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DISCLAIMER

*T*he current affairs articles are segregated from prelims and mains perspective, such separation is maintained in terms of structure of articles. Mains articles have more focus on analysis and prelims articles have more focus on facts.

However, this doesn't mean that Mains articles don't cover facts and PT articles can't have analysis. You are suggested to read all of them for all stages of examination.

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1st WEEK - AUGUST, 2024

★★★★★

SECTION -A
MAINS ISSUES

U.S.-INDIA CULTURAL PROPERTY AGREEMENT

CONTEXT

India and the United States formalized a significant cultural property agreement aimed at enhancing cooperation to protect and preserve each country's cultural heritage. This agreement marks a major milestone in international cultural heritage protection efforts.

Key Features of the Agreement

- **Prevention of Illegal Trade:** The agreement aims to prevent the illegal trade of cultural property by implementing stricter regulations and cooperative measures between the U.S. and India.

- **Return of Antiquities:** It facilitates the **repatriation of looted and stolen cultural artifacts** to their countries of origin, making the process more efficient and transparent.

- **Global Cooperation:** India joins 29 other countries that have similar bilateral cultural property agreements with the U.S., strengthening global efforts to protect cultural heritage.

- **Implementation Framework:** The agreement is based on U.S. law under the **1970 UNESCO Convention**, which seeks to prohibit and prevent the illicit import, export, and transfer of ownership of cultural property.

Significance and Implications

- The **U.S.-India Cultural Property Agreement** represents a significant advancement in cultural heritage preservation. By formalizing this agreement, both nations reaffirm their commitment to tackling the illicit trade of cultural property and fostering a deeper cultural connection. This agreement not only strengthens bilateral ties but also contributes to global efforts in protecting cultural heritage.

- The agreement sets a precedent for international cooperation in the field of cultural property and reflects a broader commitment to safeguarding the world's cultural legacy for future generations.

UPSC PYQ

Q: Safeguarding the Indian art heritage is the need of the moment. Discuss. [2018]

WAYANAD LANDSLIDE

CONTEXT

Kerala's Wayanad district has recently experienced a catastrophic landslide and flood due to heavy rains.

Why is Kerala prone to disasters?

- **Disaster-prone region:** Kerala is prone to heavy rains and flooding, with an estimated 14.5 per cent of land area seen as vulnerable. Kerala has faced several severe floods and landslides in recent years, including the devastating 2018 floods.

  ▶ In 2011, the **Western Ghats Ecology Experts Panel (WGEEP)**, chaired by ecologist **Madhav Gadgil,** had classified most of the Idukki and Wayanad districts as **category 1 under eco-sensitive zones**, meaning they were highly vulnerable and forest land in these areas should not to be used for agriculture or non-forest activities. However, two years later, the **Kasturirangan report** had toned down the recommendations,

- About **8 per cent of the area in the Western Ghat**s in the southern state is labelled as a critical zone for mass movements, including debris flow, landslides, rock falls and slumps.

Why are such disasters increasing?

- **Changing Rainfall Patterns:** Kerala has witnessed increasingly intense and erratic rainfall patterns, exacerbated by climate change. Recent heavy rains in Wayanad, amounting to 30 cm in a short period, triggered landslides and floods.

- **Climate Change:** The changing climate has increased the frequency and severity of extreme weather events, contributing to the instability of the region's slopes.

- **Forest Destruction:** Extensive deforestation in the Western Ghats for urbanization and tourism has destabilized the soil. The clearing of forests for resorts and hotels has reduced the natural ability of the land to absorb rainfall.

- **Urbanization:** Rapid and unplanned development, including the construction of resorts on hillocks, has further aggravated the risk of landslides. The destruction of natural vegetation has made the land more susceptible to erosion and instability.

FACT BOX

Madhav Gadgil Committee Report

- The Madhav Gadgil Committee Report, recommended that 64% of the Western Ghats be designated as ecologically sensitive zones.

- The report specifically highlighted the need to protect Kerala's highly sensitive areas, which were marked for no-development, and criticised the state government for ignoring these recommendations.

- The Madhav Gadgil Committee Report was submitted in 2011.

- However, the recommendations are not implemented yet.

SUPREME COURT TO EXAMINE GOVERNORS' ROLE IN DELAYING BILLS

CONTEXT

The Supreme Court of India has agreed to review whether Governors, by delaying crucial Bills and eventually referring them to the President, are allowing undue Union interference in State legislative matters, thereby undermining federalism. This decision came in response to a petition by the State of Kerala.

Issue at Hand:

- **Kerala's Petition**: Kerala's government challenged the G**overnor's decision to withhold assent on seven Bills for up to two year**s before referring them to the President. The Bills addressed State matters such as **cooperative societies, Lok Ayukta, and university laws**. Kerala argued that the Governor should have either returned the Bills to the State Assembly with reasons for objections or acted on them in a timely manner. Instead, the Bills were delayed, denying the people of Kerala the benefits of these legislations.

- **Union Influence**: Kerala contended that this delay allowed the Centre to make decisions on issues that were within the State's jurisdiction. The Governor's actions were seen as undermining the **Constitution's balance between State and Union powers.**

Impact of Delays:

- **Federal Balance:** By delaying or withholding assent on Bills, Governors might disrupt the **functioning of State legislatures and executive bodies**, affecting their ability to implement laws and policies effectively.

- **Judicial Intervention:** The State governments' functions are unfairly hindered by delays or arbitrary actions.

FACT BOX

Constitutional Provisions

- **What does the Constitution say?**

- Article 200 of the Constitution lays down that when a Bill, passed by a State Legislature, is presented to the Governor for their assent, they have four alternatives

  ▶ **Give Assent:** Approve the Bill, making it a law.

  ▶ **Withhold Assent:** Reject the Bill, which means it does not become law.

  ▶ **Return the Bill:** If it's not a Money Bill, send it back to the State Legislature for reconsideration.

  ▶ **Reserve the Bill:** Set aside the Bill for the President's consideration.

When Does the Governor Act on Advice?

- **Advice from the Council of Ministers:** Typically, the Governor acts based on the advice of the Council of Ministers. This means the Governor doesn't usually make decisions independently but follows the recommendations from the government ministers.

  ▶ A Supreme Court case (***Shamsher Singh case***) emphasize that Governors generally act on ministerial advice and **only use discretion in exceptional cases.**

- **Withholding Assent:** This might happen if the Bill was proposed by a member of the legislature who is not a Minister, known as a Private Members' Bill. In various case, the Council of Ministers might advise the Governor to withhold assent, effectively blocking the Bill.

- **Returning the Bill:** If the Bill is returned to the State Legislature for reconsideration, it is always done based on the advice of the Council of Ministers. For instance, if a Bill is not accepted in its original form, the Governor sends it back to be reviewed again.

- *The Constitution does not lay down any time limit within which the Governor is required to make a decision.*

SUPREME COURT UPHOLDS STATES' POWER TO TAX MINERALS

CONTEXT

In a landmark judgment, the Supreme Court of India has upheld the rights of state governments to levy taxes on land bearing minerals, resolving a longstanding jurisdictional conflict between the Union government and states. This decision has significant implications for the mining sector and federal relations in India.

Key Points Made by the Supreme Court:

- **States Can Tax Minerals:** The Supreme Court ruled that states have the **right to tax minerals.** This is particularly beneficial for states rich in minerals, as it allows them to earn more revenue.

- **Difference Between Royalty and Tax:** The court explained that **royalty (money paid for extracting minerals) is not the same as a tax.** A tax is collected by the government for public use, while royalty is like rent for using the minerals.

- **No Legal Barrier:** The court clarified that there is no law preventing states from taxing mineral rights.

Why does this Decision matter?

- **Benefits Mineral-Rich States:** States like Jharkhand and Chhattisgarh, which have many minerals, can now earn more money. This is especially important for poorer states.

- **Fairness:** Different states have different resources. Coastal states benefit from the sea, and hilly states earn from tourism. Allowing states to tax minerals makes things fairer.

- **Additional Revenue:** States have limited ways to collect taxes. This decision gives them another way to generate income.

Concerns:

- **Imbalance Between States:** States without minerals might feel disadvantaged. The central government could find other ways to support these states to maintain fairness.

- **Impact on Mining Companies:** Mining companies are worried they will have to pay more money due to the new taxes.

- States should be careful not to charge too much tax. Overcharging could harm the mining business.

FACT BOX

Royalties

- Royalties refer to the fees paid to the owner of a product in exchange for the right to use that product.

- Royalties are based on specific contracts or agreements between the mining leaseholder and the lessor (the person who leases the property) who can even be a private party.

- **Section 9 of the Mines and Minerals (Development and Regulation) Act, 1957 (MMDRA)** requires those who obtain leases to conduct mining activities to "pay royalty in respect of any mineral removed" to the individual or corporation who leased the land to them.

- Under the State List, states are given the exclusive power to make laws relating to "Taxes on mineral rights subject to any limitations imposed by Parliament by law relating to mineral development" (Entry 50).

INDIA'S ILLEGAL COAL MINING PROBLEM

CONTEXT

Illegal coal mining remains a significant issue in India, leading to severe consequences, including worker fatalities and environmental degradation. Despite national legislation governing coal mining, illegal activities continue to thrive, driven by economic, social, and regulatory factors.

Underlying Reasons for the Prevalence of Illegal Coal Mining:

Socio-Economic Factors	Political Factors	Regulatory Factors
⊙ **Poverty and Unemployment:** Many areas rich in coal are also plagued by poverty and high unemployment rates. The local population often resorts to illegal mining to sustain their livelihoods. ⊙ **Local Dependence:** Communities in coal-rich regions depend heavily on mining for economic survival, especially after the exhaustion of legal mining operations.	⊙ **Tacit Support**: Illegal mining often receives tacit support from local political leaders, making it challenging to curb these activities. ⊙ **Lack of Enforcement:** Political patronage can lead to weak enforcement of mining regulations, allowing illegal mining to flourish.	⊙ **Inadequate Monitoring**: Remote and isolated mining areas often suffer from inadequate monitoring, leading to ineffective enforcement of laws. ⊙ **Weak Enforcement**: The complexity of the legal framework governing mining can result in bureaucratic hurdles and inefficiencies, allowing illegal activities to persist.

Impact of Illegal Coal Mining:

⊙ **Worker Safety:** Lack of safety equipment and protocols exposes workers to severe health risks, including respiratory issues and toxic gas inhalation.

⊙ **Hazardous Conditions:** Illegal mines lack proper structural support, making them prone to cave-ins, landslides, and explosions.

⊙ **Environmental Degradation:** Unregulated mining activities lead to significant environmental damage, affecting local ecosystems and communities.

⊙ **Economic Impact:** Illegal mining undermines legal mining operations and leads to substantial revenue losses for the government.

Required Measures

⊙ **Strengthening Regulatory Frameworks:** The government must improve monitoring and enforcement of mining regulations in remote areas. It will enhance resources and capacity for regulatory agencies to effectively manage mining activities.

⊙ **Socio-Economic Development:** Poverty and unemployment should be addressed in coal-rich regions through targeted economic development programs. Support alternative livelihoods to reduce dependence on illegal mining.

⊙ **Training and Safety Protocols:** Government should implement comprehensive training programs for miners on safety procedures and emergency response. Ensure that safety equipment and protocols are enforced in all mining operations.

FACT BOX

Coal Mining in India

⊙ India has the 4th largest coal reserves in the world, with significant deposits located in the eastern and central parts of the country, particularly in Jharkhand, Chhattisgarh, Odisha, West Bengal, Madhya Pradesh, and Andhra Pradesh.

⊙ India's coal production reached 893.19 million tonnes in 2022-23. For 2023-24, production increased to 997.25 million tonnes, achieving an 11.65% growth.

⊙ The coal sector contributes over Rs. 70,000 Crore annually to the central and state governments through royalties, GST, and other levies.

Coal Production Growth and Economic Impact in India

11.65%

997.25 MT

893.19 MT

FY' 2022-23   FY' 2023-24
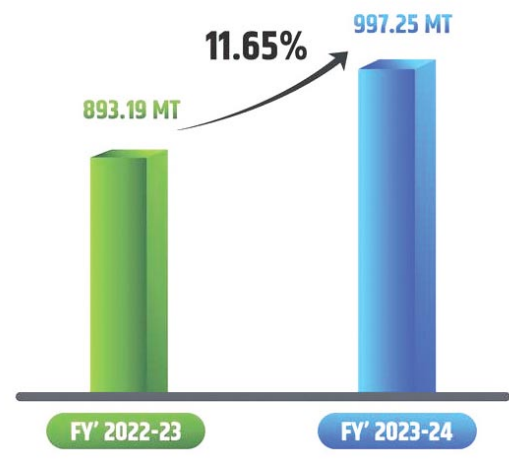
BRIDGING THE SKILL GAP

CONTEXT
India faces a growing mismatch between the rising demand for employment and the lack of a suitably skilled workforce. Despite a significant increase in the number of job seekers, the skills possessed by the workforce often do not align with the requirements of the modern job market.

Severity of the Problem (Economy Survey 2024)

⊙ Sixty-five per cent of India's fast-growing population is under 35, and many lack the skills needed by a modern economy.

- Estimates show that about 51.25 per cent of the youth is deemed employable.

- In other words, about one in two are not yet readily employable, straight out of college. However, it must be noted that the percentage has improved from around 34 per cent to 51.3 per cent in the last decade.

- **Significance of Skilling:**

  - Skilling equips the workforce with the necessary competencies to meet industry demands, fostering innovation and productivity.

  - Employment not only ensures economic stability but also empowers individuals, enhancing their quality of life and contributing to overall societal progress.

  - With one of the youngest populations, a median age of 28, India can harness its demographic dividend by nurturing a workforce that is equipped with employable skills and prepared for the needs of the industry.

What are the reasons behind India's Skill Gap?

- **Inadequate Educational Systems**

  - **Outdated Curricula:** Many educational institutions offer outdated curricula that do not keep pace with industry advancements.

  - **Limited Practical Training:** There is insufficient focus on practical skills and vocational training, leaving graduates unprepared for real-world job requirements.

- **Mismatch Between Industry Needs and Educational Output**

  - **Industry Evolution:** Rapid technological changes and evolving job roles demand new skills that are not always covered by traditional education systems.

  - **Curriculum Gap:** Educational programs often fail to align with current industry standards and needs.

- **Insufficient Vocational Training**

  - **Neglect of Vocational Education:** Vocational training and technical education are less emphasized compared to academic education.

  - **Underfunded Institutions:** Many vocational training institutions, like Industrial Training Institutes (ITIs), suffer from outdated facilities and inadequate resources.

Challenges

- **Lack of Skills:** Graduates and job seekers frequently lack the specific skills required for available jobs, leading to high unemployment or underemployment.

- **Skill Gaps in Emerging Sectors:** New industries and sectors require specialized skills that are not adequately addressed by existing training programs.

- **Cost of Training:** High costs associated with training and skill development can be a barrier for both individuals and companies.

- **Infrastructure Issues:** Poor infrastructure in training institutes limits the effectiveness of skill development programs.

- **Access to Opportunities:** There is often a lack of access to quality education and training facilities in tier-II and tier-III cities compared to metropolitan areas.

- **Regional Imbalances:** Unequal distribution of training resources exacerbates skill deficits in less developed regions.

How does it impact?

- **Productivity Issues:** Companies face difficulties in finding skilled employees, which can impact productivity and growth.

- **Economic Inefficiencies:** A mismatch between skills and job requirements can lead to inefficiencies in the labor market and economic stagnation.

- **Unemployment and Underemployment:** Persistent skill gaps contribute to higher rates of unemployment and underemployment, affecting economic stability.

- **Reduced Aspirations:** Lack of proper training and job opportunities can dampen the aspirations of the youth, limiting their career prospects.

FACT BOX

Government Measures for Skill Development

- **Pradhan Mantri Kaushal Vikas Yojana (PMKVY):** PMKVY Scheme is for imparting skill development training through Short-Term Training (STT) and Up-skilling and Re-skilling through Recognition of Prior Learning (RPL) to youth across the country including rural areas.

- target of the JSS is to impart vocational skills to the non-literates, neo-literates and the persons having rudimentary level of education and school dropouts upto 12th standard in the age group of 15-45 years, with due age relaxation in case of "Divyangjan" and other deserving cases.

- **National Policy on Skill Development & Entrepreneurship (NPSDE):** It aims to bridge gaps, improve industry engagement, and expand apprenticeship opportunities.

- **National Apprenticeship Promotion Scheme (NAPS):** This Scheme is for promoting apprenticeship training and increasing the engagement of apprentices by providing financial support to industrial establishments undertaking apprenticeship programme under the **Apprentices Act, 1961.**

- **Craftsmen Training Scheme (CTS):** This scheme provides long-term training through Industrial Training Institutes (ITIs) across the country.

- **Training:** In the Union Budget 2024-25, government announced a **new centrally sponsored scheme under the Prime Minister's package**, in collaboration with state governments and industry. This scheme aims to skill 20 lakh youth over five years and upgrade 1,000 Industrial Training Institutes (ITIs).

- **Jan Shikshan Sansthan (JSS) Scheme:** The main **Model Skill Loan Scheme:** The **Model Skill Loan Scheme** will be revised to facilitate loans up to ₹7.5 lakh with government-backed guarantees, benefiting 25,000 students annually.

- **Employment-Linked Incentive Schemes:** The government has unveiled a robust package to bolster employment and skill development, targeting 4.1 crore youth over five years. This includes three Employment-Linked Incentive Schemes to enhance job creation and support employees and employers.

  ➤ **Scheme A - First Timers** offers up to ₹15,000 in three installments for first-time employees registered with EPFO, encouraging new workforce entrants.

  ➤ **Scheme B - Job Creation in Manufacturing** provides incentives for EPFO contributions for both employees and employers in the first four years of employment, fostering job creation in the manufacturing sector.

  ➤ **Scheme C - Support to Employers** reimburses up to ₹3,000 per month for two years towards EPFO contributions for each additional employee, easing the financial burden on employers and promoting workforce expansion. Further, a new scheme for internships will provide opportunities for 1 crore youth in 500 top companies, offering valuable industry exposure and experience.

INDIAN CITIES GRAPPLE WITH A TWIN CHALLENGE

CONTEXT

Three students drowning in the flooded basement of Rau's IAS Study Circle in central Delhi's Rajender Nagar has once again brought to fore the water challenge faced by Indian metros. Most big cities in India, and particularly the metros, keep lurching from water shortage to floods. While this twin water challenge in urban areas, made worse by climate change, makes cities unliveable, it also does not bode well for India's economy.

What is the root of India's urban problem?

- **Dysfunctional organisations:** The root of India's urban problem is the dysfunctional organisations that characterise urban governance with **no clear public accountability**, and the nature of master plans of cities.

- **No accountability:** Instead of blaming the design and planning errors, everyone blames the rising population.

  ➤ As per World Bank, by 2036, India's towns and cities will be home to 600 million people, or 40 percent of the population, up from 31 percent in 2011, with urban areas contributing almost 70 percent to GDP.

- **Cramped spaces**: The high population density is forced upon people by planning that promotes highly regulated low FSI, resulting in cramped living spaces or pushing people into slums.

- **Inequity**: Little land is released for urban habitats, leading to extreme inequity in access to land and high unit costs of built-up spaces.

- Waterlogging is caused by **expansion of planned and unplanned urban areas** without regard for space for circulation; drying up and destruction of lakes, tanks and water bodies due to dumping of construction and demolition waste; and inclusion of areas occupied by lakes and other water bodies in habitation zones.

How does it impact?

- **Economic loss:** Flooding of urban areas disrupt the economy as vital economic centres, such as Bengaluru, come to a sudden halt.

  ➤ The World Meteorological Organisation's (WMO) State of the Climate in Asia 2021 report said that India suffered a loss of $3.2 billion due to flooding that year. Much of this loss can be attributed to urban areas incapacitated by waterlogging.

- **Reducing expansion**: Over time, it brings down productivity and the scope of future expansion and investment.

How to tackle India's urban explosion?

- **Implement and Update Plans:** Urban plans like Delhi's MPD-2041 must be rigorously implemented. This includes integrating blue-green development and efficient waste management systems.

- **Improve Drainage Systems:** Cities need better drainage plans. For example, resolving waterlogging issues in Delhi's ITO area requires updating sewage networks to align with water levels.

- **Community Engagement:** Engage local communities in removing encroachments and maintaining public spaces to ensure effective drainage and sanitation.

- **Rainwater Harvesting:** Incorporate rainwater harvesting systems in both new and existing buildings to capture and store rainwater.

- **Groundwater Recharge:** Refurbish and build lakes to help recharge groundwater levels. The government is working on a project to refurbish at least 75 lakes in each district.

- **Waste Water Recycling:** Increase efforts in wastewater recycling. The government aims to triple the current recycling rate by the end of the decade.

- **Investment:** A 2022 World Bank report says that India's cities require an estimated capital investment of $840 billion in urban infrastructure and municipal services in the 15 years till 2036 (in 2020 prices), equivalent to 1.18% of estimated GDP.

UP'S 'ANTI-CONVERSION' LAW

CONTEXT

The Uttar Pradesh government has proposed significant amendments to its existing law against unlawful religious conversion. This move, which was recently tabled in the state Assembly and passed by voice vote, aims to make the law more stringent.

Key Highlights of the Changes

- **Increased Punishments:**
  - ➤ **General Offences: T**he maximum punishment for unlawful conversion has been increased from 10 years to life imprisonment. The minimum jail term for ordinary offences is now five years, up from one year previously.
  - ➤ **Offences Involving Minors, Women, Dalits, and Tribals:** Maximum imprisonment has been raised to 14 years, with a new minimum term of five years. Fines have been increased from Rs 25,000 to Rs 1 lakh.
  - ➤ **Mass Conversions: T**he penalty for mass conversions has been raised from a maximum of 10 years to 14 years, with fines doubled to Rs 1 lakh.

- **Expanded Definitions and Provisions:**
  - ➤ **Serious Offences:** The law now includes serious offences such as promises or conspiracies involving marriage, trafficking or selling of minors and women, and instilling fear to facilitate conversions. These offences carry life imprisonment or a minimum of 20 years in prison.
  - ➤ **Foreign Funding:** A new provision mandates a minimum of seven years' imprisonment, extendable to 14 years, for receiving foreign funds for unlawful conversions, with a fine of Rs 10 lakh.

- **Filing Complaints and Bail Conditions:**
  - ➤ **Complaint Filers:** Any person can now file a complaint under the law, not just the aggrieved person or their close relatives as previously stipulated.
  - ➤ **Bail Conditions**: Bail applications will require public prosecutor's input and will only be heard in sessions courts. The process for obtaining bail has been made more stringent.

Need for the Bill

- **Addressing Unlawful Conversions:** The Uttar Pradesh government argues that the bill is necessary to combat organized and allegedly anti-national activities related to unlawful conversions. They claim that the existing law needs strengthening to deal with the scale of the issue effectively.

- **Preventing Misuse:** Amendments are also aimed at addressing the issues arising from inconsistent interpretations and misuse of the existing law, particularly concerning who can file complaints and how they are handled.

What about Freedom of Religion?

- The amendments have sparked concerns about the potential infringement on individual freedoms.

- The **right to religious freedom is a fundamental right under Article 25 of the Indian Constitution,** which guarantees all individuals the freedom to practice, profess, and propagate their religion.

- Critics argue that the expanded scope of the law and the new provisions might infringe upon constitutional rights by complicating the bail process, increasing penalties, and allowing any person to file complaints.

FACT BOX

Protection Of Freedom Of Religion Under Indian Constitution

Article 25 to 28 of Part-3 (Fundamental Rights) of the Constitution confers the Right to freedom of religion.

- **Article 25(1)** of the Constitution guarantees the "freedom of conscience and the right freely to profess, practise and propagate religion".
  - ➤ It is a right that guarantees a negative liberty ï¿½ which means that the state shall ensure that there is no interference or obstacle to exercise this freedom.
  - ➤ However, like all fundamental rights, the state can restrict the right for grounds of public order, decency, morality, health and other state interests.

- **Article 26:** Freedom to manage religious affairs subject to public order, morality and health.

- **Article 27:** No person shall be compelled to pay any taxes for the promotion or maintenance of any particular religion.

- **Article 28:** Freedom to attend religious instruction or religious worship in certain educational institutions.

'RIGHT TO BE FORGOTTEN' FROM JUDICIAL RECORDS

CONTEXT

The Supreme Court agreed to examine whether the "right to be forgotten," a component of the right to privacy, extends to judicial orders, which are usually considered public records.

Right to Be Forgotten in India

- The right refers to the ability to have one's digital footprint removed from search engine results or databases.

- **2017 Supreme Court Ruling**: SC established the right to privacy as a fundamental right, integral to "life and liberty," including the concept of "informational privacy."

◉ **2018 and 2019 Drafts of Digital Personal Data Protection Act**: It acknowledged the right to be forgotten but the final version subsumed it under a simpler right to "erasure."

◉ International Context (European Union): The right to be forgotten is enshrined in the 2016 EU Regulation and the 2018 General Data Protection Regulation (GDPR), which established the "right to erasure."

Supreme Court's Concern

◉ **Serious Ramifications**: The apex court cautioned that removing judgments from the public domain following an accused's acquittal could have serious ramifications.

◉ **Madras High Court Case**: The Supreme Court stayed a judgment of the Madras High Court, which had directed to remove a verdict acquitting a man in a rape case from its website.

Need for Judicial Clarity

◉ **Comprehensive Guidelines**: There is a lack of judicial clarity regarding the grounds for invoking the right to be forgotten. The Supreme Court needs to formulate guidelines to enable consistent application by High Court registries.

◉ **Discretion of Online Portals**: Leaving redaction to the discretion of online portals and search engines could amount to tampering with court records, a serious offence.

TRAGIC SAFETY LAPSES IN EDUCATIONAL INSTITUTES

CONTEXT

Four civil services aspirants (numbers not confirmed) tragically lost their lives at a coaching center in central Delhi's Old Rajinder Nagar area due to the absence of drainage systems and safety measures. The center had also violated norms by using the basement for commercial activities, contributing to this unfortunate incident.

Not the first time

Several recent incidents highlight significant safety failures in educational institutes and hostels across India. These tragedies, involving fires and structural deficiencies, underscore the urgent need for enhanced safety measures to protect students.

List of unfortunate incidents	
May 2019: Surat Fire Tragedy	◉ **Incident**: A fire erupted due to a spark in an air conditioner, spreading rapidly due to highly inflammable materials. ◉ **Casualties**: 22 students died, mostly due to suffocation or jumping off the building.
	◉ **Issues**: Lack of fire safety measures, including proper exits and fire alarms. **Aftermath**: Legal actions initiated against responsible individuals; ongoing demands for faster justice from victims' families. ◉ **Aftermath**: Legal actions initiated against responsible individuals; ongoing demands for faster justice from victims' families.
January 2023: Pune Educational Institute Fire	◉ **Incident**: Early morning fire led to the death of hostel manager; lack of fire safety measures contributed to chaos. ◉ **Evacuation**: Students escaped using a ladder to an adjacent building.
June 2023: Mukherjee Nagar Fire Incident	◉ **Incident**: Fire started in the electricity meter, causing panic among students. ◉ **Response**: Students escaped through windows and wires, resulting in injuries and casualties. ◉ **Concerns**: Inadequate safety measures despite prompt fire brigade response.
April 2024: Kota Hostel Fire	◉ **Incident**: Short circuit in a transformer led to a fire; hostel lacked fire safety equipment and emergency exits. ◉ **Consequences**: Seven students injured while attempting to flee; authorities booked hostel management for negligence.

What factors are responsible?

◉ **Common Issues**: Lack of fire exits, poor ventilation, inadequate fire safety equipment (alarms, hydrants, smoke detectors).

◉ **Regulatory Failures**: Despite safety regulations in place, enforcement remains lax, contributing to recurring incidents.

◉ **Safety Negligence and Urban Challenges**: The tragedy has brought to light **deep-rooted issues plaguing urban areas across India**. The incident underscores a systemic failure in ensuring safety standards and highlights broader concerns such as **corruption, illegal urbanization, overcrowding**, and the pursuit of **financial gain** at the expense of public safety.

◉ **Illegal Urbanization and Safety Violations:** Rapid and unplanned urbanization has led to the illegal conversion of residential spaces into commercial ventures like coaching centers, often without adherence to **building codes and safety norms**. Basements, meant for utilities or parking, are frequently used for profit-making activities despite lacking proper ventilation, fire exits, or adequate safety measures.

- **Poor-implementation:** The absence of uniform safety legislation and the NBC being a "recommendatory document," its provisions are frequently ignored at the local level.

Accountability in Such Incidents

- **Responsibility of Educational Institutes:** Educational institutes, including coaching centers and hostels, bear primary responsibility for ensuring the safety of their students. This includes:
  - **Infrastructure**: Providing adequate fire exits, proper ventilation, and fire safety equipment such as alarms, hydrants, and smoke detectors.
  - **Compliance**: Strict adherence to safety norms and regulations prescribed by local authorities.
  - **Emergency Preparedness**: Conducting regular safety audits and ensuring staff and students are trained in emergency procedures.

- **State's Responsibility:** State authorities play a crucial role in ensuring safety standards are enforced and maintained:
  - **Regulation**: Implementing and enforcing stringent safety regulations applicable to educational institutes.
  - **Inspections**: Conducting regular inspections to assess compliance with safety standards.
  - **Legal Oversight**: Taking prompt legal action against institutes found negligent in adhering to safety norms.

What measures are required?

- **Safety Compliance**: Coaching institutes must ensure all safety measures are in place as per regulatory requirements.
- **Transparency**: There is need to provide clear information to students and parents about safety protocols and emergency procedures.
- **Calls for Action**: There is urgent need for rigorous safety audits, strict adherence to safety norms, and swift legal actions against negligent institutions.
- **Student Safety**: Government must ensure robust safety infrastructure is crucial to prevent further tragedies and protect students pursuing education away from home.

FACT BOX

Building codes and safety norms

- **National Building Code (NBC):** This comprehensive building Code is a national instrument providing guidelines for regulating building construction activities across the country.
  - It was published by the Bureau of Indian Standards (BIS) in 1970 and last updated in 2016.

- It serves as a **Model Code for adoption** by all agencies involved in building construction works, be they Public Works Departments, other government construction departments, local bodies, or private construction agencies.

- **Delhi Building Bye Law:** Every basement shall be in every part at least 2.4 m in height from the floor to the underside of the roof slab or ceiling. Adequate ventilation shall be provided for the basement. The standard of ventilation shall be the same as required by the particular occupancy according to Bye-laws.

- **Model Building Bye Laws 2016:** It guides the States and UTs to frame their respective building bylaws. The Model also prescribes norms for fire protection and safety requirements.

Conclusion

These incidents serve as stark reminders of the critical need to prioritize student safety in educational settings. Authorities must implement stringent measures and ensure compliance with safety regulations to prevent such avoidable disasters in the future.

DEBT-TO-GDP RATIO

CONTEXT

The Indian government's fiscal policy has traditionally aimed to limit the fiscal deficit (difference between what the government spends and what it earns) to a specific percentage of GDP. However, in a recent budget speech, Finance Minister Nirmala Sitharaman announced a shift in focus from a fixed fiscal deficit target to managing the ratio of government debt to GDP.

What Is Changing in Fiscal Policy?

- **Current System**: Traditionally, the Indian government set a target for the fiscal deficit as a percentage of GDP (Gross Domestic Product). For instance, the target for 2024-25 is 4.5% of GDP.

- **Future Change**: From 2026-27, the government will focus on reducing the ratio of government debt to GDP, rather than strictly aiming for a specific fiscal deficit percentage. This means that instead of just lowering the fiscal deficit, the priority will be to ensure that the overall debt compared to the size of the economy is decreasing.

Reason for Change:

- **Criticism of Old Target**: The 3% fiscal deficit target, which many consider a standard, doesn't have a solid scientific basis. It originally came from the 1992 Maastricht Treaty in Europe. The new approach will still reduce the deficit but will emphasize managing debt more effectively.

How Will These Changes Affect?

- Over time, the focus on reducing debt relative to GDP should help in managing the country's overall economic health, but specific targets for fiscal deficit might not be strictly followed.

- The new approach aims to ensure that while the fiscal deficit might not meet a specific percentage, the overall debt-to-GDP ratio is on a declining path. This shift is intended to make fiscal policy more flexible and responsive to economic conditions.

FACT BOX

What is the Debt-to-GDP Ratio?

- **Debt-to-GDP Ratio** is a measure of a country's total government debt compared to its Gross Domestic Product (GDP). It is expressed as a percentage.

- Calculation of the Debt-to-GDP Ratio

$$\text{Debt to GDP} = \frac{\text{Total Debt of Country}}{\text{Total GDP of Country}}$$

- **Components**

  ➤ **Total Government Debt**: This includes all the money that the government owes to creditors, both domestic and international.

  ➤ **Gross Domestic Product (GDP)**: This is the total value of all goods and services produced within a country in a specific time period, usually a year.

- **Interpretation**

  ➤ **High Ratio**: A high debt-to-GDP ratio means the country's debt is large relative to its economic output. This can be a warning sign of potential financial instability or economic trouble.

  ➤ **Low Ratio**: A lower ratio suggests that the country has less debt relative to its economic output, which is generally seen as positive for financial stability.

MS SWAMINATHAN REPORT

CONTEXT

Farmers have been advocating for MSP implementation aligned with the recommendation of the MS Swaminathan Report.

What is the Swaminathan Report?

- The National Commission on Farmers (NCF), chaired by Professor M S Swaminathan, was established in 2004.

- It produced five reports between 2004 and 2006 to improve the productivity, profitability, and sustainability of farming in India.

- These reports are collectively known as the Swaminathan Report.

Key Recommendations of the Swaminathan Report

- **Food and Nutrition Security:** To develop strategies to ensure food and nutrition security across the country.

- **Farming Productivity and Sustainability:** To implement reforms to enhance the productivity and sustainability of farming systems.

- **Rural Credit Flow:** To increase the availability of rural credit to support farmers.

- **Land Reforms:** To address land ownership inequality by distributing surplus and wastelands.

- **Irrigation:** To improve water distribution and increase rainwater harvesting to support rain-fed agriculture, which constitutes 60% of the gross cropped area.

- **MSP:** The NCF had recommended that the MSP should be at least 50 per cent more than the weighted average cost of production. This was also known as the C2+50 per cent formula, which includes the input cost of capital and the rent on the land, to give the farmers 50 per cent of the returns.

FACT BOX

Minimum Support Price (MSP)

MSP is the lowest price set by the government for purchasing crops from farmers. The government declares these rates each season to guarantee fair prices for farmers, promoting increased investment and production.

- **Crops Covered:**

  ➤ **Kharif crops** such as Paddy, Jowar, Bajra, Ragi, Maize, Arhar, Moong, Urad, Cotton, Groundnut, Sunflower Seed, Soybean, and Sesamum.

  ➤ **Rabi crops** such as Wheat, Barley, Gram, Masur, Rapeseeds & Mustard, Safflower, and Toria.

  ➤ Additionally, MSP is announced for Copra, De-husked Coconut, Jute, and Fair Remunerative Prices are declared for Sugarcane.

- The Commission for Agricultural Costs & Prices (CACP), an attached office of the union agricultural ministry, suggests MSPs for specific crops.

BHARAT SMALL REACTORS (BSRS)

CONTEXT

In her Budget 2024 speech, Finance Minister Nirmala Sitharaman announced plans to develop Bharat Small Reactors (BSRs) as part of India's push to expand its nuclear energy capabilities. These reactors represent a significant shift in India's nuclear energy strategy, aiming to make nuclear power more accessible and versatile.
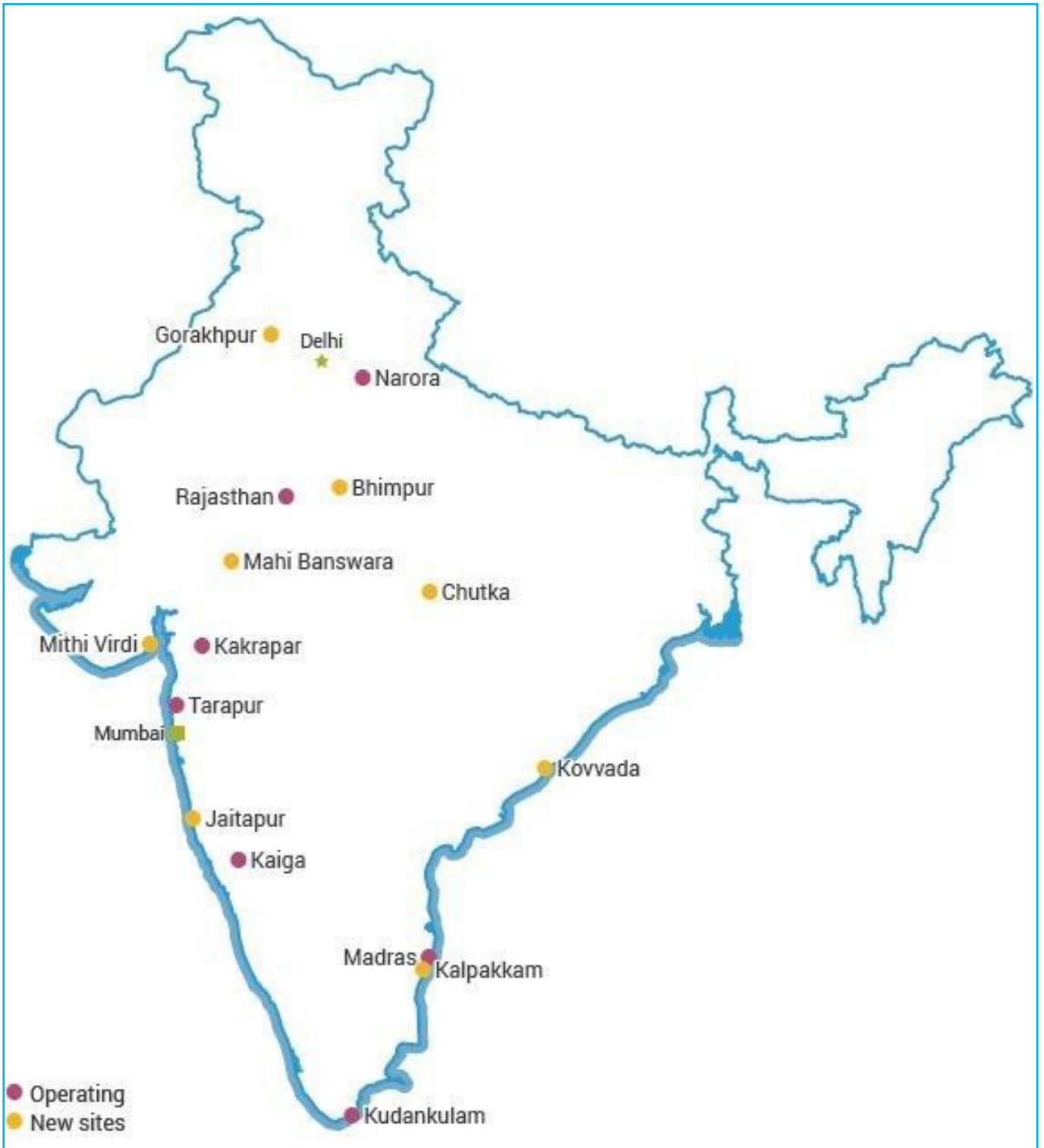
MAP: 1

What Are Bharat Small Reactors (BSRs)?

- BSRs are compact nuclear reactors designed to produce electricity on a smaller scale compared to traditional large nuclear power plants.

- **Technology:** They will use India's existing 220-megawatt pressurized Heavy Water Reactor (PHWR) technology, which is already in use in 16 reactors across the country.

- **Private Sector Involvement:** For the first time, the Indian government will involve private companies in developing and operating these reactors. This is a major change from the previous law, which only allowed government control over nuclear energy.

- **Small Modular Reactors (BSMRs):** The government is also researching BSMRs, which are a newer type of small reactor. These are being designed at the Bhabha Atomic Research Center in Mumbai.

Why Are BSRs Needed?

- **Flexibility:** BSRs can be placed in a wider variety of locations, are quicker to build, and may be more affordable compared to large reactors.
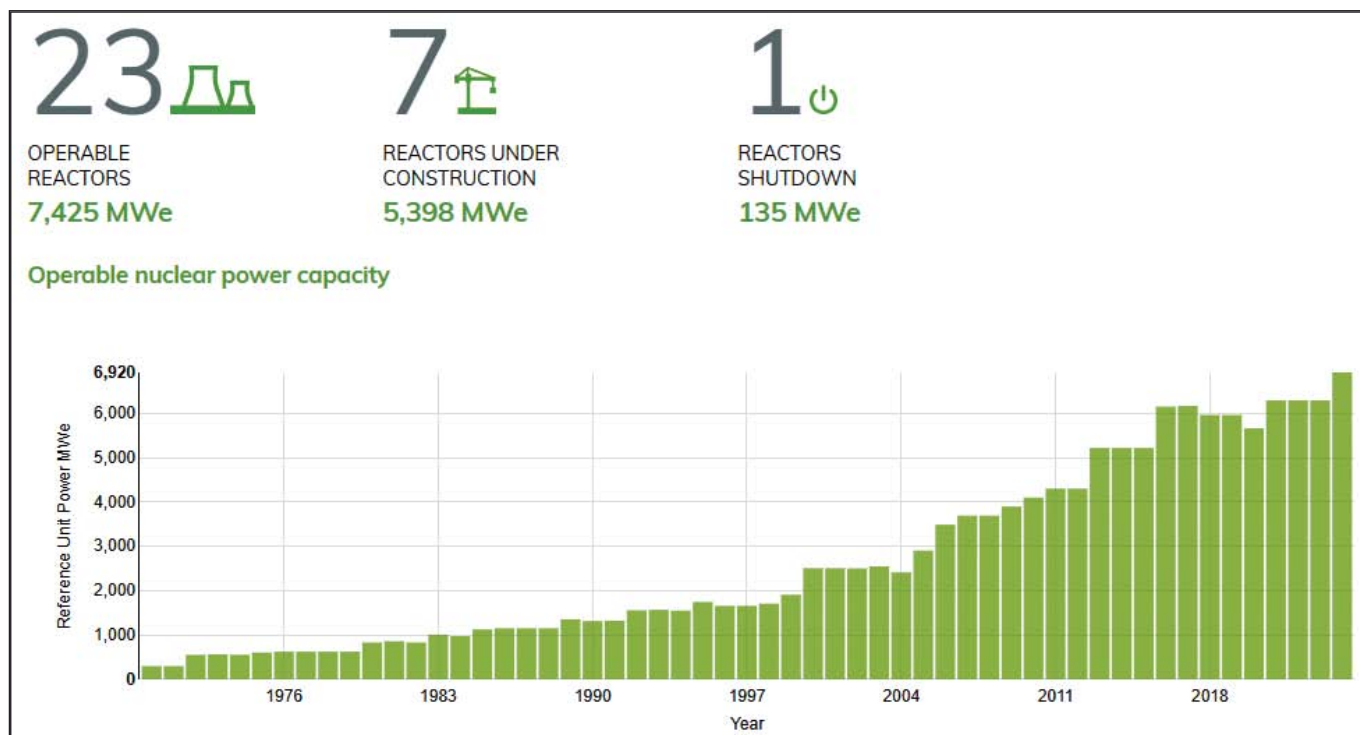
FIGURE: 1

◉ **Clean Energy:** They are part of India's strategy to use cleaner energy sources. Nuclear power helps in reducing reliance on thermal power (like coal), providing a stable source of electricity as the country moves towards greener energy.

◉ **Utility:** BSRs could help power remote areas or large industries like cement and steel plants, aligning with global trends in using smaller, more flexible nuclear reactors.

FACT BOX

India's Nuclear Capacity

India currently has **23 operable nuclear reactors** providing some **7,425 MWe** of generating capacity, with **seven units currently under construction**, including both Indian-designed and Russian-designed units as well as **one fast breeder reactor.**

◉ It has plans for a fleet of **Indian-designed and built 700 MWe pressurised heavy water reactors** as well as for large reactors from overseas vendors, including further Russian-designed VVER reactors in addition to those already in operation and under construction at Kudankulam in Tamil Nadu.

◉ **ndia's Atomic Energy Act of 1962** prohibits **private control of nuclear power generation**: only two government-owned enterprises - **NPCIL and Bharatiya Nabhikiya Vidyut Nigam Limited (BHAVINI, set up to build and operate fast reactors)** - are legally allowed to own and operate nuclear power plants in India.

◉ **I**But the possibility of **involving other public sector and private corporations** in the country's future expansion plans has been under consideration for some time.

◉ The Indian Atomic Energy Commission (AEC) is the main policy body.

◉ The Nuclear Power Corporation of India Ltd (NPCIL) is responsible for design, construction, commissioning and operation of thermal nuclear power plants.

UPSC PYQ

Q: **With growing energy needs should India keep on expanding its nuclear energy programme? Discuss the facts and fears associated with nuclear energy (2018)**

OVERTOURISM IS UNBALANCING THE WORLD

CONTEXT

The world tourism scenario is worrisome. The latest victim is Greece's "Instagram Island" Santorini. Of the record 32.7 million people who visited Greece last year, around 3.4 million, or one in 10, went to the island of just 15,500 residents.

What is Overtourism?

◉ The primary distinction between regular tourism and overtourism lies in a destination's saturation with tourists.

If their number exceeds its capacity to accommodate visitors without negative effects on the local community, it is called overtourism.

◎ **Factors behind such developments include:**

➤ growth of budget airlines

➤ impact of social media coverage on popularizing destinations

➤ government policies that put tourism sector growth before sustainability

Impact of Overtourism

◎ **Economy:** Flow of tourists (growth of demand for goods and services) drives up the cost of living for locals, causing **income inequality**, where locals may be unable to afford necessities. As tourism-related businesses dominate regions, they may **displace local enterprises**.

◎ **Society:** Communities strive to adapt to visitors' preferences, which dilutes local customs and traditions and leads to a **loss of authenticity and heritage** (*cultural erosion*).

➤ Residential areas are converted into tourist accommodations, and residents may find themselves **displaced.**

➤ It leads to overcrowded public transport, congested roads, and stretched healthcare facilities.

◎ **Environment:** Increased waste, air, and noise pollution can degrade natural landscapes and harm local wildlife.

Suggestive Measures:

◎ **Technology:** The travel industry can utilize tech-based tools that combat the root causes of tourist congestion and actively encourage travel to lesser-known locales.

◎ **Regulated tourism practice:** There is need to establish regulated tourism practices with promotion of sustainable agendas. There is need of maintenance of proper tourist capacity in every tourist place.

◎ **Vigilance and patrolling:** Protected areas require vigilance and regular patrolling to reduce unwanted wildlife-tourist interaction as well as habitat destruction due to off-road driving and encroachment.

◎ **Area Specific Sustainable Plan:** There is need to review the area's present status and draw up a sustainable plan that respects the specific requirements of region.

◎ **Promote Ecotourism:** There is need to initiate a dialogue on adverse impacts of commercial tourism and promoting ecotourism.

How Regions Are Managing Tourist Numbers?

◎ **Taxes and Fees: Venice:** Charges entry fee for day-trippers and has an overnight tax based on the number of nights stayed and the type of accommodation.

◎ **Bans: Amsterdam:** Plans to ban cruise ships from city centers to reduce tourist congestion. This plan has been approved but is not yet in effect.

◎ **Rewards for Good Behavior: Copenhagen:** Offers rewards like free food or cultural experiences to visitors who engage in positive activities such as picking up litter or using public transport.

◎ **Setting Limits:**

➤ **Marseilles:** Uses a reservation system to limit tourist numbers in **Calanques National Park** to protect a sensitive area. This system has been successful and will continue for the next four years.

➤ **Amalfi Coast, Italy:** Restricts non-residents from driving on the coastal road on certain days to manage traffic.

◎ **Marketing: France:** Running campaigns to encourage tourists to explore less-visited areas, as most visitors currently flock to just a few popular spots.

◎ **Blocked Views: Japan:** Installed a barrier to block a popular view of **Mount Fuji** to manage crowds and reduce littering and parking issues. Other Japanese destinations like Osaka and Hakone are considering new tourism taxes due to increased visitor numbers.

MANJOLAI ESTATE DISPUTE

CONTEXT

The Madurai bench of the Madras High Court is set to conduct the next hearing on multiple petitions filed by and on behalf of workers of the Manjolai estate in Tirunelveli district, Tamil Nadu.

What's Happening at Manjolai Estate?

◎ Manjolai Estate is situated within the **Kalakkad Mundanthurai Tiger Reserve** in Tirunelveli, Tamil Nadu.

◎ **Bombay Burmah Trading Corporation Limited (BBTC)** operated Manjolai Estate since 1929 on a **99-year lease.**

◎ In May 2024, BBTC announced cessation of operations, due to state notification of the land as **'forest'** in 2018 and impending lease expiry in 2028.

◎ Caught in the crossfire between the BBTC's decision and the State government's claim are the **workers at the estate**. Hundreds of workers, mainly Dalits and landless, accepted a **voluntary retirement** scheme, vacating their homes.

◎ **Madras High Court Intervention:** The Madurai Bench of the Madras High Court heard the petitions and ordered the *status quo*. The petitions had asked the Court to direct State authorities to cancel the **voluntary retirement applications** submitted by the tea plantation workers, provide **free house-site patta**, houses, 4 ha of land, other monetary relief, jobs for family members, and implement the **Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, or FRA, 2006** — or to have the Tamil Nadu Tea Plantation Corporation Limited, a State government undertaking take over the plantation.

Relationship of the Estate to the Tiger Reserve:

◉ **Establishment:** In 1988, the Tamil Nadu government formed the **Kalakkad Mundanthurai Tiger Reserve (KMTR)** under Project Tiger for administrative and management purposes.

◉ **Legal Status:** KMTR gained legal status in 2007 when 89,500 hectares were declared a **critical tiger habitat** under the **Wildlife (Protection) Act (WLPA) 1972.** An additional 70,654.20 hectares were designated as a buffer area in 2012. This brought KMTR's total area to 1.60 lakh hectares, which includes the Manjolai estate.

◉ **Forest Rights:** The WLPA mandates that residents' forest rights must be recognized upon the notification of a tiger reserve. Residents can only be relocated if they agree to it voluntarily.

How Did the Workers' Issue Arise?

◉ **Forest Rights and Eviction:** Inside the Kalakkad Mundanthurai Tiger Reserve (KMTR), the Forest Rights Act (FRA) specifies which forest rights must be recognized, including **possession of land up to 4 hectares for housing and farming, community rights (except hunting), and rights to forest resources.**

◉ **Legal Obligations**: The Tamil Nadu government is required to recognize forest rights of KMTR residents and obtain their consent before any relocation. The government must also provide a resettlement package for displaced individuals and communities, with their consent.

◉ **Disregard of Laws**: Tamil Nadu's notification of KMTR ignored provisions of the **Wildlife (Protection) Act (WLPA) and FRA**, leading to the current dispute.

Options for the State:

◉ **Legal Rights:** Forest lands leased to BBTC fall under FRA jurisdiction. Non-tribal workers living in the area for 75 years, dependent on these lands, can claim rights as 'Other Traditional Forest Dwellers'.

◉ **Eviction Protection**: Individuals whose claims are rejected cannot be evicted, as per a Supreme Court order.

◉ **Alternative Settlement**: The state can allocate a portion of Manjolai estate for settlement of workers, with approvals from the Union Ministry of Environment and Central Empowered Committee. They may also avoid paying net present value or conduct compensatory afforestation for landless beneficiaries.

◉ **Legal Challenge**: Some parts of Manjolai estate, forest lands before October 25, 1980, and converted before December 12, 1996, are not governed by Forest Conservation Act 1980. A Supreme Court challenge on this matter is pending, with current exemptions.

Key-issues

◉ **Legal Complexity:** The dispute involves intricate legal interpretations of forest laws, lease agreements, and worker rights under multiple national and state legislations.

◉ **Social Impact:** The decision to cease operations at Manjolai has significant socio-economic implications for the affected workers, particularly Dalits and landless individuals, highlighting issues of livelihood and resettlement.

◉ **Environmental Concerns**: The overlap of forest conservation objectives with socio-economic rights underscores the challenge of balancing conservation goals with community welfare in protected areas.

◉ **Judicial Role**: The Madras High Court's intervention reflects the judiciary's crucial role in adjudicating disputes involving environmental conservation, forest rights, and corporate operations within protected areas.

The dispute over Manjolai estate highlights the c**omplex interplay between conservation efforts, legal rights of local communities, and economic interests.** The legal proceedings seek to address the rights and resettlement needs of affected workers within the framework of environmental conservation laws and forest governance.

PROMOTING ENERGY EFFICIENCY IN ANDHRA PRADESH

CONTEXT

The Bureau of Energy Efficiency (BEE) urged the State Designated Agencies (SDAs) of all southern States, particularly the proactive ones like Andhra Pradesh (A.P.), to intensify their focus on energy efficiency and Mission LiFE in order to realise the immense potential for attracting global investments in key sectors such as industry, urban development, agriculture and building.

What is Mission LiFE?

◉ LiFE (Lifestyle For Environment) is a public movement to mobilize individuals to become 'Pro-Planet People'.

◉ LiFE was introduced in 2021—as a mass movement for "mindful and deliberate utilization, instead of mindless and destructive consumption" to protect and preserve the environment.

◉ It aims to nudge individuals and communities to practice a lifestyle that is synchronous with nature and does not harm it.

◉ LiFE builds upon India's environment-friendly **culture and traditional practices:**

  ➤ **Water harvesting techniques**: Step wells of Gujarat and Rajasthan, the underground tanks (tankaa) of Tamil Nadu, the check dams (j**ohads**) of Rajasthan and the **Zabo system** of Nagaland that deposit the water in pond-like structures on terraced hillsides.

  ➤ **Clayware:** Commonly used for cooking and serving purposes.

  ➤ **Adaptive architectural forms** that minimise electricity consumption and hand-washing and sun-drying of clothes

  ➤ **Dietary preference** for plant-based foods and millets

- **LiFE and SDG: The SDGs focused on**
  - ➤ Sustainable cities and communities (SDG 11)
  - ➤ Responsible production and consumption (SDG 12)
  - ➤ Climate change (SDG 13)
  - ➤ Life on land (SDG 15)
  - ➤ Life under water (SDG 14)

Need of Energy Efficiency in India

- Energy efficiency is a low-cost option for meeting the growing energy demands.

- India's energy needs might increase by 2-2.5 times by 2047 as the country progresses towards becoming a developed nation.

- About 84 per cent of Indian energy is produced using fossil fuels, and current technologies to achieve Net Zero are not yet commercially viable.

- The potential of energy efficiency and demand electrification from clean sources to reduce CO2 emissions by 51 per cent by 2047 compared to the baseline.

Significance for Amaravati

- Amaravati, Andhra Pradesh's new capital city and a future growth hub, holds particular importance in this endeavor.

- As the State progresses towards global benchmarks, integrating energy efficiency measures and **Mission LiFE** principles becomes essential.

- This effort seeks to establish eco-friendly standards, draw international investments, and elevate the State's global visibility while enhancing living standards for its residents.

> ### Central to the government's overall energy transition strategy is the:
>
> - Mission LiFE
> - PM Surya Ghar Muft Bijli Yojana
> - Perform, Achieve, Trade (PAT) scheme
> - Expansion of nuclear energy (Bharat Small Modular Reactor)
> - Critical Mineral Mission

- **Mission LiFE Introduction:** Introduced by Prime Minister Narendra Modi at COP26 in 2021, Mission LiFE promotes sustainable consumption and a circular economy. The **Ministry of Power** is actively advocating for this mission to reshape India's environmental narrative.

- **Andhra Pradesh's Potential:** Andhra Pradesh is identified as having substantial potential to attract significant investments in energy efficiency. This initiative is expected to spur economic growth, create employment opportunities, and contribute to climate change mitigation efforts.

THE "DARK OXYGEN" DISCOVERY

CONTEXT

Scientists have found a surprising source of oxygen in the deep ocean, where sunlight can't reach and photosynthesis doesn't work. This new oxygen source is linked to polymetallic nodules, which are lumps of metal found on the ocean floor. These nodules might be producing oxygen in a way never seen before, called "dark oxygen."

Key-highlights of the Discovery:

- The discovery was made in a part of the ocean called the **Clarion-Clipperton Zone**.
  - ➤ This area is off the **west coast of Mexico** and is known for having a high concentration of polymetallic nodules.
  - ➤ The Clarion-Clipperton Zone is larger than India and holds a lot of valuable metals like **manganese, copper, and nickel.**

- Scientists noticed that **oxygen levels in the water increased**, which was unusual because it should have decreased as small animals consumed it.

What Might Be Causing the Oxygen Production?

- **Polymetallic Nodules:** These nodules have a small electrical charge on their surface. This charge might be **splitting water molecules** (which are made of hydrogen and oxygen) and releasing oxygen.

- **Voltage:** The nodules create a voltage of up to 0.95 volts, but splitting water molecules needs at least 1.5 volts. Scientists think that if many nodules are close together, they might generate enough voltage to split water molecules and release oxygen.

Significance of the discovery

- **New Ecosystems:** The discovery of "dark oxygen" suggests there may be unique ecosystems in the deep ocean that depend on this oxygen source.

- **Deep-Sea Mining**: Many countries, including India, are interested in mining these nodules for their valuable metals. However, this mining could damage the ecosystems that depend on "dark oxygen."

- **Environmental Concerns**: Mining can harm deep-sea life, and the long-term impacts are still unknown. Studies have shown that past mining activities have had lasting effects on marine environments.

PROJECT TIGER TO DISPLACE 5.50 LAKH TRIBALS: REPORT

CONTEXT

On International Tiger Day, a report titled "India's Tiger Reserves: Tribals Get Out, Tourists Welcome" reveals significant concerns regarding the displacement of indigenous communities and the impact of conservation measures on local populations and wildlife.
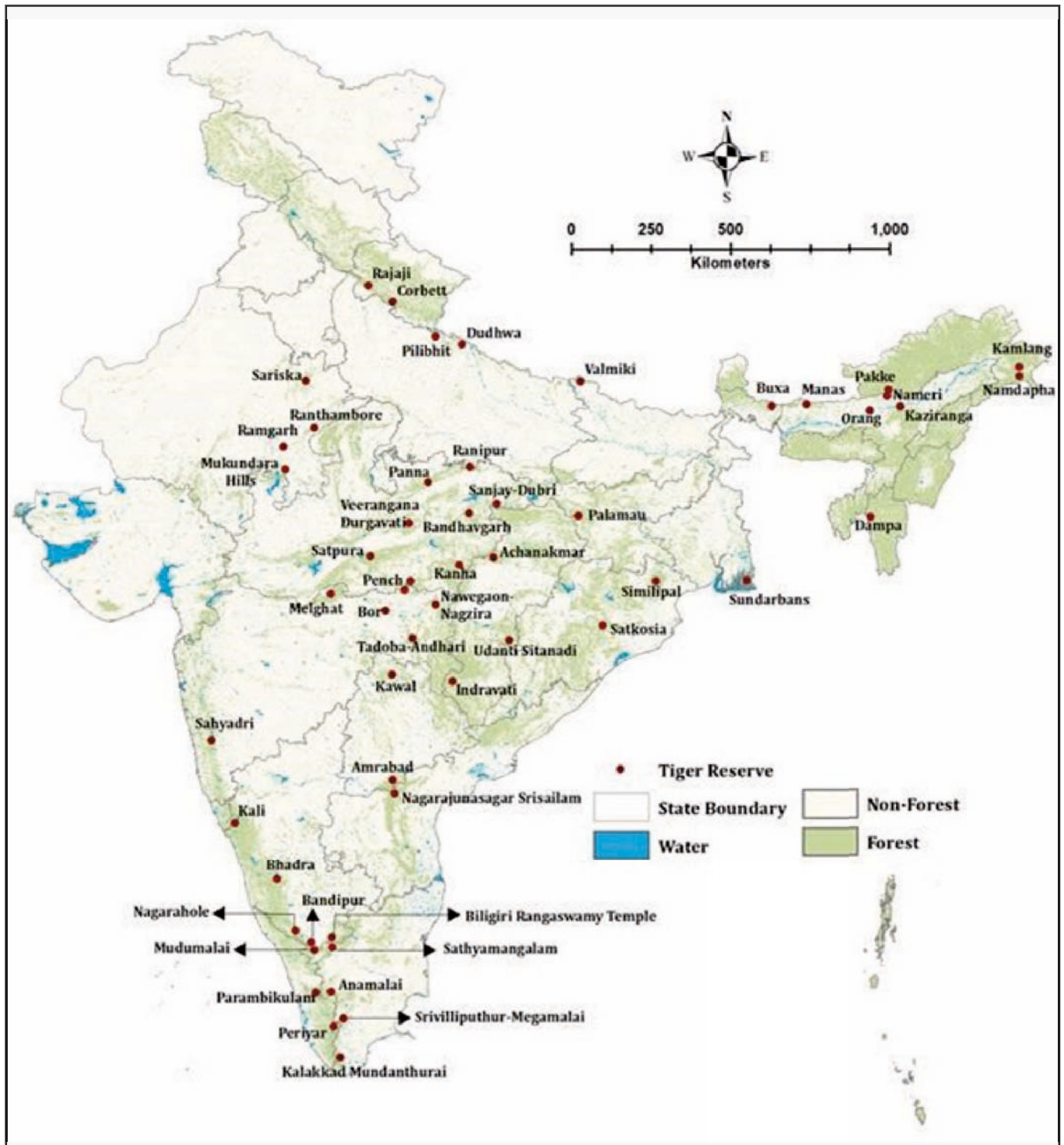
MAP: 2

Key Highlights of the Report

- ◉ **Massive Displacement of Tribals:** The report estimates that approximately 5,50,000 Scheduled Tribes and other forest dwellers have been displaced due to the creation and expansion of Tiger Reserves.

- ◉ **Breakdown:**
  - ➤ **Pre-2021:** 2,54,794 persons were displaced from 50 Tiger Reserves up to 2017.
  - ➤ **Post-2021:** An additional 2,90,000 persons are projected to be displaced from six new Tiger Reserves created after 2021.

- ◉ **Increase in Displacement:** The report highlights a dramatic 967% increase in displacement per Tiger Reserve in the post-2021 period compared to previous years.

- ◉ **Impact of Displacement:**
  - ➤ **Loss of Livelihood:** Displaced communities often lose access to traditional resources such as hunting grounds, fishing areas, and sacred sites.

➤ **Human Rights Violations:** The report details severe human rights violations, including forced evictions, destruction of homes, and legal abuses against those resisting displacement.

⊙ **Criticism of Conservation Practices:**

➤ **Non-Compliance:** The Comptroller and Auditor General (CAG) has criticized non-compliance with the Forest Rights Act and the Wildlife Protection Act of 1972, particularly regarding the forced relocation of tribes without proper consent.

➤ **Uncontrolled Activities:** The report notes uncontrolled commercial and eco-tourism activities within Tiger Reserves, including the establishment of petrol pumps, rest houses, and resorts. These activities often contribute to tiger deaths through electrocution and other hazards.

⊙ **Specific Cases and Statistics (Major Tiger Reserves Impacted)**

➤ **Srivilliputhur-Megamalai Tiger Reserve (Tamil Nadu):** About 4,000 people.

➤ **Ramgarh Vishdhari Tiger Reserve (Rajasthan):** Approximately 4,400 persons.

➤ **Ranipur Tiger Reserve (Uttar Pradesh):** Around 45,000 persons.

➤ **Nauradehi Wildlife Sanctuary (Madhya Pradesh):** At least 72,772 persons.

➤ **Dholpur-Karauli Tiger Reserve (Rajasthan):** About 4,000 persons.

➤ **Kumbhalgarh Wildlife Sanctuary (Rajasthan):** Around 160,000 persons.

Important Conservation Initiatives:

⊙ **Project Tiger:** Launched in 1973, Project Tiger is a major conservation initiative aimed at protecting tigers and their habitats in India.

⊙ **International Recognition of Tiger Reserves**: In 2022-23, several Indian tiger reserves received international accolades. The Pench Tiger Reserves in Madhya Pradesh, along with the Satpura Tiger Reserve in Madhya Pradesh, were jointly awarded the prestigious Tx2 award.

⊙ **Conservation Assured Tiger Standards (CA|TS):** It is an international accreditation system that evaluates tiger reserves' management practices to ensure they meet rigorous conservation standards. In the current year, **six additional tiger reserves in India have received CA|TS accreditation: Kali, Melghat, Navegaon-Nagzira, Pilibhit, and Periyar.**

⊙ **International Big Cats Alliance (IBCA): India launched** the International Big Cat Alliance (IBCA) in 2023 for the conservation of **seven big cats: Tiger, Lion, Leopard, Snow Leopard, Cheetah, Jaguar, and Puma.**

⊙ **International Tiger Day** is observed annually on **July 29** to highlight the importance of tiger conservation across the globe.

TIGER POPULATION IN INDIA

Year	Population
2006	1411
2010	1706
2014	2226
2018	2967
2023	3682

FIGHTING MILITANTS IN THE MOUNTAINS

CONTEXT

Since the abrogation of Article 370 in Jammu and Kashmir (J&K) in 2019, which ended the region's special status, there has been a resurgence of militancy in the Jammu region. This has raised concerns about regional stability and security.

Severity of the Situation

⊙ **Increased Militancy:** After a period of relative calm, militancy has reemerged in Jammu. In 2020, 18 militants were killed in the region. The following year, militants established a stronghold in the Pir Panjal valley and targeted Army camps and convoys.

⊙ **Recent Attacks:** In 2023, 12 security personnel, including 11 soldiers, were killed. There were 14 militant attacks in just June and July, almost one every four days.

⊙ **Impact on Local Areas:** Militancy has spread to **Doda, Ramban, and Kishtwar districts**. In Saida village, militants attacked local shops and opened fire, causing fear and disruption among residents.

Reasons Behind the Resurgence

⊙ **Post-Article 370 Developments:** The removal of Article 370 has led to increased militant activity as groups seek to destabilize the region in response to the political changes.

⊙ **Strategic Shifts:** Militants are using old infiltration routes through **Kathua and Samba districts**, which were previously inactive. This shift reflects a strategic adaptation by militant groups.

⊙ **Challenging Terrain:** The difficult mountainous terrain of Jammu, particularly the **Pir Panjal** and **Chenab valleys**, provides a strategic advantage to militants, making it hard for security forces to conduct effective operations.

Impact

⊙ **Security Forces:** The increased militant activity has led to the death of several security personnel and has strained resources. Security forces are facing challenges in patrolling the vast and rugged terrain.

⊙ **Local Communities:** Villagers are experiencing heightened fear and disruption. Economic conditions and local grievances, such as unemployment and perceived discrimination, are contributing to the challenges.

- **Terrorist Tactics:** Militants are employing sophisticated tactics, using advanced weaponry and mobile apps for navigation. They are also adapting their appearance to avoid detection, making them harder to differentiate from security forces.

Responses and Measures

- **Increased Security Measures:** The Army has reinforced its presence with more soldiers and increased patrols. They are also using drones for surveillance. Efforts are being made to detect and neutralize underground tunnels used by militants.

- **Political Solutions:** The government is being urged to find a political solution to address the underlying issues contributing to militancy.

- **Community Outreach:** Initiatives are being taken to improve relations with local communities, including mobile schools and medical patrols.

UPSC PYQ

Q: For effective border area management, discuss the steps required to be taken to deny local support to militants and also suggest ways to manage favourable perception among locals. (2020)

Q: Analyse internal security threats and transborder crimes along Myanmar, Bangladesh and Pakistan borders including Line of Control (LoC). Also, discuss the role played by various security forces in this regard. (2020)

Q: Border management is a complex task due to difficult terrain and hostile relations with some countries. Elucidate the challenges and strategies for effective border management. (2016)

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SECTION -B

QUICK BYTES

KARGIL VIJAY DIWAS

CONTEXT

July 26, 2024, marks the 25th anniversary of Kargil Vijay Diwas, a day dedicated to honoring the valor and sacrifices of Indian soldiers during the Kargil War of 1999. This significant day commemorates the successful culmination of Operation Vijay and pays tribute to the nearly 490 Indian soldiers who gave their lives in the conflict.

About the Kargil War

- The Kargil War stemmed from the **ongoing tensions between India and Pakistan**, which had escalated after the **1971 war** that led to the **creation of Bangladesh.**

- Both countries continued to clash, with disputes over the **Siachen Glacier** and **nuclear tests** in 1998 increasing hostilities.

- In February 1999, India and Pakistan signed the **Lahore Declaration** to resolve tensions and seek peace.

- Despite this, in May 1999, Pakistani soldiers and militants infiltrated Indian territory along the **Line of Control (LoC) in Kargil**, aiming to sever the link between Kashmir and Ladakh and create unrest.

- **Operation Vijay:** The infiltration led India to launch Operation Vijay to reclaim the occupied positions. The conflict, lasting from May to July 1999, involved fierce battles in the challenging mountainous terrain of Kargil.

- The Indian Army **successfully recaptured key positions**, including **Tiger Hill,** after intense fighting.

- The war concluded on July 26, 1999, with India regaining control of the territory. Nearly 490 Indian soldiers were martyred in the conflict.'

  ➤ In response to this, the government established the

Kargil Review Committee (KRC), which was tasked with recommending measures to avert future crises. One significant recommendation was to **reduce the age profile of the Indian armed forces**, a notion that had also been proposed by the **Arun Singh Committee in 1989.**

➤ The call for a **younger military profile** gained momentum with subsequent recommendations from the **Standing Committee on Defence (2006)** and the **Shekatkar Committee** (2017).

➤ The **Agnipath scheme**, introduced to address these expert recommendations, allows young recruits to serve in the **Indian Armed Forces** for a period of four years. This initiative aims to bring a fresh influx of *'josh and jazba'* (enthusiasm and spirit) into the military, while also fostering a shift towards a more technically adept force.

🔍 FACT BOX

Major military actions and operations undertaken by India after independence

- **Indo-Pak War of 1947-48 (First Kashmir War):** India defended Jammu and Kashmir from Pakistani tribal invasions, establishing the Line of Control (LoC) and a lasting territorial dispute.

- **Liberation of Goa (Operation Vijay, 1961):** A military operation to end Portuguese colonial rule in Goa, Daman, and Diu, integrating these territories into India.

MAP 1

MAP 2

- **Indo-Pak War of 1965 (Second Kashmir War):** Conflict over Kashmir, notable for the Battle of Longewala, where Indian forces successfully defended against Pakistani advances.

- **Indo-Pak War of 1971 (Liberation War):** India intervened to support the Mukti Bahini, leading to the independence of Bangladesh after a decisive victory over Pakistani forces in East Pakistan.

- **Operation Meghdoot (1984):** It secured the Siachen Glacier in the disputed region, establishing control over this strategically important area in the Himalayas.

- **Operation Blue Star (1984):** The operation was conducted to remove militants from the Golden Temple complex in Amritsar, aiming to restore law and order amidst Sikh insurgency.

- **Operation Pawan (1987-1990):** It was a peacekeeping mission in Sri Lanka to disarm the LTTE (Liberation Tigers of Tamil Eelam) as part of the Indo-Sri Lankan Accord.

- **Operation Rakshak (1988 onwards):** It was a counterinsurgency operation focused on addressing militant activities in Jammu and Kashmir and the northeastern states.

- **Operation Vijay (2004):** This was a counter-terrorism operation aimed at neutralizing militants in the Kashmir Valley.

- **Operation Trident (1971):** It was a naval operation during the Indo-Pak War of 1971 that involved the Indian Navy sinking Pakistani naval vessels and causing significant damage to Pakistan's naval capabilities.

ASSAM'S CHARAIDEO MOIDAMS, INDIA'S UNESCO'S WORLD HERITAGE SITE

CONTEXT

The Ahom dynasty's burial system, known as 'Moidams,' has been recognized by UNESCO as a World Heritage Site, becoming the 43rd property from India to be included in the prestigious index. This makes it the first cultural site from Northeast India to receive this honor. India is now at the 6th position globally for the most number of World Heritage Properties.

About Moidams:

- Moidams are **unique pyramid-like burial mounds** used by the **Tai-Ahom dynasty** that ruled Assam for about 600 years (from 1228 to 1826).

- Moidams are large, pyramid-shaped mounds made of layers of bricks and earth.

They feature **vaulted chambers** with **arched passages for entry**. Each chamber has a raised platform where the body was placed.

- **Burials:** Objects like **royal insignia, wooden, ivory, or iron items, gold pendants, ceramic ware, weapons, and clothing** were buried with the deceased. Some Moidams also include human sacrifices from the **Luk-kha-khun clan.**

- Moidams are similar to **ancient Chinese royal tombs and Egyptian pyramids** in their use of monumental architecture to honor and preserve royal lineage.
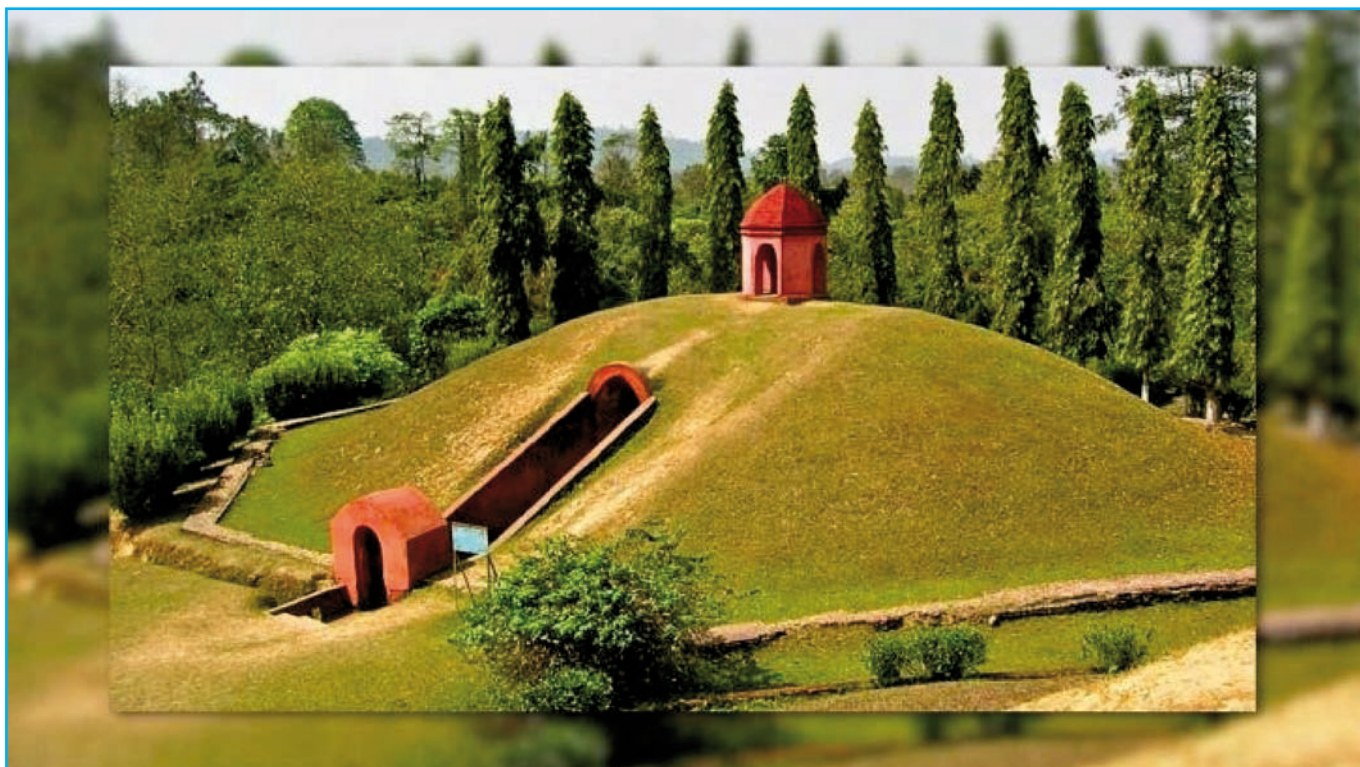

fIGURE: 01

About the Tai-Ahom Clan:

- The Tai-Ahoms migrated from China and established their capital in the **Brahmaputra River Valley** from the 12th to the 18th century CE.
- **Chaolung Sukaphaa** (founded of **Ahom dynasty**) established the first capital at **Choraideo.**
  - ➤ Choraideo, also known as Che-rai-doi (meaning a shining town situated on a hilltop), was a sacred site where Tai-Ahom royals were buried. The site was consecrated with rituals reflecting their deep spiritual beliefs.
- The Tai-Ahoms believed their kings were divine. To honor them, they built Moidams using various materials over 600 years. Initially, wood was used, later replaced by stone and bricks. The burial rituals were elaborate, showcasing the Tai-Ahom society's hierarchical structure.

Assam's World Heritage Site

- The Moidam is the first from the North East to be recognised as a World Heritage Site in cultural category.
- Assam has two other such sites in the natural category – Kaziranga National Park and Manas National Park, both upgraded to tiger reserves.

TERRACOTTA PIPELINE (6TH CENTURY BCE) IN KEELADI

CONTEXT

Archaeologists have unearthed a terracotta pipeline in the 10th phase of the excavation in Keeladi, a Sangam Era site, providing further evidence of the effective water management practices followed by the settlement's inhabitants at least 2,600 years ago.

About

- Keeladi, first discovered in 2014, is located 12 km southeast of Madurai and has become a top tourist spot in the ancient city once ruled by the **Pandya Kingdom.**
- Over 20,000 artefacts and antiquities have been recovered from Keeladi in the past nine years, revealing the inhabitants' advanced water management skills.
- The discoveries at Keeladi have pushed the start of the **Sangam Era** back to 600 BCE from the previously believed 300 BCE.
- Additionally, rice husks found in a burial urn in **Sivakalai date back 3,200 years,** and evidence shows that Tamils were aware of iron technology as far back as 2172 BCE, 4,200 years ago.

FACT BOX

Sangam Age

- The Sangam Period in South India (south of the Krishna and Tungabhadra rivers) spanned roughly from the 3rd century B.C. to the 3rd century A.D.
- Named after the Sangam academies that flourished under the royal patronage of the **Pandya kings of Madurai.**
- According to Tamil legends, there were three Sangams:
  - ➤ **First Sangam at Madur**ai (no literary work available).
  - ➤ **Second Sangam at Kapadapuram** (only Tolkappiyam survives).
  - ➤ **Third Sangam at Madurai** (a few works have survived).
- The age declined towards the end of the 3rd century A.D. Kalabhras occupied the Tamil country post-Sangam period (300 AD to 600 AD), marking an interregnum or 'dark age' as per earlier historians.

Political History

- **Cheras**:
  - ➤ Controlled central and northern Kerala and the Kongu region of Tamil Nadu.
  - ➤ Capital: Vanji; Ports: Musiri and Tondi.
  - ➤ Emblem: Bow and arrow.
  - ➤ Famous ruler: Senguttuvan, known for military achievements and introducing the Pattini cult.
- **Cholas**:
  - ➤ Controlled central and northern Tamil Nadu.
  - ➤ Core area: Kaveri delta (Cholamandalam).
  - ➤ Capital: Uraiyur; Port: Puhar (Kaviripattinam).
  - ➤ Emblem: Tiger.
  - ➤ Famous ruler: Karikala, known for military conquests, founding Puhar, and constructing the Kaveri embankment.
- **Pandyas**:
  - ➤ Ruled from Madurai.
  - ➤ Port: Korkai.
  - ➤ Emblem: Fish.
  - ➤ Patronized Tamil Sangams and facilitated the compilation of Sangam poems.

SEINE RIVER (FRANCE)

CONTEXT

Olympic women athletes were allowed to swim in the Seine River after days of concerns about water quality.

About

◉ The Seine River, the third-longest river in France, originates from a remote spot called Source-Seine in the Burgundy wine region of northeastern France.

◉ It flows northwesterly, curving through Paris, to the Normandy coast, where it empties into the English Channel.

◉ As the most important river in northern France, and with modern canals linking it to the Loire, Rhône, and Rhine, the Seine has been the hub of Paris, and of France, since the Middle Ages.

◉ **Pollution:**

➤ **Combined Sewer System:** Paris, like many old cities, has a combined sewer system where wastewater and stormwater flow through the same pipes. Heavy rain can overwhelm the system, leading to untreated wastewater flowing into the river.

➤ **Potential Contaminants:** Bacteria, viruses, or parasites can enter the water from human and wildlife waste. Rain can cause waste from animals, like rodents, to end up in the Seine.

KAKADU NATIONAL PARK

CONTEXT

Australia is taking significant steps to protect an Indigenous site within Kakadu National Park, known as Jabiluka. This site is notable for having one of the world's largest high-grade uranium deposits.

About

◉ It is the largest national park in Australia and one of the largest in the world's tropics.

◉ Kakadu preserves the greatest variety of ecosystems on the Australian continent including extensive areas of savanna woodlands, open forest, floodplains, mangroves, tidal mudflats, coastal areas and monsoon forests.

◉ Kakadu has been home to Aboriginal people for more than 50,000 years, and many of the park's extensive rock art sites date back thousands of years.

◉ In 1981, it was declared as a **UNESCO world heritage site.**

CHINA'S NEW BRIDGE ACROSS PANGONG LAKE

CONTEXT

China has recently completed and operationalized a nearly 400-meter-long bridge connecting the north and south banks of Pangong Lake, as seen in Satellite images. This development comes amid ongoing tensions between India and China over the Line of Actual Control (LAC) in Ladakh.

About the Bridge:

◉ The bridge is situated in Chinese-held territory since

1958, near the Line of Actual Control in Ladakh.

◉ **Khurnak Fort,** located on the northern shore of Pangong Tso, has been under Chinese control since 1958. Previously, the boundary between India and China was considered to be at Khurnak Fort, but China has since taken control.

◉ During the **1962 India-China war,** Khurnak Fort served as China's forward headquarters for operations in Ladakh.

◉ Since May 2020, Indian and Chinese troops have engaged in violent skirmishes along the Line of Actual Control in Eastern Ladakh.

◉ **Indian infrastructure:** Following the clashes with China, India has intensified its infrastructure development efforts in Ladakh, including the

➤ construction of tunnels to provide year-round access to the region

➤ In 2021 alone, 87 bridges were built in Ladakh

➤ In 2022, the government allocated over Rs 2,000 crore for infrastructure projects along the China-India border, with 18 major initiatives specifically planned for Ladakh.
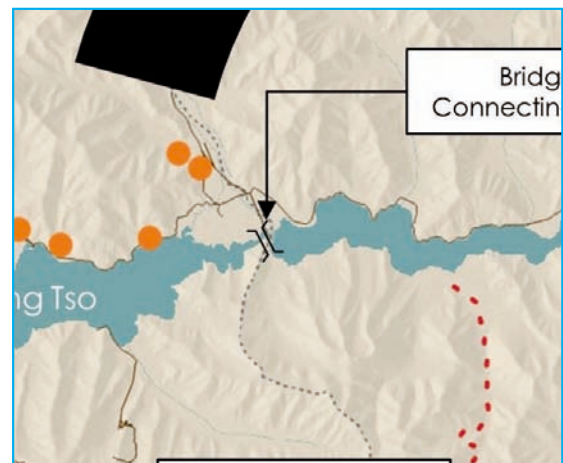
About Pangong Lake

◉ Pangong Lake is situated in the disputed region of Aksai Chin, which is claimed by India but occupied by China.

⊙ The lake stretches across both Indian and Chinese territories, making it a strategically important location. The area around the lake has been a focal point in the military standoff between the two nations, which began in 2020.

TARANG SHAKTI

CONTEXT

The Indian Air Force (IAF) has announced the largest international air exercise ever conducted in India, named Tarang Shakti.

About the Exercise

⊙ Tarang Shakti aims to boost military cooperation, enhance collaboration, and showcase India's defence industry to support the nation's goal of becoming a developed country by 2047.

⊙ Tarang Shakti represents a major step in India's efforts to enhance its military capabilities and strategic partnerships on a global scale.

⊙ The exercise not only provides a platform for international cooperation but also highlights India's progress in defence technology and production, reinforcing its vision of self-reliance and innovation in the defence sector.

⊙ **Key Aircraft and Assets:**

➤ **Participating Countries' Assets:** F-18, A-18, C-130, F-16, A-10, KC-130, KC-135 aircraft, Eurofighter Typhoon, Rafale

➤ **Indian Air Force Assets:** Tejas, Prachand, Dhruv, Rudra

⊙ The exercise follows the IAF's participation in the second edition of Air Exercise Red Flag in Alaska, where Indian Rafales joined Singaporean and American aircraft in joint exercises.

INDIA-SAUDI ARABIA HIGH LEVEL TASK FORCE

Context

India and Saudi Arabia recently convened the first meeting of the 'India-Saudi Arabia High Level Task Force' on investments, conducted virtually.

About the High Level Task Force:

⊙ The High-Level Task Force is a **special body** to facilitate **bilateral investments** following the decision taken by PM Narendra Modi and Crown Prince and Prime Minister Prince Mohammed bin Salman bin Abdulaziz Al Saud during the latter's state visit to India in September 2023.

⊙ Comprises senior officials from both countries, including the CEO of Niti Aayog, Secretaries for Economic Affairs, Commerce, MEA, DPIIT, Petroleum and Natural Gas, and Power from India.

FACT BOX

India-Saudi Arabia Economic Relations:

⊙ Saudi Arabia ranks as India's 4th largest trading partner.

⊙ India imports over 18% of its crude oil from Saudi Arabia.

⊙ Bilateral trade between the two countries totaled US$ 52.76 billion in 2022-23.

⊙ Saudi Arabia ranks 19th in terms of FDI equity inflows into India, with US$ 3.22 billion invested from April 2000 to September 2023.

⊙ There are 2.6 million Indians in Saudi Arabia, the largest expatriate community, known for their expertise, discipline, and law-abiding nature.

⊙ Saudi Arabia contributes significantly to India's energy security, while India supports Saudi Arabia's food security.

⊙ Saudi Arabia is valued by India for its natural resources, economic and cultural influence, and strategic location in the Middle East.

⊙ Significance of Saudi Arabia for India

➤ Abundance of natural resources

➤ Economic and cultural influence

➤ Critical location in the Middle East, and connectivity

21ST EDITION OF KHAAN QUEST

Context

The 21st edition of Exercise Khaan Quest, a multinational peacekeeping exercise, has commenced in Mongolia. This exercise involves around 430 participants from 23 countries, including nations like Australia, Canada, China, Japan, Türkiye, the United States, the United Kingdom, and India.

About Exercise Khaan Quest:

⊙ Khaan Quest is a **multinational peacekeeping exercise** hosted by Mongolia annually.

⊙ Initially a bilateral event between the USA and Mongolian Armed Forces starting in 2003, Exercise Khaan Quest has since 2006 evolved into a Multinational Peacekeeping Exercise.

⊙ It includes military forces from various countries, aimed at enhancing their peacekeeping capabilities and fostering collaboration.

⊙ **Objectives:** The exercise aims to prepare armed forces for peacekeeping missions in multinational environments, focusing on interoperability, military readiness under

Chapter VII of the United Nations Charter, and joint tactical drills.

- **Focus Areas**: Activities include physical fitness training, joint planning exercises, and tactical drills such as establishing checkpoints, cordon and search operations, patrolling, civilian evacuation from hostile areas, counter improvised explosive device drills, combat first aid, and casualty evacuation.

- **Outcomes:** Exercise Khaan Quest facilitates the sharing of best practices in joint operations among participating countries, enhancing inter-operability, camaraderie, and mutual understanding among soldiers.

- **Indian Participation:** This year, the Indian Army contingent consists of 40 personnel primarily from the **MADRAS REGIMENT**, along with other Arms and Services. Notably, the contingent includes one Woman Officer and two Women Soldiers.

FACT BOX

India-Mongolia bilateral defense exercise (NOMADIC ELEPHANT)

- Nomadic Elephant is India-Mongolia Joint Military Exercise.

- The exercise is an annual training event between India and Mongolia, which is conducted alternatively in the two countries.

APPOINTMENT OF THE GOVERNOR

Context

President Droupadi Murmu has appointed new governors for six states and shifted incumbents in three states.

About Governor

- The state executive comprises the Governor and the Council of Ministers, with the Chief Minister as its head. The Governor exercises executive functions with the aid and advice of the Council of Ministers, except where the Constitution requires independent exercise of discretion.

- **Appointment (Article 155):** The Governor of a state is appointed by the **President of India** through a formal warrant under their hand and seal.

- **Tenure (Article 156):** The Governor holds office during the **pleasure of the President**, with a normal term of five years. The President can withdraw pleasure at any time, leading to the Governor's resignation.

- **Qualifications for Governor:**

  - **Citizenship and Age (Articles 157 and 158):** The Governor must be a citizen of India and at least 35 years old.

- **Restrictions:** They should not be a member of Parliament or any state legislature, and must not hold any other office of profit.

Role and Powers of the Governor:

- **Constitutional Role (Article 154):** The Governor is the head of the state executive but acts as a non-political figure.

- **Relationship between Governor and State Government: Advisory Role (Article 163):** They are advised by the **Council of Ministers with the Chief Minister** as its head, except when discretion is required by the Constitution. Governor must act on the advice of the Council of Ministers of the state.

- **Powers:** The Governor has significant powers such as

  - giving assent to bills passed by the state legislature

  - deciding on the time for proving majority in the Assembly

  - determining which party gets first chance in a hung Assembly scenario

Friction in Governor-State Government Relations:

- **Political Dynamics:** Over the years, Governors have been accused of favoring the central government's interests, particularly when it differs from the state government's.

- **Friction**: Disputes often arise when Governors perceived as political appointees interfere in state matters or act against the state government's wishes.

- **Issues:** There's no provision for impeaching Governors, and their allegiance to the central government can sometimes create prolonged disputes with state administrations.

- **Controversies:** Instances of Governors being accused of partisan conduct have led to bitter exchanges between state governments and Raj Bhavans.

ANTI-DEFECTION LAW

Context

Jharkhand Assembly Speaker's Tribunal disqualified two legislators under anti-defection law.

About Anti-Defection Law

- The Tenth Schedule of the Indian Constitution, introduced by the **52nd Amendment in 1985**, addresses the issue of political defections.

- This Schedule was enacted to combat the instability caused by legislators defecting from their parent parties, which had undermined the democratic process and governance stability in India during the 1960s and 70s.

Key Provisions

- **Disqualification Grounds:**

> ➤ **Voluntary Defection:** A member of a House of Parliament or State legislature can be disqualified if they voluntarily give up the membership of their political party.
>
> ➤ **Violation of Party Whip:** Members can also be disqualified if they vote against the instructions of their party as issued by the party whip.

◎ **Role of the Whip:** A whip is appointed by the political party to ensure party discipline and adherence to party directives during votes in the legislature.

◎ **Exceptions:**

> ➤ **Para 3 (Omitted in 2003):** Originally allowed one-third of the members of a legislature party to split and form a separate group without facing disqualification.
>
> ➤ **Para 4:** Permitted the merger of a political party with another party if approved by two-thirds of its legislature party members. This exception still stands.

◎ **Role of the Speaker:** The authority to decide on disqualification issues lies with the Speaker of the House.

MODEL SKILL LOAN SCHEME

Context

The government introduced the 'Model Skill Loan Scheme' in New Delhi. This initiative aims to address a significant barrier for students seeking advanced skill training: the financial cost.

About the Scheme

◎ The Model Skill Loan Scheme aims to empower India's future workforce by providing financial support for advanced-level skill courses.

◎ This scheme targets 25,000 youth across the country, ensuring they have access to necessary upskilling opportunities.

◎ **Key Features:**

> ➤ **Increased Loan Amount:** The scheme has significantly raised the loan limit from ₹1.5 lakh to ₹7.5 lakh. This increase is intended to cover the higher fees associated with advanced skill courses, making education more accessible.
>
> ➤ **Expanded Financial Institutions:** The scheme now includes several Non-Banking Financial Companies (NBFCs), scheduled banks, and rural banks. This broader inclusion aims to make the loan application process more accessible and less cumbersome for students.
>
> ➤ **Focus on Advanced Skill Courses:** By targeting advanced-level training, the scheme addresses a crucial gap. Many high-quality skill courses come with steep fees, which can be a barrier for deserving students. The Model Skill Loan Scheme seeks to bridge this gap by offering substantial financial support.

REGISTERED STARTUPS IN INDIA

Context

The number of startups in India has increased to more than 1.4 lakh.

Key-highlights

◎ The number of Department for Promotion of Industry and Internal Trade (DPIIT) recognized startups State/UT-wise has shown that Maharashtra tops the list with 25,044 registered startups.

◎ Karnataka is second with 15,019 registered startups, followed by Delhi with 14,734 startups. Uttar Pradesh has secured the fourth place with 13,299 startups, while Gujarat is in fifth place with 11,436 startups.

◎ **Responsible factors for growth**: Increased internet penetration, digitization, and government initiatives

> ➤ Various new sectors such as **DeepTech, SpaceTech, Artificial Intelligence, and EVs** have broadened the Indian startup landscape.

Government initiatives for Start-ups

◎ **Startup India initiative:** The Government launched the scheme with the objective of building a strong ecosystem for nurturing innovation, startups, and encouraging investments in the startup ecosystem of the country.

◎ **'Startup India: The Way Ahead'**: It includes actionable plans for the promotion of ease of doing business for startups, a greater role of technology in executing various reforms, building capacities of stakeholders, and enabling a digital Aatmanirbhar Bharat.

◎ **Fund of Funds for Startups (FFS):** The Government has also established a **Fund of Funds for Startups (FFS)** with a corpus of Rs 10,000 crore to meet the funding needs of startups.

> ➤ DPIIT is the monitoring agency and Small Industries Development Bank of India (SIDBI) is the operating agency for FFS.

◎ **National Initiative for Developing and Harnessing Innovations (NIDHI):** The government launched the programme in 2016 to drive innovation, support startups and create a thriving entrepreneurial ecosystem in India.

ETHIOPIA'S ECONOMIC REFORMS AND IMF LOAN APPROVAL

Context

Ethiopia, facing severe financial difficulties, eased foreign exchange restrictions as part of a comprehensive economic reform plan. This move coincides with the International Monetary Fund (IMF) approving a loan for the country, which is seeking a multibillion-dollar financial rescue package ($1 billion).

About the IMF

- The International Monetary Fund (IMF) is an international financial institution headquartered in Washington, D.C.

- It was established in 1**944 during the Bretton Woods Conference** with the goal of fostering global monetary cooperation, securing financial stability, facilitating international trade, promoting high employment and sustainable economic growth, and reducing poverty around the world.

- The IMF provides financial assistance and policy advice to member countries facing economic difficulties.

- **Key Functions of the IMF:**

  - **Surveillance:** Monitoring the economic and financial developments of member countries.

  - **Financial Assistance:** Providing loans to member countries facing balance of payments problems.

  - **Technical Assistance and Training:** Offering support and training to help member countries improve their economic management.

INDIA'S CORE SECTOR GROWTH

Context

Growth in India's eight core sectors has declined to a 20-month low of 4% in June 2024, from 6.4% in May. Most sectors, except for coal, experienced a sharp decline in output growth, with steel production at a seven-month low and refinery products contracting for the first time in five months.

Key Highlights (Sector-wise Performance)

- **Coal:** Output grew by 14.8%, the fastest pace in eight months, with production levels at a three-month high.

- **Electricity:** Generation slipped to a four-month low of 7.7%, with output 3.6% below May's peak levels amid a heat wave.

- **Cement:** Production rose by 1.9% after two months of contraction.

- **Steel:** Grew by just 2.7%, the slowest in 27 months, potentially due to reduced public capital expenditure ahead of general elections.

- **Natural Gas:** Production grew by 3.3%, the slowest pace in 13 months.

- **Fertilizers:** Output recovered after five months of contractions, recording a 2.4% increase.

- R**efinery Products:** Production dropped by 1.5%.

- **Crude Oil:** Contraction deepened to 2.6% in June from 1.1% in May.

FACT BOX

What are Core Sector Industries?

- Core sectors are key industries that have a major impact on the Indian economy.

- The eight core sectors are electricity, steel, refinery products, crude oil, coal, cement, natural gas, and fertilizers.

- These sectors significantly affect other industries and collectively make up 40.27% of the Index of Industrial Production (IIP).

- **Core Sector Industries**

  - **Electricity:** Includes thermal, nuclear, hydro, and imports from Bhutan.

  - **Steel:** Production of alloy and non-alloy steel.

  - **Refinery Products:** Total refinery production.

  - **Crude Oil:** Total crude oil production.

  - **Coal:** Production excluding coking coal.

  - **Cement:** Production in large and mini plants.

  - **Natural Gas:** Total natural gas production.

  - **Fertilizers:** Includes urea, ammonium sulfate, calcium ammonium nitrate, complex grade fertilizer, and single superphosphate.

- **Measurement and Reporting:** The performance of these core sectors is measured through the Index of Eight Core Industries (ICI).

  - The ICI is prepared and released monthly by the Office of the Economic Adviser (OEA), Department for Promotion of Industry and Internal Trade (DPIIT), and Ministry of Commerce & Industry.

  - The ICI provides an indication of the production performance of these core industries, both individually and collectively.

RBI'S NEW GUIDELINES ON WILFUL AND LARGE DEFAULTERS

Context

The Reserve Bank of India (RBI) has introduced a Master Direction focusing on the treatment of wilful defaulters and large defaulters. This move aims to enhance the scrutiny and reporting mechanisms for non-performing asset (NPA) accounts.

Key Highlights

- **Examination Requirement**: Banks and Non-Banking Financial Companies (NBFCs) are mandated to examine the 'wilful default' aspect in all NPA accounts with outstanding amounts of Rs 25 lakh and above.

- **Reporting and Dissemination:** Provisions regarding reporting and dissemination of credit information for large defaulters apply to all entities regulated by the RBI, even if they do not meet the definition of 'lender' in the guidelines.

- All RBI-regulated entities must submit information to all credit information companies (CICs) on a monthly basis. This includes:

  ➤ A list of suit-filed accounts of large defaulters.

  ➤ A list of non-suit filed accounts of large defaulters classified as doubtful or loss.

- **Threshold Calculations**

  ➤ For calculating the Rs 1 crore threshold, any unapplied interest should be included.

  ➤ In the case of suit-filed accounts, the threshold pertains to the amount for which suits have been filed.

🔍 FACT BOX

- **Wilful Defaulter:** A borrower or guarantor who has committed wilful default, with an outstanding amount of Rs 25 lakh and above.

- **Large Defaulter:** A defaulter with an outstanding amount of Rs 1 crore and above, where a suit has been filed, or the account is classified as doubtful or loss.

SHINGLES VACCINE MAY HELP DELAY DEMENTIA: STUDY

Context

A recent study published in Nature Medicine suggests that getting vaccinated against shingles may help delay the onset of dementia. Shingles, a painful condition more common in older adults, is caused by the reactivation of the herpes zoster virus, which also causes chickenpox.

What is Shingles?

- **Cause**: Shingles is caused by the varicella-zoster virus (VZV), the same virus responsible for chickenpox.

- **Symptoms: I**t typically appears as a painful, itchy rash on one side of the body, often in a single stripe of blisters. Shingles can also lead to severe complications like long-term nerve pain called **postherpetic neuralgia (PHN).**

- **Risk:** The virus remains in the body after a chickenpox infection and can reactivate later in life to cause shingles.

- **Vaccines:**

  ➤ **Zostavax:** An older vaccine introduced about 18 years ago.

  ➤ **Shingrix:** A newer vaccine increasingly used, particularly in the UK.

What is Dementia?

- Dementia is a term for a decline in memory, language, problem-solving, and other cognitive abilities severe enough to interfere with daily life.

- **Symptoms:** It involves a decline in thinking skills, behavior changes, and impacts on relationships and daily functioning.

- **Types of Dementia:**

  ➤ **Alzheimer's Disease:** Accounts for 60-80% of dementia cases. It is characterized by progressive memory loss and cognitive decline.

  ➤ **Vascular Dementia:** Caused by microscopic bleeding and blockages in the brain's blood vessels.

  ➤ **Mixed Dementia:** Involves brain changes associated with multiple types of dementia simultaneously.

  ➤ **Other Conditions:** Some conditions, such as thyroid problems and vitamin deficiencies, can cause symptoms of cognitive impairment but are not classified as dementia.

CHANDIPURA ACUTE VIRAL ENCEPHALITIS (CHPV)

Context

In Gujarat, an outbreak of Chandipura Acute Viral Encephalitis (CHPV) has been reported since early July. As of the latest update, 137 patients are suspected of having CHPV, with 51 testing positive for the virus.

About Chandipura Virus (CHPV) and Viral Encephalitis

Chandipura Virus (CHPV):

➤ CHPV is a member of the Vesiculovirus genus within the Rhabdoviridae family. It is an emerging virus and can cause acute viral encephalitis.

➤ **Transmission:** The virus is primarily transmitted by sandflies, which act as vectors. It is a vector-borne disease, meaning it is spread through intermediaries such as insects or animals.

➤ **Symptoms:** High fever, headache, vomiting, and in severe cases, neurological symptoms such as seizures, altered consciousness, and coma.

Viral Encephalitis:

➤ Viral encephalitis is an inflammation of the brain caused by a viral infection. It can result from a variety of viruses, including the Chandipura virus.

➤ **Symptoms:** Common symptoms include fever, headache, confusion, seizures, and in severe cases, loss of consciousness and death. The severity of symptoms can vary based on the specific virus and the individual's health condition.

OROPOUCHE FEVER

Context

Two women in Brazil have recently become the first humans in the world to die from Oropouche fever, a disease caused by the Oropouche virus.

About the Oropouche Virus

- The Oropouche virus was first identified in Trinidad and Tobago in 1955.
  - ➤ The virus has been known since 1955 but had not previously resulted in fatalities.
- It is primarily transmitted through the bites of **midges,** specifically the ***Culicoides paraensis midg***e, but can also be spread by mosquitoes.
- There is no evidence of direct human-to-human transmission, though there are ongoing investigations into potential transmission from pregnant women to their unborn children.
- **Symptoms:** Fever, Headaches, Pain, Chills, Joint stiffness, Sometimes nausea and vomiting
- Most patients recover within seven days, and severe cases are rare.
- Treatment There is no specific antiviral treatment or vaccine available for Oropouche fever.

MQ-9B PREDATOR DRONE DEAL

Context

The Defence Acquisition Council (DAC) reviewed and approved amendments to the deal for 31 MQ-9B High Altitude Long Endurance (HALE) Unmanned Aerial Vehicles (UAV) from general Atomics of the US.

Key Decisions

- The DAC approved amendments to the deal for 31 MQ-9B High Altitude Long Endurance (HALE) Unmanned Aerial Vehicles (UAVs) from General Atomics, USA.
- **Details:** The amendments are related to indigenous content and other aspects. The deal includes 15 Sea Guardians for the Indian Navy and 16 Sky Guardians (eight each for the Indian Army and Air Force).
- **Cost:** Estimated at $3.99 billion.
- **Global Maintenance, Repair, and Overhaul (MRO) Facility:** General Atomics is expected to establish a maintenance facility in India as part of the MQ-9B UAV deal, which will contribute to offset obligations.
- The MQ-9B drones are planned to be deployed at four places, including INS Rajaji near Chennai and Porbandar in Gujarat, by the Indian Navy, while the other two services will keep them jointly at two bases in Sarsawa and Gorakhpur in Uttar Pradesh at Air Force bases due to long runway requirements.

🔍 FACT BOX

MQ-9B drones

- **Manufactured by:** General Atomics Aeronautical Systems
- The MQ-9B drones is the first **hunter-killer unmanned aerial vehicle (UAV)** designed for long-endurance and high-altitude surveillance.
- They boast of an endurance of over 27 hours, and can operate up to 50,000 feet.
- Moreover, they have a 240 Knots True Airspeed (KTAS) and a 1,746 kg payload capacity, including 1,361 kg of external stores.
- The drone is equipped to carry multiple mission payloads including
  - ➤ Electro-optical/Infrared (EO/IR)
  - ➤ Lynx multi-mode Radar
  - ➤ multi-mode maritime surveillance radar
  - ➤ Electronic Support Measures (ESM)
  - ➤ laser designators
  - ➤ various weapons and payload packages
- The UAV is remotely operated by a two-member crew, comprising the pilot and an aircrew member to operate the sensors and weapons.
- **Countries using MQ-9B:** Currently, the drones are in use by the **US forces, NASA, the United Kingdom's Royal Air Force, the Italian Air Force, the French Air Force and the Spanish Air Force. Japan** also inducted the MQ-9B Sea Guardian drones in April last year.

ENHANCED FNCAS9 ENZYME

Context

Scientists have developed an improved genome-editing tool. This tool, called enhanced FnCas9, offers more precise and efficient DNA modifications compared to current CRISPR technologies.

Key Findings

- Enhanced FnCas9 cuts target DNA more effectively than the original FnCas9.
- It has fewer off-target effects, making it more reliable for precise gene editing.
- The enhanced FnCas9 can identify and correct single-nucleotide changes more effectively, potentially improving genetic diagnostics.
- **Therapeutic Applications**
- **Testing for Blindness:** The team tested enhanced FnCas9 on cells with a mutation causing Leber congenital amaurosis type 2 (LCA2), a form of inherited blindness.

The tool successfully corrected the mutation in iPSCs (induced pluripotent stem cells) derived from a patient's skin cells.

- **Results:** Most corrected iPSCs showed normal levels of the protein RPE65, which is crucial for vision. The editing was highly efficient, with some colonies showing complete correction of the mutation.

FACT BOX

About CRISPR-Cas9

- CRISPR-Cas9 is a popular **gene-editing tool** that can add, remove, or alter DNA sequences in various organisms.

- It uses a **guide-RNA (gRNA)** to direct the **Cas9 enzyme** to a specific DNA sequence. Cas9 then cuts the DNA, and the cell's repair mechanisms fix the cut, incorporating the desired changes.

- CRISPR-Cas9 can sometimes cut unintended parts of the genome, leading to off-target effects.

- **Enhanced FnCas9 Development**

  - **Objective:** Researchers aimed to improve the precision and efficiency of genome editing by modifying the FnCas9 enzyme from Francisella novicida bacteria.

  - **Modifications**: They enhanced FnCas9 by altering amino acids to improve its binding with the PAM sequence (a DNA sequence required for Cas9 to cut). This adjustment increases the enzyme's efficiency and flexibility in editing hard-to-access regions of the genome.

KERALA'S FINAL COASTAL ZONE MANAGEMENT PLAN

Context

The final Coastal Zone Management Plan (CZMP) of Kerala is likely to be submitted to the Union Ministry for Environment, Forest and Climate Change for approval shortly.

What is Coastal Zone Management (CZM)?

- Coastal zone management (CZM) is a process of managing the coast, in all aspects of the including geographical and political boundaries, to achieve sustainability.

- India has an **exclusive Economic Zone (EEZ)** of 2.02 million sq. km and a long coastline of 8,118 km with rich and diverse marine living resources.

- Coastal Regulation Zone (CRZ) is the area up to 500m from the high-tide line and a stage of 100m along banks of creeks, estuaries, backwater and rivers subject to tidal fluctuations.

- The CRZ Notification, first issued in 1991 and revised in 2011 and 2019, regulates activities in India's coastal areas.

Classification of Coastal Areas

- The new CRZ norms aim to promote sustainable development based on scientific principles.

- It classifies the coastal areas into different zones and imposes restrictions on industrial and developmental activities to protect coastal ecosystems.

- **CRZ-1:** These are ecologically sensitive areas as they help in maintaining the ecosystem of the coast. They lie between low and high tide line. Exploration of natural gas and extraction of salt are permitted

- **CRZ-2:** These areas are urban areas located in the coastal areas. Now under new coastal zone regulations 2018, the floor space index norms have been de-freezed.

- **CRZ-3:** Rural and urban localities which fall outside the 1 and 2. Only certain activities related to agriculture even some public facilities are allowed in this zone

- **CRZ-4:** This lies in the aquatic area up to territorial limits. Fishing and allied activities are permitted in this zone. Solid waste should be let off in this zone. This zone has been changed from 1991 notification, which covered coastal stretches in islands of Andaman & Nicobar and Lakshdweep

METHANE EMISSION

Context

Recent studies have highlighted a dramatic increase in methane levels since the early 2020s. Methane, a potent greenhouse gas, has seen substantial growth in its atmospheric concentration due to emissions from wetlands and fossil fuels.

Key Highlights

- **Methane Growth Rates:** From 2015-2019, methane levels increased by 7-10 parts per billion (ppb) per year. This rate jumped to 12-18 ppb per year between 2020-2023.

- **Primary Sources:** The main contributors to the rise in methane are emissions from wetlands and fossil fuel operations.

- **Climate Patterns:** Persistent La Niña conditions, along with anthropogenic warming and climate extremes, have been linked to increased wetland emissions.

FACT BOX

About Methane

- Methane is about 80 times more potent than carbon dioxide (CO_2) over a 20-year period after its release into the atmosphere.

- Methane emissions come from both biogenic sources (such as wetlands) and anthropogenic sources (such as fossil fuels).
  - ➤ The largest sources of methane are agriculture, fossil fuels, and decomposition of landfill waste.
  - ➤ India is the world's largest milk producer, and is home to 80 million dairy farmers who made 231 million tons of milk last year.
- Increased methane levels can lead to higher surface ozone levels, contributing to premature deaths and various environmental issues.
- High methane emissions exacerbate climate change, affecting agriculture, infrastructure, and human health.

Measures to Reduce Methane Emissions

- India is a Party to the United Nations Framework Convention on Climate Change (UNFCCC), and its Kyoto Protocol (KP), and the Paris Agreement (PA).
- Methods to reduce methane emission from rice:
  - ➤ **System for Rice Intensification** – To enhance rice yield from 36-49% with about 22-35% less water than conventional transplanted rice
  - ➤ **Direct Seeded Rice** – The system reduces methane emissions as it does not involve raising nurseries, puddling and transplanting. Unlike transplanted paddy cultivation, standing water is not maintained in this system
  - ➤ **Crop Diversification Programme –** Methane emissions is avoided due to diversion of paddy to alternate crops like pulses, oilseeds, maize, cotton and agro forestry.
- **National Livestock Mission:** It promotes green fodder production, silage making, chaff cutting, and total mixed ration.
- **Krishi Vigyan Kendras** for creating awareness on climate resilient practices.
- **Gobar (Galvanizing Organic Bio-Agro Resources) –Dhan' scheme**
- **New National Biogas and Organic Manure Programme**

AGARWOOD (AQUILARIA MALACCENSIS)

Context

India has successfully avoided the inclusion of Aquilaria malaccensis (agarwood) in the Review of Significant Trade (RST) by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

Key Highlights

- **Export Quota**: To manage and regulate the trade of agarwood while ensuring its sustainable use and

preventing over-exploitation, CITES notified a new export quota for agarwood from India has been set, starting from April 2024. The quota is:
  - ➤ 1,51,080 kg/year for agarwood chips and powder/ sawdust.
  - ➤ 7,050 kg/year for agarwood oil.
- **Benefit to Farmers:** The development is expected to benefit farmers in Assam, Manipur, Nagaland, and Tripura, where agarwood is widely cultivated by providing a legal way to trade their agarwood products and potentially increase their income.

About Agarwood

- Agarwood is a **valuable aromatic resin** produced by the *Aquilaria malaccensis* **tree** when infected by certain fungi. Natural infections typically occur in older trees, but can be induced artificially in younger plants.
- *Aquilaria malaccensis* is extensively cultivated in Northeast India, with around 13.99 crores (139.89 million) plants.
- **Uses:** Agarwood is valued for its use in **incense, perfumes, medicine, air fresheners, and has properties like anti-inflammatory, anti-rheumatic, analgesic, and antioxidant**.
- *Aquilaria malaccensis* was first listed in **Appendix II (**regulated but not banned from trade**) of CITES in 1995**, following a proposal by India.

FACT BOX

About CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora)

- **Came into force in**: 1975
- **Location:** Geneva, Switzerland
- CITES is an international agreement aimed at ensuring that international trade in wild animals and plants does not threaten their survival.
- It regulates trade by listing species in three appendices based on their conservation status and the level of protection they need.

ENDANGERED CHARLES DARWIN'S FROG

Context

An international team of biologists has made a groundbreaking discovery about the Charles Darwin's frog (Minervarya charlesdarwini), an endangered species native to the Andaman Islands. This research reveals fascinating and previously unknown aspects of this frog's reproductive behavior.

Key Highlights

- **Upside-Down Spawning:** The Charles Darwin's frog lays its eggs in a unique upside-down position on the inner walls of tree cavities or root buttresses filled with water. This is different from other frogs, which lay eggs in a more traditional position.

- **Egg Development:** Once the eggs are laid, they eventually fall into the water below, where they hatch into tadpoles.

- **Male Calls:** Male Charles Darwin's frogs use three types of calls to attract females: advertisement calls, aggressive calls, and combat calls.

- **Physical Confrontations:** If vocal calls do not deter rival males, physical fights involving kicking, boxing, and biting occur.

- **Mating Disruptions:** Unpaired males often try to interrupt the mating pairs, leading to intense battles. The upside-down position of the mating pair might help prevent rivals from disturbing them.

- **Use of Trash:** Due to habitat loss, these frogs are increasingly found breeding in discarded containers like plastic and metal trash. This shift from natural breeding sites to human waste is a growing concern.

- **Implications:** Researchers are worried about the long-term effects of this behavior on the frogs' survival and are calling for efforts to protect their natural habitats.

🔍 FACT BOX

About Charles Darwin's frog (Minervarya charlesdarwini)

- Charles Darwin's frog is believed to be an **arboreal (tree living) species** of **tropical moist forest**.

- Breeding takes place in tree holes and there is larval development meaning tadpoles will emerge from the eggs.

- **Location: Endemic to the Andaman Islands**
  - ▶ Charles Darwin's frog is only known from Mount Harriet and Saddle Peak in the Andaman Islands of India.

- The species is classified as 'Vulnerable' by the **International Union for Conservation of Nature (IUCN).**

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23 | 24 | 26 | 27 | 28 | 29 | 32 | 38 | 43
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86 | 88 | 89 | 90 | 91 | 93 | 95 | 97 | 100

TOP 100 ALL INDIA RANKING CSE 2022

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