct their own surveys for state-specific OBC lists**, as there were no central reservations for OBCs at that time. Though Census is a Union subject, the Collection of Statistics Act, 2008 allows States and local bodies to gather necessary data, as seen in Karnataka (2015) and Bihar (2023).

2. National Gopal Ratna Award: It is **awarded under the Rashtriya Gokul Mission (RGM).** Since 2021 the Department of Animal Husbandry and Dairying under the Ministry of Fisheries, Animal Husbandry and Dairying has been conferring National Gopal Ratna Award every year.

Objective: To encourage the Milk producing farmers, dairy cooperative societies/MPC/FPOs and Artificial Insemination Technicians (AITs). **This year also National Gopal Ratna Award is given for the following categories:**

From this year onward, the **Department has incorporated a Special award for North Eastern Region (NER) States so as to encourage and boost the dairy development activities in North Eastern Region (NER).** NGRA 2024 will consist of a Certificate of merit, a memento and a monetary prize in the first two categories i.e Best Dairy Farmer and Best DCS/FPO/MPCs. In the case of the Best Artificial Insemination Technician (AIT) category, the National Gopal Ratna Award-2024 will consist of a Certificate of merit and a memento only. No cash prize will be provided in the Artificial Insemination Technician (AIT) Category. The **awards will be conferred on the occasion of National Milk Day which will be celebrated on 26th November.**

3. GRSE Accelerated Innovation Nurturing Scheme: It is an **innovative scheme which seeks solutions to the problems related to the shipyards and promotes technology development using the start-ups created and nurtured in the country.** It encourages and enables

MSMEs and Start-Ups to develop innovative solutions for further technological advancement. It will give a new dimension to the future of Indian defence and with technological advancements and dedication it will enhance the strength of our armed forces and enhance maritime security. It is a unique national scheme to encourage and enable MSMEs and Start-Ups to develop innovative solutions that GRSE may incorporate for further technological advancement. **The aim is to leverage the vast eco-system of MSMEs and Start-Ups to address present and emerging challenges in the ship design and construction industry, while achieving the objectives of Atmanirbharta.** This initiative is in keeping with the 'Make in India' and 'Start-up India' policies of the Government of India.

4. World Population Day (WPD): It is **observed on July 11 every year.** It highlights the importance of addressing population-related concerns such as **reproductive health, family planning, gender equality and sustainable development.** It provides a platform for governments, organizations, and individuals to engage in discussions and take action.

WPD 2024 Theme: "Leave no one behind; count everyone."

History:

WPD was established by the United Nations (UN) and first observed in 1989, with participation from over 90 countries. The idea was inspired by the world population reaching five billion on July 11, 1987, prompting Dr. KC Zachariah, a senior demographer at the World Bank, to suggest marking the occasion as World Population Day.

Facts about Global Population:

In 2011, the world's population reached 7 billion, and on 15 November 2022, the world's population reached 8 billion people. India holds the top place with a population of 44 billion as of July 2024. **India overtook China as the country with the largest population in the world in 2022.** China's population exceeds 1.4 billion but declined in 2024. Currently, China is second on the list, with a population of 1.42 billion.

16 JULY

1. Upper Siang Hydropower Project: It is a proposed 11,000-megawatt hydropower project on the Siang River in the Upper Siang district of Arunachal Pradesh. **The Brahmaputra River, which in Arunachal Pradesh is known as the Siang River**. The area is predominantly inhabited by the Adi tribe of Arunachal Pradesh. **The National Hydroelectric Power Corporation (NHPC) and the North Eastern Electric Power Corporation (NEEPCO) have jointly been assigned the task of construction of this project.** It is seen as a strategic move to counter China's hydel projects on the Yarlung Zangbo (Brahmaputra) River, particularly a 60,000 MW 'super dam' in Tibet's Medog county.

2. e-office Platform: It aims to streamline operations and enhance efficiency across 133 identified offices. **This initiative is spearheaded by the Ministry of Personnel, Public Grievances & Pensions.**
Implementation by: The National Informatics Centre (NIC) to be the knowledge partner for implementation of e-Office.

The key components of eOffice are as follows:

➢ **File Management System (eFile):** It is a workflow-based system that extends the features of existing manual handling of files in addition to a more efficient electronic system.

➢ **Knowledge Management System (KMS):** It brought the concept of a central repository of documents in an organization.

➢ **Work from Anywhere (WAW) Portal:** A gateway for virtual office from anywhere is a one stop-portal for office functions and connects the officials to securely access their office from anywhere.

➢ **Smart Performance Appraisal Report Recording Online Window (SPARROW):** It is a web-based application for processing of Annual Performance Appraisal Report (APAR). Employees can fill in their APAR, which is further reported and reviewed by the official hierarchy.

3. Liberalised Remittance Scheme (LRS): The Reserve Bank of India (RBI) in a notification issued recently allowed resident individuals to open Foreign Currency Accounts (FCAs) in International Financial Services Centres (IFSCs) at GIFT City in Gujarat under the Liberalised Remittance Scheme (LRS). It **is a foreign exchange policy initiative introduced by the RBI in 2004**. It is intended to simplify and streamline the process of remitting funds outside India. **This scheme helped Indians overcome international fund transfer**

restrictions as set by the FEMA (Foreign Exchange Management Act), 1999. Under LRS, all resident individuals, including minors, are allowed to freely remit up to USD 250,000 per financial year (April–March). Only individual Indian residents are permitted to remit funds under LRS. Corporates, partnership firms, HUFs, trusts, etc. are excluded from its ambit. This can be for any permissible current or capital account transaction or a combination of both.

4. Constitutional Rights for safeguarding Vulnerable groups against Climate Change/Disasters:

Right to Life and Personal Liberty (Article 21): The Constitution guarantees the right to life and personal liberty, which includes the **right to live in a safe environment** free from the adverse effects of climate change and disasters.

Right to Equality (Article 14): Women and girls are entitled to equal protection under the law, ensuring that they receive equitable treatment and opportunities in **climate change adaptation and disaster response measures.**

Right to Health (Article 21): The **Constitution recognizes the right to health as an integral part of the right to life, ensuring access to healthcare services** to mitigate health risks posed by climate change and disasters, particularly for pregnant women and children.

Directive Principles of State Policy (Article 39): The Directive Principles of State Policy mandate the state to ensure that women are not subject to discrimination and have equal rights to livelihood opportunities.

Fundamental Duties (Article 51A): Citizens have a duty to protect and improve the natural environment, including forests, lakes, rivers, and wildlife, which are essential for climate resilience and disaster mitigation efforts that benefit women and girls.

Protection Against Exploitation (Article 23): The **Constitution prohibits trafficking, forced labour, and other forms of exploitation, safeguarding women and girls from vulnerabilities** exacerbated by climate change-induced displacement and migration.

Special Provisions for Women and Children (Article 15): The Constitution allows the state to make special provisions for the advancement of women and children, including measures to enhance their resilience and adaptive capacity to climate change and disasters.

Protection of Tribal Rights (Article 244): Indigenous women and girls have constitutionally protected rights to their traditional lands and resources, which are essential for their resilience to climate change impacts.

17 JULY

1. e-FAST India Initiative: NITI Aayog has announced the launch of the 'NITI GearShift Challenge' as part of the e-FAST India initiative. **e-FAST was born from the recognition of the urgent need to decarbonize road-based freight transportation in India to realize its 2070 net zero commitments**. It was launched in September 2022. **It aims to galvanize the transition towards cleaner and greener freight transportation.** The platform facilitates active collaborations at both the national and international levels, supports ideation and development of pilot programs on a scalable basis, and explores technology integration and associated research**. It is a platform that facilitates deliberation, debates and collaboration between different stakeholders including the government, Original Equipment Manufacturers, Logistics Service Providers, Shippers, and industry experts to enable the development and adoption of electric technology in the freight sector at scale.** It is supported by the collaborative efforts of 12 knowledge partners.

2. SIM Swapping Scam: Google Fi wireless has introduced a security feature called 'Number Lock'. **This new feature empowers users to take control and prevent a growing cybersecurity threat – SIM swapping.** It occurs when a malicious actor convinces your carrier to transfer your phone number to a new SIM card in their possession. **This can grant them access to your calls, texts, two-factor authentication codes, and potentially even financial accounts linked to your number.**

Modus Operandi: In the SIM swap scam, fraudsters first take personal details such as phone numbers, bank account details, and addresses with the help of phishing or vishing. After receiving the personal information, fraudsters visit the mobile operator's retail outlet, posing as the victim with forged ID proof, and report a fake theft of the victim's SIM card and/or mobile phone. By doing this, they attain a duplicate SIM. Notably, scamsters can get a duplicate SIM even when the original is working, as they reported a theft of the original SIM card. **Unlike other scams,**

where scamsters trick people into giving OTPs and private information on a phone call, the SIM swap scam doesn't require direct communication with the victims. However, fraudsters do give missed calls to their victims so that the latter leave their phones and ignore the lost network connectivity. **When the SIM is swapped, the accused gains control of the entire SIM.** All calls and messages go through their SIM only. Once in control of the SIM card, they are able to obtain passwords and OTPs that allow them to access their targets' bank accounts.

3. National Geophysical Research Institute (NGRI): NGRI, a constituent research laboratory of the Council of Scientific and Industrial Research (CSIR), was established in 1961.
Mission: To carry out research in multidisciplinary areas of the highly complex structure and processes of the Earth system and its extensively interlinked subsystems.
Location: Hyderabad, Telangana.
NGRI has the mandate to conduct research for public-good science to enable government agencies and public and private sector stakeholders to make informed decisions about the use of geo-resources sustainably and improve preparedness and resilience to natural hazards.

4. Syphilis: It is a sexually transmitted infection (STI) that can cause serious health problems if you do not treat it. It is caused by the **bacteria, Treponema pallidum**. After the infection happens, syphilis bacteria can stay in the body for many years without causing symptoms. But the infection can become active again.
Transmission: People usually get syphilis from sexual contact with someone who has it. It can also pass from mother to baby **during pregnancy, childbirth, and sometimes through breastfeeding.**

Symptoms:
Syphilis develops in stages. The symptoms vary with each stage and is often painless. The disease starts as a sore that's often painless and typically appears on the genitals, rectum, or mouth. Sometimes it causes swelling in nearby lymph nodes. If you do not treat it, syphilis usually causes a non-itchy skin rash, often on your hands and feet. Many people do not notice symptoms for years. Symptoms can go away and come back.

Treatment:
Syphilis is treatable and curable. It is easy to cure with antibiotics, especially during in the early stages. **Penicillin is the most commonly used medication for syphilis.**

18 JULY

1. Bhojshala Complex: It is **located in the Dhar district of Madhya Pradesh**. It was built by Raja Bhoja (1000-1055 A.D.) in 1034 AD, who was the greatest monarch of the Paramara dynasty. It served as a university and many students used to come here to learn **music, Sanskrit, astronomy, yoga, Ayurveda and philosophy. History: In 1305 AD, it was for the first time attacked by Alauddin Khilji.** In 1514 AD, Mehmudshah Khilji II attacked this complex and tried to convert it into a dargah. He **encroached on land outside Saraswati Temple and built 'Kamal Moulana' Makbara.**

Inscriptions found: In the rocks of this complex, **two hymns written in the Prakrit language of the Karmavatar or crocodile incarnation of Vishnu are engraved**. Two Sarpabandha pillar inscriptions, one containing the Sanskrit alphabet and the main endings of nouns and verbs and the other containing the individual declensions of the ten tenses and moods of Sanskrit grammar. **In 1951, the complex was declared as a monument of national importance under the Ancient and Historical Monument and Archaeological Sites and Remains (Declaration of National Importance) Act, 1951.** It is currently protected by ASI under the Ancient Monuments and Archaeological Sites and Remains Act, 1958.

2. ASMITA Project: ASMITA (Augmenting Study Materials in Indian Languages through Translation and Academic Writing) is an **initiative to develop 22,000 books in Indian languages in the next five years**. It is a collaborative effort of the UGC and the Bharatiya Bhasha Samiti, a high-powered committee under the Ministry of Education. **The primary objective of this initiative is to promote and integrate Indian languages more deeply into the education system, thereby enriching the learning experience and making it more inclusive**. This project is seen as part of a broader strategy to enhance the accessibility and quality of educational materials across various Indian languages. Thirteen nodal universities have been

identified to lead the project, along with member universities from various regions. **The UGC has also created a standard operating procedure (SOP) for the book-writing process in each assigned language. The SOP includes the identification of nodal officers and authors, allocation of title, subject, and programme, writing and editing, submission of the manuscript, review and plagiarism check, finalisation, designing, proofreading and e-publication.**

3. Fiscal Federalism:

Seventh Schedule: Tax Bases Delineated in Union and State Lists (Article 246).

Distribution of Revenue:

- ➢ **Article 269:** Taxes levied and collected by Centre, assigned to states.
- ➢ **Article 269-A:** GST in inter-state trade.
- ➢ **Article 270:** Taxes distributed between Union and states per Finance Commission.
- ➢ **Article 275:** Financial assistance to States in form of grants-in-aid charged to revenue of India.

Borrowings:

Article 292: Union can borrow domestically or internationally.

Article 293: State can only borrow domestically.

Article 280: Finance Commission constituted to adjudicate sharing of resources between Union and States.

19 JULY

1. Annual Survey of Unincorporated Enterprises (ASUSE): According to the Annual Survey of Unincorporated Enterprises (ASUSE), the informal sector in India faces many challenges. Over the last seven years, **many small and medium enterprises have shut and about 16.45 lakh jobs have been lost.**

ASUSE: The ASUSE was released for the 2021-22 and 2022-23 by the Union Ministry of Statistics and Programme Implementation (MoSPI). It carried out surveys for unincorporated non-agricultural establishments in three sectors: **manufacturing, trade, and other services**. Unincorporated enterprises are enterprises in the unorganised/ informal sector, comprising MSMEs, household units including those with hired workers, and own-account enterprises. **Manufacturing units other than those covered under** **the Factories Act 1948 and the organised manufacturing sector covered by the Annual Survey of Industries (ASI), have been surveyed.** Under trade and other services, proprietary and partnership establishments (excluding LLPs), co-operatives, self-help groups, non-profit institutions, etc., are included.

2. Meaning of the Informal Sector of the Economy: The term unorganised/ informal sector is used interchangeably in the India context. It consists of small and medium enterprises and household proprietary and partnership establishments**. The unorganised sector contributes over 44% to the country's gross value added (GVA) and employs nearly 75% of the workforce employed in non-agricultural enterprises**. This means the sector accounts for almost half of India's economic output and more than three-fourths of employment. The share of the unorganised sector is highest in agriculture as the holdings are small and fragmented. **This is followed by trade, construction, real estate, professional services, etc.**

3. National Bank for Financing Infrastructure and Development: It was set up in 2021, by an Act of the Parliament (The National Bank for Financing Infrastructure and Development Act, 2021). It **is a specialized Development Finance Institution in India.**

Objectives: Addressing the gaps in long-term non-recourse finance for infrastructure development, strengthening the development of bonds and derivatives markets in India, and sustainably boosting the country's economy.

Regulated by: It shall be **regulated and supervised by RBIas an All-India Financial Institution (AIFI).**

The principal idea behind the setup of NaBFID is to provide a dedicated and specialized institution focused on addressing the long-term financing needs of the infrastructure sector in India.

4. Koothandavar festival: In the Tamil month of Chithirai ,the 18-day Koothandavar festival takes place in Koovagam of Tamil Nadu. It is the **annual event, steeped in tradition, garners global attention for its unique celebration of the transgender identity.**

History: In a Tamil version of the Mahabharata, a character called Aravan offered himself as sacrifice for the Pandavas' triumph in war. It is said he had a boon of marriage before his sacrifice but no woman wanted to marry him as it would mean widowhood. Eventually,

it is said **Lord Krishna married Aravan after taking the form of Mohini. Lore has it that Lord Krishna grieved for Aravan as a widow.**

Rituals: The **focal point of the festival, Lord Aravan's sacrificical ritual**. On the 17th day of the ceremony, transwomen from far and wide congregate to wed Lord Aravan. The next day, as the culmination of the festival, Aravan would be sacrificed in the war. Marking his death, the trans women who married him go through the rituals of widowhood, lamenting Aravan's death.

20 JULY

1. Enemy Property: Enemy property are those **immovable and moveable assets which were left behind by people who took citizenship of Pakistan and China after leaving India during the partition and post the 1962 and 1965 wars**. Besides real estate, enemy property may also include bank accounts, shares, gold, and other assets of such individuals. **The enemy properties are vested with the Custodian of Enemy Property for India (CEPI), an authority created under the Enemy Property Act, 1968**. The 2017 amendment to the Act (Enemy Property (Amendment and Validation) Act, 2017) stated that the successors of those who migrated to Pakistan and China ceased to have a claim over the properties left behind in India. The amendment ensured that the law of succession does not apply to enemy property, that there cannot be a transfer of any property vested in the custodian by an enemy, or enemy subject, or enemy firm, and that the custodian shall preserve the enemy property till it is disposed of in accordance with the provisions of the Act**. As per CEPI, there are 13,252 enemy properties in India, valued at over Rs1 lakh crore.** Most of these properties belong to people who migrated to Pakistan, and over 100 to those who migrated to China. **Uttar Pradesh (5,982) has the highest number of enemy properties, followed by West Bengal (4,354).**

2. Khelo India Rising Talent Identification (KIRTI) Program: It is aimed at school children between nine and 18 years age group. **The nation-wide scheme will have two main objectives: To hunt talent from every nook and corner of the country and to use sports as a tool to curb addiction towards drugs and other gadgetry distractions.**

KIRTI made a solid launch across 50 centres in India. Fifty thousand applicants are being assessed in the first phase across 10 sports, including **athletics, boxing, wrestling, hockey, football and wrestling**. It aims to conduct 20 lakh assessments across the country throughout the FY 2024-25 to identify talent through notified Talent Assessment Centres. **Its athlete-centric programme is conspicuous by its transparent selection methodology based on Information Technology.** Data analytics based on Artificial Intelligence are being used to predict the sporting acumen of an aspiring athlete. **With its decentralized and pocket-based talent identification approach will help in achieving the twin objectives of the Khelo India Scheme i.e. excellence in sports, and mass participation in sports.**

3. Gaia Spacecraft: It was launched by the European Space Agency (ESA) in December 2013. It is located 1.5 million kilometres from Earth at the second Sun-Earth Lagrange point (L2).

Mission: It monitors each of its target stars about 14 times per year. It is precisely charting their positions, distances, movements, and changes in brightness. It is expected to discover hundreds of thousands of new celestial objects, such as extra-solar planets and brown dwarfs, and observe hundreds of thousands of asteroids within our own Solar System. **The mission is also studying more than 1 million distant quasars and providing stringent new tests of Albert Einstein's General Theory of Relativity**. It contains two optical telescopes that work with three science instruments to precisely determine the location of stars and their velocities, and to split their light into a spectrum for analysis. **It is creating an extraordinarily precise three-dimensional map of nearly two billion objects throughout our Galaxy and beyond, mapping their motions, luminosity, temperature and composition.** This huge stellar census is providing the data needed to tackle an enormous range of important open questions relating to the origin, structure and evolutionary history of our Galaxy.

4. National Clean Air Programme: The new study by Centre for Science and Environment (CSE) said that road dust mitigation works undertaken to reduce particulate matter 10 (PM10) pollution is draining a lion's share — 64% — of funds under the National Clean Air Programme (NCAP). It was **launched in January, 2019 by the Ministry of Environment, Forest, and Climate Change. It is a long-term, time-bound,**

national level strategy to tackle the air pollution problem across the country in a comprehensive manner.

Objectives:

➢ Stringently implementing mitigation measures to **prevent, control, and abate air pollution.**

➢ Strengthening an air quality monitoring network across the country.

➢ Increasing public awareness and capacity building measures.

Target: NCAP envisages reduction by 20-30% in PM 10 concentration over baseline in year 2017 by 2024. Target has been revised to achieve reduction in PM10 level up to 40% or achievement of national standards (60 µg/m3) by 2025-26.

22 JULY

1. Assam's Moidams to be considered for World Heritage List: Assam's 'Moidams,' the mound burial system of the Ahom dynasty, will be considered for inclusion in the World Heritage Sites list at the 46th session of the World Heritage Committee. **The Moidams (also Maidams) are the mound-burial system of the Ahom dynasty (13th century-19th century). The mound-burial system of the royals of the Ahom dynasty in Assam's Charaideo district can be likened to the royal tombs of ancient China and the Pyramids of the Egyptians Pharaohs.** The Ahom rule lasted for about 600 years until the British annexed Assam in 1826. Charaideo, more than 400 km east of Guwahati, was the first capital of the Ahom dynasty founded by Chao Lung Siu-Ka-Pha in 1253. Previously, those of the deceased with their paraphernalia were buried. However, after the 18th century, the **Ahom rulers adopted the Hindu method of cremation, entombing the cremated bones and ashes in a Moidam at Charaideo**. The Moidams enshrine the mortal remains of Ahom royalty and are highly venerated. Although subject to vandalism by treasure seekers in early 20th CE, the group of Moidams in Choraideo has been systematically restored to safeguard its structural integrity.

2. Sagittarius A* (Sgr A*): Scientists recently discovered another intermediate-mass black hole at the centre of a star cluster in the Milky Way, which is close to the supermassive black hole Sagittarius A* (SgrA*). It **is a supermassive black hole located at the center of our spiral galaxy, the Milky Way.** It is mostly dormant and only occasionally absorbs gas or dust, but nonetheless has an estimated mass 4.3 million times that of the sun**. It is located in the constellation Sagittarius. It is a strong source of radio waves**. Most of the radio radiation is from a synchrotron mechanism, indicating the **presence of free electrons and magnetic fields.**

3. Rapid Apophis Mission for Space Safety (RAMSES): It is a planetary defence mission of the European Space Agency (ESA). It will **intercept the asteroid 99942 Apophis** and accompany it through its safe but exceptionally close flyby of Earth in 2029. It **will be the closest approach of an asteroid of this size that humankind has ever known about in advance**. For a short time, Apophis will be visible to the naked eye in clear, dark skies for about 2 billion people across much of Europe, and Africa, and parts of Asia. Apophis will miss Earth. Astronomers have ruled out any chance that the asteroid will collide with our planet for at least the next 100 years. But the **Apophis flyby in April 2029 is an extremely rare natural phenomenon.** Researchers will study the asteroid as Earth's gravity alters its physical characteristics. Their findings will improve our ability to defend our planet from any similar object found to be on a collision course in the future. **RAMSES will work in synergy with the NASA mission OSIRIS-APEX that will arrive at Apophis a few days after the closest approach of the asteroid to the Earth, allowing a comparison of the asteroid properties measured by the two missions.**

23 JULY

1. India Maritime Centre (IMC): It is a **cornerstone of the Ministry of Ports, Shipping, and Waterways (MoPSW) under the Maritime India Vision 2030**. It **aims to provide a unified platform for the Indian maritime industry, acting as a think tank for policy formulation and industry recommendations**. It is poised to be a pivotal institution in advancing India's maritime interests both domestically and internationally.

Its primary goals include:

- Strengthening India's participation in the **International Maritime Organisation (IMO) and global maritime forums.**
- Creating a robust domestic maritime sector through a unified and synchronised approach.
- **Conducting flagship events** to build a strong global brand for the Indian maritime cluster.
- Providing expert analysis and recommendations for sustainable growth.
- **Establishing platforms for industry stakeholders to collaborate and network.**
- Creating a pool of funds to support the industry, including startups.

Mumbai has been finalized as the location for the IMC. The IMC Secretariat shall be built as a world-class facility, including equipped conference area and meeting rooms.

2. Upper Karnali Hydro-Electric Power Project: It is a **900 MW run-of-the-river hydropower project being developed on the Karnali River in Nepal**. The project will supply power to Nepal, India, and Bangladesh for a contracted period of 25 years. **The Government of Nepal awarded the project to GMR Upper Karnali Hydro Power Limited (GUKHL), a subsidiary of GMR Group India,** under a memorandum of understanding (MoU) signed in January 2008. **GMR is developing the project on a build-own-operate-transfer (BOOT) basis.** The Nepal Government received 27% free equity in the project as part of the MoU with GMR. It is estimated to generate 3,466 million units of electricity, while offsetting approximately two million tons of greenhouse gas emissions a year. **It will feature a concrete gravity dam, headrace tunnels, a fish pass, feeder tunnels, surge and pressure shafts, and silt flushing tunnels.**

3. International Covenant on Civil and Political Rights: It is a key international human rights treaty, providing a range of protections for civil and political rights**. The Covenant was adopted by the U.N. General Assembly in 1966 and came into force in 1976. The ICCPR, together with the Universal Declaration of Human Rights and the International Covenant on Economic Social and Cultural Rights, are considered the International Bill of Human Rights.** The ICCPR obligates countries that have ratified the treaty to protect and preserve basic human rights, such as:

The right to life and human dignity; equality before the law; freedom of speech, assembly, and association; religious freedom and privacy; freedom from torture, ill-treatment, and arbitrary detention; gender equality etc.

The Covenant compels governments to take administrative, judicial, and legislative measures in order to protect the rights enshrined in the treaty and to provide an effective remedy. **As of 2024, 174 countries have been party to this Covenant. India became a party to the ICCPR in 1979 and has undergone three such reviews so far, the last being in 1997.**

4. Cases related to self-incrimination:
Selvi vs. State of Karnataka (2010): SC has put restrictions on Narco analysis and brain mapping. However, DNA testing and other samples can be taken. **Ritesh Sinha versus State of Uttar Pradesh (2019):** SC broadened the parameters of handwriting samples to include **voice samples, adding that this would not violate the right against self-incrimination**.
In 2022, Supreme Court Upholds Amendments to Prevention of Money Laundering Act (PMLA): The Supreme Court upheld the key amendments granting extensive powers of summons, arrest, and raids to the government and the Enforcement Directorate (ED).

24 JULY

1. RAMP Scheme: It is a World Bank-assisted program that aims to improve the performance of MSMEs in India. It is a **Central Sector Scheme launched by the Ministry of MSME.**

Objectives:
- Improving access to markets and credit for MSMEs.
- Strengthening institutions and governance at the central and state levels
- Improving center-state linkages and partnerships.
- Addressing issues of delayed payments.
- Greening of MSMEs.

The **National MSME Council has been set up by the Ministry to work as an administrative and functional body of the RAMP Programme.**

Sub schemes under RAMP:
- **MSME GIFT Scheme:** MSME Green Investment and Financing for Transformation Scheme intends to

help **MSMEs adopt green technology with interest subvention and credit guarantee support.**

➢ **MSE SPICE Scheme:** The MSE Scheme for Promotion and Investment in Circular Economy **aims to support circular economy projects**, which will be done through credit subsidy and will lead to realising the dream of MSME sector towards zero emissions by 2070.

➢ **MSE ODR Scheme**: **The MSE Scheme on Online Dispute Resolution for Delayed Payments is a first of its kind scheme to synergise legal support with modern IT tools and Artificial Intelligence** to address the incidences of delayed payments for Micro and Small Enterprises.

2. MSME Trade Enablement and Marketing Initiative (MSME-TEAM Initiative): As a sub-scheme under the Central Sector Scheme "Raising and Accelerating MSME Performance (RAMP)", the Ministry of MSME launched "MSME Trade Enablement and Marketing Initiative" (MSME-TEAM Initiative). **It aims at assisting five lakh Micro, Small and Medium Enterprises (MSMEs) to onboard the Open Network Digital Commerce (ONDC) platform**, through awareness workshops which will include hand-holding assistance for onboarding onto ONDC. **It aims to provide financial assistance to Micro and Small Enterprises (MSEs) through Seller Network Participants, for catalogue preparation, account management, logistics, and packaging material and design**. Of the total five lakh MSEs to be benefited, two and a half lakh MSEs would be women owned.

The objective of the Initiative is to provide assistance to MSEs all across the country. However, awareness workshops will be conducted preferably in Tier 2 and Tier 3 cities and MSME Clusters, for greater outreach, especially among women and SC/ST owned MSMEs. The MSME TEAM Initiative, being a sub-scheme, is for a period of three years upto March 2027. However, MSMEs can continue to onboard onto ONDC, which is an open network.

3. Air Breathing Propulsion System: In this system the rocket will carry its fuel, but will not carry an on-board oxidiser. Instead, **this system will utilize atmospheric oxygen as an oxidiser to burn the fuel. This makes rockets significantly lighter and more efficient.** However, such air-breathing technologies can be used only within the denser layers of the Earth's atmosphere, where there is an adequate supply of oxygen. **Such technologies might be feasible in the denser layers of Earth's atmosphere** and thereafter the rocket must switch to another stage that has both fuel and an on-board oxidizer.

Types of air-breathing propulsion:

➢ **Ramjet:** It is an **air breathing propulsion engine operating on the principle of supersonic combustion**. It has the absence of any rotator and relies solely on the forward motion of the engine to compress incoming air.

➢ **Scramjet: It is an upgraded version of the Ramjet** and generates thrust through supersonic air flow and combustion. It moves at hypersonic speed and performs best at high speeds, greater than Mach 5. In 2023, **India became the fourth country to successfully demonstrate the flight testing of a Scramjet Engine.**

➢ **Dual-Mode Ramjet (DMRJ):** It is a **jet engine where a ramjet transforms into a scramjet over Mach 4-8 range** and it can efficiently operate both in subsonic and supersonic combustor modes.

4. DIGIPIN: It is an **initiative to establish a standardized, geo-coded addressing system in India**. In this regard, the Department had collaborated with IIT Hyderabad for developing this National Addressing Grid. **This system will act as a strong and robust pillar of Geospatial Governance, leading to enhancements in public service delivery, faster emergency response and a significant boost to logistics efficiency**. The DIGIPIN layer will act as the addressing reference system which can be used for logically locating addresses with directional properties built into it due to the logical naming pattern followed in its construction. It is proposed to be fully available in the public domain and can be easily accessed by everyone. **The DIGIPIN Grid system being an addressing referencing system, can be used as the base layer for other ecosystems**, including various service providers and utilities, where addressing is one of the processes in the workflow. The **advent of DIGIPIN will mark a revolutionary step in India's journey towards digital transformation by bridging the crucial gap between physical locations and their digital representation**. The Department has released a beta version of National Addressing Grid 'DIGIPIN' for public feedback.

1. Skill Loan Scheme:

It was **introduced in July, 2015, to offer institutional credit to individuals pursuing skill development courses aligned with National Occupations Standards and Qualification Packs**. These courses are conducted by training institutes following the National Skill Qualification Framework (NSQF) and lead to certifications, diplomas, or degrees. The Scheme applies to **all member banks of the Indian Banks' Association (IBA) and other banks and financial institutions as advised by the Reserve Bank of India (RBI).**

Features:

Eligibility: Any Indian National who has secured admission in a course run by Industrial Training Institutes (ITIs), Polytechnics, or in a school recognised by Central or State Education Boards or in a college affiliated with a recognised university, training partners affiliated to National Skill Development Corporation (NSDC) Sector Skill Councils, State Skill Mission, or State Skill Corporation can avail loan for the purpose. No specific restriction with regard to age.

Courses: Aligned with NSQF.

Duration of Course: No minimum duration.

Quantum of Finance: 5,000-1,50,000. Now, it has increased to Rs 7.5 lakh.

Moratorium: Duration of the course.

Repayment Period:

➢ Loans up to Rs. 50,000: Up to 3 years.
➢ Loans between Rs. 50,000 to Rs. 1 lakh: Up to 5 years.
➢ Loans above Rs. 1 lakh: Up to 7 years.

Coverage: Course fees and expenses for assessment, examination, study material, etc.

Interest Rate: The interest rate to be charged by the bank should not be more than 1.5% p.a.

Collateral: The scheme does not allow for collateral to be charged from the beneficiary.

Ministry of Skill Development and Entrepreneurship (MSDE), through a November 2015 notification, brought into force the Credit Guarantee Fund for Skill Development (CGFSSD) for all skill loans sanctioned on or after 15 July 2015, to be administered by the National Credit Guarantee Trust Company (NCGTC).

2. NPS Vatsalya Scheme:

It is a scheme under the National Pension Scheme (NPS). It is **designed to help parents and guardians plan for their children's future financial needs**. Under this scheme, parents or guardians can open an account for their minor children and make contributions towards their retirement savings. **The funds will accumulate until the child turns 18. Once the child reaches adulthood, the accumulated amount will be transferred to the standard NPS account.** This plan could be seamlessly converted into a non-NPS plan when the child becomes an adult. The scheme operates similarly to the existing NPS.

3. Vishnupad Temple:

It is **in the state of Bihar and dedicated to Lord Vishu**. It was built in 1787 on the orders of Queen Ahilyabai Holkar of Ahmadnagar. It is **located on the banks of the Falgu river.**

Architecture: Architecturally, the temple is around 100 feet tall and has 44 pillars. Devotees visit the temple during pitra paksh, a period in the Hindu calendar when people take part in rituals to remember their ancestors.

Mahabodhi Temple: The temple stands to the east of the Mahabodhi Tree, where Gautam Buddha is believed to have attained nirvana. The temple has a unique shape and a height of 170 feet. It is **located in Bodh Gaya, in central Bihar, on the banks of the Niranjana River.** The Mahabodhi Temple Complex is the first temple built by Emperor Asoka in the 3rd century B.C., and the present temple dates from the 5th–6th centuries. **It is one of the earliest Buddhist temples built entirely in brick, still standing,** from the late Gupta period and it is considered to have had significant influence in the development of brick architecture over the centuries. **It was recognized as a UNESCO World Heritage Site in 2002.**

27 JULY

1. Listeria:

Two separate outbreaks of listeria, a bacteria that can contaminate food, have been reported recently in the United States and Canada. **Listeria or Listeria monocytogenes is a type of bacteria found in soil, vegetation, water, sewage and even the faeces of animals and humans**. Listeria-contaminated

food can lead to an infection called listeriosis. Most people who ingest listeria-infected food do not fall sick. The bacteria can be present in the infected person's system for up to two months until the symptoms present themselves, making it difficult to establish the connection between what was consumed and the infection. **Symptoms include vomiting, nausea, cramps, severe headache, constipation and fever.**

2. Exercise KHAAN QUEST: It is a multinational military exercise which will bring together military forces from around the world to collaborate and enhance their peacekeeping capabilities. **Last edition of Exercise KHAAN QUEST was conducted in Mongolia in 2023. The exercise first started as a bilateral event between USA and Mongolian Armed Forces in the year 2003.** Subsequently, from the year 2006 onwards the exercise graduated to a Multinational Peacekeeping Exercise with current year being the 21st iteration.

3. State of the World's Forests 2024 Report: It is **published by the Food and Agriculture Organization (FAO) of the United Nations.**

Highlights of the Report:
It highlighted a decline in deforestation rates compared to previous decades, with several countries showing significant improvements. In 2020, the global forest covered approximately 4.1 billion hectares (ha), or 31 percent of the land area. **Russia, Brazil, Canada, the United States of America, and China account for 54 percent of the global forest area, in descending order.** The report estimated that between 1990 and 2020, approximately 420 million ha of forest were converted to land use. **It also noted 10 countries recording annual gains in forest area in 2020, which include China, Australia, India, Chile, Viet Nam, Turkey, the United States of America, France, Italy, and Romania. India gained 2,66,000 hectares of forest annually from 2010-2020, ranking third globally in forest area gains**. The global mangrove area was recorded to be 14.8 million ha, out of which South and Southeast Asia contributed almost 44 percent of the total global area. The rate of gross global mangrove loss decreased by 23 percent between the two recent decades (2000-2010 and 2010-2020), and the rate of gain in mangrove areas also decreased slightly.

4. Kargil Vijay Diwas: It is celebrated on 26th July every year. The year 2024 marks the 25th anniversary of Kargil Vijay Diwas. It **was fought between India and Pakistan between May and July 1999 in the Kargil district of Kashmir and along the Line of Control (LOC). Cause:** In an effort to ease these tensions**, India and Pakistan signed the Lahore Declaration in February 1999, which aimed for a peaceful resolution to the Kashmir issue**. However, during the winter of 1998-1999, Pakistani forces secretly infiltrated the Drass and Batalik sectors of Kargil in the Ladakh region. **Their objective was to capture positions that would allow them to monitor and potentially control movements along the vital NH 1A.** Initially, the Indian military mistook these infiltrators for insurgents. As the scale of the infiltration became apparent, India mobilized nearly 200,000 troops to counter the threat, leading to the onset of the Kargil War.

Operation Vijay: The Indian Army fought bravely and recaptured the famous 'Tiger Hill' and other important posts around under 'Operation Vijay' by evicting the Pakistani troops in the 1999 Kargil War. Asia was the major contributor to mangrove loss and gains. It is estimated that about 340-370 million ha (equivalent to less than half the land area of Australia) of the earth's land area is impacted by annual fire.

29 JULY

1. Integrated Disease Surveillance Programme (IDSP): It is a decentralized, state-based surveillance programme in the country. It was **launched with World Bank assistance in November 2004 by the Ministry of Health and Family Welfare, Government of India.**
Objectives: To strengthen/maintain a decentralized laboratory-based IT enabled disease surveillance system for epidemic-prone diseases to monitor disease trends and to detect and respond to outbreaks in the early rising phase through trained Rapid Response Teams (RRTs).

Programme Components:
Integration and decentralization of surveillance activities through the establishment of surveillance units at the Centre, State, and District levels.
Human Resource Development: Training of State Surveillance Officers, District Surveillance Officers, RRT, and other medical and paramedical staff on principles

of disease surveillance. **Use of Information Communication Technology for collection, collation, compilation, analysis, and dissemination of data**. Strengthening of public health laboratories. sectoral coordination for zoonotic diseases

2. Asian Disaster Preparedness Centre: It is an autonomous international organization established in 1986. **It is for cooperation in and implementation of disaster risk reduction and building climate resilience in Asia and the Pacific region.**

Vision: Safer communities and sustainable development through disaster risk reduction and its geographical remit is Asia and the Pacific

Member countries: India, Bangladesh, Cambodia, China, Nepal, Pakistan, Philippines, Sri Lanka and Thailand are the founding members.

Governance: The organs of ADPC, defined in the ADPC Charter include the Board of Trustees, the Executive Committee, the Advisory Council and the Regional Consultative Committee (RCC), which are the governing or advisory bodies of ADPC.

ADPC's international Charter was signed by nine founding member countries and it was put into effect in 2018 through the ratification by all the founding members. **As of January 2020, ADPC is operating as an autonomous international organization governed by the Board of Trustees.**

Headquarter: Bangkok, Thailand and sub-centers in the country of operations are the operational parts of ADPC.

3. E-Upahaar Portal: It is an **auction portal of the President's Secretariat (office of the President of India), Rashtrapati Bhavan for auctioning of gift items presented to Hon'ble President and former Presidents of India**. The portal was launched by the President of India, on July 25, 2024. It is **conceptualized, designed, developed and hosted by National Informatics Centre (NIC), Ministry of Electronics and Information Technology**. The aim of this initiative is not only to increase citizen engagement but also to support noble causes. All proceeds from the auction will be donated to help children in need.

4. Tell Umm Amer Heritage site: The **World Heritage Committee (WHC) decided to include the Palestinian site of Tell Umm Amer in both the UNESCO World Heritage Site List and the Lost of World Heritage in**

Danger during its 46th session in New Delhi. It is situated on the coastal dunes of the Nuseirat Municipality, just 10 km south of Gaza city. It is an ancient Christian monastery founded in the fourth century by Hilarion the Great (291-371 CE). **It is also known as the 'Monastery of Saint Hilarion. It was the first monastic community in the Holy Land, laying the groundwork for the spread of monastic practices in the region**. The monastery occupied a strategic position at the crossroads of major trade and communication routes between Asia and Africa.

30 JULY

1. Agarwood: Agarwood or Gaharu as it is known in **many Asian countries is resinous heartwood that occurs in trees belonging to the genus Aquilaria**. It is a fast-growing, subtropical forest tree. It grows at elevations from a few meters above sea level to about 1000 meters, with approx. 500 meters being most ideal.

Distribution: West Bengal and North-Eastern States of India namely Assam, Meghalaya, Manipur, Mizoram, Arunachal Pradesh. This is a tropical tree which grows over high rainfall tracts throughout humid regions. **The region experiences low temperature variations between 20ºC to 28ºC and relative humidity around 80%**

Soil: It grows over sandy loam and slightly acidic soils. Highly valued for its traditional uses as incense, the extracts (agarwood oil) of plants are also used in water-based perfumes. It is also utilized in the aroma industry, medicine preparations, preparations of air fresheners and purifiers. The **essential oil extracted from agarwood has anti-inflammatory, anti-rheumatic, analgesic and antioxidant.**

➢ **IUCN: Critically Endangered**
➢ **CITES: Appendix II**

2. NIPUN Bharat Mission: The National Initiative for Proficiency in Reading with Understanding and Numeracy (NIPUN Bharat) Bharat mission was launched by the Ministry of Education. **The mission will focus on children of the age group of 3 to 9 years including preschool to Grade 3**. A five-tier implementation mechanism will be set up at the National- State- District- Block- School level in all States and UTs, under the aegis of the centrally sponsored scheme of Samagra Shiksha. **The goals and**

objectives of the mission are required to be achieved by all Govt., Govt. Aided and Private Schools so that universal acquisition of Foundational Literacy and Numeracy (FLN) skills can be achieved by 2026-27. It has been launched under the aegis of the centrally sponsored scheme of Samagra Shiksha, will focus on providing Access and retaining children in foundational years of schooling; teacher capacity building; development of high quality and diversified Student and Teacher Resources/Learning Materials; and tracking the progress of each child in achieving learning outcomes.

3. INS Tabar: It is a stealth frigate built for the Indian Navy in Russia. **It is the third of the Talwar-class frigate of the Indian Navy. The frigate was commissioned in Kaliningrad, Russia.** INS Tabar has the ability to handle air/surface/subsurface missions or defending herself, operating either independently on maritime missions or supporting a larger naval task force. The ship is part of the Indian Navy's Western Fleet, which is based in Mumbai under the Western Naval Command.

4. Pollution Under Control (PUC) Certificate: PUC Certificate, often **referred to as the pollution certificate, is a mandatory document for every vehicle owner in India**. It is a **validation document that states that the vehicle's emission levels are within the permissible levels set by the government.** All vehicles on Indian roads are required to possess a valid PUC certificate under the Central Motor Vehicles Rule 1989. Usually, a new vehicle is exempt from PUC in the first year. Following this, the vehicle has to undergo mandatory PUC tests at regular intervals to get a validity certificate. A PUC certificate is usually valid for a year from the date of issue.

Failure to produce a PUC certificate can invite a fine of up to Rs 10,000 or six months of imprisonment or both under the Motor Vehicle Act. The vehicle owner may also be disqualified from holding their licence for three months. If the vehicle is found to be emitting fumes beyond the prescribed limit, despite possessing a valid PUC certificate, the certificate will be cancelled. The vehicle owner will have to obtain a new PUC certificate within seven days. **The PUC certificate rule is applicable to CNG-powered vehicles in addition to petrol and diesel vehicles**. A PUC certificate can be obtained from a government-authorised emission test centre with a computerised facility. The issuance of an emission test certificate involves a thorough examination of the vehicle's exhaust gas, and the test results are mentioned in the PUC certificate.

31 JULY

1. Defence Acquisition Council (DAC): It is the highest decision-making body of the defence ministry on procurement. **The main objective of the DAC is to ensure expeditious procurement of the approved requirements of the armed forces in terms of capabilities sought and time frame prescribed by optimally utilizing the allocated budgetary resources. Formation: It** was formed after the Group of Minister's recommendations on 'Reforming the National Security System', in 2001, post-Kargil War (1999).
Composition:
The defence minister is the chairman of DAC.
Its members include the **Chief of Defence Staff (CDS) and chiefs of the Army, Navy, and Air Force.**

Its functions include:
➢ Give in principle approval of a **15 years Long Term Integrated Perspective Plan (LTIPP) for defence forces.**
➢ Accord of acceptance of necessity to acquisition proposals.
➢ Categorisation of the acquisition proposals relating to 'Buy', 'Buy & Make', and 'Make'.
➢ Look into issues relating to single vendor clearance
➢ **Take decisions regarding 'offset' provisions** in respect of acquisition proposals above Rs 300 crore.
➢ Field trial evaluation.

2. E-cigarettes: E-cigarettes are electronic devices designed to simulate the act of smoking tobacco cigarettes. **They are also called "e-cigs," "vapes," "e-hookahs," "vape pens," and "Electronic Nicotine Delivery Systems (ENDS)."** Contain a heating element that vaporizes a liquid (e-liquid) which typically includes nicotine, flavorings, and other chemicals. Come in various forms, including pens, mods, tanks, and pod systems. **Vaping is the act of inhaling and exhaling the aerosol produced by an e-cigarette.**

PLACES IN NEWS

1. Nubra Valley
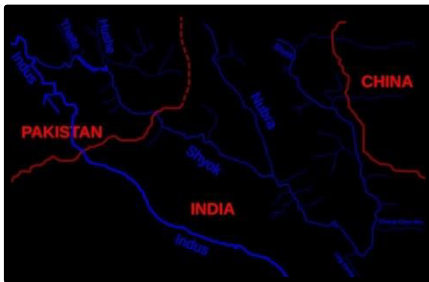
The **Nubra Valley acts as the gateway to the strategically important Siachen Glacier and Karakoram Pass.**

The Karakoram Pass on the northwest side connects the valley with Xinjiang, China.

The **Nubra River is a river in the Nubra Valley of Ladakh in India.**

It is a **tributary of the Shyok River** (a part of the Indus River system) and originates from the Siachen Glacier.

2. Bolivia:

Bolivia has been hit by an economic turmoil fuelled by dependence on U.S. dollar, draining international reserves and mounting debts.

Political features

➤ Largest landlocked country of Southern Hemisphere located in South America.

➤ **Land boundary:** Brazil (north and east), Paraguay (southeast), Argentina (south), Chile (southwest and west) and Peru (northwest).

Geographical features

➤ **Mountain range:** Andes Mountains.

➤ **Highest point:** Mt Sajama.

➤ **Major rivers:** Madeira, Paraguay, Mamore.

➤ It is also **home to Amazon rainforest. Bolivia shares Lake Titicaca, the second largest lake in South America (after Lake Maracaibo), with Peru.**

3. Caspian sea:

Earth's largest inland body of water, when measured by surface area.**Bordered by Russia (northwest), Azerbaijan (west), Iran (south), Turkmenistan (southeast) and Kazakhstan (northeast)**. In 2003, the Caspian littoral states signed the (Tehran) Framework Convention for the Protection of the Marine Environment of the Caspian Sea. **Lies at the junction of Europe and Asia, with the Caucasus Mountains to the west and the steppes of Central Asia to the east.**

4. Talle Wildlife Sanctuary

It is a **wildlife sanctuary as well as a bio-diversity hotspot located in the state of Arunachal Pradesh**. Rivers like Pange, Sipu, Karing and Subansiri flow through this sanctuary.

Flora: It comprises sub-tropical and alpine forests.

Fauna: Clouded leopard, Himalayan squirrel, Himalayan Black Bear etc.

### 5. Democratic Republic of Congo (Capital: Kinshasa)

Political Features

➢ Largest country in Sub-Saharan Africa (SSA) and second largest in African Continent (after Algeria).
➢ **Territorial boundaries:** Angola, Burundi, Central African Republic, Republic of the Congo, Rwanda, Sudan, Tanzania, Uganda, and Zambia (9 nations).
➢ **Maritime boundary:** Opens Atlantic Ocean.

Geographical features

➢ **Major River:** Congo River (second longest river, after the Nile).
➢ **Vegetation:** Mainly tropical forests. **Also Congo basin is home to world's largest tropical peatlands along with Brazil and Indonesia.**
➢ **Minerals:** It has 70% of the world's cobalt, 3rd largest producer of oil in Sub-Saharan Africa. It also has Gold, coal, and iron-ore deposits, lithium, etc.

6. ANDAMAN AND NICOBAR ISLANDS

Congress demanded suspending NITI Aayog's Great Nicobar project clearances due to legal, tribal, and ecological concerns.
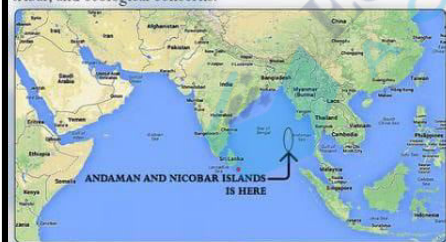
Crucial Facts

Formation: 1 November 1956
Capital and largest city: Port Blair
Two Island Groups: Northern Andaman Islands and Southern Nicobar Islands
Separated by: Ten Degree Channel
Maritime Borders: Indonesia to the south, Myanmar to the north-east and Thailand to the south-east.

7. Argentina:

Argentina designates **Hamas a terrorist group in show of support for Israel.**

Political Features

➢ Country in South America.
➢ **Neighboring Countries:** Chile (south and west), Bolivia and Paraguay (north), and Brazil, Uruguay (east).
➢ Bounded to the east by Atlantic Ocean.

Geographical Features

➢ **Geographically divide into four major regions: Andes, North, Pampas, and Patagonia.**
➢ Pampas is fertile grassland.
➢ **Major rivers:** Parana, Paraguay, Uruguay, etc.
➢ **Highest peak:** Cerro Aconcagua.

8. Mount Erebus:
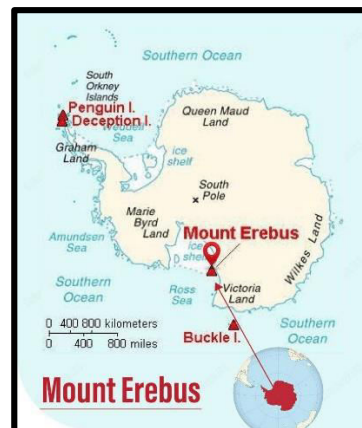
World's southernmost active volcano
Location – Antarctica
Only volcano to emit gold in a metallic form.
One of several volcanoes forming Ross Island off the coast of West Antarctica.
Type – Stratovolcano composed of alternating layers of solidified ash, hardened lava, and rocks.

9. Chagos islands

Comprises around 58 small, very low-lying islands in the middle of the Indian Ocean.

Key Islands include Salomon Islands, Diego Garcia, Nelsons Island, etc. **Diego Garcia is home to a US naval support facility. Strategic located at about 1,600 km south of the southern tip of the Indian subcontinent.** Currently controlled by UK as British Indian Ocean Territory. In **2019, International Court of Justice (ICJ) in its advisory opinion directed United Kingdom to unconditionally withdraw from Island.**

10. Rwanda's incumbent President wins fourth term.

Political Boundaries

Landlocked country lying south of Equator in east-central Africa.

Bounded by Uganda (north), Tanzania (east), Burundi (south), and Democratic Republic of Congo (west).

Geographical features
- Known as 'The Land of a Thousand Hills'
- **Highest point:** Mount Karisimbi in Virunga Range
- **Major Lakes:** Lake Kivu, Muhazi Lake etc.
- **Major Rivers:** Akagera, Akanyaru, Mukungwa (in Nile Basin) and Rubyiro, Ruhwa, Rusizi (in Congo Basin).

11. Itanagar Wildlife Sanctuary
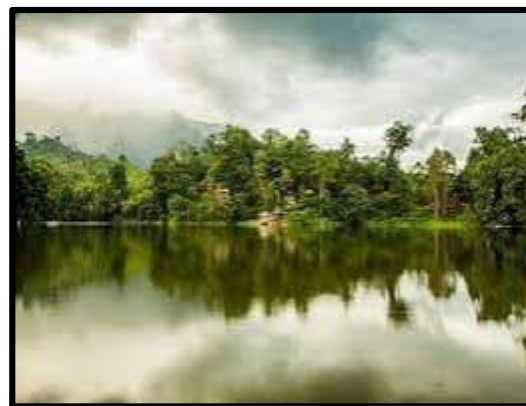
It is **located in the southern-west part of Arunachal Pradesh and state capital Itanagar is located inside the sanctuary.**

Major streams: Poma, Pam, Pachin, Neorochi and Chingke.

Habitat: Mixed evergreen to semi-evergreen forests.

The sanctuary has also been recognized as an Important Bird Area by Birdlife International as it lies in Eastern Himalayas Endemic Bird Area.

Fauna: Asian Elephant, Four species of Hornbills, Tiger, Asiatic Black Bear etc.

Threats: Hunting, unorganized urbanization/ settlement, encroachment.

12. Nine Dash Line
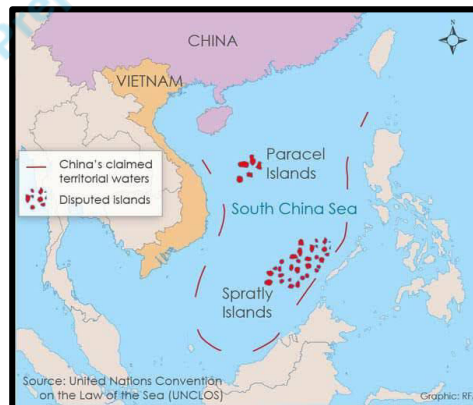
It is a **visual representation of China's claims on Chinese official maps and comparative maps of disputed claims in the South China Sea.** It covers almost 90% of the South China Sea and overlaps with the Exclusive Economic Zone claims of Brunei, Indonesia, Malaysia, the Philippines, Taiwan, and Vietnam.

Claims by China under Nine-dash line were rejected by a UN Tribunal in 2016.

13. Liberia (Capital: Monrovia)

Group of senators in Liberia has proposed to relocate its Capital city due to recurring flash floods.

Political features
- Located along the coast of western Africa.
- **Land Boundaries:** Sierra Leone (northwest), Guinea (north), Côte d'Ivoire (east).
- **Maritime Boundary:** Atlantic Ocean (south and west).

Geographical features
Highest Point: Mount Wuteve.
Major rivers: Mano, Lofa, St. Paul etc.
Climate: Tropical; Hot, humid; dry winters with hot days.
Natural resources: Iron ore, timber, diamonds, gold etc.

14. Latvia (Capital:Riga)

India has operationalized the new resident Mission in Latvia

Political features
- It is a member of the European Union (EU) and NATO.

- Located in northeastern Europe.
- **Land Boundaries:** Estonia(North), Russia(East), Belarus(southeast), and Lithuania (South)
- **Maritime boundaries:** Baltic Sea and the Gulf of Riga.

Geographical Features
Highest point: Gaiziņkalns hills
Major rivers: Daugava,Venta.
Climate: Humid

15. Periyar Tiger Reserve (PTR)

Location: Thekkady (Idukki) district, Kerala. **Situated in Cardamom Hills and Pandalam Hills of Southern Western Ghats of peninsular India.**

Climate: Cool and humid climate with high rainfall.
Forest Types: Tropical evergreen forests, tropical semi-evergreen forests, moist deciduous forests, grasslands and eucalyptus plantations.
Major River: Periyar and Mullayar.
Mullaperiyar Dam is located within PTR.
Fauna: Asian Elephant, Bengal Tiger, Sambar Deer, Leopard, Barking Deer, Nilgiri Tahr, Lion Tailed Macaque, etc.
Flora: More than 41 % of entire flowering plants (angiosperms).

PRELIMS & MAINS EDUBYTES

1. INSTC

It is a 7,200-kilometer Multimode Transit Route linking the **Indian Ocean and the Persian Gulf to the Caspian Sea via Iran and onward to northern Europe via St. Petersburg in Russia.**

It connects ship, rail, and road routes for moving cargo between India, Iran, Azerbaijan, Russia, Central Asia, and Europe.

Significance of INSTC

1. Diversification of Trade Routes to bypass choke points (Strait of Hormuz)
2. Enhanced **Connectivity with Central Asia**
3. Drop in logistic time and cost
4. Enhanced energy security for India
5. **Strengthening Ties with Iran and Afghanistan**
6. Balance the region by challenging the influence of China

Challenges

1. Limited International Funding
2. US Sanctions on Iran
3. Security Concerns in Central Asia
4. Differential Tariffs and Customs in member states.
5. Uneven Infrastructure Development in member states. **Recently, Russia has sent 2 trains carrying coal to India through the INSTC for the first time.**

2. Space Debris

Space debris refers to **man-made objects in Earth's orbit that no longer serve a useful purpose.**

E.g. defunct satellites, spent rocket stages, and fragments of debris from collisions. The number of space objects larger than 10 cm in size in Low Earth Orbit is expected to be about 60,000 by 2030-ISRO.

Issues/Challenges

1. Threat for Operational Satellites (chances of colliding)
2. Space debris in specific orbital regions can limit the availability of desirable orbital slots.
3. The increasing launches & resulting amount of space debris makes it more challenging for satellite operators and space agencies to accurately track and predict the orbits of objects in space.
4. The current coordination of space traffic is fragmented.
5. Developing tracking system is costly.

Initiatives

1. ISRO set up the IS4OM to continually monitor objects posing collision threats, predict the evolution of space debris to reduce risk.
2. 'Project NETRA' is also an EWS to protect Indian satellites.

3. BHARATIYA SAKSHYA ACT, 2023

The Bharatiya Sakshya Act, 2023 has 170 sections, altering 24, adding two, and repealing six of 167 sections of the **Indian Evidence Act 1872.**

Retained Provisions

1. Parties involved in a legal proceeding ca1n only present admissible evidence.
2. Court accepts proven facts if evidence supports reasonable action in the given circumstances.
3. Police confessions generally inadmissible unless recorded by a Magistrate

Key Changes

1. **Electronic records hold equivalent legal status to traditional paper documents.**
   (i) Electronic records encompassing data stored in memory and communication devices.
2. **Allows oral evidence to be given electronically.**
   (i) Electronic records are categorised as secondary evidence

3. A joint trial means trying more than one person for the same crime.

  (i) A trial of multiple persons, where accused has not responded to an arrest warrant, will be treated as a joint trial.

Key Issues

1. **Electronic Records:**

  (i) Concerns regarding tampering of electronic records during the **search, seizure and investigation process.**

  (ii) Usually, Electronic records must be **authenticated by a certificate to be admissible as documents**.

  (iii) The Act classifies electronic evidence as documents (which may not need certification), creating a contradiction.

2. Exclusion of Suggestion of SC and Low Commission

  (i) Concerns about duress and torture on Act kept rule allowing information from someone in police custody to be to a discovered fact used if it's directly related

  (ii) Exclusion of the presumption of police responsibility for injuries to someone in custody

4. BHARATIYA NAGARIK SURAKSHA SANHITA (BNSS), 2023

BNSS replaces CrPC 1973 and consists of 531 sections with 177 sections revised, 9 new sections added, and 14 sections repealed.

Key Provisions-

1. **Hierarchy of Courts:** Eliminated distinction and role of Metropolitan Magistrates.
2. **Mandated Use of Electronic Mode:** At stages of investigation, inquiry, and trial.
3. **Detention of Undertrials:** Restriction on release on personal bond for accused persons

  (a) charged with life imprisonment or

  (b) facing multiple proceedings

4. **Alternative to Arrest:** An accused doesn't have to be arrested; instead, the police can take a security bond for their appearance before a Judicial Magistrate.
5. **Community Service Defined:** "Work which the Court may order a convict to perform as a form of punishment that benefits the community, for which he shall not be entitled to any remuneration.

6. **Substitution of Terminology**: **"Mental illness"** replaced by **"unsoundness of mind in majority of provisions.**
7. **Documentation Protocols:** Searches with/without warrants require mandatory audio-video documentation with recorded material promptly submitted to Magistrate.
8. Timelines for Procedures: Prescribes timelines for various procedures Eg. Issuing verdict **within 30 days post-argument**
9. **Medical Examination**: Can be requested by any police officer in certain cases
10. **Sample Collection**: Magistrate can compel individuals to submit signature specimens, handwriting samples etc, even if they haven't been arrested
11. **Forensic Investigation:** Mandated for offences punishable with a 7 years of imprisonment
12. **New Procedures FIR Registration:**

  (i) After filing of **Zero FIR**, relevant police station must transfer it to the jurisdictionally appropriate station for further investigation.

  (ii) FIRs can be electronically registered, and the information will be officially recorded upon the person's signature within 3 days.

13. **Rights of Victim/Informant:**

  (i) Police after filing charge sheet obligated to supply police report and other documents to victim.

  (ii) Witness protection scheme to be laid down by the State Governments.

Key Issues

1. Permitted **15 days of police custody** within Initial 40 or 60 days
2. Doesn't mandate investigating officer to provide reasons when seeking police custody.
3. Allows use of handcuffs during arrests, **contradicting SC rulings and NHRC** guidelines.
4. Scope of **mandatory bail** limited in case of multiple charges.
5. **Limits plea bargaining** in India to sentence bargaining.
6. Restricting bail, and limiting ting scope for plea bargaining could deter decongesting of prisons.
7. **Power to seize property** expanded to immovable property apart from movable property.
8. Several provisions overlap with existing laws.

9. **BNSS retains CrPC provisions** related to public order, raising the question of whether laws governing trial procedure and public order maintenance should be unified or treated separately, considering their distinct functions.

5. BHARATIYA NYAYA SANHITA (BNS), 2023

BNS 2023 replaced Indian Penal Code 1860, incorporating 368 sections (611 in IPC), maintaining most of the IPC provisions, introducing new offences, eliminating court-struck-down offences, and enhancing penalties for various offences.

New Offences

1. **Promise to Marry**: Criminalising "deceitful" promises to marry.
2. **Mob Lynching**: Codify offences linked to mob lynching and hate-crime murders
3. Ordinary criminal law now covers **Organized Crime and Terrorism**, including a broader scope for terror financing in BNS compared to UAPA.
4. **Attempt to Suicide:** Criminalises attempts to commit suicide with intent to compel or restrain any public servant from discharging official duty.
5. **Community Service**: Added as possible form of punishment.

Deletions

1. **Unnatural Sexual Offences:** Section 377 of the IPC, which criminalised homosexuality among other "unnatural" sexual activities repealed completely
2. **Adultery:** Offence of adultery omitted in consonance of apex court judgement
3. **Thugs:** Section 310 of PC fully omitted
4. **Gender Neutrality:** Some laws dealing with children modified to bring gender neutrality.

Other Modifications

1. **Fake News:** Criminalisation of publishing false and misleading information
2. **Sedition:** Introduced under a new name **'deshdroh'** with wider definition
3. **Mandatory Minimum Sentence:** in several provisions, mandatory minimum sentences prescribed which may limit scope for judicial discretion

4. **Damage to Public Property:** Carry a graded fine (Le fine corresponding to the amount of damage caused)
5. **Death by Negligence:** Elevates punishment for causing death by negligence from two to five years (for doctors-2 years imprisonment)

Key Issues

1. **Criminal Responsibility Age Discrepancy:** Criminal responsibility starts at seven, extendable to 12 based on maturity, potentially conflicting with global recommendations.
2. **Inconsistencies in Child Offense Definitions:** It sets child age below 18, but age criteria for offenses like rape differ, causing inconsistency
3. **Retention of IPC Provisions on Rape and Sexual Harassment:** Maintains IPC provisions on rape and sexual harassment, omitting **Justice Verma Committee**'s 2013 suggestions for gender-neutral rope and recognizing marital rape as on offense.

6. Sustainable Development Goal-National Indicator Framework (NIF) Progress Report by MoSPI

Progress in SDG Goal 3 (Health and well-being)

1. Maternal Mortality Ratio has declined from 130 per 1,00,000 live births in 201416 to 97 per 1,00,000 live births in 2018-20.

2. Under-five mortality rate has declined from 43 per 1000 live births in 2015 to 32 per 1000 live births in 2020

Progress in SDG Goal 4 (Quality Education)

1. Gross Enrolment Ratio in higher secondary education has increased from 48.32 in 2015-16 to 57.60 in 2021-22.

7. Constitutional Morality
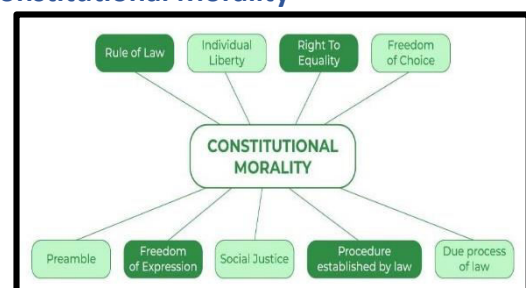
It is a concept **that refers to the adherence to the core principles of constitutional democracy**.

Significance of Constitutional Morality
1. Protection of Individual Autonomy and Personal Liberty
2. Respect for Constitutional Values (e.g. secularism)
3. Promotion of Pluralism and Diversity
4. Fosters a culture of tolerance, respect, and dialogue.

Challenges to Constitutional Morality
1. Lack of Clear Definition
2. Conflicts with Popular Morality and Religious Beliefs
3. Influence of Political Considerations and Personal Biases

Related SC Cases
1. Krishnamoorthy case (2015): Court emphasised that constitutional morality is essential for good governance.

2. Justice KS Puttaswamy case (2018): Court reiterated its duty to uphold constitutional morality by nullifying any law or executive action that contravenes the constitution.

3. Navtej Singh Johar Case (2018): While striking down Section 377 of the IPC, the Court emphasizing constitutional morality over societal morality

8. Digital India initiative (DII) completes 9 years
Digital India initiative is a **flagship programme to transform India into a digitally empowered society and knowledge economy.**

Key Focus Areas:
➢ Digital Infrastructure as a Utility to Every Citizen
➢ Governance & Services on Demand
➢ Digital Empowerment of Citizens

Initiative launched: UMANG, e-NAM, DigiLocker etc

Significance of DI
1. Digital India Initiative has led to Ease of Living and transparency in country.
2. Digital Public Infrastructure: Enabling a technology-led model for growth that is collaborative, equitable and democratises opportunity.

3. Financial Inclusion: Over 11 Crore farmers now receive money directly in their bank account Over 137 Crore Aadhaar numbers generated.
4. **BharatNet:** Under it, 6.83 lakh km of optical fibre network has been laid.
5. Boom in tech-led Innovation and Startups

Key challenges
1. Coordination Issues (Program covers many departments),
2. Rural urban digital divide
3. Increased Mobile tariff prices.

9. 7 years of GST
101st Constitutional Amendment Act introduced the GST in 2017.

Key Features of GST
1. **One Nation, One Tax**
2. **Dual Structure:** Comprises of the Central GST and the State GST
3. In the case of Inter-state transactions, Integrated GST is applicable, which is collected by the Central Government and apportioned to the respective State.
4. Destination-based Tax
5. **Governance:** GST Council is key decision making body.

Key Achievements
1. **Rise in number of GST taxpayers** (grew from 1.05 crore (April 2018) to 1.46 crore (April 2024))
2. Eliminated the cascading effect of taxes.
3. **Reduced compliance burden for small taxpayers-EoDB**
4. Simple and easy online procedure
5. Increased intrastate and interstate transactions by electronic way (e-way) bills

Concerns
1. Multiplicity of Tax Slabs
2. Various products are still outside purview of GST(e.g liquor)
3. State's power of taxation has reduced
4. Shortfall in revenue collection of states is not compensated timely.

10. Medical Ethics
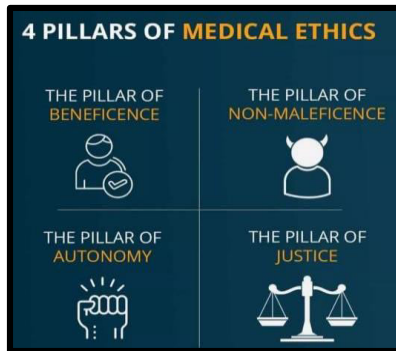
Medical ethics is the **applied branch of ethics which describes the moral principles by which a medical practitioners must conduct themselves.**

Ethical Issues Involved in the Medical Field

1. **Issue of medical negligence-** of sensitive medical supplies like injection
2. **Collusive termination of pregnancy-** Determination of sex of the foetus
3. **Medical fraud for monetary benefits-** Reusing-Vadodara hospital shows kidney patients as HIV positive in medical reports, organ trade, higher ills for minor diseases.
4. Lack of proper regulatory framework leading to fraud and violation of rights of the volunteers of medical trials.
5. Sexual exploitation of women and child

Way Forward

1. Medical humanitarianism
2. Need for respectful interaction
3. Strict enforcement of guidelines, code of ethics
4. Adhering to the 4 pillars of Medical Ethics

11. R&D Landscape of India

Gross Expenditure on R&D has more than doubled in 2020-21 from 2010-11.

Significance of R&D

1. Through R&D, **educational institutions become incubators of creativity and innovation.**
2. Catalyses societal challenges by providing solutions to issues in healthcare, environmental sustainability, manufacturing etc.
3. Employment generation and boost to economy
4. Can lead to Competitive advantage

Challenges in R&D

1. **Lack of Funding-** India spends 0.64% of GDP on R&D. South Korea -4.8%
2. Weak Patent System
3. Lack of participation of private players.
4. Limited Collaboration between Academia and Industry
5. Brain Drain

Way Forward

1. Encouraging Private Sector Collaboration
2. Increasing R&D Expenditure as Percentage of GDP
3. Strict implementation of patent laws

Initiatives taken

1. National Education Policy 2020 promotes quality and quantity of research.
2. **Anusandhan National Research Foundation Act 2023**.
3. INSPIRE Initiative
4. WISE-KIRAN for encouragement of women in R&D.

12. On recent demands of moving education to the state list

Presently, **education is under concurrent list of Schedule 7.**

The 42nd Constitutional Amendment moved it to the Concurrent list without any explicit reason, following the Swaran Singh Committee's recommendation.

Benefits of education under concurrent list

1. To **evolve all-India policies on education as a subject.**
2. Checks the lack of professionalism and corruption in state run universities
3. Encourages collaboration and coordination between the central and state governments.
4. **Uniform strategy and quality control**

Reasons for demand to shift education in State List

1. One size fits all approach is neither feasible nor desirable.
2. Budgeted expenditure on Education 2022, 24% is spent by the Centre while 76% is spent by the States.
3. Syllabus can be tailored according to the requirements of each state.

International Practices

1. **Canada:** education is managed by the provinces
2. **Germany:** Legislative powers for education reside with states

13. Aspirational District Programme
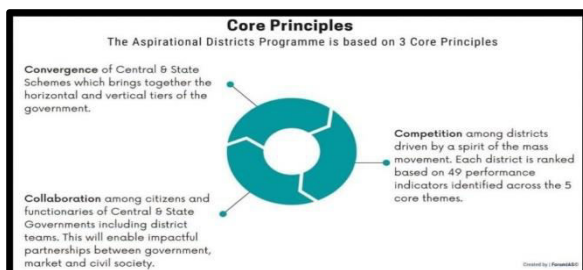
Launched in 2018 it aims to transform districts that have shown relatively lesser progress in key social areas.

5 broad socio-economic themes
1. **Health & Nutrition (30%)**
2. **Education (30%)**
3. **Agriculture & Water Resources (20%)**
4. **Financial Inclusion & Skill Development (10%)**
5. **Infrastructure (10%)**

Success Stories

1. Poshan App has been developed for an aspirational district in Ranchi
2. **'Hamara Vidhyalaya'** model adopted in **Namsai,** a remote district in Arunachal Pradesh, registered substantial improvement in learning outcomes.
3. The farmers of **Chandauli,** U.P were encouraged to grow fertiliser-free organic black rice.
4. Bijapur in Chhattisgarh and Malkangiri in Odisha have greatly improved the network of roadways and ramped up the infrastructure projects helped them to shake off LWE threats

Challenges that remain

1. Inadequate Coverage
2. Imbalance in implementation
3. Budgetary Constraints
4. Lack of Coordination
5. Ranking Method focuses on quantity mainly

14. Sanghai Cooperation Organization
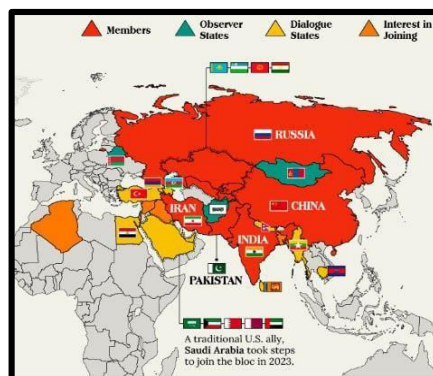
Belarus has become 10th member of SCO. The share of SCO states in the global GDP is already 30 percent and it represents 40% of the world's population

Importance of SCO for India

1. **Energy Security**- Source of energy resources
2. One of the few forums to engage with Pakistan directly
3. Economic Cooperation & connect to central Asia
4. Possibility of creation of a Multi polar world where India can become one of the poles.
5. **Counterterrorism is one of the main agenda of SCO (RATS of SCO)**

Challenges for India

1. Continued perception of SCO being an anti-west forum in Western nations.
2. Conflict among member nations e.g. India-Pakistan.
3. Lacks unified goals and ideology
4. Limited engagement with observer states, dialogue partners and other regional and international organizations

15. New Policy proposed for Farmer Producer Organisation proposed by MoAFW

Aims: To scientifically and systematically consolidate existing FPOs, and establish 50,000 FPOs. Policy will directly benefit 2.50 crore farmers.

Guiding Principles:
1. Assessment of all existing schemes
2. Boost End-to-end Value Chain
3. **Emulating AMUL model: To develop FPOs on 3 tier AMUL model**

Importance of FPO:

1. Pooling of resources- Can engage in collective farming- higher average yield
2. Greater bargaining power
3. Economics of Aggregation- Low cost and quality inputs
4. Awareness generation and dissemination of information to Annadatas.

Challenges:
1. Lack of Professional Management & Business sense
2. Weak Finances
3. Capacity Building
4. Market Linkages
5. Political overtone

16. Defence Manufacturing Overview

Defence production in India registered 16.8% growth in terms of value as compared to 2022-23. By 2028-29, defence production is expected to touch 3 lakh Cr and defence exports 50,000 Cr.

Significance
1. Reduce import & Fiscal Deficit
2. Indigenisation in defence is critical to national security
3. Self Reliance & Strategic capability
4. Innovation and Technical expertise
5. Employment Generation
6. Increased export of defence equipment

Challenges
1. Bureaucratic delay
2. Lack of technological depth to design/manufacture major systems and critical parts.
3. Present defense exports are mainly composed of spare parts and components.
4. Budget issues & dependency on PSUs. (PSUs share is approx. 80%)

Initiatives taken by GOI
1. Defence Production and Export Promotion Policy 2020 & Defence Acquisition Procedure
2. Make in India initiative.
3. FDI limit has been raised to 74% through the Automatic Route & upto 100% under government route.
4. iDEX & SRIJAN Portal

17. Special Category Status

SCS is a **classification given by the Centre to assist development of states that face geographical & socio-economic disadvantages.**

Parameters for SCS
➢ Hilly Terrain
➢ Low Population Density & Sizeable Share of Tribal Population
➢ Strategic Location along Borders with Neighbouring Countries Economic and Infrastructure Backwardness Nonviable Nature of State finances

Benefits:
1. The **Centre pays 90% of the funds in Centrally-Sponsored Schemes.**
2. Unspent money in a financial year does not lapse.
3. Concessions are provided to in excise and customs duties, income tax & corporate tax.
4. **30% of the Centre's Gross Budget goes to Special Category states.**

Concerns:
1. Strain the central government's resources
2. Dissatisfaction among non-SCS states
3. Driven by political motives Bihar has been asking for it ever since the mineral rich Jharkhand was carved out. **Andhra Pradesh is demanding SCS on the grounds of revenue loss due to the city of Hyderabad going to Telangana.**

18. Biosphere Reserves

Biosphere Reserves in India
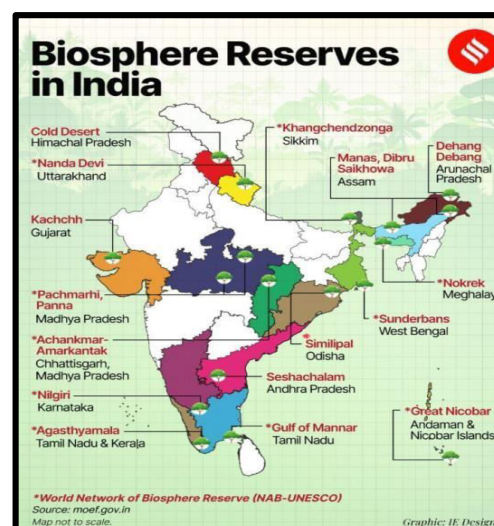
UNESCO has added 11 new BRs to World Networks of Biosphere Reserves. **Out of 18 BRs in India 12 has been recognized under WNBR.**

BRs Consists of three main zones-

1. **Core areas:** Comprise a strictly protected zone
2. **Buffer zones:** Used for activities compatible with sound ecological practices that can reinforce scientific research, etc.
3. **Transition area:** Communities foster socio-culturally and ecologically sustainable activities

Significance:

1. Biodiversity Conservation
2. Ecosystem Preservation
3. Sustainable Development- promoting the sustainable use of natural resources
4. Opportunity for Scientific Research and Education
5. Eco-friendly tourism and community upliftment

Challenges

1. Conservation vs. Livelihood Conflicts
2. Habitat Degradation
3. Illicit Poaching
4. Climate Change Impacts

Suggestive Measures

1. Securing Tribal Land Rights
2. Combatting Alien Species Invasion
3. Building up community consensus
4. Enhanced surveillance and use of technology to tackle poaching

19. Production Linked Incentive Scheme

The PLI scheme was conceived to scale up domestic manufacturing capability, accompanied by higher import substitution and employment generation.

Recently government has invited applications for PLI in White Goods Nodal

Ministry- Ministry of Commerce & Industry

Significance of PLI Scheme

1. Targeted Sectors for enhancement of manufacturing base under Make in India
2. Reduced import and strategic independence
3. Aligned with the goal to increase manufacturing to 25% of GDP

4. Increased employment
5. Target of increasing India's share in global export.

Concerns in PLI Scheme

1. India is turning into destination of assembly rather than manufacturing
2. The lack of a centralized database that captures information like increase in production or exports, number of new jobs created etc.
3. Low-value goods production is more prevalent than that of high-value goods.
4. Insufficient attention is dedicated to Research and Development

20. GIG Economy

Indian gig workforce is expected to expand to 23.5 Mn workers by FY30 from 7.7 Mn in FY21, gig workers will form 4.1% of the total workforce in India by FY30- **NASSCOM**

Recently Karnataka has introduced a bill to better integrate Gig workers with formal economy along with various welfare measures for the workers.

Issues faced by GW

1. Frequent Termination
2. Job & Economic uncertainty as they are at the mercy of platforms majorly.
3. They receive hardly any health benefit
4. Exploitative working conditions and inadequate compensation- 43% of gig workers earn less than Rs 500 a day
5. **Issues with platform- ID deactivation and customer misbehaviour**, negatively impacting their ability to work effectively.
6. **Male dominated industry**

Recommendations

1. Implementing Code on Social Security, 2020
2. Expanding Employer Responsibilities
3. Collaboration between governments, gig platforms, and labour organisations
4. Linking Women Empowerment with Gig Economy

21. Persons with Disability

Census 2011- 2.21% of total population of India is differently abled (56% male, 44% female). 69% of the PwD resided in rural areas.

Challenges faced by PwD

1. The first hurdle is the **lack of awareness about the government schemes & benefits.**
2. Limited Access to Education & Employment
3. Persons with disabilities are sometimes **viewed as objects of charity rather than as autonomous being**s capable of making meaningful contributions.
4. **Lack of Legal and Policy Support**
5. Public infrastructure in India is not disabled friendly
6. Stereotypes hinder their opportunity & perpetuates the cycle of exclusion & isolation

Way Forward

1. Enhancing Employment Opportunities
2. Improving Accessibility & Infrastructure
3. Raising Awareness and Sensitivity
4. Strengthening Legal and Policy Support

Government Initiatives

1. National Policy for Persons with Disabilities,2006
2. Accessible India Campaign
3. Rights for Persons With Disabilities Act, 2016- mandates 4% reservation in government jobs

22. India-Russia Ties

Significance

1. **Time-Tested Partners-** The Indo-Soviet Friendship Treaty of 1971, Defence ties
2. Russia is a prime partner for India's Energy Security
3. **Economic:** Russia is India's seventh-biggest trading partner
4. Counterbalancing Chinese Aggression

Opportunities:

➢ **Trade target-** $100billion by 2030
➢ Bilateral Trade settlement based on national currencies
➢ Expanding energy cooperation across nuclear & petroleum
➢ Increased Cargo turnover with implementation of International North South Transport Corridor
➢ Both country agrees on comprehensive reform of the UNSC

➢ India is increasingly becoming a destination for manufacturing of Russian origin defence equipment.

Issues

1. Russia's increasingly Closer Ties with China
2. Indo Russia engagement is seen as anti west
3. India is facing criticism for refraining from condemning the Russian invasion of Ukraine.

Way Forward

1. Promoting Cultural Connectivity
2. Forging Technological Cooperation
3. Continued Multilateral Engagement

23. Central Bureau of Investigation

CBI is the premier investigating police agency in India. It **provides assistance to the Central Vigilance Commission and Lokpal. It is also the nodal police agency in India which coordinates investigation on behalf of Interpol Member countries.**

Issues related to CBI

1. The CBI, run by IPS officers on deputation, is also vulnerable to the government's ability to manipulate the senior officers
2. **Loss of Credibility**- SC has called it caged parrot
3. **Lack of Accountability**- Exempted from RTI
4. The powers and jurisdiction of members of the CBI for investigation are subject to the consent of the State Govt
5. The agency has been plagued by a shortage of personnel, infrastructure, and financial resources

Way Forward:

1. **Statutory Backing** – A new CBI Act can be brought to replace the DSPE Act
2. Increasing Staff Strength
3. Delink the CBI from the administrative control of the government
4. **Increasing Jurisdiction**- across union and state

24. Assam Floods

Recently, floods in Assam have resulted in over 50 deaths, displacing 360,000 people. More than 40,000 hectares of crops have been affected by flooding.

Causes of regular floods in Assam:

1. Assam has more than 120 rivers, several of which originate from the hills and mountains of extreme rainfall hotspots
2. The monsoon is intense in the Northeast
3. **Brahmaputra River is braided and unstable in its entire reach in the Assam Valley**. The instability of the river is attributed to high sediment charge and steep slopes.
4. The melting of glaciers and snow caps in the Tibetan Plateau due to global warming
5. The landslides & earthquakes send in a lot of debris in the rivers causing the river bed to rise.
6. Other Anthropogenic reasons

Way Forward
1. Early Warning Systems
2. Improved Infrastructure
3. Improve cooperation between state and central governments to ensure that resources and efforts are effectively focused on sustainable flood management solutions
4. Dredging of Rivers

25. Structural Issues of Indian Economy

Recently IMF has released a white paper on structural transformation of Indian economy

India is currently the 5th largest economy and it is projected to move to 3rd place in coming years.

Issues

1. **Sectoral imbalances**- Agri employs majority of the work force but contributes roughly 15% of the GDP.
2. Manufacturing void as India has shifted to service sector from primary sector
3. **Despite rapid economic growth, unemployment remains a serious issue in both rural and urban areas**.
4. Women participation is lower even when we compare to country like Bangladesh
5. Infrastructural bottlenecks and high logistics cost
6. Bureaucratic delays
7. Poor aggregate demand and rising inequality. **Reforms in last few decades LPG, IT boom, New Economic Policy, Labour Codes, PLI Schemes etc.**

Way Forward:

1. Boosting Consumption and Investment Demand
2. Improving the Business Environment
3. Fostering Innovation and Entrepreneurship
4. Addressing Inequality and Poverty

26. RTI

It provides citizens right to secure access to information under control of **Public Authorities (PA).**

Key Features

1. Deals with **constitution, composition, and functions of Central and State Information Commissions.**
2. Puts obligations on PAs for designation of Central/State Public Information Officers (CPIO/SPIOs) to provide requested information to citizen.
3. **Appeal can be made to 1st appellate authority within 30 days of filing RTI application.**
4. Provision for second appeal within 90 days of order by 1st appellate authority.
5. The onus to prove that denial of request was justified lies on CPIO/SPIOS
6. Disposal of appeals within 30 days (extended to 45 days) from date of filing.

Issues with RTI

1. Low Public Awareness
2. Huge Backlog and Delay in Disposal of Cases
3. The Act does not give adequate authority to the Information Commissions to enforce their decisions.
4. Insufficient number of Information Commissioners at the center level

27. BIMSTEC

Bay of bengal Initiative for Multi-Sectoral Technical & Economic Cooperation

Bangladesh — Sri Lanka — India — Nepal — Bhutan — Thailand — Myanmar

Combined GDP- $4.5 trillion in 2022

Focus areas: Trade; Environment and Climate Change; Security; Agriculture and Food Security; Science, Technology etc.

Significance of BIMSTEC for India

➢ **Regional cooperation:** It is a critical intersection of Neighbourhood First Policy and Act East Policy.

➢ **Geostrategic importance:** Sectoral cooperation in Bay of Bengal region helps to secure critical lines of communication in Indian Ocean Region & boost trade

➢ **Security:** In line with India's SAGAR vision & strengthen maritime cooperation in IOR

➢ Potential to overcome the deficiencies of SAARC to evolve as a meaningful platform for regional cooperation in South Asia.

Issues faced

1. Growing influence of China in South Asia is another threat to BIMSTEC cooperation
2. Apathy towards holding regular annual summits.
3. Current military coup in Myanmar affecting efficient functioning
4. **Bilateral Issues between Member Nations:** Bangladesh is facing one of the worst refugee crisis of Rohingyas from Myanmar.

28. India-Afghan Relations

India has joined UN led Conference on Afghanistan which aims to find ways to improve the lives of Afghan people under Taliban rule. It **supplements Delhi Regional Security Dialogue on Afghanistan, Moscow Format consultations, etc.**

Opportunities for Indo Afghan Relations

1. **Regional connectivity:** Afghanistan is considered as a gateway to Central Asian Region.
2. **Security**- Reduced insurgency and cross-border terrorism.
3. **Energy and resources:** Stability in Afghanistan could pave the way for the Turkmenistan-Afghanistan-Pakistan-India (TAPI) pipeline.
4. **Curbing Drug trafficking:** Stable government in Afghanistan can better tackle drug trafficking.
5. **Countering China**- India has undertaken more than 400 key infrastructure projects in all 34 Afghan provinces.

Challenges

1. **Economic Constraints**: Economic and infrastructural constraints.

2. The return of the Taliban raises concerns about human rights and the humanitarian crisis.
3. Growing influence of China over the region.

29. Gram Nyalaya

Gram Nyayalayas aims to **provide access, affordable and quick justice to the citizens at their door steps and de-clog local courts.**

Features of Gram Nyayalaya Act

1. **Jurisdiction:** Civil and Criminal offences mentioned in the act and it can accept evidence which is **not included in the evidence act.**

2. **Settlement:** Gram Nyalayas can allow for conciliation and plea bargaining for settlement of disputes.

3. **Inspection:** High Court can authorise any judicial officer **superior to Nyaya Adhikari** to inspect the Gram Nyayalaya **once in 6 months.**

4. **Appeal:** It shall lie in the district court/sessions court & appeals shall be **disposed within six months.**

Issues

1. **Poor implementation**- 309 GNs functional against requirement of 6000.

2. **Ambiguity**- Section 3 of the Act provides that **state governments "may"** constitute Gram Nyayalayas.

3. **Resistance by states**- Jharkhand & Bihar resisted the gram nyayalayas in tribal or scheduled areas.

4. **Lack of awareness** among lawyers, police officials & other stake holders.

30. Hyperloop Technology
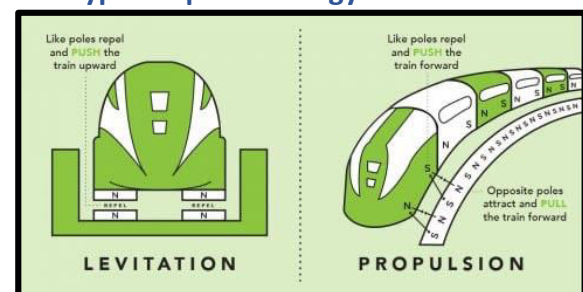
It is an ultra-high speed ground transportation system.

Functioning: Hyperloop systems consists of a **low-pressure or vacuum network** of tubes through which capsules travel free or very less friction & air resistance.

Magnetic Levitation: The vehicle can be suspended & propelled on a guidance track made with magnets.

Advantages of Hyperloop

1. **Revolutionize transportation**- Hyperloop pods travel efficiently at ultra- high speeds.
2. Less travel time by directly connecting mobility hubs.
3. Entire hyperloop is climate-neutral over its life cycle.

Challenges

1. **High cost** of building long inter-city vacuum tubes.
2. **High energy requirement:** Consume 4-5x of energy as compared to **Shinkansen trains** in Japan.
3. This system requires building **long straight line tubes** which is often difficult to find space and time.
4. Human body is not designed to handle large lateral/vertical accelerations without intense nausea.

IIIT, Madras plans to host global college level hyperloop competition.

31. Battery Energy Storage System

It refers to an electrochemical device which enables renewable energy like solar energy, wind energy to be stored & released when needed. India's cumulative installed BESS capacity is **219.1 Megawatt-hours**.

Significance of BESS

1. **Minimizes GHG emissions:** Aids in achieving target of net zero emission.
2. Stored energy can be used during peak hours when **energy prices are highest**.
3. Reduce Grid Dependency & Improves Grid Stability.
4. Can be deployed at various points in the energy system, from residential applications to utility-scale projects.
5. Enhances energy security by reducing reliance on fossil fuels & imported energy.

Concerns

1. Increased need for maintenance and monitoring

2. Initial cost can be high which may deter investing.
3. Smooth **supply of raw materials like lithium is a concern.**

Initiatives taken

1. **Viability Gap Funding** scheme for development of **4,000 MWh** of BESS projects.
2. PLI for National Programme on Advanced Chemistry Cell Battery Storage.

32. Domicile/Local Reservation in private jobs

Arguments in Favour of the Legislation	Arguments against the Legislation
1. **Protection of Right to livelihood**- The State government contended that the local reservation law intends to protect the right to livelihood of people domiciled in the State. 2. **Solving the rising unemployment problem**- The legislation aims to solve the rising unemployment in Haryana. 3. **Mandate of Article 16(4)**- The government contended that it is empowered to provide local reservation under Article 16(4) of the Constitution. Art 16(4) stipulates that the right to equality in public employment does not prevent the State from making reservation for any backward class of citizens which are not adequately represented.	1. **Violation of provisions of Article 19 of the Constitution**- The reservation law violated the Right to freedom to reside and settle in any part of the Indian territory and practise any profession, business or trade. 2. **Infringement of Article 14 and 15**- The law was an infringement of Article 14 (equality before the law) and Article 15 (prohibition of discrimination on grounds of place of birth). 3. **Contravention of common citizenship**-The local reservation law creates a wedge between persons domiciled in different States and is contrary to the concept of common citizenship envisaged in the Constitution.

Alternatives

1. Focus on human development that enhances the **skills, education and employability of the local candidates.**
2. **Provide stimulus packages that provide financial and social support to the local candidates, who are affected by unemployment**, by offering schemes such as unemployment allowance, job guarantee, social security.
3. States should ensure that migrant workers enjoy basic labour rights and create a level playing field for both the migrant and local workers. This will also protect the migrant labours from exploitation.
4. Promote the development of local industries and sectors that have a high demand for local candidates, instead of restricting the employment of non- local candidates.

Conclusion-

The narrow parochial views of regionalism which is propagated by these local reservation must be countered by actively promoting interstate cultural interactions through the **'Ek Bharat Shrestha Bharat' Scheme.**

33. China+1 Strategy

What is China+1 strategy?
China+1 or Plus One is a global business strategy in which companies avoid investing only in China and diversify their businesses to alternative destinations.

Opportunities for India

1. **Demographic Dividend**- India's youthful demographic, with **28.4%** of the population under 30 in 2023.

2. India's **lower labour and capital costs** compared to competitors like Vietnam.

3. PLI scheme, **tax reforms & relaxed FDI norms** have created a conducive business environment.

4. **Digital India**- has 870 million internet users representing 61% of its population.

5. **Dynamic Diplomacy and Global Influence**- India assumes leadership roles   in G20 and SCO

6. Large domestic market & consumption

Challenges

1. India's regulatory environment is complex, characterized by bureaucratic hurdles and inconsistent policy implementation

2. **Poor transportation, logistics, and energy infrastructure** increase operational costs & reduce business efficiency

3. **Complex tax regime,** including multiple indirect taxes, adds to the cost of doing business

4. The **education system** often fails to produce graduates with the skills demanded by the modern economy

5. Corruption increases transaction cost.

34. Geoengineering
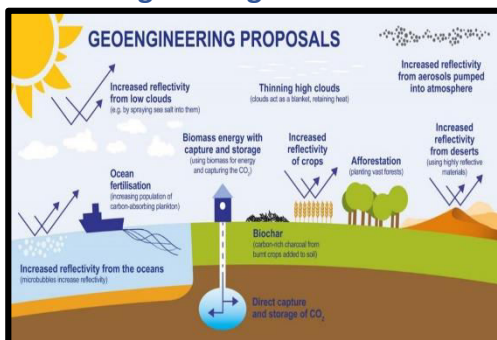
It involves large-scale interventions in Earth's natural systems to counteract climate change.

Categories Solar Geoengineering: aims to limit sun's radiation onto the Earth's surface & reduce global average temperature. E.g. **Aerosol Injection, Marine Cloud Brightening etc.**

Carbon Geoengineering: aims to reduce the concentration of CO2 in the atmosphere by removing it from the atmosphere. E.g. Carbon Capture and Storage, Ocean Fertilization etc.

Significance

1. Can **complement decarbonization** efforts and help reduce impacts of global warming.

2. Can halt melting of glaciers and restrict sea level rise.

3. Can prevent climate change induced extreme disasters & protect livelihoods.

4. Toxic substance are not used in the process.

Concerns

1. Huge financial costs.

2. Can lead to potential extreme events, acid rain and altered precipitation patterns.

3. Real world tests have not been concluded comprehensively.

35. Best Practices

1. **Balika Panchayats of Maharashtra consisting of girls of 12-18 years age is effectively fighting alcoholism** via door to door campaigns with a emphasis to dialogue.

2. **NTPC Talcher Thermal's "Girl Empowerment Mission 2024":** NTPC Talcher Thermal has launched a mission to support 40 young girls across government schools in four Gram Panchayat

3. UP- The Pink E-Rickshaw scheme provides **women with e-rickshaws at a low-interest rate loan and a subsidy of Rs. 49,500.**

4. The Madhya Pradesh cabinet, under Chief Minister Mohan Yadav, has decided that state ministers will personally pay income tax on their salaries and allowances, a departure from the previous practice where the   state government covered these taxes.

5. The Assam government launched the **'Mukhya Mantri Nijut Moina'** (MMNM) scheme to promote girls' education and combat child marriage. It provides financial incentives to approximately 10 lakh female students, varying based on their

educational level from higher secondary to post-graduate courses.

6. **AI Learning in Kerala Schools: Kerala introduced Artificial Intelligence (AI) learning in the Information & Communication Technology (ICT) textbook for Class 7 students**. This initiative will expose over 4 lakh students to AI, providing them with practical experience in creating AI programs that recognize facial expressions.

36. Farm loan Waiver

Telangana government has announced crop loan waiver upto 1 lakh.

Need for FLW

1. **Low scale of farming:** More than 85% of small & marginal farmers
2. The crop yield & production are highly dependent on monsoon
3. Credit is a critical resource to farming households for carrying out crop production & meeting consumption & daily-life expenses
4. Frequent crop failure distresses small farmers (6,083 deaths by suicides of agricultural labourers during 2022-NCRB).

Argument against

1. It is being used as a political tool in election year
2. It is a temporary relief & can lead to willful default by farmers
3. Fiscal strain e.g. Maharashtra government decision to waive off crop loans cost about Rs 45,000 crore (2020).
4. The loss to the bank, due to loan waivers, is directly or indirectly against the interests of the depositors.

Way forward

1. Access to formal credit
2. Investment in infrastructural development

3. Enhancing crop insurance.
4. Ensure remunerative prices for produce.

37. Train Accidents 2022-23:

48 rail accidents were reported (NCRB).

Reasons for Train Accidents

1. Slow expansion of rail network is leading to severe congestion and safety compromises.
2. **Derailments:** highest reason for casualties (1127 derailments during 2017-21).
3. **Accidents due to failure of railway staff:** Over 50% of accidents are due to lapses like carelessness in working, non-observance of safety rules etc.
4. Overworked loco-pilots increases accident risk.
5. Unmanned Railway Crossings

Way Forward

1. Accelerate **adoption of LHB coaches** to reduce casualties during derailments, as they don't pile up.
2. Improve working conditions & amenities for loco-pilots.
3. Standardize the location of signals based on visibility, braking distance & train speed.
4. Accelerate the deployment of the **KAVACH**

Steps taken

1. **Khanna Committee-** a separate Safety Department was established
2. **Rashtriya Rail Sanraksha Kosh**
3. All locomotives are equipped with Vigilance Control Devices to ensure alertness of Loco Pilots.

38. Illicit Drug Trade

From 2014 to 2024 around 5.43 lakh kilogram of drugs worth Rs 22000 crore were seized in India

Challenges

1. **Narco Terrorism is posing threat to national security of India.**

2. Role of Internet and social media in connecting sellers & buyers at local level.

3. Emergence of **Cryptocurrencies and Darknet drug markets**.

4. Proximity to Golden triangle & Golden crescent.

5. Transnational nature of crime with illegal Hawala transactions and tax evasion.

6. Illicit cultivation of drugs such as opium in India.

Way Forward

1. Cooperation between international organizations, national Governments, regulatory authorities & private companies.

2. Strategic approach towards demand reduction and disrupting supply chain

3. Empowerment of Border Guarding Forces, Indian Coast Guard & Railway Protection Force

4. Creating more employment opportunities

Measures taken

1. Narcotics Drugs and Psychotropic Substances Act.

2. The Prevention of Illicit Traffic in Narcotic Drugs and Psychotropic Substances Act.

39. Organ Trafficking

Delhi crime branch has busted a Interstate kidney transplant racket.

Reasons of OT

1. **High demand & low supply**- As per National Organ & Tissue Transplant Organization as on March 2023. Only 15,561 organ transplants took place in 2022 against demand of approx 65000 patients

2. **Poverty**- false promises of high payments, employment.

3. Low deceased donation rate

4. Inadequacy in present policies regarding organ procurement

Issues of OT

1. Non consensual, undermines donor's health and human rights

2. leads to organized crime networks.

3. Ethical Issues as human body parts are treated as commodities

Way Forward

1. Reduce people's vulnerability & raise awareness to donate.

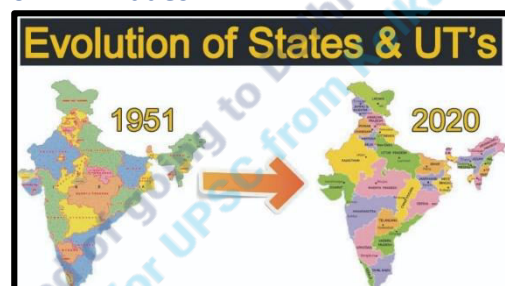2. **Victim protection and assistance**: To cooperate with law enforcement agencies.

3**. Uniform legal & ethical guidelines:** One Nation, One Policy

India's Measures

1. Transplantation of Human Organs and Tissues Act, 1994

2. **Rashtriya Arogya Nidhi** provides for upto Rs. 15 lakh to BPL patients for transplantation of organs.

40. Bhil Pradesh

Bhil tribes are demanding an independent tribal state i.e., Bhil Pradesh, **comprising parts of Rajasthan, MP, Gujarat & Maharashtra.**

Factors driving Demand for New States in post-independence India

1. **Linguistic diversity:** Creation of Maharashtra and Gujarat in 1960.

2. **Cultural identity:** Demand for Statehood for the Gorkhaland region of West Bengal.

3. **Developmental differences:** Demand for the Vidarbha, region of Maharashtra.

4. **Administrative efficiency:** Demand of Harit Pradesh from Uttar Pradesh.

Advantage of smaller state

1. **Better Governance**: Focused & quick decision-making

2. Targeted policies for local needs

3. Better utilization of natural resources

4. **Other:** Reduced regional disparities, Distribution of power etc.

Concerns

1. Administrative challenges & initial costs of setting up new state machinery

2. Possibility of increased interstate conflict over

3. Potential financial burden on central government

4. Creation of new states can further lead to demand for newer states

41. Mental Health

Source: WHO

10.6% of adults in India suffer from mental disorders, while treatment gap for mental disorders ranged between 70 to 92% for different disorders **(National Mental Health Survey 2015-16).**

Factors affecting Mental Health

1. Poverty via stressful living conditions, **financial instability & lack of employment opportunities**

2. Rise in nuclear family leads to psychological issues in elders - lack of support system.

3. **Lack of Awareness and Sensitivity**- Stigma & exclusion

Impact

1. Impact on Physical Health
2. Impact on Relationships
3. Impact on Productivity
4. Poor growth and development of personal capabilities

Way Forward

1. Increase number of psychiatrists, from 0.75 psychiatrists per lakh population in 2021 to 3 per lakh population (WHO norm).

2. Advocating for a bottom-up strategy engaging communities comprehensively.

3. To generate awareness among masses about mental illnesses

Initiatives taken

1. Tele- MANAS
2. Manodarpan, to provide psychosocial support to students.

42. Textile industry & trade

India's textile industry, valued at US$ 250 billion, provides jobs to 50 million people.

Key Challenges

1. India's **exports grew only by 4.6% (2013 to 2023) against Vietnam's by 81.6% & Bangladesh's by 69.6%.**

2. Outdated and intricate procedures by the DGFT & customs hinder exports.

3. High import duties & mandatory quality norms on raw materials like polyester and viscose staple fibers making it hard to compete globally.

4. Small, informal weaving and processing units lack advanced technology & scale.

5. Fast Fashion Impact.

Way ahead

1. Modify PLI Scheme For Textile Sector

2. **Streamline Import Procedures:** For example, The DGFT should issue import entitlements based on value terms, similar to Bangladesh.

3. **Strengthen Legal Framework:** Enhance the enforcement of contracts to provide a more secure business environment

4. Focus on enhancing synthetic apparel production, implement strategies to become compliant with the fast fashion industry, etc.

43. Urban Transformation push in budget

For the fiscal year 2024-25, the government has allocated ₹82,575 crore for urban development

Need of Urban Transformation strategy

1. **Urban areas constitute 35% of India's population** which is expected to grow to 53% by 2047.

2. Urban centres contribute ~66% to the national GDP and expected to reach 80% by 2050.

Key issues in India's urban centres include **infrastructure deficit, rapidly deteriorating environment like air pollution, sub-optimal planning and governance, etc**.

Key Strategies announced

1. **Expansion of PM Awas Yojana** for the construction of 3 crore additional houses & interest subsidies to facilitate loans.

2. Facilitation of rental housing with dormitory-type accommodation for industrial workers through PPP mode.

3. **Transit Oriented Development plans will be implemented for 14 large cities with populations above 30 Lakhs.**

4. New scheme to support development of 100 weekly haats' or street food hubs each year for the next 5 years in select cities.

44. Best Practices

1. **"Mukhyamantri Yuva Udyami Vikas Abhiyan (MYUVA)"** scheme in Uttar Pradesh, aimed at fostering entrepreneurship among the state's youth. Under this scheme, interest-free financing is provided to assist young individuals in launching entrepreneurial ventures, contributing to the state's economic growth and youth empowerment.

2. The Odisha government launched the **LABHA Yojana**, a state-funded minimum support price (MSP) scheme for minor forest produce (MFP) collected by tribal communities, aiming to enhance their livelihoods and promote sustainable forest management

3**. Karnataka's Digital Detox Campaign:** The Karnataka government, in partnership with the All India Game Developers Forum (AIGDF), unveiled a digital detox campaign to combat gaming and social media addiction. **The campaign includes the establishment of online and offline Digital Detox Centres throughout Karnataka to provide counselling and support to individuals seeking to regulate their technology usage.**

45. India-UK Relations

India & UK has launched ambitious Technology Security Initiative to enhance collaboration in critical & emerging technologies across key sectors.

Significance of Indo UK Relations

1. **Strategic Convergence:** Both are concerned about an assertive China in Indo-Pacific.

2. UK could play a crucial role in co-developing defence technology & ensuring maritime security.

3. Joint military exercises include Ajeya Warrior, Cobra Warrior etc.

4. Under Enhanced Trade Partnership they aim to double bilateral trade by 2030 & are negotiating a FTA

5. The **India-UK Infrastructure Finance Bridge supports India's National Infrastructure Pipeline.**

6. **Civil Nuclear Cooperation:** The UK has pledged to share advanced technology with India.

Challenges

1. Historical Contradictions in India-UK Relations

2. Pakistan has emerged as a significant obstacle in India's bilateral relations with Britain

3. The issue is the extradition of Indian Economic Offenders who are presently seeking shelter in Britain

46. Small Modular Reactors
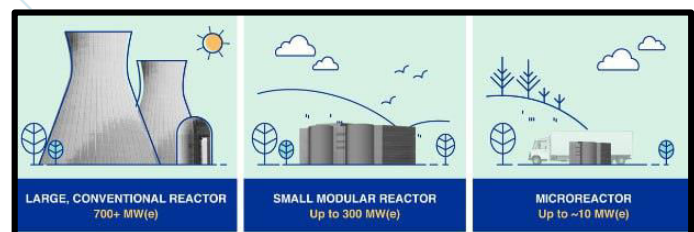
Centre to partner with private sector to develop Bharat Small Reactors:

Significance of SMR

1. SMRs are **gaining attention for decarbonization**

2. They can enhance the contribution of Nuclear energy in India's energy basket (current share of is 1.6%)

3. **Reduced fuel requirements, require less frequent refueling, every 3-7 years compared to 1-2 years for conventional plants**

4. Saves construction time as prefabricated units of SMRs can be manufactured, shipped & installed on site.

5. Eliminate or significantly lower the potential for unsafe releases of radioactive substance

6. Alternatives to Critical Minerals

Challenges

1. The SMR industry is yet to realize fully developed operational fabrication facility .

2. The **lack of experience with innovative designs within the nuclear safety regulatory organisations** .

3. SMRs also produce radioactive waste from spent fuel & require spent fuel storage & disposal facilities .

4. Nuclear power has faced traditional opposition.

47. Space Economy

Union Budget proposes to set up **₹1000 crore venture capital fund for space economy.** Present Indian space economy values around 26,700 crore and with a 2% share in global space economy in 2021. This share is expected to **rise to 8% by 2030 and further to 15% by 2047.**

Key initiatives for growth

1. **IN-SPACe a single window nodal agency** to promote and authorize space activities.

2. Space sector reform 2020 which opened the sector for private sector participation.

3. **Indian Space Polic and 100% FDI** in some sub-sectors

4. Rising private sector participation with startups such as Skyroot Aerospace, Agnikul Cosmos.

5. Transfer of technology to private players

6. International collaborations (NISAR programme)

Challenges

1. Increase in space debris pose significant challenges in space operations

2. Growing militarisation of space.

3. Disruption risks in global technology supply chains due to geopolitical tensions.

4. Absence of substantial domestic investor pool interested in space ventures.

48. Best Practices

1. **Policy for Youth/Sports**- Tamil Nadu's **'Kalaignar Sports Kit'** Initiative to develop sports potential at the local level. The project will offer athletic equipment to 12,000 local panchayats across the state, aiming to promote sports and fitness among youth.

2. **Geriatric Care**- Maharashtra government decided to start the **'Mukhyamantri Vayoshri Yojana'** to benefit around 15 lakh elderly citizens with physical or mental disabilities by providing them with an annual financial aid of Rs 3,000. This **scheme aims to support the elderly population and improve their quality of life through financial assistance.**

3. **'Swayam' scheme in Odisha:** Offering interest-free loans up to Rs 1 lakh to promote self-employment among youth in both rural and urban areas. This **scheme aims to empower youth and stimulate entrepreneurship for economic development.**

49. India AI Mission

It aims to establish a robust AI computing infrastructure in India to support the development and testing of AI systems. Union Cabinet approved the Rs 10372 Cr **IndiaAI Mission.**

Key Components

IndiaAI Compute Capacity, IndiaAI Innovation Centre, IndiaAI Datasets Platform, India AI Application Development Initiative etc.

Opportunities to Invest in India

1. Using the IoT and AI-powered precision farming & crop monitoring can boost productivity.

2. AI-driven fraud detection, risk assessment & customer service automation are in demand.

3. AI offers opportunities for predictive diagnostics, personalized treatment & drug discovery.

4. AI technologies like recommendation engines and chatbots are reshaping the retail sector.

Challenges

1. Geopolitical tensions & export control regulations can restrict AI technologies

2. The cost of deploying AI solutions can be prohibitively high

3. There is a shortage of skilled AI professionals

4. Ensuring ethical use & avoiding bias in AI models is critical

50. Best Practices

1. **'Bagless school' day in Madhya Pradesh:** The Madhya Pradesh government announced a 'bagless school' day once a week for students to alleviate their burden, along with issuing guidelines on the maximum permissible weight of school bags. This **measure aims to promote the well-being of students and reduce the physical strain associated with heavy school bags**.

2. **"Ungalai Thedi, Ungal Ooril" scheme in Tamil Nadu:** This scheme **aims to enhance public service delivery and ensure the effective implementation of government schemes** at the grassroots level, promoting transparency and accountability in governance.

3. **"Savera" program in Haryana:** Savera represents a significant step forward in Haryana's fight against breast cancer. By harnessing the unique capabilities of visually impaired individuals and promoting early detection, the program has the potential to save countless lives and improve the well-being of women across the state.

51. A Decade of Act East Policy

India Acts East

With its Act East policy, India hopes to deepen its political, economic and security relationships with the countries of Southeast Asia and the wider Indo-Pacific. Balancing against the rise of China is a key driver.

China: India views the rise of its principal strategic rival as a serious challenge and is forging relations with countries along its periphery to maintain the balance between them

ASEAN: Boosting exports with the 10 members of the Association of Southeast Asian Nations is a core plank of Modi's Act East policy Australia: China's rise has compelled India's outreach to Australia to forge a stronger defense partnership

Australia: China's rise has compelled Indian outreach to forge a stronger defense partnership

Japan: The key regional power shares India's concerns over China's expansion

Northeast India: New Delhi wishes for its remote northeastern wing to serve as a trading hub that connects to Southeast Asia through Myanmar

South Korea: India wants to deepen trade, investment and security ties with this regional economic power

AEP focuses on the extended neighbourhood in the Indo-Pacific region (IPR), with ASEAN as its core

Achievements under AEP

1. **AEP positioned India's launching pad to the IPR:** E.g., India's support of Philippines' on South China Sea dispute

2. AEP forged stronger strategic partnerships with BIMSTEC and the IOR

3. Greater integration of Northeastern states with ASEAN to end economic isolation

4. **Security Engagement:** Increased Defence cooperation with East Asian countries

Roadblocks to AEP

1. Deeper Chinese integration in the ASEAN economy.

2. India's economic under-performance E.g., India's trade deficit $ 43.57 billion.
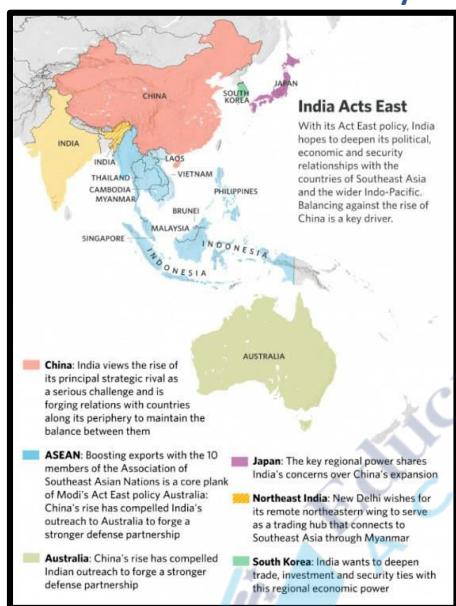
3. Limited economic engagement & RCEP failure

Way forward-

Review of ASEAN FTA; **promote tourism, partner with Singapore and Malaysia to boost Indian Semiconductor Mission, etc.**

Initiatives under AEP

1. **Regional connectivity:** E.g., India-Myanmar-Thailand trilateral highway

2. Played the role of **'pharmacy of the world'** E.g., Supplied Covid-19 vaccines.

52. Integrated Nutrient Management
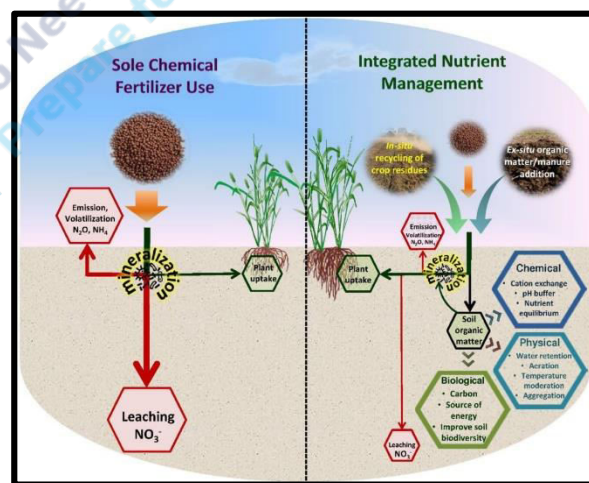
INM is a sustainable agricultural practice that aims to maintain soil fertility & plant nutrient supply for optimal crop productivity

Significance of INM

1. Enhanced soil fertility & health by increasing soil organic matter which **improves nutrient retention, soil structure, & water-holding capacity**

2. **Sustainable crop production:** Reduces pollution from excessive fertilizer use.

3. **Fruitful utilization of farm wastes:** INM promotes utilisation of farm wastes as a manure and a source of nutrients to crops

4. Some organic sources are cheaply available

Challenges

1. Farmers often have inadequate knowledge on use of fertilizers
2. Farmers lack access to credit especially in rural areas
3. **Monsoon vagaries**- Risk of water deficit
4. Biofertilizers have several constraints to effectively utilize & popularize the usage

Government initiatives

1. **Paramparagat Krishi Vikas Yojana**
2. **Mission Organic Value Chain Development in North East Region**.

53. QUAD

Significance of Quad for India

1. Counterbalance China's growing presence in IOR, including its BRI
2. QUAD provides India with a powerful platform to advance East Asia's interests & further strengthen its Act East policy
3. Evolving Foreign policy strategy by aligning with like- minded countries
4. Supplementing India's defense capabilities
5. **Economic significance:** The member countries have launched several initiatives like the Supply Chain Resilience Initiative. India is mostly at the receiving end of investments by QUAD countries.

Challenges to Quad

1. Lacks definitive structure with a secretariat or any permanent decision- making body
2. The entire focus on the Indo-Pacific makes the Quad a maritime, rather than a land-based grouping, raising questions whether the cooperation
3. India is averse to a treaty alliance system, has slowed down the progress
4. The QUAD members have varying levels of military capabilities with the US being the most powerful. This could limit the group's ability.

54. Urban Floods

It refers to rapid **rise of floodwaters in urban areas due to limited infiltration and heavy rainfall events.**

Factors Causing UF

1. **Meteorological Factors:** Unprecedented Rainfall (944 mm in 24 hours, Mumbai floods 2005)
2. **Hydrological Factors:** Change in course of rivers; Landslides and soil erosion etc
3. **Human factors:** Rapid rate of urbanization & deforestation
4. Lack of maintenance of infrastructure & drainage channels
5. Unplanned release of water from dams/lakes (**Chennai Floods 2015**- water released from **Chembarampakkam lake**)

Way Forward

1. Implement sustainable urban planning practices that prioritize green spaces, retention ponds
2. Invest in upgrading and expanding drainage infrastructure
3. Identify & map flood-prone areas & develop appropriate floodplain management strategies
4. Establish and improve EWS to alert residents about impending floods.

EDUFACTS

2 JULY

1. Maternal Mortality Ratio has declined from **130 per 1,00,000 live births in 2014-16 to 97 per 1,00,000 live births in 2018-20**

2. Under-five mortality rate has declined from **43 per 1000 live births in 2015 to 32 per 1000 live births in 2020**

3 JULY

1. Rise in number of GST taxpayers (grew from **1.05 crore (April 2018) to 1.46 crore (April 2024)**

4 JULY

1. In India, about **32% of land** is under **degradation** and **25%** is **undergoing desertification.**

2. India spends 0.64% of GDP (2020-21) on R&D, much lower than major world economies i.e. South Korea (4.8%) and the United States (3.5%).

5 JULY

1. NITI Aayog has launched **National Multidimensional Poverty Index (NMPI)** according to which poverty reduced to **14.96% in 2019-21 from 24.85% in 2015-16.**

2. **Revenue expenditure on Education:** As per 'Analysis of Budgeted expenditure on Education' 2022, 24 % is spent by the Centre while 76% is spent by the States.

8 JULY

1. **Periodic Labour Force Survey (PLFS) - Quarterly Bulletin (January-March 2024):** Unemployment Rate (UR) in urban areas decreased to 6.7% during January-March 2024 for persons of age 15 years and above

Female UR decreased to 8.5% in January-March 2024

Labour Force Participation Rate (LFPR) in urban areas shows an increasing trend from 48.5% to 50.2% during January-March 2023 to January-March 2024 respectively for persons of age 15 years and above

Female Labour Force Participation Rate in urban areas rises to 25.6% during January-March 2024, reflecting Overall Increasing Trend in LFPR

Increasing Trend in Worker Population Ratio (WPR) for persons of age 15 years and above from 45.2% in January-March 2023 to 46.9% in January-March 2024

Female Worker Population Ratio in urban areas rises to 23.4% during January-March 2024, reflecting Overall Increasing Trend in WPR

9 JULY

1. Currently, there are **65,000 functional Primary Agricultural Credit Societies (PACS) in the country.**

2. The National Crime Records Bureau's (NCRB) annual report reveals a harrowing surge in crimes against women in India. With a staggering 4,45,256 cases registered in 2022 alone, equivalent to nearly 51 FIRs every hour

12 JULY

1. As per the 2011 census, there were more than 413 thousand beggars and vagrants in India.

2. **Status of Person with Disability (PwD) in India** according to 2011 census 2.21% of the total population. Among the disabled population **56% are males and 44% are females**. Majority (69%) of the disabled population resided in rural areas.

17 JULY

1. Gender gap in bank account ownership reduced from **18 to almost 0% (2011-2022).**

2. India's cumulative installed Battery Energy Storage System (BESS) capacity is 219.1 Megawatt-hours (MWh). **Chhattisgarh (Highest BESS capacity) accounts for 54.8% of cumulative installed capacity.**

18 JULY

1. Approximately 90% of used batteries are either processed by unorganized industry or end up in landfills and garbage dumps.

2. Currently, there are **2000 charging stations exist in India. (NITI Aayog Report, 2021)**

19 JULY

1. Over 25 crore households across India have potential to deploy 637 GW on rooftops (as per **Council on Energy, Environment and Water (CEEW).**

2. Rooftop solar installed capacity in **India is around 11.08 GW as of December 2023, of which only 2.7 GW is in the residential sector.**

22 JULY

Illicit Drug Trade in India

1. From 2014 to 2024, around 5.43 lakh kilogram of drugs worth Rs 22,000 crore were seized.

2. India is responsible for around **21% global manufacturing** of internationally controlled psychotropic substances.

3. India is the **largest opiate market in South Asia.**

23 JULY

1. India's textile industry

India's textile industry, valued at US$ 250 billion, provides jobs to 50 million people. India is present across all parts of the value chain.

India contributes around 4.**6% of the global trade in textiles and apparel.**

Garment export (2013 to 2023): India's exports grew only by 4.6 % against Vietnam's by 81.6% and Bangladesh's by 69.6%

24 JULY

1. **Urea accounts for over 82% of nitrogenous fertilisers**, leading to imbalanced NPK (nitrogen, phosphorus, and potassium ratios), from **4:3.2:1 in 2009-10 to 7:2.8:1 in 2019-20.**

2. Deforestation Rate declined to 10.2 million hectare (ha) per year in 2015–2020 from 15.8 million ha per year in 1990–2000. **India ranked 3rd for average annual net gain in forest area from 2010- 2020.**

25 JULY

1. Currently, urban areas constitute approximately 35% of India's population which is expected to grow to 53% by 2047.

2. Urban centres contribute approximately 66% to the national GDP and expected to reach 80% by 2050.

26 JULY

1. Status of Food Security and Nutrition

The **world is far off track to achieve Sustainable Development Goal (SDG) 2, Zero Hunger.**

1 in 11 people faced hunger globally in 2023.

Between 713 and 757 million people were estimated to be undernourished in 2023.

An estimated 28.9 percent of the global population were moderately or severely food insecure in 2023.

30 JULY

1. **Education Remains Overlooked in Climate Policy Agenda:** In 2020, education accounted for less than 1.3% of climate assistance and mentioned in less than one in three Nationally Determined Contribution plans.

2. NTCA data reveals that over half (53.2%) of tiger deaths occurred within Tiger Reserves (TRs), while nearly one-third (35.22%) happened outside boundary of TRs during 2012-2022.

31 JULY

1. In 2022-23, **47% of RBI ombudsman complaints were about digital payments**.

2. **Over 5,700 plant/animal species** have been recorded in Indian mangroves.