

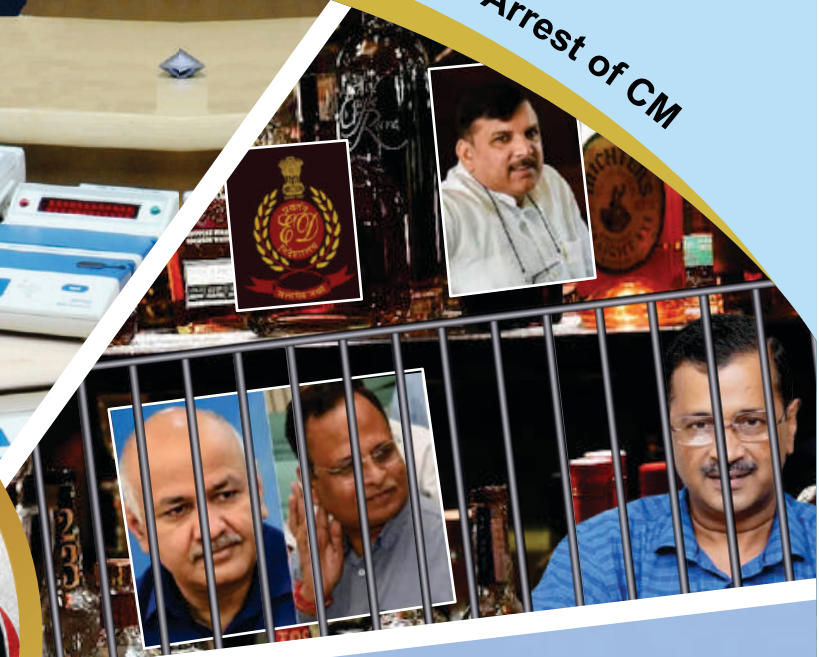
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Arrest of CM



Iran and Israel Rivalry



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- Iran and Israel Rivalry
- Kachchatheevu Island Conflict
- PMLA 2002 and Arrest of Chief Minister in India
- Domestic Violence Act Applicable to All Women
- VVPAT vs Re – Counting and Verification of Votes

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# Foreword

## Dear Aspirants,

This magazine by the Plutus IAS team is designed in such a fashion that it holistically covers all the relevant and important topics for the Civil Services Exam to make aspirants exam-ready. Plutus IAS Current Affairs Magazine is a secondary source of information; the newspaper will remain the primary source for the preparation of Current Affairs.

Now, Current Affairs are no longer merely current; they are Contemporary Affairs. Questions asked in both Prelims as well as the Mains assess the conceptual clarity of an aspirant. This magazine is prepared with the aim of helping you understand the interlinkages of both Static and Dynamic news events and internalize the concepts required to crack this examination.

The Plutus IAS team wishes you all the best. Prepare for the UPSC Civil Services Examination with a calm, composed, or serene mind and some patience to crack this examination in one go.

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### Sources:

The Hindu | The Indian Express | The Economic Times | Press Information Bureau | PRS Legislative Research | IDSA: Institute for Defense Studies and Analysis | Yojana and Kurukshetra | Lok Sabha and Rajya Sabha Debates.

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## DOMESTIC VIOLENCE ACT APPLICABLE TO ALL WOMEN IRRESPECTIVE OF RELIGION

### Why in the News?

The recent observation by the Delhi High Court underscores that the Protection of Women from Domestic Violence Act, 2005, serves as a tool for social justice intended to protect all women regardless of their religious beliefs or social status. Justice Anoop Kumar Mendiratta emphasised that the law was created to uphold the rights of individuals facing 'domestic violence' within a 'domestic relationship'.

### About Protection of Women from Domestic Violence Act, 2005

#### Definition of Domestic Violence

The Act defines domestic violence as any act, omission, or commission by the respondent that harms or injures or endangers the health, safety, life, limb, or well-being, whether mental or physical, of the aggrieved person or tends to do so and includes:

- **Physical Abuse:** This includes any act that causes physical harm or injury, such as hitting, kicking, slapping, or pushing.
- **Sexual Abuse:** This includes any act of a sexual nature that is forced or coerced upon the aggrieved person.
- **Verbal and Emotional Abuse:** This includes insults, name-calling, threats, intimidation, and humiliation.
- **Economic Abuse:** This includes depriving the aggrieved person of financial resources or controlling their access to money.

#### Who is Covered under the DV Act?

The DV Act adopts a broad definition of "domestic relationship," ensuring a wide net of protection. Here's a breakdown of women who can seek protection under the Act:

- **Close Family Members:** Mothers, sisters, wives, and

widows are explicitly included, recognising the potential for violence within familial relationships.

- **Partners in Shared Households:** The Act extends protection to women in live-in partnerships, irrespective of a formal marriage or adoption, acknowledging the realities of modern relationships.
- **Female Relatives in Joint Families:** Women residing with their male relatives in a joint family structure are also covered, understanding the complexities of domestic dynamics within extended families.

#### Who can File a Complaint?

**Women Experiencing Domestic Violence:** Any woman who has endured domestic violence has the legal right to file a complaint, initiating the process of seeking justice and safety.

**Mothers Acting on Behalf of Children:** Recognizing the vulnerability of children, the Act allows mothers to file complaints on behalf of their minor children (regardless of gender) who have experienced domestic violence within the household.

**Children Included in Applications:** If a woman files for her own protection, her children can be included as co-applicants in the court proceedings, ensuring their well-being is addressed alongside the mother's.

**It's important to note that the DV Act does not allow female relatives of the husband/partner to file complaints against the wife/female partner, focusing on violence within a heterosexual relationship.**

#### Available Relief Measures under the DV Act

- **Protection Orders:** These court-ordered safeguards aim to shield women from further physical or emotional harm by the respondent. These orders can restrict the respondent's contact with the woman or limit their access to the shared household.
- **Residence Orders:** These orders grant women the right to stay in the shared household, irrespective of ownership. This ensures they have a safe space to live, espe-



cially if they have children.

- **Financial Support:** The Act recognises the economic impact of domestic violence. Women can seek financial assistance (maintenance) for themselves and their children, ensuring their financial security and independence.
- **Temporary Child Custody:** During legal proceedings, women can obtain orders for temporary custody of their children. This is crucial to ensure the children’s safety and well-being while the court makes long-term decisions.
- **Compensation for Damages:** Women can claim compensation for any physical or emotional harm caused by domestic violence. This serves as a form of justice and helps cover medical expenses or other losses incurred.

**Support System for Women**

- **Protection Officers:** Government-appointed officers play a vital role. They assist women in filing complaints, accessing legal aid, and ensuring court order enforcement. These officers act as a bridge between women and the legal system.
- **Service Providers:** These are NGOs that collaborate with various stakeholders, including the police and legal aid organisations. Service providers offer a holistic range of support, including legal aid, shelter in short-stay homes for women and children, counselling, medical care if needed, and even vocational training to empower women to achieve economic independence.

**Factors behind Domestic Violence**

- **Power Imbalance:** Domestic violence often stems from an unequal distribution of power within relationships, where one partner exerts control over the other through physical, emotional, or financial means.
- **Social Norms and Gender Roles:** Traditional gender norms and expectations may perpetuate attitudes that condone or justify violence against women. Societal expectations regarding masculinity and femininity can reinforce power differentials and normalise abusive behaviour.
- **History of Abuse:** Individuals who have experienced or witnessed violence in their childhood or past relationships may be more likely to perpetrate domestic violence or become victims themselves.
- **Stress and Economic Hardship:** Financial strain, unemployment, or poverty can exacerbate tension within households and increase the likelihood of conflict and violence. Economic dependence on the perpetrator

may also trap victims in abusive situations.

- **Lack of Education and Awareness:** Limited access to education and awareness about healthy relationships, conflict resolution, and legal rights may contribute to a lack of understanding of what constitutes acceptable behaviour within intimate partnerships.
- **Cultural and Religious Beliefs:** Cultural or religious beliefs that prioritise male authority or uphold strict gender roles may perpetuate attitudes that tolerate or justify domestic violence.

### Laws For Indian Women

<b>01</b>	<b>Hindu Succession Act (1956)</b>
<b>02</b>	<b>The Equal Remuneration Act, 1976</b>
<b>03</b>	<b>The Dowry Prohibition Act, 1961</b>
<b>04</b>	<b>Immoral Traffic (Prevention) Act, 1956</b>
<b>05</b>	<b>The Pre-conception Pre-natal Diagnostic Techniques Act, 1994</b>
<b>06</b>	<b>The Medical Termination of Pregnancy Act, 1971</b>
<b>07</b>	<b>The Commission of Sati (prevention) Act, 1987</b>
<b>08</b>	<b>The Prohibition of Child Marriage Act, 2006</b>

### Status of Domestic Violence in India

- Domestic violence persists as a significant issue in India, impacting a substantial portion of married women aged 18-49 years, as evidenced by the **National Family Health Survey (NFHS-5) 2019-2021**, which reports a prevalence rate of 29.3%. Additionally, 3.1% of pregnant women have encountered physical violence during their pregnancy.
- The prevalence of domestic violence displays **regional disparities, with Karnataka, Bihar, and Manipur exhibiting the highest rates, while Lakshadweep, Goa, and Himachal Pradesh record the lowest rates.** Recent NFHS-5 data indicates that 30% of Indian women encounter domestic or sexual violence, highlighting the widespread nature of this issue. Notably, domestic violence transcends educational backgrounds, affecting women across all strata of society, including educated households.

### JUDGES IN POLITICS



#### Why in the News?

The topic of judges assuming official positions post-retirement has sparked discussions, especially following a recent incident involving a former Calcutta High Court judge from West Bengal who joined a political party shortly after leaving the judiciary, prompting inquiries into judicial ethics.

#### Constitutional Provisions Related to Retired Judges in India

- **Article 124(7)** of the Constitution prohibits a retired judge of the Supreme Court from practising before any court or authority within India. This provision upholds the independence and impartiality of the judiciary. Nonetheless, the Constitution does not explicitly prohibit retired judges from taking on assignments or appointments after their retirement.
- **Article 128** grants authority to the Chief Justice of India, with the President's approval, to invite a retired Judge of the Supreme Court, Federal Court, or High Court, who is qualified for Supreme Court appointment, to serve and function as a Supreme Court Judge.
- **Article 220** prohibits High Court judges from pleading before any authority in India except the Supreme Court and other High Courts.

#### Cases and Recommendations Regarding Judges Joining Politics

- In the case of **Bombay Lawyers Association v. Union of India**, the **Supreme Court rejected a public interest litigation (PIL) petition that sought to enforce a mandatory cooling-off period of two years for retired judges** before they could accept post-retirement appointments. The highest court emphasised that it **did not have the authority to impose such a cooling-off period**, indicating that this matter falls outside its jurisdiction.
- **The 14th Law Commission**, chaired by MC Setalvad, suggested that judges should refrain from taking up post-retirement positions offered by the government and **proposed the implementation of a cooling-off period after retirement.** However, there exists no explicit rule that prohibits judges from accepting such positions.

#### Concerns Arising From Judges Entering Politics

- **Contradiction with Constitutional Value:** The Indian Constitution's third Schedule, which pertains to oath-taking, mandates judges to pledge to execute their duties without partiality. However, their involvement in politics raises concerns regarding their impartiality and propriety.
- **Erosion of Public Trust:** Judges' participation in politics can undermine public trust in the judiciary as a whole. In the case of *C. Ravichandran Iyer vs Justice A.M. Bhattacharjee* (1995), the Supreme Court emphasised the necessity of judges possessing impeccable integrity and unwavering character to maintain the purity of justice.
- **Breach of Judicial Impartiality:** The entry of judges into the political arena raises doubts about the neutrality of the decisions made during their tenure. Judicial officers are expected to remain impartial and base their judgments solely on factual evidence and legal principles.
- **Contravention of Checks & Balances Principle:** The Indian Constitution operates on the principle of checks and balances among different branches of government. An independent judiciary acts as a check on both the executive and legislative branches. However, judges' involvement in politics could upset this balance.
- **Undermining Judicial Independence:** Judges' foray into politics undermines judicial independence and introduces the risk of political influence affecting the judiciary's functioning. Judicial independence is crucial for upholding the rule of law.
- **Conflict of Interest Concerns:** Judges' entry into politics, especially following controversial statements or rulings during their tenure, raises concerns about

potential conflicts of interest. Judges are expected to avoid such conflicts and uphold their integrity.

- **Ethical Conduct of Judges:** Judges’ involvement in politics goes against the ethical conduct expected of them. Judges are expected to uphold the dignity, independence, impartiality, integrity, decency, and diligence both inside and outside the courtroom to enhance public confidence in the judiciary.



**Arguments in Support**

- **Utilisation of Expertise:** Advocates posit that judges possess invaluable expertise and experience that could significantly benefit the government and public service sectors. By accepting official roles post-retirement, judges can contribute to policymaking and governance based on their profound understanding of legal principles and judicial procedures.
- **Upholding Integrity in Official Positions:** Supporters of post-retirement appointments contend that judges are held to elevated standards of integrity throughout their careers, which are likely to persist in their roles in official positions. Appointing retired judges to key positions ensures the maintenance of ethical standards and impartiality in decision-making processes.
- **Addressing Vacancies Requiring Specialised Knowledge:** Certain official positions demand specific expertise or comprehension of legal intricacies, areas in which retired judges are well-versed. By appointing retired judges to such roles, there’s a guarantee that critical positions are occupied by individuals with pro-

found insights into legal matters, thereby contributing to effective governance and administration.

- **Preservation of Talent Pool:** Offering post-retirement appointments ensures the retention of the knowledge and skills of seasoned jurists within the country. It facilitates the continued contribution of judicial veterans to public service endeavours beyond their active tenure on the bench.

**Way Forward**

- **Enactment of Legislation Establishing a ‘Cooling-off Period’:** In accordance with the Supreme Court’s recommendation, the Parliament should enact legislation mandating a cooling-off period of at least two years before judges can join political parties or be appointed to political positions by the government.
- **Extension of Judges’ Retirement Age:** Consideration should be given to increasing the retirement age of judges from 60 to 70 years. This extension would help mitigate the risk of conflicts of interest arising from post-retirement employment opportunities for judges.
- **Implementation of Conditions for Tribunal Appointments:** Clear conditions should be prescribed for the appointment of judges to tribunals. Factors such as expertise in constitutional matters or Public Interest Litigations (PILs), years of legal practice, research proficiency, and previous experience on benches handling similar cases need to consider before making post-retirement appointments.
- **Promotion of Self-regulation among Constitutional Office Holders:** Individuals occupying constitutional positions should adopt self-regulation as a guiding principle. For instance, retired justices like Chelameswar and Kurian Joseph, along with former Chief Justices of India Kapadia, Lodha, and Thakur, have set an example by refraining from pursuing post-retirement involvement in politics or accepting nominations to political positions.

**CINEMATOGRAPH (AMENDMENT) BILL, 2023 GETS APPROVED BY THE PARLIAMENT**

**Why in the News?**

The Cinematograph (Amendment) Bill, 2023, was recently approved by both the Lok Sabha and Rajya Sabha. This bill extends the jurisdiction of the law beyond censorship to encompass copyright matters and introduces rigorous measures against piracy. Its primary objective is to make amendments to the current Cinematograph Act of 1952.

## Significant Provisions of the Bill

### Combating Film Piracy

- **Stiffer Penalties:** The bill aims to deter film piracy by introducing stricter punishments for unauthorised recording and distribution of copyrighted content. Offenders could face jail terms ranging from 3 months to 3 years and fines between Rs. 3 lakhs and 5% of the film's production cost.

### Streamlined Television and Online Broadcasting

- **Recertification for Other Media:** Previously, adult-rated films were banned from television. Broadcasters often made voluntary cuts and sought re-certification for a U/A rating from the CBFC. The bill formalises this practice, allowing films to be recertified for television and "other media" platforms.
- **Perpetual Validity of Certificates:** The 10-year validity period for CBFC certificates has been removed, granting them perpetual validity. This eliminates the need for filmmakers to re-certify their films after a decade.

### Expanding Copyright Protection

- **Beyond Censorship:** This amendment broadens the scope of the Cinematograph Act, which currently focuses primarily on censorship, to encompass copyright protection. This aligns with the evolving film distribution ecosystem and aims to safeguard the intellectual property rights of filmmakers and content creators.

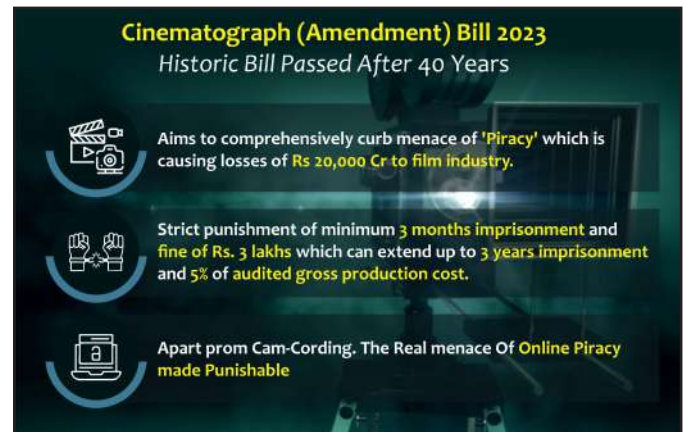
### Limited Government Intervention in CBFC Decisions

- **CBFC's Autonomy:** The bill emphasises the autonomy of the Central Board of Film Certification (CBFC). This move aligns with the 2000 Supreme Court judgement in *K.M. Shankarappa vs Union of India*, which limited the government's revisional powers over CBFC decisions.

### Enhanced Age-Appropriate Viewing

- **Granular Age Ratings:** The amendment introduces a new age rating system for films that require parental guidance. The current U/A category will be **split into three distinct categories**:
  - U/A 7+,
  - U/A 13+,
  - U/A 16+

This aligns with age-based classifications already existing for streaming platforms and recommendations put forward by the **Shyam Benegal Committee**.



### The Need for a Modern Film Law

The Indian film industry faces a significant challenge: rampant online piracy. While the Cinematograph Act of 1952 governs film certification for theatrical release, it lacks provisions to address the piracy crisis plaguing the digital age.

### Limitations of the Existing Law

- The 1952 Act focuses solely on theatrical releases, leaving online content vulnerable to piracy.
- Its age-based film certification categories are limited, lacking the granularity needed for today's diverse audience.

### The Rise of Piracy and OTT Platforms

- India has emerged as a global leader in pirated content consumption, highlighting the urgency for legislative action.
- The booming OTT industry operates under separate regulations, creating inconsistencies in content governance.

### Efforts Towards Modernization

- Recognising these issues, the government has made attempts to update the Cinematograph Act.
- Committees led by Justice Mukul Mudgal and filmmaker Shyam Benegal were formed to address film certification and legal frameworks.

### The Need for a Comprehensive Solution

- These efforts underscore the need for a modernised film law that effectively combats piracy across all platforms – theatrical, online, and emerging media.
- A robust legal framework is crucial to safeguard intellectual property rights, promote content creation, and ensure a healthy and sustainable film industry in India.

## About the Cinematograph Act of 1952

The Cinematograph Act of 1952 serves as a cornerstone for film regulation in India. Enacted by the Parliament, it aims to ensure that films exhibited publicly adhere to societal norms and sensitivities.

### Key Provisions

- **Certification Guidelines:** The Act establishes principles for film certification, considering factors like national security, public order, decency, and respect for the judiciary.
- **Central Board of Film Certification (CBFC):** Section 3 empowers the establishment of the CBFC, popularly known as the Censor Board. This statutory body under the Ministry of Information and Broadcasting regulates film exhibitions by following the Act's provisions.
- **Appellate Tribunal:** The Act allows for the formation of an Appellate Tribunal to address appeals against decisions made by the CBFC.

## EFFECTS OF REGISTERING PARENTS RELIGION AT BIRTH



### Why in the News?

In a significant move, the **Registration of Births and Deaths (Amendment) Act, 2023**, which received parliamentary approval on August 11 of the previous year, brings about a requirement for the **recording of parents' religious affiliations** during birth registrations, as highlighted in the latest headlines on April 5.

This Act now mandates the **establishment of a centralized national birth and death database**. This database will serve as a mechanism for updating multiple systems, including but not limited to the National Population Register (NPR), electoral rolls, Aadhaar number, ration card, passport, driving license, property registration, and any others specified in subsequent notifications. The Amendment stipulates that if the parents of the child adhere to different religious beliefs, their **respective religions must be recorded and documented alongside the child's religion** in the registration records.

### Negative Impact of Raising Identity Consciousness on a Child Behavior

Legally, the term "adult" typically pertains to physical attributes, whereas **religion resides in a quasi-metaphysical realm**. Bundling religious affiliation with the child's inherited DNA imposes constraints on their autonomy and poten-

tially impedes their development.

Studies indicate that a staggering 80 percent of a child's brain development occurs within the initial 1,000 days of life. During this critical period, the prevailing cultural and familial environment plays a pivotal role in shaping the child's enduring attitudes and values. However, this influence isn't always conducive to fostering a balanced perspective or nurturing individual growth.

That's Why identity consciousness have these negative impacts:

- **Limited Self-Expression:** Imposing a specific identity on a child may inhibit their ability to freely express themselves and explore their individuality. This can lead to feelings of frustration, confusion, and even identity crisis.
- **Social Alienation:** Being confined to a predetermined identity may isolate the child from peers who do not share the same characteristics or beliefs. This can result in social ostracization and feelings of loneliness or marginalization.
- **Psychological Strain:** Forced conformity to a particular identity can cause psychological stress and internal conflict, as the child may struggle to reconcile their true self with the imposed identity. This can manifest in anxiety, depression, or other mental health issues.
- **Stifled Growth:** Identity restrictions may impede the child's personal and intellectual growth by limiting their exposure to diverse perspectives and experiences. This can hinder their ability to develop critical thinking skills, empathy, and tolerance towards others.
- **Resentment and Rebellion:** Children subjected to identity restrictions may develop resentment towards authority figures or the societal norms that impose such limitations. This can lead to rebellious behavior, defiance, or withdrawal from social interactions.
- **Inhibited Creativity:** Confining a child to a rigid identity framework may stifle their creativity and innovation. They may feel constrained in exploring new ideas, interests, or pursuits that deviate from the prescribed identity, resulting in missed opportunities for personal growth and fulfillment.

### Registration of Birth and Death Amendment Act, 2023

The Registration of Births and Deaths (Amendment) Bill, 2023 aims to make changes to the existing Registration of Births and Deaths Act of 1969. This act primarily deals with the regulation and registration of births and deaths across the country.

Under the Concurrent List, both the Parliament and state leg-

islatues have the authority to enact laws pertaining to the registration of births and deaths. The proposed amendment seeks to address any shortcomings or updates necessary in the original act to ensure more effective regulation and administration of this crucial aspect of civil documentation.

### Features of the Act:

The Digital Birth Certificates provision within the Bill introduces a modernized approach to documentation, aiming to streamline the process by offering comprehensive digital certificates that serve multiple purposes, thereby reducing the necessity for numerous documents to validate birth details.

Moreover, the proposed legislation suggests integrating Aadhaar details of parents and informants into birth certificates, expanding the scope of Aadhaar inclusion to encompass various reporting authorities, such as medical officers, jailors, and institution managers.

Furthermore, the establishment of a centralized database is proposed to manage birth and death records, enhancing service efficiency and ensuring the accuracy and currency of information. This centralized repository will not only update birth certificates but also synchronize with the National Population Register (NPR), ration cards, and property registrations.

Additionally, the Bill mandates States to register births and deaths on the Centre's Civil Registration System (CRS) portal and share the data with the Registrar General of India, an entity operating under the Union Home Ministry, ensuring a unified and coordinated approach to civil registration across the nation.

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## MODEL CODE OF CONDUCT



### Why in the News?

The implementation of the Model Code of Conduct (MCC) has commenced following the Election Commission of India's (ECI) declaration of voting dates for the 2024 Lok

Sabha elections. This marks a notable milestone in electoral administration.

### About MCC

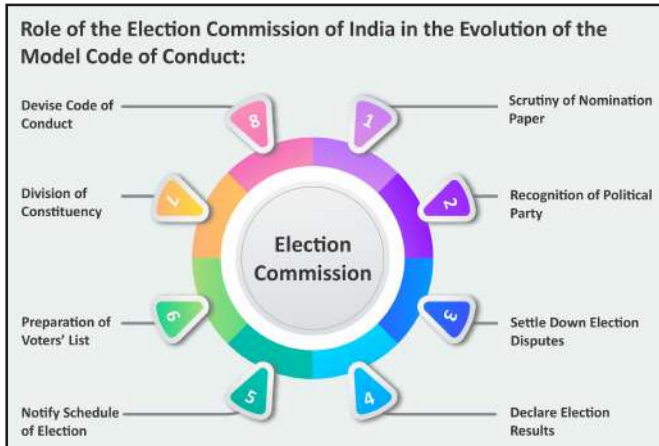
- The **Model Code of Conduct (MCC)** stands as a collective agreement among political parties, wherein they commit to regulating their behaviour during elections according to its provisions.
- This collaborative effort aids the Election Commission (EC) in fulfilling its **constitutional mandate under Article 324, empowering it to oversee and ensure the conduct of free and fair elections** for both the Parliament and State Legislatures.
- Operative from the announcement of the election schedule until the declaration of results, the **MCC imposes restrictions on governmental actions such as announcing financial grants, promising infrastructure development, or making ad hoc appointments in government or public enterprises.**
- While lacking statutory authority, the MCC has gained significance over the past decade due to its stringent enforcement by the EC. In instances where specific MCC provisions are breached, corresponding legal statutes such as the **Indian Penal Code (IPC) of 1860, Code of Criminal Procedure (CrPC) of 1973, and Representation of the People Act (RPA) of 1951** can be invoked for enforcement.

### History and Evolution of MCC

- The inception of the Model Code of Conduct (MCC) **traces back to Kerala, where, in 1960, ahead of the state's Assembly elections, the administration formulated a preliminary code** addressing crucial facets of electoral activities such as processions, political gatherings, and speeches.
- Formally **introduced** by the Election Commission of India (ECI) **in 1974**, the MCC underwent institutionalisation with the establishment of bureaucratic entities at the district level to supervise its adherence. Initially, up **until 1977, the MCC primarily regulated the conduct of political parties and candidates.**
- In response to instances of incumbent parties abusing their authority by **monopolising public spaces and utilising public funds** for promotional activities, the **Election Commission expanded the MCC in 1979** to incorporate guidelines specifically targeting ruling political parties.
- The revised MCC comprised seven segments, including provisions dedicated to governing the behaviour of ruling parties subsequent to the announcement of

elections:

- **Part I:** General conduct guidelines for candidates and political entities.
- **Parts II and III:** Regulations concerning public assemblies and processions.
- **Parts IV and V:** Directives for conduct on polling day and within polling stations. Since its revision in **1979**, the MCC has undergone multiple amendments, with the most recent update occurring in 2014.



**Significant Provisions of the Model Code of Conduct (MCC)**

The MCC outlines guidelines for ethical conduct during elections in India. Here’s a breakdown of its main provisions:

**Promoting Harmony**

- Parties and candidates should avoid actions that could worsen existing divisions between castes, communities, religions, or language groups.
- Similar to **Section 123(3) of the Representation of the People Act, 1951**, the MCC prohibits using religion, race, caste, community, or language to spread hatred or manipulate voters.
- Criticism of opposing parties should focus on their policies, past performance, and plans, not personal attacks.

**Organising Events**

- Parties must **notify local police about the time and location of public meetings to allow for proper security arrangements.**
- If multiple candidates plan processions on the same route, communication beforehand is crucial to avoid clashes.

- Displaying or **burning effigies of political figures** from other parties is **not permitted.**

**Polling Day Procedures**

- Only eligible voters and individuals with official Election Commission (EC) authorisation can enter polling booths.
- Authorised party representatives at polling stations must **wear clear identification badges or cards.**
- Any information slips they provide to voters must be on plain white paper with no symbols, candidate names, or party affiliations.
- The **EC will appoint observers to monitor the election** and address any concerns raised by candidates regarding the conduct of the polls.

**Restrictions on the Ruling Party**

- Introduced in 1979, the **MCC imposes limitations on the ruling party’s behaviour.** It prohibits ministers from combining official visits with election campaigning or using government resources for political purposes.

**Challenges with the Model Code of Conduct (MCC)**

The MCC, while promoting fair elections, faces some limitations:

- **Limited Enforcement:** The MCC lacks legal teeth. This raises questions about its effectiveness and the Election Commission’s ability to ensure a fair playing field.
- **New Threats:** Technological advancements and social media have given rise to new forms of electoral malpractice, like using them to influence voters illegally. The MCC might not fully address these emerging challenges.
- **Uneven Response:** Sometimes, the Election Commission’s response to violations by powerful politicians has been slow or weak. This weakens the MCC and emboldens them to disregard the rules.
- **Limited Power:** The Commission can’t directly disqualify candidates for misconduct. It can only recommend legal action, which can be a lengthy process.
- **Party Accountability Gap:** The ECI lacks the authority to deregister parties for electoral violations. This creates a situation where parties might face no real consequences for breaking the rules.

**Way Forward**

- **Legal Force:** A key proposal involves giving the MCC le-

gal teeth. The Standing Committee on Personnel, Public Grievances, Law, and Justice (2013) recommended integrating it into the Representation of the People Act (1951) to make it legally enforceable.

- **Leveraging Existing Laws:** While not currently a legal code itself, some MCC provisions can be enforced through existing legal frameworks like the Indian Penal Code, Code of Criminal Procedure, and Representation of the People Act.
- **Addressing Pre-MCC Advantage:** The Law Commission (2015) identified a potential advantage enjoyed by incumbent parties. They highlighted the use of government-funded advertisements to showcase achievements before the official implementation of the MCC. To ensure a level playing field, the Commission suggested a ban on such advertisements in the months leading up to elections.
- **Monitoring Digital Channels:** Utilising technology, including AI-powered systems, can offer valuable support in monitoring and preventing MCC violations on social media and other digital platforms. This can enhance the effectiveness of the code in the digital age.

## INTERNET SHUTDOWNS IN INDIA



### Why in the News?

India has consistently held the top position globally for internet shutdowns over the span of five years, constituting 60% of all worldwide instances of blackout from 2016 to 2022.

### Status of Internet Shutdowns in India

- India has the dubious distinction of leading the world in internet shutdowns, experiencing a significant **780 internet blackouts between 2014 and 2023**. Just in **2023, there were over 7,000 hours of internet disruptions** documented in the country.
- These shutdowns are **often implemented in response to major events, such as the protests** surrounding the **Citizenship Amendment Act**, the **abrogation of Article 370**, and the **Farm Bills**.
- The state of Jammu and Kashmir has been particularly affected by internet restrictions, witnessing a staggering **433 shutdowns in the past twelve years**. Furthermore, Manipur experienced the **longest internet blackout in the country, lasting from May to December 2023**.

- These frequent and lengthy internet shutdowns have sparked critical discussions about whether India is adhering to international standards regarding internet access.
- A recent **report by Freedom House** paints a concerning picture: Global internet freedom has been on a **downward slope for 13 years straight**, with online human rights taking a hit in 29 countries.
- Interestingly, India's approach to internet restrictions differs from the global trend. While **internet shutdowns worldwide are most commonly used to quell protests, India's internet outages are primarily localised, affecting specific regions like districts, cities, and villages**.

### Number of internet shutdowns in India by state in 2022

Jammu & Kashmir:	49
Rajasthan:	12
West Bengal:	7
Haryana:	4
Jharkhand:	4
Andhra Pradesh:	1
Arunachal Pradesh:	1
Assam:	1
Bihar:	1
Manipur:	1
Meghalaya:	1
Odisha:	1
Punjab:	1



### Legislative Frameworks

India's internet shutdown practices are enabled by a combination of legal loopholes. Here's a breakdown of the key laws involved:

- **Indian Telegraph Act:** This act, dating back to 1885, grants states broad authority to restrict internet access during "public emergencies" or for "public safety." However, the act lacks clear definitions for these terms, creating an environment for potential misuse.
- **Section 69A of the IT Act:** This section empowers the government to censor online content. While its stated aim is to curb harmful or unlawful content, it has been used to block over 55,000 websites, raising concerns about freedom of expression.
- **Unlawful Activities (Prevention) Act:** This law allows the government to block URLs associated with banned organisations. A notable example is the blocking of The Caravan magazine's website, highlighting the potential



for misuse of this act.

### Impact of Internet Shutdown

- **Fundamental Rights Violations:** Court rulings have established that internet access is a protected right under India's Constitution. Shutdowns directly contradict these protections for freedom of speech, the right to information, and even the right to practise professions online.
- **Economic Disruption:** Businesses, especially startups and those reliant on online operations, suffer financial losses during shutdowns. Studies estimate substantial economic costs associated with these disruptions.
- **Journalistic Obstructions:** Journalists rely on the Internet to gather and share information. Shutdowns hinder their ability to report on events, infringing on the public's right to know. This violates the fundamental right to freedom of the press established by the Supreme Court.
- **Erosion of Trust:** Frequent shutdowns breed distrust towards authorities. They raise concerns about censorship and a lack of transparency in decision-making.
- **Educational Obstacles:** Learning is hampered when internet access is restricted. Students lose access to online platforms and resources crucial for their education.
- **International Repercussions:** India's frequent shutdowns attract international criticism and damage its reputation on the global stage.

### Arguments Favouring Internet Shutdown

- **Curbing Hate Speech and Misinformation:** Shutdowns are seen as a way to prevent the spread of inflammatory content online that could incite violence or unrest. For instance, some cite the Delhi NCR internet shutdown during farmer protests on Republic Day as a measure to combat misinformation and maintain order.
- **Controlling Protests:** Supporters argue that shutdowns can hinder the organisation and mobilisation of protests that could disrupt public order and security. The government's imposition of internet restrictions in Kashmir after the abrogation of Article 370 is presented as an example of using shutdowns to prevent separatist movements.
- **Protecting National Security:** Some believe shutdowns can safeguard national security and sovereignty from external threats and cyberattacks. The government's suspension of internet services in border areas during the standoff with China is used as an illustration of shutdowns to prevent potential espionage or sabo-

tage.

- **Controlling Offensive Content:** Supporters argue that shutdowns can be used to restrict access to harmful or offensive content that might target specific groups or individuals. For example, some point to instances where internet access was blocked in certain regions to prevent the circulation of objectionable material.

## SC ISSUED A TEMPORARY SUSPENSION ON THE ESTABLISHMENT OF FACT CHECK UNITS

### Why in the News?

The Indian Supreme Court has issued a temporary suspension of the central government's notification regarding the establishment of a Fact Check Unit (FCU). This action follows a petition filed in the Bombay High Court contesting the revised Information Technology (IT) Rules of 2023, which granted the government authority to detect fake news circulating on social media platforms.

### About the Fact-Checking Unit and the Amended IT Rules

The rise of social media has created a breeding ground for misinformation, and India is taking steps to address this challenge with the introduction of the Fact-Checking Unit (FCU) in 2023.

### Fact-Checking Units:

- Established in 2023 as part of the Press Information Bureau (PIB), the FCU acts as a government-appointed watchdog specifically tasked with monitoring social media for information related to the central government and its departments.
- This unit meticulously examines online content, identifying and flagging posts that it deems to be false or misleading. By acting as the government's eyes and ears on social media, the FCU aims to combat the spread of disinformation that could potentially erode public trust in the government.

### The Amended IT Rules

To effectively combat misinformation, the FCU isn't operating in a silo. The amended IT Rules, introduced alongside the FCU in 2023, **establish a broader framework for tackling fake news**. These rules place new responsibilities on online intermediaries like Facebook, Twitter, and YouTube, along with internet service providers (ISPs) such as Airtel and Jio.

- **Proactive Measures:** Online platforms are now obligated to implement measures that prevent the spread

of inaccurate information about the government in the first place. This could involve content moderation strategies or flagging mechanisms for users to report suspicious content.

- **Fast Response:** When the FCU identifies demonstrably false information, the IT Rules mandate that these platforms take “reasonable efforts” to remove such content. This creates a system where the FCU acts as the investigator, identifying misinformation, while online platforms function as the enforcers, taking down flagged content.
- **Safe Harbor protection at risk:** The IT Rules come with a potential penalty for non-compliance. Failure to adhere to these regulations could result in online intermediaries losing their “safe harbour” protection. This legal shield currently safeguards them from lawsuits over content posted by their users. Losing this protection could expose them to significant legal liabilities.

#### Concerns Raised

- **Unclear Standards:** The Fact-Checking Unit (FCU) might have too much leeway in deciding what’s “false information” about the government. This raises concerns about biased judgments and targeting specific viewpoints, which might have a negative impact on **Freedom of Speech and Expression(Article-19)**.
- **Silencing the Dissent:** Some argue the rules, particularly the **amendment to Rule 3(1)(b)(v)**, violate fundamental rights like free speech and equality enshrined in the Indian Constitution. They fear these rules could be used to silence criticism of the government.
- **Burden on Platforms:** Social media platforms like Facebook and YouTube face a heavy task: monitoring and removing content flagged by the FCU. This could lead to excessive censorship.
- **Conflict of Interest:** The fact-checking unit’s function presents a notable conflict of interest since it assumes the roles of adjudicator, evaluator, and enforcer simultaneously.

#### Government’s Rationale Behind Establishing FCU’s

- **Tackling the False Information:** This fact-checking entity can play a crucial role in addressing the problem of false news and misinformation circulating on digital platforms, which has the potential to cause harm to society.
- **Enhancing Accountability of Social Media Intermediaries:** Designating PIB’s Fact-Check Unit as the government’s official fact-checking body will heighten the accountability of social media intermediaries such as

Facebook and Twitter. They will now be obligated to remove content that is false or misleading.

- **Strengthening Cybersecurity Measures:** PIB’s Fact-Check Unit has the capacity to bolster cybersecurity efforts by preventing the misuse of online platforms for illicit or harmful purposes. For instance, regulating the dissemination of deepfakes can be part of this endeavour.
- **Curbing Hate Speech and Violence:** The Fact-Check Unit aims to ensure adherence to Indian laws such as the IT Act and statutes pertaining to national security. This endeavour helps thwart the exploitation of social media platforms and other digital media channels to propagate hate speech or instigate violence.

#### BALANCING RENEWABLE ENERGY AND GREAT INDIAN BUSTARD CONSERVATION



#### Why in the News?

In a notable decision, the Supreme Court has broadened the interpretation of Articles 14 and 21 to encompass protection against the detrimental impacts of climate change. The judgement was given on a petition by environmentalists to protect the Great Indian Bustard.

#### More About the Case

The Supreme Court of India recently navigated a complex case concerning the critically endangered Great Indian Bustard (GIB). The bird, found in the arid grasslands of Rajasthan and Gujarat, faces numerous threats, including collisions with overhead power lines.

#### April 2021 Verdict of Supreme Court

- In a landmark verdict in April 2021, the Supreme Court prioritised the GIB’s survival. Recognising the devastating impact of power lines on these birds, the court imposed restrictions on their construction across a vast area (approximately 99,000 square kilometres) in the GIB’s primary habitat.
- This bold decision aimed to create safer airspace for the birds and encourage alternative transmission solutions. The court even suggested converting existing overhead lines to underground cables, a more bird-friendly option but also a significantly more expensive and technically challenging undertaking.

#### Threats From Power Lines

- The Great Indian Bustard (GIB) faces a significant threat from power lines criss-crossing its arid grassland hab-

it in India. A 2020 study by the Wildlife Institute of India revealed a grim statistic – power lines claim the lives of an estimated 84,000 birds of various species annually within and around the Desert National Park in Rajasthan.

- The GIB is particularly susceptible to power line collisions due to its unique physical characteristics. Unlike some birds with a broad field of vision, the GIB, along with other raptors and bustards, has extensive blind spots above its head.
- This limited frontal vision makes it difficult for them to detect oncoming power lines from a distance.
- Additionally, their large size and weight hinder their ability to manoeuvre quickly and avoid collisions at close quarters. These factors combine to make power lines a deadly threat to the already endangered GIB population.

#### Concerns Over the Impact on Achieving Clean Energy Goals

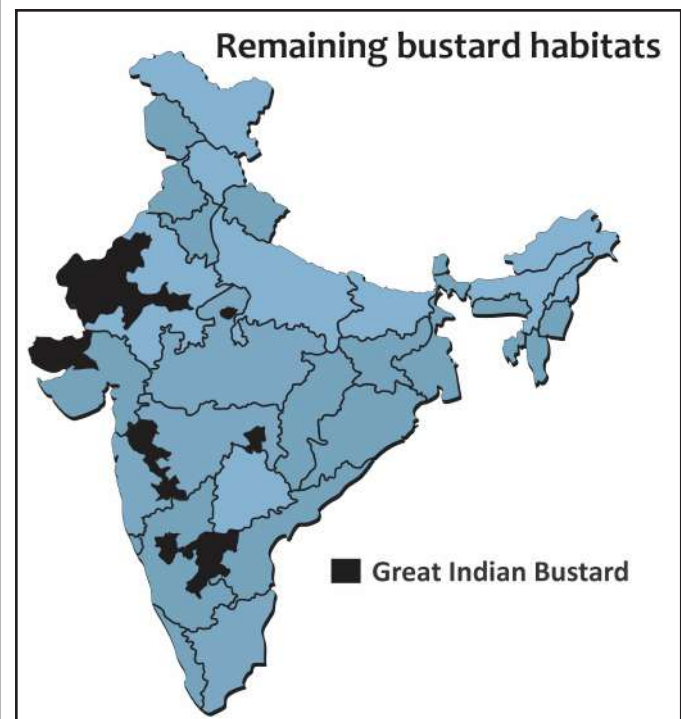
- The Ministry of Environment, Forests and Climate Change, along with the Power and New and Renewable Energy Ministries, challenged the court's order. They argued that the restrictions placed a significant burden on India's clean energy goals.
- Many of the nation's major solar and wind power plants, crucial for reducing the country's carbon footprint, are located within this designated area.
- Additionally, transitioning existing overhead lines to underground cables was deemed technically infeasible in many locations due to factors like complex terrain and soil conditions.

#### Modification in 2021 Verdict of SC

- Acknowledging the practical difficulties highlighted by the government, including technical limitations, land acquisition challenges, and high costs associated with underground cables, the Supreme Court modified its original order in March 2024.
- The court's revised approach recognises the importance of climate change action and the need for renewable energy development. It emphasises the need to find a balance that ensures the GIB's conservation alongside broader environmental protection.
- This likely involves exploring alternative solutions like carefully planned rerouting of power lines, implementing bird diverters on existing lines, and investing in research and development of new technologies that minimise bird collisions.

#### About Great Indian Bustard

- **Habitat:** The GIB thrives in open, dry, and semi-dry grasslands. These areas are typically dotted with scattered bushes and patches of scrub, providing them with a mix of open space for foraging and some cover for nesting and roosting.
- **Diet:** These adaptable birds are omnivores, meaning they consume both plant and animal matter. Their diet includes insects, grass seeds, berries, small rodents, and reptiles. In areas bordering cultivated lands, they may occasionally feed on exposed groundnuts, millets, and legume pods.
- **Distinctive Appearance:** The GIB's striking appearance makes it easy to identify. A prominent black crown adorns their forehead, contrasting beautifully with their pale neck and head. Males boast a larger crown compared to females, and their plumage colouration further differentiates the sexes.
  - **Conservation Status:**
    - **IUCN:** Critically Endangered
    - **CITES:** Appendix-I
    - **WPA 1972:** Schedule-I



#### Highlights of the Verdict

- The court acknowledged challenges with underground cables, including limited capacity, higher transmission losses, and the need for legal frameworks for land ac-

quisition.

- A 9-member committee of experts was formed to assess the feasibility of undergrounding power lines in specific areas.
- The court recognised India's significant clean energy targets and the importance of transitioning from fossil fuels for environmental, economic, and security reasons.
- The court highlighted the social, economic, and environmental benefits of solar power, emphasising its role in energy security, combating air pollution, and conserving water resources.
- The judgement highlighted the link between climate change and human rights, emphasising states' responsibility to address climate impacts through the lens of rights like a clean environment.

#### Fundamental Rights and Climate Change:

- **Article 21** guarantees the fundamental rights to life and personal liberty, while **Article 14** ensures equality before the law and equal protection of the laws for all individuals. **These constitutional provisions serve as significant foundations for the right to a healthy environment and protection against the adverse impacts of climate change.**
- The realisation of the right to life is contingent upon a clean and stable environment free from the disruptions caused by climate change. **Factors such as air pollution, changes in disease vectors, increasing temperatures, and droughts directly affect public health, which falls under the purview of the right to life as stipulated in Article 21.**
- Furthermore, the **inability of marginalised communities to adapt to or mitigate the effects of climate change** constitutes a **violation of both the right to life (Article 21) and the right to equality (Article 14)**. These underserved populations face disproportionate challenges in safeguarding their health and well-being in the face of environmental degradation and climate-related hazards.

#### Conclusion:

The Supreme Court's judgement in this case highlights the complex challenges at the intersection of environmental protection and sustainable development. Striking a balance between these goals requires careful consideration of ecological needs, technological feasibility, and economic realities. Moving forward, collaborative efforts between government agencies, energy companies, conservation groups, and scientific experts will be crucial in finding inno-

vative solutions that safeguard the GIB and support India's clean energy transition.

## UPHOLDING THE PRIVACY OF ELECTORAL CANDIDATES

#### Why in the News?

The Supreme Court has held that individuals running for office in elections possess a right to privacy regarding certain aspects of their personal lives and belongings, and they are not obligated to reveal every detail. This ruling was made in response to a specific case involving an MLA whose election was contested due to the failure to disclose vehicles as assets. The Court sided with the MLA, asserting that vehicles, once sold, do not qualify as assets for the purpose of election disclosure.

#### More About the Case

- The Supreme Court was presented with a case wherein an MLA from Arunachal Pradesh **challenged a 2023 Guwahati High Court ruling that invalidated his election** due to the omission of three vehicles from his assets declaration, as required by the **Conduct of Election Rules, 1961**.
- The MLA was accused of violating **Section 123 of the Representation of People Act (RPA), 1951**, which defines "corrupt practice" for not disclosing ownership of these vehicles.
- However, the Supreme Court ruled that a candidate's decision to maintain privacy regarding **matters irrelevant to their candidacy** or of no concern to voters **does not constitute a "corrupt practice" under Section 123 of the RPA, 1951**.
- Furthermore, such non-disclosure does **not amount to a significant defect under Section 36(4) of the RPA, 1951**. The court emphasised that voters have a right to essential information for making an informed decision about the candidate they wish to support.
- The court elucidated that candidates are not obligated to disclose every movable asset unless it notably affects their overall asset value or mirrors their standard of living.

#### About Representation of the People Act (RPA), 1951

- The Representation of the People Act (RPA), 1951, is a significant piece of legislation in India that governs elections to the Parliament and State Legislatures. Enacted by the Indian Parliament, the RPA, 1951 **lays down the framework for conducting free and fair**

elections in the country.

- It outlines the qualifications and disqualifications for candidates contesting elections, the process of voter registration, the conduct of elections, and the resolution of disputes arising from elections.

Some important key provisions of RPA,1951 are-

- **Qualifications and Disqualifications of Candidates:** Sections 8 to 10 of the RPA, 1951, outline the qualifications required for individuals to contest elections to the Parliament and State Legislatures. It also specifies various grounds for disqualification, such as being of unsound mind, being an undischarged insolvent, or holding an office of profit under the government.
- **Conduct of Elections:** Sections 21 to 29 deal with the conduct of elections, including the preparation of electoral rolls, the appointment of election officers, the nomination process for candidates, and the procedure for polling.
- **Disputes Regarding Elections:** Sections 80 to 99 provide for the resolution of disputes arising from elections. This includes the filing of election petitions, the jurisdiction of election tribunals, and the grounds on which an election can be challenged.
- **Election Expenses:** Sections 77 to 81F regulate the expenditure incurred by candidates and political parties during elections. The Act imposes limits on campaign spending to curb the influence of money in politics and requires candidates to submit expenditure statements.
- **Election Commission of India (ECI):** The RPA, 1951, establishes the Election Commission of India (ECI) as the apex body responsible for the conduct of elections. The powers and functions of the ECI are delineated in various sections of the Act, empowering it to supervise elections, enforce electoral laws, and ensure free and fair polls.

Corrupt Practices Under RPA,1951

- **Section 123** describes corrupt practices as actions undertaken by a candidate with the intention of furthering their chances of success in an election. These actions encompass various forms of misconduct, including but not limited to bribery, exertion of undue influence, dissemination of false information, and provocation of hostility based on factors such as religion, race, caste, community, or language.
- **Section 123(4)** extends the definition of corrupt practices to include the deliberate dissemination of false statements aimed at swaying the outcome of an election. This provision widens the scope of prohibited

activities to encompass deceptive tactics employed to manipulate voter opinions.

- **Section 123(2) of the Act** addresses the issue of undue influence, which encompasses both direct and indirect interference by a candidate, their agents, or any other individuals that hinders the free exercise of electoral rights. Such interference may involve tactics such as intimidation, social ostracism, expulsion from a social group or community, or coercion based on spiritual consequences.

Right to Privacy in India

- The Constitution of India, under Article 21, guarantees the right to life and personal liberty, which has been interpreted to include the right to privacy. This right extends to protecting an individual's autonomy, dignity, and personal choices from unwarranted interference by the state or any other entity.
- The Supreme Court's ruling in the case of Justice K.S. Puttaswamy (Retd.) vs Union of India affirmed the right to privacy as an intrinsic part of the fundamental freedoms guaranteed under the Constitution. The Court held that privacy is essential for the exercise of other fundamental rights and is integral to the concept of liberty and dignity.
- However, the right to privacy is not absolute and can be subject to reasonable restrictions in certain circumstances, such as national security, public order, morality, or the protection of other fundamental rights. Additionally, laws and regulations governing data protection, surveillance, and other privacy-related matters continue to evolve to address the challenges posed by technological advancements and changing societal norms.

VVPAT VS RE – COUNTING AND VERIFICATION OF VOTES



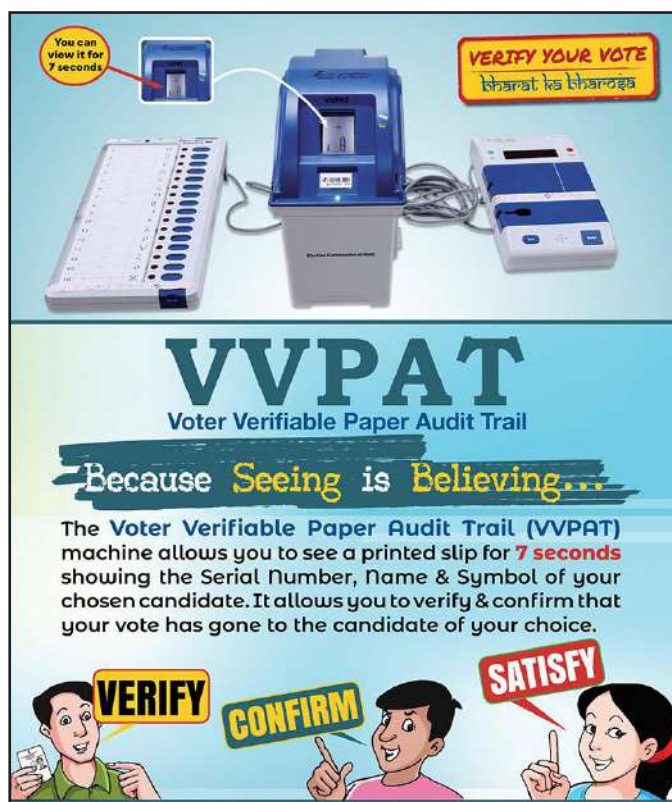
Why in the News ?

- Recently the various phases and dates of the Lok Sabha Elections 2024 of India have been announced by the Election Commission of India.
- With the announcement of various phases of the Lok Sabha General Elections 2024 to be held in India, a petition has been filed by various political parties in the Supreme Court of India regarding matching of VVPAT slips with the votes cast in EVMs.
- The bench of Justice BR Gavai and Justice Sandeep Me-

hta of the Supreme Court of India has issued a notice to the Election Commission and the Central Government and sought their response on this petition filed regarding election reforms in India.

- Congress General Secretary Jairam Ramesh has supported this decision of the Supreme Court of India and said that –**“100 percent VVPATs should be used to increase public confidence in EVMs and ensure integrity of the electoral process in general elections in India.”**
- At present, in the general elections held in India, VVPAT paper slips of 5 random polling stations are matched with EVMs to verify the vote count.
- The Lok Sabha elections 2024 to be held in India is the world’s largest democratic electoral process, in which the voters of India will cast their votes using more than 900 million Electronic Voting Machines (EVMs) and ensure their participation in this electoral process.

**Introduction of VVPAT:**



- **Full name of VVPAT** – Voter verifiable paper is the audit trail that is attached to the electronic voting machines (EVMs) in the election process. When a voter casts a vote using an EVM, the VVPAT prints a paper slip displaying the voter’s choice. This slip is visible behind glass for a few seconds, allowing the voter to verify his choice before depositing it in the box.
- Voter Verifiable Paper Audit Trail (VVPAT) is a method

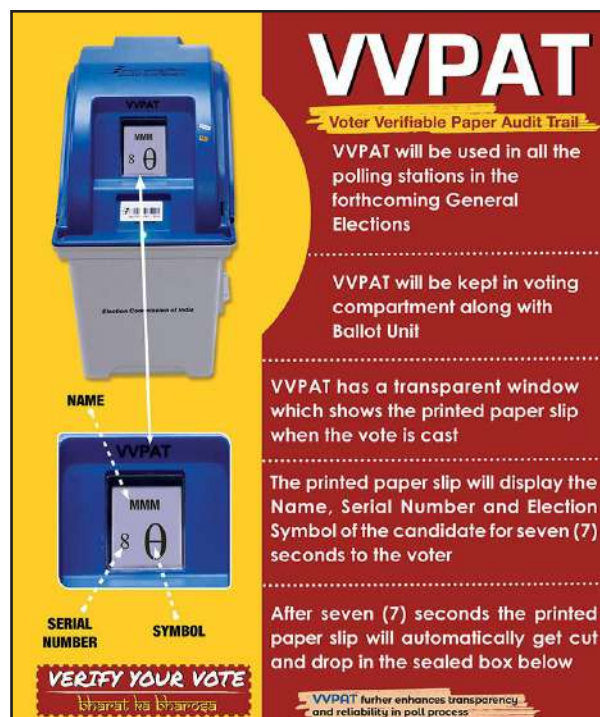
of providing feedback to voters using a ballotless voting system.

- VVPAT is intended to be an independent verification system for voting machines, designed to allow voters to verify that they are voting and to detect potential election fraud or malfunction, and to provide a means to audit stored electronic results. It has been confirmed that their vote has been cast correctly.
- It contains the name of the candidate (for whom the vote has been cast) and the election symbol of the party/individual candidate.

**Background of Using VVPAT in General Elections in India:**

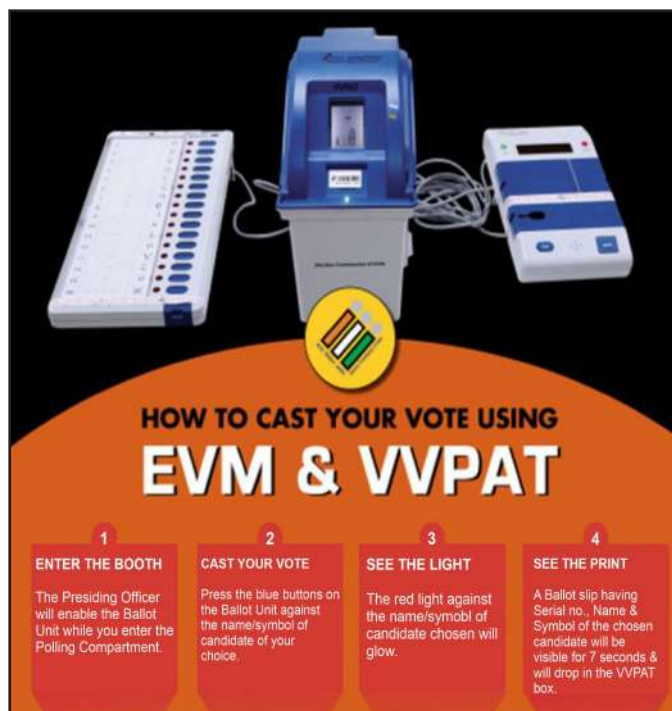
- Use of VVPAT in general elections in India The idea of EVMs was first proposed by the Election Commission of India (ECI) in 2010, when several political parties raised concerns about the reliability and security of electronic voting machines (EVMs). ECI conducted several field trials and demonstrations of VVPAT machines in various states and had also sought feedback in this regard from various stakeholders.
- In the year 2013, the Supreme Court of India had directed the ECI to implement VVPAT in a phased manner.
- The Supreme Court of India in the year 2017 had ordered the ECI to use VVPAT along with EVMs in all future elections held in India.

**Importance of VVPAT in General Elections of India:**



- This allows voters to verify that their votes have been cast as per their preferences.
- This prevents any discrepancy or manipulation in the recording of votes by the EVMs.
- It provides a means of auditing the stored electronic results and enables cross-checking of votes in case of any dispute or doubt.
- This serves as an additional barrier to votes being altered or destroyed by corrupt or malfunctioning voting machines or personnel.
- This enhances the confidence of voters in the electoral system conducted in India and reduces the scope for any allegations or complaints made against EVMs.

#### Features of VVPAT:



- VVPAT The machine is a printer-like device attached to the EVM. When a voter presses the button on the EVM against the selected candidate, the VVPAT machine prints a paper slip with the candidate's serial number, name and his election symbol.
- The slip is visible to the voter for seven seconds through a transparent window in the VVPAT machine, after which it is automatically cut and falls into a sealed drop box.
- VVPAT does not require batteries as it runs on a power pack battery.
- Normally a VVPAT takes one hour to count votes.

- VVPAT was first conducted in September 2013 in the by-election to Noksen assembly seat in Tuensang district of Nagaland.
- The VVPAT consists of a printer and a VVPAT Status Display Unit (VSDU).
- In case of recount or audit this slip can be obtained only by the polling officials.

#### Corrective Steps Taken by Election Commission of India Related to VVPAT:

- ECI has procured over 16 lakh VVPAT machines from two public sector undertakings, Bharat Electronics Limited (BEL) and Electronics Corporation of India Limited (ECIL), at a cost of about Rs 3,000 crore.
- ECI has conducted extensive training and awareness programs for polling officials, security personnel, political parties, candidates and voters on the use and operation of VVPAT machines.
- ECI has introduced a randomization process for allocation and distribution of EVMs and VVPATs to ensure fairness and confidentiality.
- The ECI has ordered that as per the Supreme Court direction, at least one polling station in each assembly constituency will be randomly selected for counting the VVPAT slips along with the EVM votes.
- ECI has also developed a technical protocol for counting of VVPAT slips in case of any mismatch or discrepancy between EVM and VVPAT results.

#### Challenges Related to Vvpat Before the Election Commission of India:

- VVPAT machines are prone to technical faults, malfunctions, jamming or printing errors due to various factors such as faulty hardware, software bugs, power fluctuations, environmental conditions, human errors or sabotage.
- VVPAT machines require more maintenance, storage space, security arrangements and transportation costs compared to stand-alone EVMs.
- VVPAT machines increase the time and complexity of the voting process, as voters have to wait for the paper slip to appear and verify it before leaving the polling station.
- VVPAT machines may not be completely effective in ensuring voter verification, as some voters may not check or understand the paper slips properly, or may not report any discrepancies or complaints to polling officials.

- VVPAT machines may not be sufficient to resolve all disputes or doubts about election results, as counting of paper slips is limited to a few polling stations and is subject to human errors or manipulation.

#### Solution / Way Forward:

- VVPAT is widely considered a best practice for ensuring the integrity and reliability of electronic voting systems. However, it also presents some technical and operational challenges that need to be addressed carefully. It is important to thoroughly test and evaluate VVPAT systems on a large scale before implementing them in elections in India.
- It is also extremely important to ensure adequate legal and regulatory framework for its use and validation in general elections in India.
- In India, the Election Commission is required to increase the recount sample by selecting certain assemblies of each State/Union Territory to make it more statistically significant or only on those seats where the margin of victory is very small (e.g., total votes This problem can be solved by increasing the recalculation sample. But insisting on a complete recount shows exaggeration and a clear lack of trust in EVMs.
- Verification of a statistically significant sample of VVPAT slips should suffice for elections in India.
- The VVPAT system plays an important role in the electoral system of India, as it enhances fairness, accuracy, transparency and public trust of the voting process.
- India's electoral process also requires continuous improvement and innovation to address its challenges and limitations.
- ECI should ensure adequate testing, quality control, calibration and certification of VVPAT machines before and after each election and promptly replace or repair any defective or defective machines.
- The ECI should conduct regular training and refresher courses for polling officials, security personnel, political parties, candidates and voters on the use and operation of VVPAT machines and resolve any queries or complaints effectively.
- The ECI should increase random sampling and counting of EVM votes as well as VVPAT slips and adopt a scientific and transparent method for selection of polling stations for this purpose.
- ECI should develop a robust and secure protocol for counting of VVPAT slips and ensure proper documentation and verification of the process in case of any mismatch or discrepancy between EVM and VVPAT results.

- To conduct elections in India in a fair manner, the ECI should also explore other technological solutions or alternatives such as end-to-end verifiable voting systems, blockchain-based voting systems or paper-based voting with optical scanners that would be possible in India. Can replace the VVPAT system in general elections.

### GENDER INEQUALITY INDEX 2022



#### Why in the News?

The Gender Inequality Index for 2022 was published by the UNDP as part of their Human Development Report for 2023/2024 on March 13, 2024. India is ranked 108th out of 193 countries. Compared to the Gender Inequality Index of 2021, where India ranked 122nd out of 191 countries, there is a notable improvement of 14 ranks in the 2022 index.

#### About the Gender Inequality Index

The Gender Inequality Index (GII) is a comprehensive metric that measures gender inequality in three major areas: reproductive health, empowerment, and the labour market. This index serves as a vital tool to gauge the level of gender inequality within a society, shedding light on the gaps between men and women in various aspects of life.

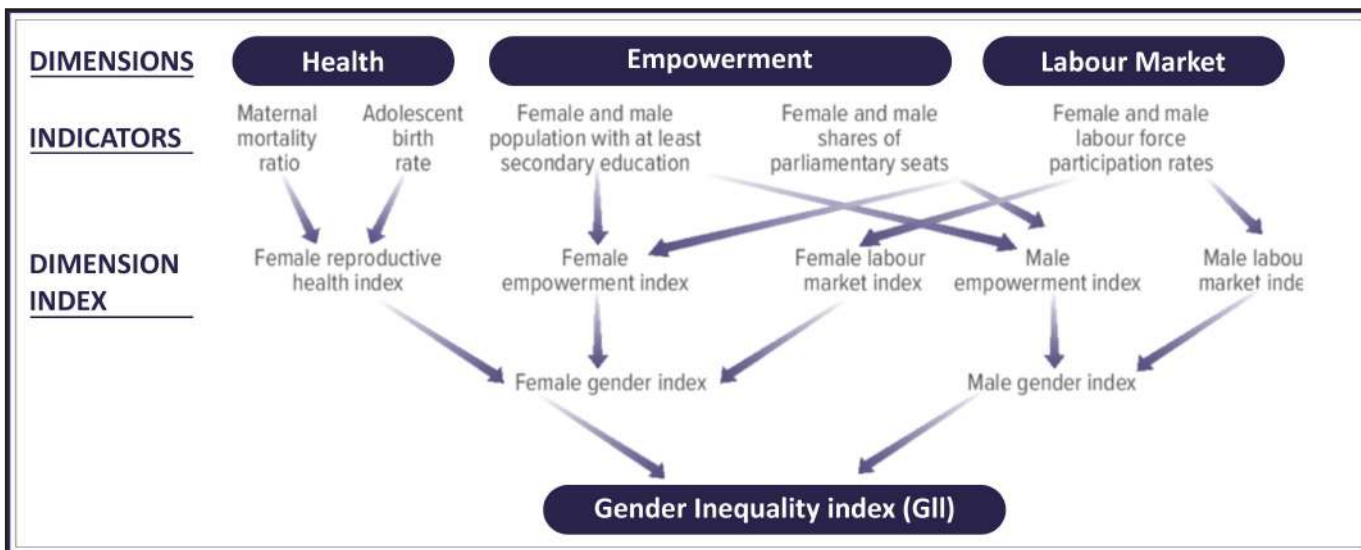
#### Dimensions of the Gender Inequality Index

- **Reproductive Health:** This dimension is evaluated based on indicators such as the maternal mortality ratio and the adolescent fertility rate. It highlights the health outcomes and challenges faced by women in terms of reproductive well-being.
- **Empowerment:** The empowerment dimension of the GII focuses on factors like the share of parliamentary seats held by each gender and levels of secondary and higher education attainment. It reflects the extent to which women are politically and educationally empowered within a society.
- **Labour Market:** Women's participation in the workforce is a crucial aspect of the GII's evaluation of the labour market dimension. It considers paid work, unpaid work, and the active pursuit of employment by women, providing insights into gender disparities in economic participation.

#### Interpretation of the Gender Inequality Index

- The GII ranges from 0 to 1, where 0 signifies gender





**equality**, indicating that women and men fare equally, while **1 represents significant gender inequality**, where one gender faces substantial disadvantages across all measured dimensions.

- **Higher values on the GII indicate worse achievements** in terms of gender equality, emphasising areas where improvements are needed to bridge the gender gap effectively.

**Implications of Gender Inequality**

- Gender inequality restricts women’s opportunities, freedom, and interactions with others, impacting their ability to access resources, make independent decisions, and contribute to society.
- Low status and inequality can have detrimental effects on women’s physical and mental health, autonomy, and control over household resources, ultimately affecting their well-being and that of their children.
- Addressing gender inequality is crucial for promoting social development, economic growth, and overall well-being within a society.

**Unequal Lives: The Many Faces of Gender Inequality in India**

India, a nation of immense diversity, continues to grapple with significant gender inequality. While the country boasts progress in various sectors, disparities between men and women persist across various aspects of life.

- **Unequal Access to Education:** Girls are often denied schooling due to societal pressures and poverty. This lack of education limits their opportunities and perpetuates the cycle of inequality.
- **The Patriarchal Shadow:** Deep-seated patriarchal

norms dictate that men hold primary power in society. This relegates women to domestic roles and hinders their participation in public spheres.

- **Workplace Discrimination:** Women face challenges in entering and advancing within the workforce. Unequal pay, lack of maternity benefits, and a rigid work environment discourage women’s professional aspirations.
- **Violence Against Women:** Domestic violence, sexual harassment, and honour killings are grim realities for many women in India. Fear of violence creates a climate of insecurity and restricts their freedom.
- **Skewed Sex Ratio:** India has a long-standing issue of a skewed sex ratio, with a preference for sons leading to female infanticide and sex-selective abortions. This imbalance has social and demographic consequences.
- **Harmful Practices:** Child marriage, dowry demands, and restrictions on mobility are deeply ingrained practices that limit girls and women’s agency and well-being.

**Initiatives Taken by the Indian Government to Tackle Gender Inequality**

- **Beti Bachao, Beti Padhao:** This flagship campaign aims to improve the sex ratio and promote girls’ education.
- **Samagra Shiksha:** This program ensures gender-inclusive quality education at all levels, with a focus on creating safe and girl-friendly schools.
- **Stand-Up India:** This scheme provides loans and support to women entrepreneurs, encouraging their participation in businesses.
- **Mahila E-Haat:** This online platform empowers women entrepreneurs and Self-Help Groups (SHGs) by facilitat-

ing market access for their products.

- **One-Stop Centre (OSC) Scheme:** These centres offer integrated support to women affected by violence, including legal aid, counselling, and medical assistance.

## CUSTODIAL DEATHS IN INDIA

### Why in the News?

Recently, the Supreme Court has underscored the importance of employing a “more stringent method” when evaluating bail requests from law enforcement officers accused in instances of custodial Deaths. A Bench consisting of Justices Aniruddha Bose and P V Sanjay Kumar remarked as they revoked the bail granted to a police constable implicated in a custodial death case dated February 12, 2021.

### Meaning of Custodial Death

- Custodial death refers to the demise of an individual that occurs while they are under the custody of law enforcement authorities, typically in police custody or in a detention facility.
- As outlined by the Law Commission of India, when a public servant commits an offense against an individual who is under arrest or detained, such actions constitute custodial violence.

### Reasons for Custodial Deaths in India

Custodial deaths in India can occur due to various reasons, often stemming from systemic issues within the criminal justice system. Some possible reasons include:

- **Police Brutality and Torture:** One of the primary reasons for custodial deaths is police brutality and torture. Suspects or detainees are sometimes subjected to physical abuse, torture, or excessive force during interrogation or while in custody, leading to severe injuries or death.
- **Lack of Oversight and Accountability:** There is often a lack of effective oversight mechanisms and accountability within law enforcement agencies. This allows for unchecked abuse of power, with officers facing little to no consequences for their actions.
- **Inadequate Training and Sensitization:** Insufficient training of law enforcement personnel on human rights standards and proper procedures for handling detainees can contribute to incidents of custodial deaths. Lack of awareness about legal boundaries and protocols may result in misuse of authority and violence.

- **Overcrowded and Poorly Maintained Detention Facilities:** Many police stations and jails in India are overcrowded and poorly maintained, lacking basic amenities and healthcare facilities. In such environments, detainees are vulnerable to physical harm, neglect, and medical emergencies, increasing the risk of custodial deaths.
- **Delay in Legal Proceedings:** Lengthy legal proceedings and delays in the justice system can prolong the detention period of individuals, exacerbating their vulnerability to mistreatment or neglect while in custody.
- **Corruption and Misconduct:** Instances of corruption and misconduct within law enforcement agencies can further exacerbate the risk of custodial deaths. Bribery, collusion, and other forms of malpractice may undermine efforts to uphold the rule of law and protect the rights of detainees.
- **Lack of International commitment:** India, despite signing the United Nations Convention against Torture in 1997, has yet to ratify it. While signing signifies the country’s willingness to adhere to the treaty’s obligations, ratification involves implementing laws and mechanisms to fulfill these commitments.

### Constitutional and Legal Safeguards against Custodial Deaths

In India, there are several constitutional and legal safeguards in place to address custodial deaths and protect the rights of individuals in custody. These safeguards include:

- **Constitutional Protections:** The Indian Constitution guarantees certain fundamental rights to all individuals, including those in custody. These rights include the right to life and personal liberty (Article 21), protection against torture and inhuman treatment, and the right to legal representation and fair trial. Article 20 provides safeguarding against unjust and disproportionate punishment for an accused individual, regardless of their citizenship status or legal entity, such as a company or corporation.
- **Legal Framework:** India has enacted specific legislation to prevent custodial deaths and hold accountable those responsible for such incidents. The most notable among these is the Protection of Human Rights Act, 1993, which establishes the National Human Rights Commission (NHRC) and State Human Rights Commissions (SHRCs) to investigate complaints of human rights violations, including custodial deaths.
- **Criminal Laws:** Various provisions of the Indian Penal Code (IPC) address offenses related to custodial deaths, including sections on homicide, and culpable homicide not amounting to murder, assault, and torture. These

laws provide for the prosecution of law enforcement officials found guilty of causing death or harm to individuals in custody.

- **Judicial Oversight:** The judiciary plays a crucial role in safeguarding against custodial deaths through its power of judicial review. Courts can issue writs such as habeas corpus to ensure the legality of detention and can also take suo motu cognizance of cases involving custodial deaths to ensure prompt investigation and accountability.
- **Supreme Court Guidelines:** The Supreme Court of India has issued guidelines and directives to prevent custodial deaths and ensure accountability. These include guidelines on the arrest and detention of individuals, the use of force by law enforcement agencies, and the need for independent and impartial investigations into cases of custodial deaths.

**Landmark Supreme Court Judgements on Custodial Deaths**

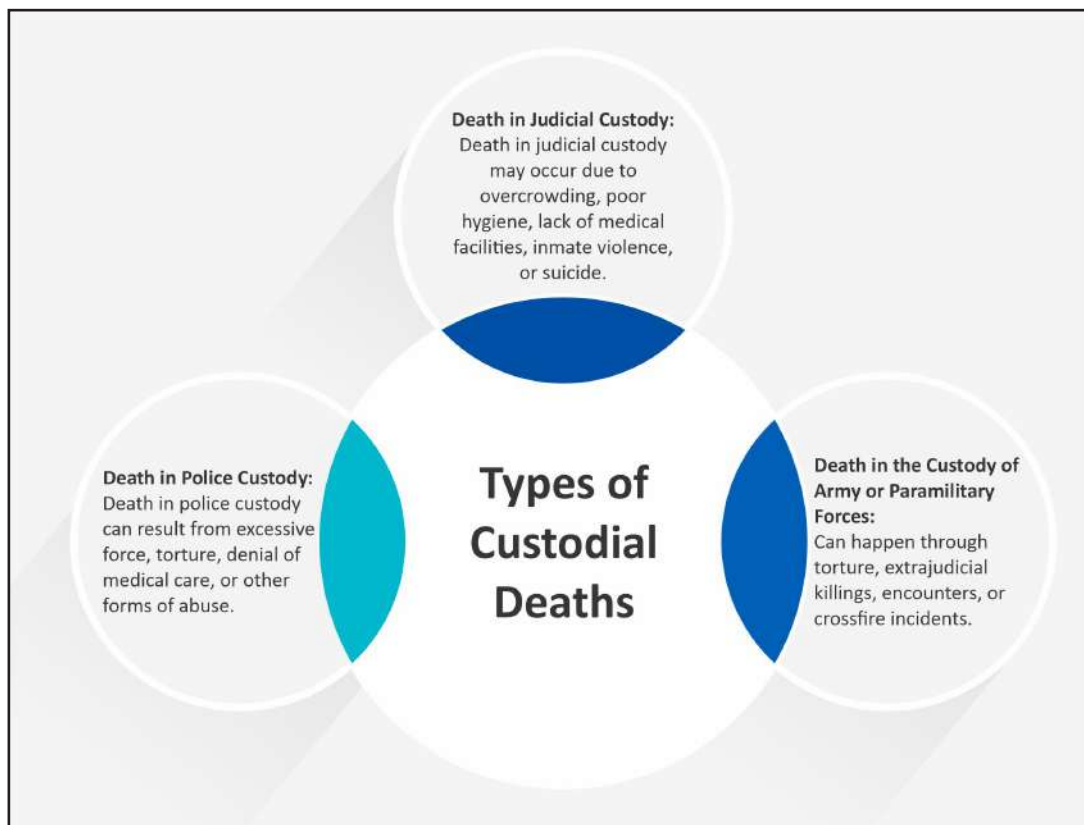
- **D.K. Basu vs. State of West Bengal (1997):** This case resulted in the formulation of guidelines commonly known as the “**D.K. Basu Guidelines**” to prevent custodial torture and deaths. The Supreme Court outlined several measures, including the requirement for police personnel to carry accurate and visible identification, the right of the detainee to inform a friend, relative, or lawyer about their arrest, and the mandate for police to maintain a register of arrestees at the police station.
- **Nilabati Behera vs. State of Orissa (1993):** In this case, the Supreme Court recognized the **right to compensation** for victims of custodial deaths. The Court held that custodial death violates Article 21 of the Constitution, which guarantees the right to life and personal liberty. It established the principle of strict liability on the state to compen-

sate the victim’s family for custodial deaths, irrespective of whether the state was directly responsible for the death.

- **State of Maharashtra vs. Ravikant S. Patil (2011):** In this case, the Supreme Court reiterated that custodial death is a serious violation of human rights and emphasized the duty of the state to ensure the safety and security of individuals in custody. The Court emphasized the need for independent and impartial investigations into cases of custodial deaths and held that the burden of proof lies on the custodial authorities to prove that the death occurred due to natural causes and was not a result of torture or negligence.

**Measures to be Taken to Tackle Custodian Deaths**

- **Strengthening oversight and accountability:** Ensuring that there is proper supervision and accountability at all levels of the criminal justice system, from police officers to prison officials. This includes implementing clear guidelines, monitoring systems, and reporting mechanisms for any misconduct or abuse.
- **Providing adequate training and Sensitization:** Ensuring that law enforcement officers and prison staff receive proper training in human rights, effective communication, and non-violent conflict resolution. This will help them better handle situations involving detainees and minimize the use of force.



- **Implementing reforms:** Implementing comprehensive reforms in the criminal justice system, including addressing overcrowding in prisons, improving access to legal representation, and ensuring that detainees receive fair and timely trials.
- **Ensuring access to medical care:** Ensuring that detainees have timely access to medical care, including mental health care, to prevent injuries and illnesses that may lead to death.
- **Implementing the use of CCTV cameras:** Installing CCTV cameras in detention facilities can help monitor the treatment of detainees and provide evidence in case of any abuse or neglect.
- **Offering compensation to families:** Providing financial compensation to the families of those who have died in custody can help alleviate some of their suffering and may serve as a deterrent to future incidents.
- **Collaborating with civil society:** Engaging with civil society organizations, including human rights groups, to monitor detention facilities and advocate for improvements in the treatment of detainees,
- **Access to Legal Representation:** Ensuring that detainees have prompt access to legal representation and are informed of their rights, including the right to remain silent and the right to consult with a lawyer. Legal aid services should be readily available to individuals who cannot afford representation.

**POWERS OF THE GOVERNOR: CHALLENGES AND VARIOUS REFORM PROPOSALS RELATED TO THE POWERS GIVEN BY THE CONSTITUTION**



#### Why in the News ?

- Recently, Tamil Nadu Governor R.N. By Ravi K. The refusal to allow Ponmudi to be re-inducted into the Tamil Nadu Cabinet is a completely inappropriate and unconstitutional example of the Governor's power.
- Following the decision of the Supreme Court of India, Tamil Nadu Governor R.N. Ravi administered the oath of office and secrecy to Ponmudi.
- Ponmudi's conviction in an alleged corruption case was recently stayed by the Supreme Court of India, resulting in his reinstatement of eligibility to be a member of the Legislative Assembly.
- Tamil Nadu Governor R.N. Ravi's stance that reinducting Ponmudi into the Cabinet on the basis of a stay on conviction would be against 'constitutional morality'

was not legally sustainable.

- Tamil Nadu Governor R.N. Ravi, the stay imposed by a two-judge bench of the Supreme Court on the verdict of conviction given by the Madras High Court was only a kind of interim relief and meant that the conviction 'remained intact, but unexecuted' and that it was not equivalent to being turned over.
- In India, the legal consequences of a criminal conviction in a corruption case (loss of eligibility to be an MLA and, therefore, to be a minister) are suspended as soon as the conviction is stayed.
- As soon as the conviction is stayed, Parliament and State Legislatures reinstate the convicted person's membership, even if their seats have been declared vacant.
- Tamil Nadu Governor R.N. Ravi's tampering with the validity of the principles of 'ethics' and good governance is being interpreted as an abuse of the Governor's powers conferred by the Constitution.
- The recent action by the Governor of Tamil Nadu is also being seen as an example of accepting the limits of the powers given to the Rajpal and the failure of the Central Government to act on the increasing cases of pulling up of Governors by the Supreme Court. .
- Recently the Supreme Court of India noted that Ravi disposed of the bills pending with him only after it raised questions over his long inactivity.
- The recent high-handedness of the Governor of Tamil Nadu has brought to the fore the debate that "If the Governor does not follow the Constitution, what should the State do except approach a constitutional court?"
- Given the multiplicity of litigations related to the conduct of Governors in India every day, the Center should have provided remedial measures but this recent incident has once again sparked a debate on the conduct of Governors in India. The style of working of the Governor is not governed by the constitutional provisions of India, but at present the style of working of the Governor is inspired by the vested interests of any political party and given to him by the President of India on the advice of his employers i.e. the Central Government. Is running as per.
- The issue related to the Governor of Tamil Nadu has once again highlighted the issue of maintaining the colonial institution called the Governor. The Supreme Court reminded him that he was not an elected authority and he should not have kept the decision of the elected government in abeyance.

- Recently, a special session was called by the Speaker of the Tamil Nadu Assembly and in addition, the State Government's decisions regarding sanctioning prosecution of AIADMK ministers, appointments to the Tamil Nadu Public Service Commission and premature release of prisoners were approved by the Governor. It was retained by the Government for no apparent reason.

#### Major Challenges Related to the Post of Governor in India:

##### Appointment of Governors:

- The Governor is appointed by the President on the advice of the Central Government in India.
- Since the Governor is appointed by the President on the advice of the Central Government, questions always arise on the political neutrality and impartiality of the Governor in India.
- In India, many times an example is seen where a member of the ruling party at the Center was appointed as the Governor or he was removed or transferred due to political reasons. Which shows the dignity of the post of Governor in India and his importance. This itself is seen as a weakness of stability in the state.

##### Powers and Role of the Governor in India:

- The Constitution of India has provided various types of powers and various roles to the Governor.
- In India, the Governor has the powers to give assent to the bills passed by the state legislature, appoint the Chief Minister and other ministers, send reports to the President on various subjects of the state and discharge special responsibilities in some states.
- The roles and powers given to the Governor by the Constitution are often at the discretion of the Governor, which sometimes leads to conflict between the elected state government and the Governor in many states in India.

##### Accountability and Immunity of Governors:

- The Governor is considered equivalent to the President in the respective state government in India.
- In the context of the Governor, it has often been seen that he is seen acting as an agent of the Central Government.
- Governors in India are often appointed to check the power of the respective elected state governments.
- In India, the Governor can be removed from his post by the President with the consent of the Central Government.



- In reality, Governors in India are confident that as long as they continue to work in accordance with the Central Government, they will remain in office.
- According to Article 361 of the Constitution of India, the Governor of India is not answerable to the courts for his actions while in office as the head of the state.

**Powers of the Governor Given by the Indian Constitution:**

**The Constitution of India mentions the powers of the Governor which are defined by Article 200 and Article 201 of the Constitution with respect to passing of bills.**

According to Article 200 and Article 201 of the Constitution, when a Bill is presented to the Governor by the State Legislature, **They have the following options:-**

- He can give assent to the bill, which means the bill becomes an act or law.
- He cannot give his assent to the bill or can stop the bill, which means that the said bill has been repealed.
- He may send back to the State Legislature any Bill other than a Money Bill or some provision of that Bill with a message requesting reconsideration of it.
- If the said bill is passed again by the state legislature with or without amendments, then the Governor has to give his assent to that bill.
- The Governor may reserve a Bill for the consideration of the President, who may either assent to the Bill or withhold his assent, or may direct the Governor to send the Bill back to the State Legislature for reconsideration. .
- If any bill of any state in India can jeopardize the position of the High Court of that state, then it is mandatory for the Governor to stop that bill.
- It is within the discretion of the Governor to decide whether any Bill is against the provisions of the Constitution of India, the Directive Principles of State Policy or the larger interest of the country or is of serious national importance, or relates to compulsory acquisition of property under Article 31A of the Constitution. It happens.

**Arguments to be Presented in Favor and Against Abolishing the Post of Governor in India:**

- In India, when Governors behave inappropriately and unconstitutionally, it is often said that the post of Governor should be completely abolished in India. However this argument is both imprudent and unnecessary.
- The reasoning behind this being called imprudent is

that because Westminster parliamentary democracy requires the presence of both the head of state and the head of government and abolishing the post of Governor would be tantamount to abolishing that entire parliamentary system. .

- The logic behind calling it unnecessary is that viable alternatives like judicial intervention or constitutional reform already exist. Therefore, it is unnecessary to abolish the post of Governor in India.

**Views of the Members of the Constituent Assembly Regarding the Post of Governor in India:**



- Some members of the Constituent Assembly in India, such as Dakshinayani Velayudhan, Vishwanath Das and H.V. Kamath was a strong critic of the provisions related to governors. His argument was that since the draft Constitution Government of India Act 1935 Where the center has been given too much power and the autonomy of the states has been reduced. Therefore, they also feared that the Governor would act as an agent of the Center and interfere in the work of the State Governments.
- Chief architect of the Constitution Dr.B.R. Ambedkar Had defended the existing provisions related to Governors. His argument was that there was little time to make changes to the Government of India Act 1935 and that governors were to act only in collaboration with state governments, not to rule or dominate them. The apprehension that the Governor would act according to the Centre, the possibility of which was highlighted by many members of the Constituent Assembly, was rejected by Dr. Ambedkar. He also did not say anything

about why no reforms were made in the provisions related to the Governor, whereas many provisions of the Government of India Act 1935 were incorporated in the Constitution with necessary reforms.

#### Important Reforms Related to the Governor at Present:

##### Judicial Intervention:

- The Supreme Court can continue to monitor the conduct of governors and issue directions or observations to ensure that they act in accordance with the Constitution and law. This can help in preventing arbitrary or partisan actions of Governors and maintaining the federal principle or federal form of Indian polity.

##### To Improve the Current Appointment and Removal Process:

- The existing Constitution of India can also be amended to change the process of appointment and removal of Governors in India, as suggested by the authors of 'Heads Held High'. This could include a more transparent and consultative mechanism, such as a collegium or parliamentary committee, which could select candidates on the basis of merit and suitability. The removal of governors could also be facilitated by requiring a resolution of the state legislature or a judicial inquiry can be made difficult.

##### Making the Governor Accountable to the State by Giving Him the Same Status as the President:

- The Governor can be made accountable to the State Legislature in the same way as the President is accountable to the Union Parliament. Arrangements like appointment by election and removal by impeachment can also be made for the Governor in India.

##### Making the Governor an Elected Representative:

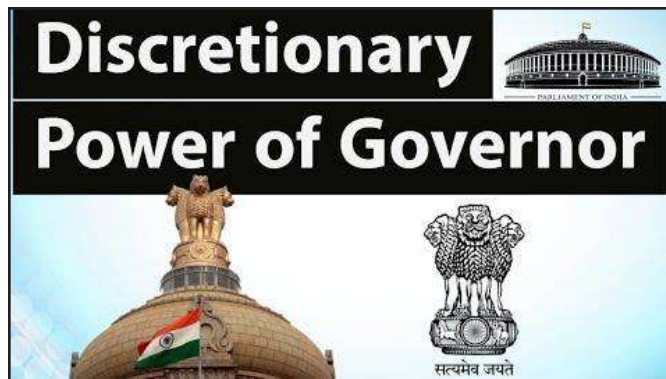
- The Governor may be an elected representative of the state rather than a person nominated by the Central Government. This can increase the accountability and legitimacy of this post and reduce the scope for interference or influence by the Centre. The Governor may be elected by the state legislature or by the people of the state, as in the case of the election of the President in India.

##### To Impeach and Remove from Office:

- The Governor can be removed from his office by impeachment by the State Legislature on the grounds of violation of the Constitution or misconduct. By which it can provide checks and balances on the power and authority of the Governor and prevent any misuse of the office of the Governor. The process of impeaching the Governor can be modeled on the same lines as the

process of impeaching the President, where a majority of the total membership and a two-thirds majority of the members present and voting in both Houses of the State Legislature are required in India.

#### Constitutional Reforms Related to the Governor Suggested by the Supreme Court and Various Committees in India:



Some constitutional reforms related to the post of Governor have been suggested from time to time by the Supreme Court and various committees in India. Which are as follows –

##### Recommendations of Sarkaria Commission (1988):

- The Governor should be appointed by the President after consultation with the Chief Minister of the concerned state.
- The Governor must be a person of eminence in some field of public life and must not belong to the State to which he is appointed.
- Except in rare and compelling circumstances, the Governor should not be removed before the completion of his term.
- The Governor should act as a bridge between the Centre and the State and not as an agent of the Centre.
- The Governor should exercise his discretionary powers in a restrained and judicious manner and should not use them to weaken the democratic process but should use them to strengthen the democratic process of India.

##### Suggestions of Venkatachaliah Commission (2002):

- The process of appointment of governors should be entrusted to a committee, consisting of the Prime Minister, Home Minister, Speaker of the Lok Sabha and the Chief Minister of the concerned state in India.
- The Governor in India should be allowed to serve a full term of five years unless he resigns or is removed by

the President on the grounds of misbehavior or incompetence.

- The Central Government must consult the Chief Minister of the concerned state before taking any action related to the removal of the Governor In India,.
- The Governor should also not interfere in the daily administration of the state. He should act as a friend, philosopher and guide of the state government and use his discretionary powers sparingly.

#### Suggestion of Punchhi Commission (2010):

- Punchhi Commission related to Governors in India recommended removing the phrase 'during the pleasure of the President' from the Constitution, according to which the Governor can be removed at the pleasure of the Central Government.
- The Punchhi Commission also suggested that the Governor should be removed from his post only by a resolution of the state legislature, which would ensure greater stability and autonomy for any state in India.

#### B.P. Judgment of the Supreme Court of India in Singhal V. Union of India (2010):

- B.P. Supreme Court of India in Singhal v. Union of India (2010)The decision regarding the post of Governor said that the President can remove the Governor at any time and without assigning any reason. This process can happen in India because the Governor holds his office 'during the pleasure of the President' under Article 156(1) of the Constitution of India. However, the Supreme Court also said that the removal of any person from the post of Governor should not be done in an arbitrary manner or on the basis of any improper reasons, but constitutional methods should be adopted for removing the Governor from the post in India.

#### Conclusion / Path to Solution:

- The ongoing debate over the role of governors in India highlights the need for very subtle reforms, while complete abolition of the post is considered unwise. Therefore, transparent appointment of Governors in India, increase in their ex-officio accountability and limited discretionary powers will have to be used with restraint.
- It is extremely important to strike a balance between the interests of the State and the Center in India to ensure effective functioning of the office of the Governor without undermining the democratic principles or constitutional values, as the Governor in any State is merely a rubber stamp. Or Rajpal is not just an agent of the Central Government, rather the Rajpal often uses

his wisdom and discretionary powers in collaboration with the State Government and the Chief Minister of the concerned State to ensure better administration in that State and to ensure a better, Develop sensible administrative system and also work towards making the state a developed state.

- Therefore, any position is relative to time. If with the changing times there is any attempt to transform the powers related to that post into a state with a better democratic system, then it is an indicator of India's democracy as well as its governance system imbued with constitutional values. Due to which the backbone of a stable, democratic, egalitarian state system in the state will be strengthened and the post of Governor in India will also be able to maintain its dignity, its constitutional values and its prestige. By coordinating with the Chief Minister and Cabinet of the concerned state, the Governor will be able to provide a transparent and just governance system to that state. Because whenever a government is irrational and inclined towards dictatorship, the whip of justice sitting on the post of Governor plays an important role in making that elected government full of judicial character and rational.

#### FOREST A MAJOR CONTRIBUTOR TO FINANCIAL WEALTH: SC



#### Why in the News?

- The supreme court has asserted in a judgment that forests are a national asset and major contributor in the nation's wealth. The judgment is crucial because last year the government passed a controversial Forest Conservation (Amendment) Act, 2023 which attracted widespread criticism .
- SC has also highlighted the concept of carbon credit and green accounting to evaluate national wealth. A judge named Justice M.M. Sundresh said that the forest's spirit is what makes the earth move. This was in response to an appeal from Telangana State against a High Court ruling that gave forest land to a private individual. The State's forest officers made things worse by giving different statements in court.
- The top court told both the State government and the private individuals to pay ₹5 lakh each as punishment. Additionally, the State was told to investigate its own forest officers.
- The court's decision comes at a crucial moment, especially with the recent controversy surrounding the Forest (Conservation) Amendment Act (FCAA) of 2023. This law



has faced significant backlash, with many criticizing it for granting States the power to legalize encroachments in protected forests and decide on the use of forest lands. Critics argue that the Act essentially opens the door for the **commercial exploitation** of forests.

### Importance of Forest for a Nation:

- **Environmental Stability:** Forests help maintain environmental stability by regulating climate, preventing soil erosion, and purifying air and water. They act as carbon sinks, and suck out carbon dioxide from the atmosphere and help tackle the impacts of climate change.
- **Biodiversity Conservation:** Forests are home to a variety of plants and animals, some of which are unique and endangered. Protecting forests preserves biodiversity and ensures the survival of these species, which are essential for ecosystem health and resilience.
- **Economic Benefits:** Forests provide valuable resources such as timber, non-timber forest products, and medicinal plants, which support livelihoods and contribute to economic growth. Forest-based industries, including logging, tourism, and ecotourism, generate revenue and employment opportunities.
- **Water Regulation:** Forests are important in regulating the water cycle by influencing rainfall patterns, reducing flooding, and maintaining the flow of rivers and streams. They also help recharge groundwater and provide clean drinking water to communities.
- **Food Security:** Forests contribute to food security by providing habitat for pollinators, wild edible plants, and game animals. Forest ecosystems support agriculture through pollination services, soil fertility, and pest control.
- **Cultural and Recreational Value:** Forests hold cultural significance for many indigenous communities, serving as sacred sites, sources of traditional knowledge, and places for spiritual practices. They also offer opportunities such as hiking, camping, and wildlife viewing, promoting physical and mental well-being.
- **Climate Change Mitigation:** Forests are crucial for tackling climate change by sucking out carbon dioxide through photosynthesis. Forest conservation and restoration efforts are essential strategies for reducing greenhouse gas emissions and achieving global climate targets.

### Threats to Forest Land in India

- **Deforestation:** Deforestation, primarily driven by logging, agriculture expansion, infrastructure development, and urbanization, is a significant threat to forest land in India. Illegal logging and land clearing for agri-

cultural purposes contribute to the loss of forest cover.

- **Encroachment:** Forest land often faces encroachment by individuals, communities, and industries for agricultural activities, settlements, mining, and infrastructure projects. Encroachments degrade forest ecosystems and reduce biodiversity.
- **Illegal Logging and Poaching:** Illegal logging for timber and poaching of wildlife for trade pose serious threats to forest ecosystems. Unsustainable logging practices degrade forest health, while poaching leads to the decline of endangered species and disrupts ecological balance.
- **Forest Fires:** Forest fires, both natural and human-induced, are a significant threat to forest land in India, particularly during the dry season. These fires destroy valuable forest resources, habitats, and biodiversity, and contribute to air pollution and climate change.
- **Climate Change:** Climate change is a threat to forest ecosystems in India, leading to shifts in temperature and rainfall patterns, increased frequency and intensity of extreme weather events, and changes in species distributions. These impacts can stress forest ecosystems and make them more vulnerable to other threats.
- **Illegal Mining and Quarrying:** Illegal mining and quarrying activities, especially in forested areas, degrade habitat quality, disrupt ecosystems, and cause soil erosion and water pollution. These activities also contribute to deforestation and loss of biodiversity.
- **Infrastructure Development:** Infrastructure projects such as roads, dams, and power plants often involve clearing forest land, leading to habitat fragmentation, loss of biodiversity, and disruption of ecological processes.

### Forest Conservation Act, 1980

#### Objectives of the Forest Conservation Act 1980:

- **Conservation and Sustainable Management:** The primary objective is to conserve forests and ensure their sustainable management.
- **Regulation of Forest Land Diversion:** The act aims to regulate the diversion of forestland for non-forestry purposes, such as mining, industrial projects, or infrastructure development.
- **Central Government Approval:** Any diversion of forestland must receive prior approval from the central government.
- **Compensation for Forest Cover Loss:** If forestland is diverted, compensation is required based on the net

present value of the affected area. These funds are then utilized for afforestation and reforestation efforts.

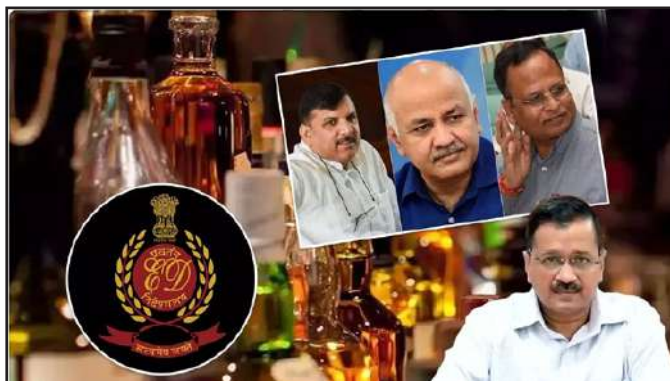
#### Salient Features of the Act:

- **Central Government Approval:** The Act mandates that forestland diversion for non-forestry purposes can only be approved by the central government. This ensures decisions are made at the national level, balancing economic development and environmental conservation.
- **Compensation for Loss of Forest Cover:** Compensation is required for the loss of forest cover due to diversion. The amount is based on the net present value of the diverted land, with funds allocated for afforestation and reforestation.
- **Consultation with State Governments and Tribal Communities:** Before approving forest land diversion, state governments and tribal communities must be consulted. This ensures local stakeholders' views are considered.
- **Mandatory Compensatory Afforestation:** An equal area of non-forest land must be afforested or reforested as compensation for the loss of forestland due to diversion.

#### PREVENTION OF MONEY LAUNDERING ACT (PMLA) 2002 AND ARREST OF CHIEF MINISTER IN INDIA



#### Why in the News?



- Recently, on March 22, 2024, a Delhi court sent Chief Minister Arvind Kejriwal to the custody of India's central agency Enforcement Directorate (ED) till March 28, 2024 in the 'Delhi Liquor Policy' case.
- In the history of India's democratic system, Arvind Kejriwal has become the first Chief Minister of the country to be arrested by India's central agency Enforcement Directorate while holding the post of Chief Minister.

- India's central agency Enforcement Directorate told the court that "Aam Aadmi Party (AAP) chief Arvind Kejriwal is the mastermind of the Delhi liquor policy scam and the mastermind and main accused of this scam.
- Prior to this case, Jharkhand Chief Minister Hemant Soren had resigned from the post of Chief Minister of Jharkhand before being arrested by the ED.

#### Background of Delhi Liquor Policy/ Delhi Excise Policy Scam:

- Two cases related to the Delhi Liquor Policy scam have been registered in India – one by the CBI, and the other by the Enforcement Directorate (ED) in a case of alleged money laundering.
- The Delhi Liquor Policy scam came to light following a report submitted by Delhi Chief Secretary Naresh Kumar to Lieutenant Governor Vinay Kumar Saxena in July 2022, which alleged procedural lapses in the formulation of the Delhi Excise Policy 2021 – 22.
- Delhi Excise Policy Case 2021 – 22 came into force in Delhi in November 2021, but this policy was abolished in July 2022.
- Under the Delhi Excise Policy Case 2021 – 22, it has been alleged that "the leaders of Aam Aadmi Party's Delhi government have sought exemption from license fee from liquor mafia and operators associated with the liquor business and also to extend its period – Bribes were taken by the Delhi government in lieu of providing preferential treatment such as relief due to the disruptions caused by the Covid-19 pandemic and the bribe money was used to fund assembly elections in Punjab and Goa in early 2022 and these This was done to influence the elections".
- India's central agency Enforcement Directorate also alleged that the scam was dictated by a policy of 12% profit in lieu of 6% kickback to give the wholesale liquor business to private individuals and entities instead of government shops designated by the Delhi government.

#### Meaning of Money Laundering:

- Money laundering is a process that transforms illegally earned money or black money in such a way that it appears to have been obtained from legitimate sources or it becomes legitimate money.
- Money laundering in India is not only an independent crime but also a process to cover up the crime of hiding black money already committed.
- **Money laundering'** The term originated from mafia groups in the United States. Mafia groups earned huge

amounts of money from extortion, gambling, etc. and this money was disguised as legitimate sources (e.g. laundromats). Money laundering became a concern in the United States around the 1980s.

- **“Money Laundering”** Popularly known as hawala transactions in India. It was most popular in India during the 1990s when the names of many leaders were exposed in it.
- Money laundering refers to disguising black money earned illegally as legitimate money. Money laundering is a way of hiding money obtained illegally.
- The money obtained through money laundering is invested in such works or in such investments that even the investigating agencies are not able to trace the main source of the money.
- It is said that a person who misappropriated money in the process of laundering money obtained illegally is a **“launderer”**.
- In the process of money laundering, black money earned through illegal means turns white and returns to its rightful owner in the form of legal tender.

#### **Money Laundering: An Organized Crime:**

- There is a very deep connection between money laundering and organized crime. Money launderers earn huge profits from drug trafficking, international counterfeiting, arms smuggling etc.
- The risk of criminals being caught is eliminated once these profits are converted into illegal assets through money laundering. In such situations, new crimes are committed.

#### **Prevention of Money Laundering Act (PMLA) 2002 In India:**

- The Prevention of Money Laundering Act (PMLA) was passed in 2002. After that this Act was implemented on 1 July 2005.
- PMLA – 2002 was enacted in response to India’s global commitment (Vienna Convention) to combat money laundering.
- The Money Laundering Act in India was enacted in 2002, but has been amended 3 times (2005, 2009 and 2012). The last amendment made in it in the year 2012 got the assent of the President on January 3, 2013 and this law came into force across India from February 15, 2013.
- The PMLA (Amendment) Act, 2012 has included concealment, acquisition and possession of money and

use of proceeds of crime in the list of offenses.

- PMLA, RBI, SEBI and Insurance Regulatory and Development Authority (IRDA) were brought under PMLA in 2002 and hence all the provisions under this Act apply to all financial institutions, banks, mutual funds, insurance companies and their financial intermediaries. Are.
- According to PMLA – 2002 “Any person or entity who, directly or indirectly, attempts to engage or knowingly aids or knowingly is a party or is actually involved in any process or activity involving the proceeds of crime, including concealing, possessing, acquiring or using it and presenting it as untainted property or claiming it to be untainted property, he shall be guilty of the offense of money laundering”.
- The main objective of this Act is to prevent money laundering. Its objective is to prevent the use of black money in economic crimes, to seize property involved in or derived from money laundering and to curb other crimes related to money laundering. The Enforcement Directorate is responsible for investigating crimes under this Act.
- The provision of punishment under PMLA is: Under PMLA, property earned through the crime of money laundering is confiscated. Under this, there is a provision for rigorous imprisonment for at least 3 years to 7 years.

#### **Central Bureau of Investigation (CBI):**

- **The Central Bureau of Investigation (CBI) in India was established on 1 April 1963.**
- The Central Bureau of Investigation is a major investigating agency of the Government of India.
- It has been established to investigate various types of cases related to criminal and national security in India.
- The Delhi Special Police Establishment (DSPE) is governed by the Act this in India
- its establishment of anti-corruption **Santhanam Committee (1962-1964)** Was done on the suggestions of.
- Presently CBI works under the Department of Personnel, Ministry of Personnel, Pensions and Public Grievances, Government of India.

#### **Main Functions of Central Bureau of Investigation (CBI):**

- The main function of the Central Bureau of Investigation in India is to investigate cases of corruption, bribery and misconduct by Central Government employees under the Prevention of Corruption Act against Indian officials, public sector undertakings, corporations and

bodies owned or controlled by the Government of India.

- One of the main functions of the Central Bureau of Investigation in India is to investigate cases related to violation of fiscal and economic laws, i.e., cases related to violation of laws related to export and import controls, customs and central excise, income tax and foreign exchange regulations. To do. For example – bank related fraud. Matters relating to Foreign Exchange Violation, Counterfeit Indian Currency Notes and Import-Export in India.

#### Enforcement Directorate:

- The Enforcement Directorate was established by the Central Government in 1956 In India.
- It is a special financial investigation agency under the Department of Revenue, Ministry of Finance, Government of India, whose headquarters is located in New Delhi.
- The major functions of the Enforcement Directorate include; Involves investigating cases related to violations of FEMA, 1999, “Hawala” transactions and violations of foreign exchange rules and other types of violations under FEMA.
- The Enforcement Directorate is a multi-disciplinary organization set up to investigate the crimes of money laundering and violations of foreign exchange laws.
- Money laundering in India was earlier dealt with under the provisions of the Foreign Exchange Regulation Act, 1973 but later FERA was replaced by FEMA.

#### Main Functions of Enforcement Directorate:

The main functions of the Enforcement Directorate are as follows –

The Enforcement Directorate in India investigates cases related to suspected violations under the provisions of FEMA. The following cases have been included in cases relating to suspected cases of violation of laws in India:–

- Overestimating the export price and underestimating the import price.
- Transactions done under Hawala.
- Buying property abroad outside India.
- Illegal collection of large amounts of foreign currency.
- Illegal trading in foreign currency.
- Matters relating to violation of foreign exchange rules and other types of violations under FEMA.

- The Enforcement Directorate (ED) in India first collects intelligence regarding a case of violation under FEMA's 1999 laws, and then shares it with case-related agencies in India. The Enforcement Directorate in India receives intelligence and secret information from complaints etc. through the intelligence agencies of the Center and the state concerned.
- The Enforcement Directorate in India has the power to attach or confiscate the property of those found guilty of violating FEMA.
- “Attachment of property” under Chapter III of the Money Laundering Act [Section 2 (1) (D)] means confiscation of property, includes transfer or conversion of property to another person and prohibition of sale of the said property; Is.
- Against those who violate this rule under the Money Laundering Act; It also includes carrying out search, seizure, arrest, and prosecution actions etc.
- The Money Laundering Act provides for the legal extradition of criminals from the respective states for the transfer of money laundering as well as completion of proceedings related to the transfer of criminals.
- The Enforcement Directorate in India is empowered to adjudicate cases of violation of the erstwhile FERA Act 1973 and subsequent FEMA, 1999 in India and decide the penalty imposed at the conclusion of settlement proceedings.
- Thus, the main objectives of setting up the Enforcement Directorate include taking legal action against those involved in money laundering in the country, which includes confiscating their assets.

#### Conclusion:



- The arrest of Delhi Chief Minister and Aam Aadmi Party (AAP) leader Arvind Kejriwal by the Enforcement Directorate in India raises questions about Indian democracy and the socialist nature of India.
- The arrest of a prominent opposition leader and a sit-

ting Chief Minister of an Indian state just ahead of the Lok Sabha general elections to be held in 2024 was also seen as an attempt by the ruling government at the central level in India to harass its main opposition political party..

- At present, Kejriwal himself is trapped in the same argument which he had popularized among the general public of India during the Anna movement. But wrong with wrong is never right.
- Various states in India have been accused of misusing central investigative agencies, intimidating opposition political parties or being biased against states ruled by their political opponents by the government in power at the Centre. In such a situation, the Central Investigating Agencies also need to remain impartial, independent and neutral and need to implement the powers conferred by the Constitution of India under their jurisdiction without any bias and impartially so that in the future there is a need for Centre-State conflict in India. There should not be a situation of deadlock in relationships.

## GREEN ELECTIONS

### Why in the News?

The Election Commission of India (ECI) has expressed apprehension regarding the environmental hazards linked with the utilisation of non-biodegradable substances in electoral processes. Since 1999, it has consistently encouraged political parties and candidates to refrain from using plastic or polythene for creating election-related materials during campaign periods.

### About Green Elections

Green elections entail conducting electoral activities while minimising their ecological impact. This includes various measures aimed at reducing waste, conserving resources, and promoting eco-friendly practices throughout the electoral cycle.

### Key Principles of Green Elections

- **Sustainable Campaign Materials:** Candidates and political parties prioritise the use of eco-friendly materials such as **recycled paper, biodegradable banners, and reusable signage.**
- **Digital Outreach:** Leveraging digital platforms like **social media, websites, and email campaigns to minimise paper usage** and reduce the carbon footprint associated with traditional campaigning methods.

- **Energy Efficiency:** Adopting energy-saving measures for campaign events, including the **use of LED lighting, sound systems with low power consumption,** and organising rallies in locations accessible by public transportation.

### Benefits of Green Elections

- **Environmental Conservation:** By reducing waste generation and resource consumption, green elections contribute to environmental conservation efforts and help mitigate climate change.
- **Public Awareness:** Promoting eco-friendly practices during electoral campaigns raises public awareness about environmental issues and fosters a culture of sustainability.
- **Long-Term Impact:** Implementing green election practices sets a precedent for future electoral processes, encouraging continuous improvement in environmental stewardship within the political sphere.
- **Cost Savings:** While initially requiring investment in sustainable infrastructure and practices, green elections often lead to long-term cost savings. By reducing the need for disposable campaign materials, minimising energy consumption, and optimising resource usage
- **Setting a Positive Example:** By adopting green election practices, political entities demonstrate their commitment to environmental responsibility and leadership. This sets a positive example for other sectors of society and encourages broader adoption of sustainable practices beyond the electoral arena.

### Challenges and Considerations

- **Cost Implications:** Transitioning to green election practices may involve initial investment in eco-friendly materials and technologies, which could pose financial challenges for candidates and electoral bodies.
- **Behavioural Change:** Encouraging widespread adoption of sustainable practices requires a shift in attitudes and behaviours among political stakeholders, voters, and electoral staff.
- **Accessibility Concerns:** Ensuring inclusivity in green election initiatives by addressing accessibility barriers, particularly for marginalised communities, is crucial for equitable participation in the democratic process.
- **Infrastructure Limitations:** In some regions, inadequate infrastructure may hinder the adoption of green election practices. Limited access to recycling facilities, renewable energy sources, and sustainable transportation options can pose logistical challenges and im-

pede efforts to minimise the environmental footprint of electoral activities.



### Some Successful Eco-Friendly Electoral Initiatives Taken in India and the World

#### Kerala's Green Campaign

During the 2019 general election, the Kerala State Election Commission took proactive steps to encourage political parties to avoid single-use plastic materials in their campaigns. This initiative aimed to reduce plastic waste and promote eco-conscious practices among political entities. Additionally, the Kerala High Court imposed a ban on non-biodegradable materials like flex banners, pushing for the use of more sustainable alternatives such as wall graffiti and paper posters.

#### Goa's Artisan-Crafted Eco-Friendly Booths

In 2022, the Goa State Biodiversity Board introduced eco-friendly election booths for the Assembly elections. These booths were constructed using biodegradable materials crafted by local traditional artisans, showcasing a blend of sustainability and traditional craftsmanship. This initiative not only reduced the environmental impact of the election process but also supported local artisans and promoted eco-friendly practices.

#### Collaborative Efforts in Thiruvananthapuram, Kerala

Government bodies in Thiruvananthapuram collaborated with the district administration to ensure green elections by implementing various eco-friendly practices. This collaboration included conducting training sessions for election workers in villages to raise awareness about environmen-

tal stewardship and promote sustainable election practices. By involving local communities and emphasising the importance of eco-conscious initiatives, Thiruvananthapuram set a commendable example for fostering green elections.

#### Sri Lanka's Carbon-Sensitive Campaign

**Key takeaway:** Measured emissions, offset them with tree planting, raising environmental awareness. It reduced emissions through careful monitoring and engaged the public in reforestation efforts.

#### Estonia's Digital Voting Revolution

**Key takeaway:** Introduced digital voting as an alternative to paper ballots. It eliminated paper waste associated with traditional voting systems.

## CURATIVE PETITION

### Why in the News?

Recently, the Supreme Court granted relief to the Delhi Metro Rail Corporation (DMRC) through the Curative Petition. A three-judge bench headed by Chief Justice DY Chandrachud allowed the curative petition of Delhi Metro Rail Corporation Ltd. (DMRC) against Delhi Airport Metro Express Pvt. Ltd. (DAMEPL). It set aside its judgment in the case of Delhi Airport Metro Express Private Limited v. Delhi Metro Rail Corporation Ltd. (2022).

CJI Chandrachud acknowledged that a **previous court decision was unjust**, halted the Delhi Airport Metro's legal action, and ordered refunds of payments made by DMRC to DAMEPL.

The Supreme Court's decision to support DMRC via a curative petition impacts PPPs, investor trust, and legal precedents, showcasing a commitment to justice.

### Background of the Case:

- In 2008, the DMRC partnered with DAMEPL, a consortium led by Reliance Infrastructure Ltd, for the Delhi Airport Metro Express project through a Public Private Partnership (PPP).
- However, a dispute arose between the two parties, and the agreement was terminated by DAMEPL in 2013.
- An arbitration tribunal ruled in favour of DAMEPL and ordered DMRC to pay nearly eight thousand crore in 2017.
- DMRC challenged this in the Delhi High Court in 2019. The Delhi High Court overturned an arbitral award

challenged by DMRC, but the Supreme Court reversed this decision in September 2021, upholding the original award in favour of DAMEPL.

- In November 2021, the Supreme Court dismissed a review petition filed by DMRC in the case, and subsequently, in August 2022, DMRC filed a curative petition against the arbitral award in the Supreme Court.

#### About the Curative Petition:

- A curative petition allows for reviewing the Supreme Court of India's final judgment or order. The curative petition can be filed if the petitioner believes that principles of natural justice have been violated or if a fundamental error in the judgment has resulted in manifest injustice.
- This process was established through the **case of Rupa Ashok Hurra vs. Ashok Hurra & Anr. in 2002**, acknowledging that even final judgments might have mistakes that need correction. This mechanism is a critical safety valve to prevent miscarriages of justice, ensuring that every legal option is explored before a case is concluded.
- The Concept of a curative petition is based on Article 137 of the Indian Constitution. Article 145 of the Indian Constitution governs the making of laws and rules. This means that the Supreme Court has the authority to review every judgment that it makes.
- A curative petition may be filed after a review plea against the final conviction is dismissed. It must be filed within 30 days of the judgment or order. The Supreme Court's three senior judges, including the Chief Justice of India and the judges who dismissed the review petition, heard the petition.
- Once the Supreme Court passes a judgment on a curative petition, it is considered final, and no further recourse is available within the judicial system.

#### Conclusion:

The curative petition is the Indian judicial innovation. It safeguards against potential miscarriages of justice in exceptional cases where all other legal avenues have been exhausted. Curative petitions are rarely granted, and the Supreme Court exercises caution in admitting them. They are considered only in exceptional cases with a glaring error or a fundamental flaw in the judgment.

### PRELIMS QUESTION

**Q1. What dimensions does the Gender Inequality Index assess?**

- (a) Economic, social, and political
- (b) Reproductive health, empowerment, and the labour market
- (c) Education, employment, and healthcare
- (d) Infrastructure, environment, and governance

**Q2. In patriarchal societies, which of the following is often associated with the relegation of women to domestic roles and limited participation in decision-making processes?**

- (a) Gender fluidity
- (b) Gender parity
- (c) Gender asymmetry
- (d) Gender segregation

**Q3. Consider the following statements**

1. The Election Commission of India is a five-member body.
2. Union Ministry of Home Affairs decides the election schedule for the conduct of both general elections and bye-elections.
3. The Election Commission resolves the disputes relating to splits/mergers of recognised political parties.

**How many of the statements above are correct?**

- (a) Only one
- (b) only two
- (c) All three
- (d) None

**Q4. Consider the following statements:**

1. According to the Constitution of India a person who is eligible to vote can be made a minister in a State for six months even if he/she is not a member of the Legislature of that State.
2. According to the Representation of People Act, 1951, a person convicted of a criminal offence and sentenced to imprisonment for five years is permanently disqualified from contesting an election even after his release from prison.

**Which of the statements given above is/are correct?**

- (a) 1 only
- (b) 2 only

- (c) Both 1 and 2  
(d) Neither 1 nor 2

**Q5. Consider the following statements:**

1. India's shutdowns are localised rather than nationwide, which differs from the global trend.
2. Unlawful Activities (Prevention) Act allows the government to block URLs associated with banned organisations.

**Which of the above statements is/are correct?**

- (a) 1 only  
(b) 2 only  
(c) Both 1 and 2  
(d) Neither 1 nor 2

**Q6. What rights do internet shutdowns in India violate according to court rulings?**

- (a) Right to privacy only  
(b) Right to freedom of speech only  
(c) Right to freedom of speech and right to information  
(d) Right to freedom of speech and right to practise religion online

**Q7. Consider the following:**

1. Service providers
2. Data centres
3. Body corporate

**For how many of the above is it legally mandatory to report on cyber security incidents?**

- (a) Only one  
(b) Only two  
(c) All three  
(d) None

**Q8. With reference to the Indian judiciary, consider the following statements:**

1. The Chief Justice of India, with the President of India's prior consent, has the authority to invite any retired Supreme Court judge to serve and function as a judge of the Supreme Court of India.
2. A High Court in India possesses the authority to review its own judgment, similar to the Supreme Court.

**Which of the statements given above is/are correct?**

- (a) 1 only  
(b) 2 only  
(c) Both 1 and 2  
(d) Neither 1 nor 2

**Q9. With reference to India's Desert National Park, which of the following statements is correct?**

1. It is spread over two districts.
2. There is no human habitation inside the Park.
3. It is one of the natural habitats of the Great Indian Bustard.

**Select the correct answer using the code given below:**

- (a) 1 and 2 only  
(b) 2 and 3 only  
(c) 1 and 3 only  
(d) 1, 2 and 3

**Q10. The concept of "Public Trust Doctrine" in environmental law implies that natural resources are:**

- (a) Owned by the government  
(b) Owned by private entities  
(c) Owned collectively by citizens and the government and must be protected for the common good  
(d) Owned by multinational corporations

**Q11. In which case did the Supreme Court of India recognise the "polluter pays" principle?**

- (a) MC Mehta v. Union of India  
(b) Indra Sawhney v. Union of India  
(c) Olga Tellis v. Bombay Municipal Corporation  
(d) Vishaka v. State of Rajasthan

**Q12. The right to Privacy is protected as an intrinsic part of the Right to Life and Personal Liberty. Which of the following in the Constitution of India correctly and appropriately implies the above statement?**

- (a) Article 14 and the provisions under the 42nd Amendment to the Constitution.  
(b) Article 17 and the Directive Principles of State Policy in Part IV.



(c) Article 21 and the freedoms guaranteed in Part III.

(d) Article 24 and the provisions under the 44th Amendment to the Constitution.

**Q13. For election to the Lok Sabha, a nomination paper can be filed by**

(a) Anyone residing in India.

(b) A resident of the constituency from which the election is to be contested.

(c) Any citizen of India whose name appears in the electoral roll of a constituency.

(d) Any citizen of India.

**Q14. 'Beijing Declaration and Platform for Action' is:**

(a) a strategy to tackle regional terrorism, an outcome of a meeting of the Shanghai Cooperation Organization

(b) a plan of action for sustainable economic growth in the Asia-Pacific Region, an outcome of the deliberations of the Asia-Pacific Economic Forum

(c) an agenda for women's empowerment, an outcome of a World Conference convened by the United Nations

(d) a strategy to combat wildlife trafficking, a declaration of the East Asia Summit

**Q15. Consider the following statements regarding the impact of climate change on women:**

1. Women in low-income countries are more vulnerable to climate change due to their dependence on natural resources and labour-intensive work.

2. Women in urban areas are more vulnerable to climate change than those in rural areas.

**Which of the statements given above is/are correct?**

(a) 1 only

(b) 2 only

(c) Both 1 and 2

(d) Neither 1 nor 2

**Q16. Consider the following statements regarding judges accepting official positions after retirement in India.**

1. Regarding the post-retirement cooling-off period for judges in India, former CJI of the Supreme Court of India, R.M. Lodha had recommended a cooling-off period of at least 2 years.

2. The recommendations of the 14th Law Commission Re-

port, 1958 ensure providing financial security to the judges without compromising the independence of the Indian judiciary in any way.

**Which of the above statement / statements is/are correct ?**

(a) Only 1

(b) Only 2

(c) Neither 1 Nor 2

(d) All of the above.

**Q17. Consider the following statements regarding the Governor in India.**

1. According to the Punchhi Commission, the Governor should be appointed by the President after consultation with the Chief Minister of the concerned state.

2. According to the Sarkaria Commission, the process of appointment of governors in India should be entrusted to a committee, which should include the Prime Minister, Home Minister, Speaker of the Lok Sabha and the Chief Minister of the concerned state.

3. The Governor is appointed by the President on the advice of the Central Government in India.

4. The Governor can send back to the State Legislature a Money Bill as well as any Bill or any Bill with a message requesting reconsideration of certain provisions of that Bill in India.

**Which of the above statements is/are correct ?**

(a) Only 1 and 3

(b) Only 2 and 4

(c) Only 2

(d) Only 3

**Q18. Consider the following statements regarding Prevention of Money Laundering Act 2002.**

1. The first Prevention of Money Laundering Act was passed in India in 2002. Which was implemented all over India from July 1, 2005.

2. Money laundering refers to disguising black money earned illegally as legitimate money.

3. RBI, SEBI and Insurance Regulatory and Development Authority (IRDA) are also included under PMLA, 2002 in India. Therefore, all the provisions of this Act apply to all financial institutions, banks, mutual funds, insurance companies and their financial intermediaries.

4. Under PMLA 2002, property earned through the offense of money laundering is confiscated and there is a provision for rigorous imprisonment of not less than 3 years to 7 years.

**Which of the above statement / statements is/ are correct?**

- (a) Only 1, 2 and 3
- (b) Only 2, 3 and 4.
- (c) None of these.
- (d) All of these.

**Q19 Consider the following statements regarding water conservation management and promotion in India in relation to climate change.**

1. India's monsoon is also affected by external factors like El Nino.
2. Watershed management is a good option for water conservation and groundwater recharge in India.
3. The main theme of World Water Day 2024 is 'Leveraging Water for Peace'.
5. The main theme of World Water Day 2024 in India was Water Power through Women Power.

**Which of the above statement /statements is/are correct ?**

- (a) Only 1, 2 and 3.
- (b) Only 2, 3 and 4.
- (c) None of these.
- (d) All of the above .

**Q20. Consider the following statements regarding the demand for vote verification through recounting of VVPAT slips in the direction of electoral reforms in India.**

1. The use of VVPAT in general elections in India was first proposed by the Election Commission of India (ECI) in 2010.
2. This prevents any type of malpractice from taking place in elections.
3. VVPAT machines in India are manufactured by Bharat Electronics Limited (BEL) and Electronics Corporation of India Limited (ECIL).
4. This allows cross-checking of votes in case of any dispute or doubt related to the votes in the election.

**Which of the above statement / statements is/are correct?**

- (a) Only 2, 3 and 4.
- (b) Only 1, 2 and 3.
- (c) Only 1, 3 and 4.
- (d) All of these.

**Q21. With reference to the curative petition, which of the following statements is NOT correct?**

- (a) The curative petition is the Indian judicial innovation.
- (b) The constitutional bench constituted by the Supreme Court to review the Curative Petition.
- (c) The curative petition must be filed within 30 days of the final judgment or order.
- (d) It helps to minimize any abuse of the processes of law and prevent misuse of justice.

### ANSWER

S. No.	Answers
1.	B
2.	D
3.	A
4.	D
5.	C
6.	C
7.	D
8.	C
9.	C
10.	C
11.	A
12.	C
13.	C
14.	C
15.	A
16.	D
17.	D
18.	D
19.	D
20.	D
21.	B

## MAINS QUESTION

**Q1.** Compare and contrast India's Gender Inequality Index score and rank with another country that has a similar population size, and speculate on the reasons behind any disparities or similarities.

**Q2.** How does the Model Code of Conduct impact the level playing field for political parties and candidates during elections?

**Q3.** Reflect on the role of technology in promoting eco-friendly electoral practices, particularly in the context of digital voting systems and online campaigning. What opportunities and challenges does technology present in achieving green elections?

**Q4.** How do internet shutdowns impact the economy of a country? Explore the economic consequences for businesses, particularly startups, during periods of internet blackout. Discuss potential long-term effects on investment and technological innovation.

**Q5.** How does the unregulated dissemination of information on the internet potentially exacerbate social tensions in diverse countries like India, where different cultural, religious, and ethnic groups coexist?

**Q6.** How can governments, NGOs, and local communities collaborate to leverage traditional knowledge for biodiversity conservation and sustainable development?

**Q7.** Analyse the Supreme Court's interpretation of the

right to privacy in the context of electoral disclosures and its implications for candidates and voters.

**Q8.** Reflect on the ethical implications of political parties and candidates adhering to or violating the provisions of the Model Code of Conduct (MCC) during electoral campaigns.

**Q9.** In what ways has economic instability during the pandemic contributed to instances of shadow violence, particularly in marginalised populations?

**Q10.** Highlighting the various dimensions/aspects of judges accepting official posts after retirement in India, discuss whether it is constitutional and appropriate for judges to accept official posts after retirement in India or unconstitutional and inappropriate. Present rational thoughts.

**Q11.** Outlining the process of appointment of Governor in India, discuss in detail the challenges related to the post of Governor in the light of the suggestions of various commissions related to the Governor and also present solutions to those challenges.

**Q12.** What do you understand about money laundering? Discuss what are the challenges before the Enforcement Directorate under the major provisions of the Prevention of Money Laundering Act 2002 in India and what are its solutions?



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## KATCHATHEEVU ISLAND CONFLICT



### Why in the News?

The small island of Katchatheevu has become a source of tension between India and Sri Lanka, highlighting the challenges of managing fishing rights and maritime borders in the region.

### About Katchatheevu Island

- Katchatheevu, a **285-acre deserted landmass situated in the Palk Strait** between India and Sri Lanka, lies northeast of Rameswaram, about 33 km from the Indian shoreline and approximately 62 km southwest of Jaffna, Sri Lanka's northernmost point. It was **formed as a result of volcanic activities during the 14th century**.
- This island **lacks essential resources like drinking water, making it unsuitable for permanent human habitation**. The **only construction on Katchatheevu is St. Anthony's church**, a Catholic shrine established in the early 20th century. Annually, Christian clergy from both nations conduct a festival service there, drawing devotees from India and Sri Lanka.



### History of the Island

- **During British colonial rule**, the 285-acre territory was **jointly administered by India and Sri Lanka**. Katchatheevu island was owned by the Raja of Ramnad, which eventually became part of the Madras Presidency.
- **In 1921, both India and Sri Lanka asserted ownership over the island** for fishing purposes, leading to an ongoing dispute.
- Following India's independence, efforts were made to address the territorial dispute between Ceylon and the British. Presently, Sri Lanka administers the uninhabited island.

### What is the Conflict Around Katchatheevu Island?

- For decades, the waters surrounding Katchatheevu Island served as a shared bounty for Indian and Sri Lankan fishermen. This **harmonious dynamic shifted dramatically in the 1970s with the signing of a series of maritime boundary agreements** between the two nations.
- These agreements, intended to establish clear maritime borders and facilitate resource management, inadvertently sowed the seeds of conflict.
- **Shifting the control:** A key point of contention is the ownership of Katchatheevu Island itself. **In 1974, India ceded control of the island to Sri Lanka under the "Indo-Sri Lankan Maritime Agreement."** While Indian fishermen retained limited access to resting and drying nets, their fishing rights were restricted.
- **Limited Fishing Zone:** The agreements carved out exclusive economic zones (EEZs) for each country, restricting fishermen from venturing into the other's territory. This posed a challenge for Indian fishermen, particularly as fish stocks in their own waters dwindled.
- **Depleting resources:** Depleted fish populations within the Indian continental shelf pushed Indian fishermen further into Sri Lankan waters in search of better catches. This influx raised concerns about overfishing and the potential ecological damage caused by modern fishing practices like trawling.

- **Strain in diplomatic relations:** The increased presence of Indian fishermen in Sri Lankan waters has led to numerous incidents of apprehension by Sri Lankan authorities. This ongoing friction strains diplomatic relations and jeopardises the livelihoods of fishermen on both sides.

### Difference Between the Central Government's and Tamil Nadu's Stands.

#### Tamil Nadu's Claim on Katchatheevu Island

- Tamil Nadu has a long history of contesting the ceding of Katchatheevu to Sri Lanka. As early as 1973, the state's Chief Minister argued that the island rightfully belonged to India, not just Tamil Nadu.
- The issue flared up again in 1991. The then Chief Minister initially called for reclaiming the island entirely. Later, the demand softened to a request for a long-term lease (perpetual lease) of Katchatheevu.
- Notably, both the Chief Minister and the Leader of the Opposition in Tamil Nadu joined forces to approach the Supreme Court on this matter.

#### Central Government's Position

- The Indian government's stance centres around the **1974 and 1976 agreements** that established the maritime boundary between India and Sri Lanka. In 2013, **they argued before the Supreme Court that the question of reclaiming Katchatheevu was irrelevant.** They maintained that these agreements were settlements of historical disputes and no Indian territory was ceded in the process.
- However, the central government's position seems to acknowledge some nuance. While citing the same agreements in 2022, **they clarified in the Rajya Sabha that Katchatheevu lies on the Sri Lankan side of the established maritime boundary.**
- The central government's position seems to be that the agreements are valid and the island belongs to Sri Lanka. However, the legal challenge by Tamil Nadu is still pending in the Supreme Court. This indicates that the domestic debate on Katchatheevu is far from settled.

## "TWO ARCH-RIVALS- IRAN AND ISREAL"

### Why in the News?

Iran attacked Israel on April 13, 2024, in response to an alleged Israeli strike on an Iranian consulate in the Syrian capital of Damascus on April 1, 2024. The attack on the con-

sulate reportedly killed multiple Iranian military personnel.

### More About the News

Iran's Islamic Revolutionary Guards Corps, along with the Popular Mobilization Forces, Hezbollah, and the Houthis, launched a large aerial attack on Israel using drones, cruise, and ballistic missiles in a retaliatory strike codenamed Operation True Promise. This marked Iran's first direct military attack on Israel and escalated tensions between the two countries.

### History of Two Arch-Rivals

The rivalry between Iran and Israel primarily stems from ideological, geopolitical, and religious differences.

- **Geopolitical Competition:** Both countries vie for influence in the Middle East. Iran seeks to establish itself as a regional power, often through support for proxy groups like Hezbollah and Hamas. Israel sees Iran's support for these groups as a threat to its security.
- **Religious Differences:** Iran's population primarily follows the Shia Muslim faith, whereas Israel's population is predominantly Jewish. This religious contrast contributes to ideological tensions and perceptions of each other as adversaries.
- **Historical Context:** Iran's Islamic Revolution in 1979 replaced a pro-Western monarchy with an Islamic Republic hostile to Israel. Since then, Iran's leadership has often expressed anti-Israel sentiments, including calls for its destruction.
- **Israeli Security Concerns:** Iran's nuclear program and its rhetoric about Israel's annihilation have heightened Israeli concerns about its security and survival. Israel views Iran's nuclear aspirations as posing an existential danger to it.
- **Proxy Conflicts:** Iran and Israel have engaged in proxy conflicts across the Middle East, including in Syria, Lebanon, and the Palestinian territories. Their support for opposing factions exacerbates tensions and reinforces their status as arch-rivals.

### How the Iran-Israel conflict can affect Global Geopolitics?

- **Escalation of tensions:** The conflict could escalate into a larger regional conflict, with the potential for increased violence and instability in the Middle East. This could pose a threat to global security and potentially lead to a more significant military confrontation between major powers.
- **Strained international relations:** The conflict could strain relationships between countries with significant stakes in the region, such as the United States, Russia,

China, and European powers. This could lead to increased tensions and potential conflicts in other areas of the world.

- **Proliferation of weapons:** The conflict could lead to the proliferation of weapons, particularly if Iran or Israel were to resort to using nuclear, chemical, or biological weapons. This could pose a threat to global security and public health.
- **Displacement of populations:** The conflict could result in the displacement of large numbers of people, particularly if the fighting were to escalate or reach densely populated urban areas. This could lead to humanitarian crises and refugee flows, placing additional burdens on neighbouring countries and the international community.
- **Economic consequences:** The conflict could disrupt trade, investment, and economic growth in the region, which could have global economic repercussions. Additionally, the conflict could lead to increased energy prices due to potential disruptions in oil production and distribution.



### What is India's stake in Iran-Israel conflict?

India has a complex stake in the Iran-Israel conflict, as it seeks to maintain a delicate balance between its strategic partnerships with both countries while also trying to protect its own interests in the region.

- **Energy Security:** India relies heavily on oil imports, with around 80% of its oil needs being met by imports. The Persian Gulf region, including Iran and Iraq, is a

major source of oil for India. A disruption in the supply of oil from the region could have a significant impact on India's economy and energy security.

- **Non-Proliferation:** India is a member of the Nuclear Suppliers Group (NSG) and has been actively promoting nuclear non-proliferation. The Iran nuclear deal (Joint Comprehensive Plan of Action or JCPOA) was a significant diplomatic achievement for India, as it sought to curb Iran's nuclear ambitions and ensure that its nuclear capabilities remain peaceful. A conflict in the region could potentially undermine India's non-proliferation efforts.
- **Terrorism:** India faces the challenge of terrorism from various sources, including elements within Pakistan and Afghanistan. Iran and Israel are both known to be counter-terrorism partners, and India would prefer to see stability in the region to address its own security concerns.
- **Balance of Power:** India has been pursuing a policy of strategic autonomy, seeking to reduce its dependence on any single country for defense and security cooperation. The Iran-Israel conflict could potentially force India to choose sides, which could be detrimental to its strategic interests.
- **Regional Stability:** India has been trying to play a role as a mediator in the Middle East peace process and has diplomatic relations with both Israel and Iran. A conflict between Iran and Israel could destabilise the region, potentially affecting India's own stability and security.
- **Indian Diaspora:** Members of the Indian diaspora living in countries with a significant presence of Israeli or Iranian nationals might feel increased safety concerns due to the heightened tensions between the two countries.

### Future Course of Action for India

- **Diplomatic engagement:** India should actively engage in diplomatic efforts to resolve the conflict between Iran and Israel. This may include mediating negotiations, offering support for peace talks, and promoting dialogue between the two countries.
- **Maintain strategic autonomy:** India should continue to maintain its strategic autonomy in the Middle East, avoiding getting directly involved in the conflict between Iran and Israel. This would help ensure regional stability and allow India to focus on its own national interests.
- **Support regional partners:** India should support its regional partners, such as Saudi Arabia, the United Arab Emirates, and other Gulf countries, in maintain-

ing stability and security in the Middle East. This can help India build and maintain strong relationships in the region.

- **Promote economic cooperation:** India should continue to pursue economic cooperation with both Iran and Israel, focusing on areas such as energy, trade, and technology. This can help create opportunities for economic growth and development in the region, which can contribute to long-term stability.
- **Promote cultural exchange:** India should encourage cultural exchange programs and educational initiatives between its people and those in Iran and Israel. This can help build understanding and goodwill between the two countries, fostering a more peaceful and cooperative relationship.
- **Monitor the situation:** India should closely monitor the situation in the Middle East, particularly any developments that could directly impact its national security or regional stability. This will allow India to respond appropriately and effectively to any changes in the conflict.

The Iran-Israel conflict has the potential to significantly affect global geopolitics, posing risks to international security, economic stability, and diplomatic relations. It is essential for the international community to work towards resolving the conflict peacefully and promoting dialogue between the two countries to mitigate these risks.

## INDIA PRESENTED A MODEL FOR UNSC REFORM



### Why in the News?

India, as a member of the G4 nations, has presented a comprehensive proposal for United Nations Security Council Reform during the Intergovernmental Negotiations on the matter. This proposal advocates for the inclusion of new permanent members chosen through democratic processes by the UN General Assembly while also demonstrating a willingness to address concerns regarding the use of veto power. The G4 consists of Brazil, Germany, India, and Japan.

### Key Features of the G4 Proposed Model for Security Council Reform

The G4 nations (Brazil, Germany, India, and Japan) have proposed a significant reform of the UN Security Council structure to address concerns about representation and effectiveness. Here's a breakdown of their key proposals, along with some additional considerations:

**Addressing the Representation Gap:** The G4 proposal rightly highlights the under-representation of key regions, particularly Africa, Asia-Pacific, Latin America, and even Western Europe (excluding the current permanent members). This imbalance undermines the Council's claim to legitimacy and its ability to address global challenges that disproportionately affect these regions.

**Council Expansion:** The G4 model suggests increasing membership from 15 to 25-26, adding both permanent and non-permanent members. This could enhance the Council's responsiveness to a wider range of issues and perspectives. However, some argue that a larger Council could lead to slower decision-making.

**New Permanent Seats with Geographical Distribution:** The proposal for six new permanent seats distributed geographically (two each for Africa and Asia-Pacific, one each for Latin America and Western Europe/Others) aims to rectify the representation imbalance. This could lead to a more balanced and inclusive Council. However, the specific allocation criteria and selection process for these new members would need careful consideration to ensure fairness.

**Veto Reform with a Trial Period:** The G4's suggestion for a temporary restriction on veto power for new permanent members is an intriguing concept. This "trial period" would encourage new members to engage in constructive dialogue before resorting to a veto. However, the details of this limitation (duration, specific issues) and its enforceability would require further discussion.

**Democratic Elections for New Members:** The emphasis on democratic elections for new permanent members aligns with calls for greater transparency and accountability within the Security Council. This approach could enhance the Council's legitimacy in the eyes of the global community.

**Veto Power for Existing Permanent Members:** The G4 proposal doesn't directly address the veto power of the current P5 (China, France, Russia, the UK, and the US). Reform efforts might also consider potential limitations on their veto use.

**Regional Dynamics:** The G4 model doesn't specify how regional blocs would choose their candidates for permanent seats. This aspect would require careful negotiation to ensure a smooth selection process.

### Why Reform the UN Security Council?

The UN Security Council needs reform to ensure its effectiveness and legitimacy in today's world. Here's a concise breakdown:

**Representation Gap:** The Council's current makeup, based on 1945 realities, doesn't reflect the rise of new powers

and regions like Africa, Asia, and Latin America. This undermines its legitimacy.

**Outdated Structure:** The Council's size and composition haven't kept pace with the UN's membership growth (142 new countries since 1945). Reform is needed to reflect this new reality.

**Veto Power Concerns:** The veto power of the permanent members (P5) is criticised for hindering action on critical issues and lacking democratic accountability. Reform could address this.

**Alternative Decision-Making:** A lack of reform risks decision-making shifting to other forums, weakening the Security Council's role.

**Enhancing Legitimacy:** Reform should ensure the Council reflects the current world order and operates with greater transparency and accountability. This will strengthen its ability to address global security challenges.

### The G4 and UN Security Council Reform

The G4 (India, Japan, Brazil, and Germany) is a coalition pushing for reform within the UN Security Council (UNSC). Formed in 2005, they advocate for a more inclusive and representative decision-making process at the UN.

#### Key Goals

- **UNSC Reform:** The G4 emphasises the need for significant reforms, particularly in the UNSC, which is crucial for maintaining global peace and security.
- **Permanent Membership:** All G4 members aspire to become permanent members of the UNSC, currently dominated by the five veto-wielding P5 countries (China, France, Russia, the UK, and the US).

#### Renewed Push for Reform

- The 2023 G4 Ministerial Summit highlighted the increasing pressure on multilateralism due to complex global crises.
- The ineffectiveness of the current UNSC in addressing these challenges underscores the urgency for reform.
- The G4 emphasises the need to revitalise discussions on this critical issue.

#### Enhancing UNSC Participation

- The G4 calls for increased participation of developing countries within the UNSC.
- They reaffirm their support for the Common African Position (CAP) on UNSC reform, which advocates for greater African representation.

## RELEVANCE OF THE UNITED NATIONS SECURITY COUNCIL IN THE CURRENT GEOPOLITICAL CONTEXT



### Why in the News?



- Recently, on 25 March 2024, the United Nations Security Council (UNSC) has called for an 'immediate ceasefire' and the release of all hostages by Hamas, five and a half months after Israel launched its attack on Gaza.
- About 32,000 Palestinian civilians have been killed and about 74,000 people have been injured in the Gaza-Israel war.
- In this war, more than 90 percent of Gaza's population has been displaced and almost all the population is in dire straits of starvation.
- America, which has vetoed every resolution in the United Nations for an immediate ceasefire in Gaza, remained absent from this voting. This indicates a change in the policy of the Biden administration regarding this war.
- All UNSC members, including Britain, have voted in favor of the ceasefire proposal.
- Israeli Prime Minister Benjamin Netanyahu has canceled a previously scheduled visit to Washington by two of his close Cabinet aides in anger over a ceasefire proposal, and by China and Russia in the context of the unconditional release of hostages pending a ceasefire. This supported proposal has also been strongly criticized.
- About 1,200 Israeli civilians were killed after Hamas declared a cross-border war on October 7, 2023.



- On the day of the attack on Israel by Hamas, the entire world was in sympathy and solidarity with Israel. But what Israel did in the next few months to punish the entire population of Gaza for the actions of Hamas has turned international opinion against it.
- In such a situation, if Israel makes an objective assessment of the situation on humanitarian grounds, then it should immediately follow the UNSC resolution and declare a cease-fire.

#### United Nations Security Council ( UNSC ):

- The United Nations Security Council is considered the largest forum for managing the security of various countries at the global level.
- The responsibility of maintaining peace and order in the world and ensuring compliance with the principle of collective security rests with the United Nations Security Council.
- The temporary membership of the United Nations Security Council changes from time to time.

#### Introduction to the United Nations Security Council:

- The United Nations Security Council is the most important body of the United Nations, which was formed in the year 1945 during the Second World War.
- Headquarters of the United Nations Security Council located in New York City.
- The Security Council has five permanent members – the United States, China, France, Russia, and the United Kingdom (UK) – collectively known as the P5.
- The United Nations Security Council originally had only 11 member countries, which was expanded in the year 1965 into an international organization with members from 15 countries.
- The permanent member countries of the Security Council have the power of veto, while apart from these permanent member countries, 10 other countries who are included in the Security Council as temporary members for two years, have the power of veto. Is not provided.
- The membership of these countries on the Security Council was designed to reflect the post-World War II balance of power.

#### Importance and Powers of the United Nations Security Council:

- The United Nations Security Council is the most powerful body of the United Nations whose primary responsibility is to maintain international peace and security

of all countries.

- Its main powers also include contributing to peace-keeping operations, enforcing international sanctions and taking military action through Security Council resolutions.
- It is the only UN body with the authority to issue resolutions binding on UN Security Council member states.
- It was established through a Charter of the United Nations in which all member states are bound to follow the decisions of the Security Council.
- Currently the five permanent members of the United Nations Security Council have the right to veto power. **Veto power means – ‘Prohibition power’.**
- If any one permanent member does not agree with the decision of the permanent members, then he can stop that decision by using veto power.



#### Benefits of Getting Permanent Membership in the United Nations Security Council:

- The United Nations Security Council is a major decision-making body of the United Nations.
- To impose any sanctions on any country or to implement any decision of the International Court of Justice, member states require the support of the Security Council.
- By getting India permanent membership of the United

Nations Security Council, India may be able to have a stronger say in global geopolitics.

- After getting permanent membership in the United Nations Security Council, India will also get the power of veto power.
- Permanent membership of the Security Council will help strengthen a mechanism to address external security threats and state-sponsored terrorism against India.



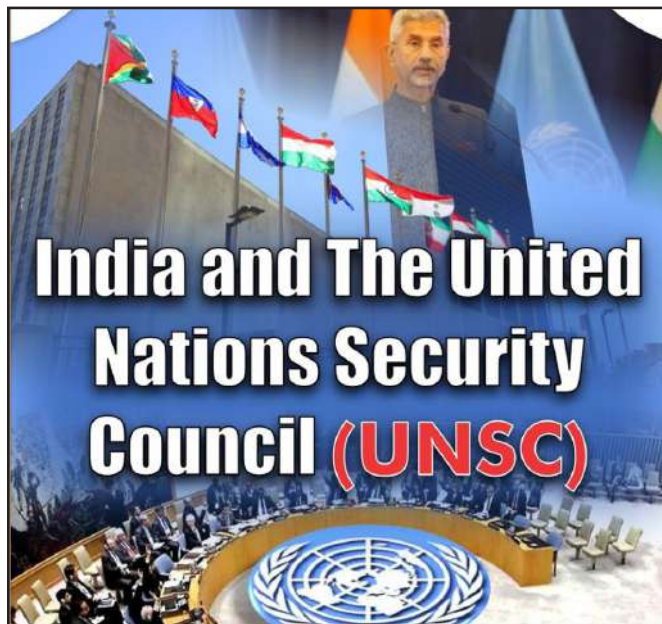
#### Need for Change in the United Nations Security Council in Present Era:

- The United Nations Security Council is the principal global body for maintaining international peace and security, but it is in constant need of reform in order to better respond to the diverse challenges arising globally in the twenty-first century.
- In the twenty-first century, countries all over the world are facing global challenges like various types of cyber crimes, bio-crimes and the increasing spread of nuclear bombs. In such a situation, there is a need for comprehensive changes in the United Nations Security Council as per the trends of increasing crimes at present.
- The United Nations Security Council was established in 1945 according to geopolitics. Present-day geopolitics is now quite different in nature from the backdrop of the Second World War.
- The need for reform has been felt in the world since the end of the Cold War. It requires a number of reforms, the most important of which are organizational structure and procedural reforms.
- At present, Europe has the highest representation among the five permanent countries of the United Nations Security Council. Whereas only 5 percent of the total world population resides in Europe.
- No country from Africa and South America is a permanent member of the Security Council. Whereas more than 50 percent of the work of the United Nations is

related to African countries alone.

- Despite playing an important role in peacekeeping operations at the global level, the stance of other countries like India is being ignored by the current members. India, the world's largest and emerging fifth economic superpower, needs permanent membership in it as per the present times. Is.
- There is a need to reform the structure of the United Nations because it is dominated by America, while at the global level other countries also stand as emerging economic superpowers in relation to America. America has also been ignoring the United Nations and other international organizations on the strength of its military and economic power, which no economic superpower country can tolerate at present. Therefore, there is an urgent need to make changes in this organization according to the global needs of the present time and the changing nature of crimes.

#### Arguments Given in Favor of India Getting Permanent Membership in the United Nations Security Council:



- India is the second most populous country in the world, with a population of about one billion and forty crore. Where about 1/5th of the total population of the world resides.
- At present, India is an emerging economic superpower of the world. India's growing status as an economic superpower on the global stage further strengthens India's claims for permanent membership of the UN Security Council. At present India is the fifth largest economy in the world. Apart from this, India is also among the three largest economies of the world in terms of GDP based on PPP.

- India is now counted among the most influential countries in economic organizations like WTO, BRICS and G-20.
- India has also successfully hosted an economic organization like G-20 in the year 2023.
- India's foreign policy has historically been to promote world peace and brotherhood, and India has always believed in the concept of "Vasudeva Kutumbkam".
- India is also the country sending the largest number of troops to the United Nations.

#### Conclusion / Path to Solution:

- India's temporary membership of the United Nations Security Council will certainly be an important effort to move towards permanent membership.
- Permanent membership will bring India at par with America, Britain, France, China and Russia at the level of global politics.
- Therefore, India also needs to make more serious efforts for permanent membership in the United Nations Security Council.
- The United States has historically used its veto power to shield Israel from Security Council decisions.
- Nearly a third of its negative votes since 1972 have been on resolutions critical of Israel.
- China has used the veto more frequently in recent years, although it has historically been more restrained than the United States or Russia, with Beijing now rejecting twenty resolutions.
- The full name of the Soviet Union was the Union of Soviet Socialist Republics. Russia was the principal republic of the USSR.
- Since the dissolution of the USSR in 1991, China and Russia have vetoed more than a quarter of the time. In contrast, France and the United Kingdom (Britain) have not used their veto power since 1989 and have also asked other P5 members to use it less.
- The ongoing war between Israel and Hamas is increasing tensions in Israel's relations with its closest allies, including the United States.
- If Israel continues this war, it will further increase its domestic and international challenges. In addition, many more lives will be lost in the unprotected, battered, besieged, bombed Gaza Strip.

## ISRAEL – PALESTINE CONFLICT AND AMERICA'S ROLE



### Why in the News?



- Recently, on April 1, 2024, there was an attack on an annex of the Iranian Embassy in Damascus.
- This attack is a further step in the multi-dimensional conflict that is spreading across West Asia from October 7, 2023.
- Iran has blamed Israel for this attack.
- In this attack, 13 Iranians, including Mohammad Reza Zahedi, the top commander in charge of the Quds Force's Syria operation, have been killed.
- Israel has neither confirmed these claims nor denied that it was behind such attacks. But it is an open secret that it is taking action by targeting Iranian military and nuclear installations in this entire region.
- On 25 December 2023, Razi Mousavi, a senior adviser to Iran's Islamic Revolutionary Guard Corps (IRGC), was killed in a suspected Israeli strike in Syria.
- The attack of April 1, 2024 is different from Israel's previous attacks because an embassy complex was targeted in this attack.
- Under international law, any embassy and other diplomatic premises have protected status, which cannot be attacked under any circumstances.
- Even during the Second World War, diplomatic complexes were not attacked by enemy powers.
- When the Chinese Embassy in Belgrade was bombed by the US in May 1999, then US President Bill Clinton publicly apologized, calling it an accident.
- In Damascus, the attack was aimed at hitting a group of IRGC fighters. Many in Iran view this as an act of war.

### Main Reasons for Israel – Palestine Conflict:



- The main reason for the Israel-Palestine conflict is the city called Jerusalem.
- Jerusalem is a city that straddles the border between Israel and the West Bank.
- It is an important site, one of the holiest sites in both Judaism and Islam.
- Therefore, both Israel and Palestine want to capture the city of Jerusalem.
- The city of Jerusalem is considered to be the main cause of the Israel-Palestine conflict.
- Therefore, both countries want this to be the solution to the Israel-Palestine conflict.

### What Does Palestine Want?

- Palestine wants Israel to withdraw from the city limits of Jerusalem before 1967 and to establish an independent Palestinian state in the West Bank and Gaza.
- Israel must stop all humanitarian expansion into settlements in the city of Jerusalem and then engage in peace talks related to the Israel-Palestine conflict.
- Palestine also wants that Palestinian refugees who lost their homes in 1948 should have the freedom to return to their homes in Palestine.
- Palestine wants to make East Jerusalem the capital of an independent Palestine state.

### What Does Israel Want?

- Israel wants sovereignty over Jerusalem.
- Wants global recognition of Israel as a Jewish state.

- Israel is the only country in the world that was created for a religious community.
- Only Palestine has the right of return for Palestinian refugees, not Israel.

### The Main Reasons for America's Entry into the Israel-Palestine Conflict:

- There are more Jews in the United States than in Israel. Jews have significant control over the American media and economy.
- Israel receives approximately \$3 billion in direct foreign aid each year, which currently accounts for about one-fifth of the entire US foreign aid budget.
- America is playing an important role as a mediator in the Israel-Palestine conflict, but its credibility as a mediator has been questioned by the Palestinians for a long time.
- The United States has also been criticized by the OIC (Organization of Islamic Cooperation) and other Arab organizations for vetoing most Security Council decisions criticizing Israel.
- The United States has been vocal about its intention to veto any Palestinian efforts to achieve statehood for Palestine. Due to which Palestine is not included in the United Nations even at present. '**Non-member Observer**' Had to be satisfied with 'status' only.
- The second term of the Obama administration saw a deterioration in US-Israel relations.
- Israel was irritated by the 2015 Iran nuclear deal and also criticized America for this agreement.
- The Obama administration allowed the United Nations to pass a resolution that declared Israel's growing settlements in the occupied territories illegal.
- Until that vote, the Obama administration had used its veto power in the UN Security Council to block resolutions criticizing Israel.
- With the presidency led by Trump, who was more inclined towards Israel, an increase in illegal settlements by Israel was seen in the West Bank and Gaza.

### Conclusion or Path to Solution of Israel – Palestine Conflict:

- The most accurate solution to the ongoing Israel-Palestine conflict "**Two – State Theory** " Maybe that would establish Palestine as an independent state in Gaza and much of the West Bank, and leave the rest of the land to Israel.
- The two-state plan in the Israel-Palestine conflict is

clear in theory, but both sides have still not agreed on how to implement it in practice.

- A one-state solution (only Palestine or only Israel) cannot be a viable option.
- Road Map for Peace: The EU, UN, US and Russia issued a road map in 2003, outlining a clear timetable for Palestinian statehood.
- Democratization of Palestinian society is necessary so that a new credible leadership can emerge.
- It is time for the international community to quickly find a just and lasting peaceful solution to the world's most difficult conflict.
- Even before the Hamas attack on Israel on October 7, 2023, a shadow war was going on between Israel and Iran in West Asia. But after October 7, 2023, Israel started a two-pronged attack.
- On one hand, it has launched a complete attack on Gaza, a small Palestinian territory with 2.3 million people, while on the other hand, it has carried out dozens of air strikes in Syria and Lebanon against Iran and its militia network.
- Israel views Iran as the nexus of all non-state militias in the region, be it Hamas, Hezbollah, Houthis or Palestinian Islamic Jihad, and is determined to eradicate their influence in its immediate neighborhood.
- Israel's war in Gaza is not going according to plan.
- The Israel-Palestine conflict that has been going on for the last six months has turned Gaza into an open graveyard, in which more than 33,000 people have been killed. Most of these killed include women and children.
- The attack which took place on October 7, 2023, on the instructions of Israeli Prime Minister Benjamin Netanyahu, is now under increasing pressure within his own country and abroad to call for a ceasefire and resign.
- An open war between Israel and Iran, which could even drag the US into it, would be a security disaster for the region and an economic nightmare for the world at large.
- Therefore, Iran should not fall into the trap laid by Israel.
- Strategically, it should show patience and restraint and the United States, Israel's most important diplomatic and military supporter, should prevent its closest ally from committing evil acts again.

- At present, America will have to control Israel and Iran will also have to maintain restraint in this war.



## IPEF CLEAN ENERGY ECONOMIC FORUM

### Why in the News?

The Department of Commerce recently announced that the Indo-Pacific Economic Framework for Prosperity (IPEF) will host its first clean economy investor forum in Singapore on June 5th and 6th, 2024. The department has also invited applications from domestic climate and tech entrepreneurs to participate in the meeting.

### What is the Indo-Pacific Economic Framework For Prosperity (IPEF)?

- The Indo-Pacific Economic Framework for Prosperity (IPEF), initiated in 2022, aims to foster collaboration among countries in the region for resilient, sustainable, and inclusive economic growth, promoting cooperation, stability, and prosperity.
- It comprises 14 countries: Australia, Brunei Darussalam, Fiji, India, Indonesia, Japan, the Republic of Korea, Malaysia, New Zealand, Philippines, Singapore, Thailand, the United States and Vietnam.
- The IPEF comprises four pillars of cooperation: Trade, Supply Chain, Clean Economy, and Fair Economy.
- It is not a free trade agreement (FTA) between the member countries.
- The IPEF provides a platform for countries in the region to collaborate on advancing resilient, sustainable, and inclusive economic growth. Further, it aims to contrib-

ute to regional cooperation, stability and prosperity.

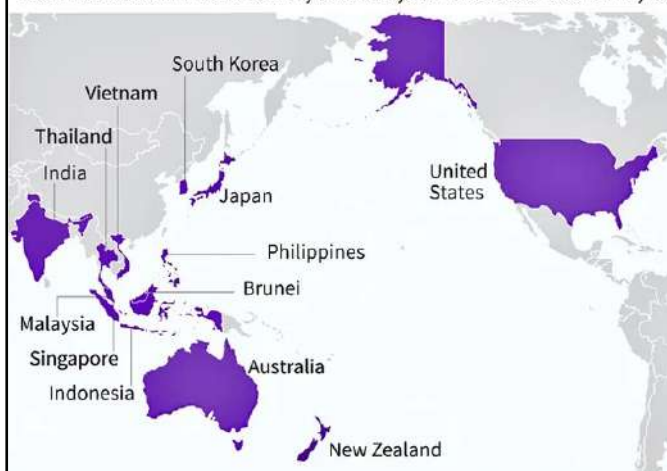
#### About IPEF Clean Energy Economic Forum:

- The IPEF Clean Economy Investor Forum brings together the region's top investors, philanthropies, financial institutions, innovative companies, start-ups and entrepreneurs.
- The forum focuses on catalyzing investments in sustainable infrastructure, climate technology, and renewable energy projects.
- The forum will provide opportunities for the Indian industry in two distinct tracks, e.g., the Climate Tech Track and the Infrastructure Track.
- The Infrastructure Track emphasizes investment-ready sustainable projects spanning energy (solar, wind, hydrogen), transportation (EVs, charging stations), and waste management.
- Through its Climate Tech and Infrastructure Tracks, the forum will highlight leading climate tech firms and sustainable infrastructure projects to global investors.
- Top climate tech companies from India seeking investment opportunities will also attend the meeting.

**The Department of Commerce is the nodal agency for the IPEF engagements, and the IPEF Clean Economy Investor Forum is managed by Invest India, India's National Investment Promotion Agency.**

#### Asia-Pacific trade framework

13 countries listed in initiative formally unveiled by US President Joe Biden on May 23



#### Government of India's Initiatives for Promoting Clean Energy in India:

Clean energy addresses the world's various environmental, economic, and social challenges. Clean energy sources such as solar, wind, hydroelectric, and biomass produce minimal or no greenhouse gas emissions during power generation.

By replacing fossil fuels, which are major contributors to air and water pollution and climate change, clean energy helps mitigate environmental degradation and reduce the impact of global warming.

Since pledging to be a net zero emitter by 2070 at COP 26 in Glasgow, India has introduced policies and regulatory actions to develop technologies. These initiatives aim to help India to achieve its ambitious climate target, reflecting its commitment to environmental sustainability. **Some targets are:**

- Reducing emission intensity of GDP by 45% by 2030, compared to 2005.
- Raising the share of non-fossil fuel-based generation capacity to 50% by 2030.
- Reduce projected carbon emissions by 1 bn tonnes by 2030.
- 20% ethanol blending by 2025.
- 500 GW of non-fossil fuel-based capacity by 2030.
- 5 MMTPA green H2 production by 2030.

Several companies in India have announced their net zero goals and plans to reduce their carbon footprint through technology. These clean energy drivers primarily focus on renewables, battery storage, electric vehicles, carbon capture, green hydrogen, and biofuels.

The Government of India has undertaken several initiatives to promote renewable energy. These initiatives reflect India's commitment to achieving its renewable energy targets, reducing greenhouse gas emissions, and transitioning towards a more sustainable and cleaner future. **Here are some key initiatives:**

- **National Solar Mission (NSM):** Launched in 2010, the NSM aims to promote solar energy development in India. This mission includes various incentives, such as subsidies, tax benefits, and generation-based incentives, to attract investments in solar power generation.
- **PM-KUSUM:** PM Kisan Urja Suraksha Evam Utthan Mahabhiyan (KUSUM) is a farmer-oriented solar power scheme that will allow the setting up of grid-connected solar plants in rural areas and off-grid solar pumps. Under the scheme, the government plans to incentivize farmers to run solar farms and water pumps and use barren land to generate power for extra income up to Rs 60,000 per acre annually.
- **Clean Energy Financing:** The government has established institutions like the Indian Renewable Energy Development Agency (IREDA) to provide financial assistance and loans for renewable energy projects. Additionally, initiatives like the Green Climate Fund (GCF)

aim to mobilize funds for India's climate-resilient and low-carbon development projects.

- **Electric Vehicle (EV) Promotion:** To reduce vehicular emissions and promote clean transportation, the Indian government has launched schemes such as the Faster Adoption and Manufacturing of Hybrid and Electric Vehicles (FAME) scheme. This initiative provides subsidies and incentives for adopting electric and hybrid vehicles.
- **Energy Efficiency Programs:** The government has implemented various energy efficiency programs to reduce energy consumption and promote sustainable practices. This includes the Perform, Achieve, and Trade (PAT) scheme, which aims to improve energy efficiency in energy-intensive industries through regulatory mechanisms and incentives.
- **Renewable Purchase Obligations (RPO):** Under the Electricity Act 2003, state electricity regulatory commissions enforce RPOs on distribution companies and open-access consumers. These companies are mandated to procure a specific percentage of their power from renewable sources.
- **Tax Incentives:** The government provides tax benefits, including accelerated depreciation and income tax exemptions, to promote investments in renewable energy projects.

India actively participates in international collaborations and agreements related to clean energy and climate change, such as the Paris Agreement. These collaborations facilitate technology transfer, capacity building, and financial assistance for clean energy projects in India. However, policy implementation, infrastructure development, and financing challenges remain critical for achieving ambitious clean energy targets.

## STRATEGIC IMPORTANCE OF ANDAMAN & NICOBAR ISLANDS



### Why in the News?

The recent attention from the Indian government towards the development of the Andaman and Nicobar Islands highlights their crucial importance in the Indo-Pacific area. This has led to initiatives aimed at improving both infrastructure and security on the islands. The current emphasis on bolstering strategic facilities, both for civilian and military purposes, indicates a belated recognition of the islands' strategic maritime value, which had been overlooked since India gained independence.

## Strategic Importance of Andaman & Nicobar Islands

### Gateway to Indo-Pacific

As a "net security provider," India can utilise its presence on these islands to safeguard its own interests while projecting itself as a stabilising force in the area.

### Connect India with Southeast Asia

Andaman and Nicobar Islands serve as a bridge between South Asia and Southeast Asia, with approximately 30 per cent of India's Exclusive Economic Zone (EEZ) encompassing them. Geographically, they are closely situated in Myanmar and Indonesia, reinforcing their strategic importance.

### Checking the Chinese Aspirations

In terms of regional security, the islands provide India with the capability to establish a maritime exclusion zone, particularly in times of potential conflict with China. This strategic advantage enables India to counterbalance the presence of the People's Liberation Army Navy (PLAN) in the Indian Ocean and closely monitor Chinese maritime activities, thus acquiring valuable insights into their operational behaviours and patterns within the Indian Ocean Region (IOR).

### Maritime Partnership

Given their intersection with the Indian Ocean, the South China Sea, and the Pacific Ocean, the islands serve as a critical nexus in the broader Indo-Pacific region. Japan's commitment to supporting development projects in the Andaman and Nicobar Islands underscores their significance, with recent investments aimed at infrastructure enhancement, including an international container transshipment terminal, an airport, a power plant, and a township.

### Regional Connectivity Hub

The Andaman & Nicobar Islands are strategically important for India beyond defence. They bridge South and Southeast Asia, offering economic opportunities. With a vast Exclusive Economic Zone, they can be a hub for trade, investment, and cultural exchange, connecting India to the Indo-Pacific region. Upgrading infrastructure like ports will further solidify this role.

### Mineral Wealth

The Andaman and Nicobar Islands offer India access to a vast exclusive economic zone spanning 300,000 square kilometres, holding significant potential for undersea hydrocarbon and mineral reserves.

### Tourism Appeal

With its pristine beaches, the Andaman and Nicobar Islands boast considerable tourism potential, presenting an

opportunity to attract foreign direct investment (FDI) into India's hospitality sector.

### Maritime and Innovation Hub

Recognizing the islands' potential, NITI Aayog has outlined plans for their development as a maritime and startup hub. For instance, the proposed project for Great Nicobar includes the establishment of an international container trans-shipment terminal, a greenfield international airport, a power plant, and a township complex.

### Humanitarian Assistance and Disaster Relief (HADR)

The Andaman and Nicobar Islands offer India a platform to engage in disaster relief efforts, medical assistance, combating piracy and human trafficking, as well as conducting aircraft and submarine search and rescue missions, contributing to social welfare across the broader Indo-Pacific region.



### Challenges Regarding the Development of A&N Islands

- **Shifting Priorities:** India's evolving foreign policy, transitioning from a passive "Look East" approach to a more active "Act East" policy, has highlighted the need to prioritise the development of its island territories. However, this realisation comes after a period of relative neglect.
- **Logistical Hurdles:** The islands' remoteness from mainland India presents significant challenges in infrastructure development. Building essential infrastructure is a complex and expensive undertaking due to the logistical difficulties involved.
- **Environmental Safeguards:** Strict environmental regulations and the need to protect tribal communities and sensitive ecosystems create hurdles for development projects. Balancing economic growth with environmental and social sustainability remains a critical challenge.

- **Bureaucratic Bottlenecks:** The involvement of multiple ministries and agencies in development projects often leads to coordination issues, creating bureaucratic delays and hindering progress.
- **Short-Term vs. Long-Term Vision:** Striking a balance between long-term strategic goals and short-term political gains can be challenging. Politicians may prioritise quick, visible projects over long-term strategic initiatives crucial for the islands' development.

### Central Government's Initiatives for the Development of Andaman & Nicobar Initiatives

- **Vision 2030 & 7-Year Strategy:** This plan outlines initiatives to boost agriculture, fisheries, and tourism in the islands. It promotes sustainable practices like crop diversification and solar dryers for copra production.
- **NITI Aayog's Project for Great Nicobar:** This ambitious project envisions an international container trans-shipment terminal, airport, power plant, and township, aiming to create a maritime and industrial hub.
- **Japan's Overseas Development Assistance:** In 2021, Japan granted USD 265 crore in aid for development projects in the Andaman and Nicobar Islands.
- **Development of defence infrastructure:** A contemporary hangar and dispersal system have been established at INS Utkrosh in Port Blair. Additionally, Naval Communication Network (NCN) Centers have been strategically positioned at INS Kohassa, INS Baaz, and INS Kardi, aimed at enhancing communication and operational capacities within the Andaman and Nicobar Command.

## INDIA'S NEW POST OFFICE IN ANTARCTICA

### Why in the News?

In a recent development, the Department of Posts inaugurated a second post office branch at the Bharati research station in Antarctica, marking the first expansion in nearly forty years. As part of this initiative, letters designated for Antarctica will now bear a unique experimental PIN code, MH-1718, tailored for the new branch.

### Importance of India's Post Office in Antarctica

#### INDIA'S PRESENCE IN ANTARCTICA IN HISTORY

India's Antarctic postal story began in 1984 with the inauguration of a post office at Dakshin Gangotri, the country's first research station on the continent. This pioneering out-



post, though eventually decommissioned due to ice submergence, stands as a historical landmark, a testament to India's early foray into Antarctic exploration. The legacy continues at the Maitri and Bharati research stations, both equipped with functional post offices established in 1990 and beyond.

### Collaboration for Research

These Antarctic post offices serve as vital communication lifelines for researchers stationed at the remote bases. Letters carrying scientific data and personal messages travel between India and Antarctica, facilitating collaboration and keeping researchers connected to loved ones back home. The act of sending and receiving mail, even in such a harsh environment, provides a morale boost, reminding researchers of the world beyond the frozen expanse.

### The Growing Presence of India in the International Arena

Unlike a traditional post office operating within national borders, India's Antarctic branches hold a unique significance. Antarctica, governed by the Antarctic Treaty promoting peaceful research and environmental protection, presents a special opportunity. The presence of these post offices subtly yet demonstrably asserts India's peaceful presence and commitment to scientific exploration on the continent. It's a way to plant a flag, not of conquest but of scientific curiosity and international collaboration.

### Aligning With the Antarctic Treaty

The Antarctic Treaty plays a crucial role in governing the continent. It neutralises territorial claims, prohibits military activity, and emphasises scientific discovery. India's postal network in Antarctica aligns perfectly with this spirit. It signifies India's commitment to peaceful scientific pursuits and environmental stewardship in a region crucial for understanding our planet.

### Boost to Morale

For researchers stationed in Antarctica for extended periods, being able to send and receive mail from home through a familiar Indian postal service can be a morale booster, helping them stay connected to loved ones.

### About the Antarctic Treaty System

- The Antarctic Treaty System (ATS) stands as a cornerstone of international cooperation and governance in the Antarctic region. Signed on December 1, 1959, the treaty entered into force in 1961 and has since been joined by numerous nations, including major stakeholders in Antarctic affairs.
- It serves as a comprehensive framework for the management of Antarctica, encompassing governance, environmental protection, scientific research, and peace-

ful cooperation.

- Key provisions of the Antarctic Treaty include the **demilitarisation of the continent**, the prohibition of nuclear testing and disposal of radioactive waste, and the promotion of scientific research and collaboration among signatory nations. The treaty establishes Antarctica as a zone of peace and scientific endeavour, ensuring that it is used exclusively for peaceful purposes and scientific research.
- Furthermore, the Antarctic Treaty System encompasses a series of additional agreements and protocols aimed at addressing specific issues and challenges facing the region.
- These include the Convention for the Conservation of Antarctic Marine Living Resources (CCAMLR), which regulates fishing and marine resource exploitation in Antarctic waters, and the Protocol on Environmental Protection to the Antarctic Treaty, which designates Antarctica as a natural reserve dedicated to peace and science and outlines measures for environmental protection and conservation.
- It operates on the basis of consensus decision-making among its member states, ensuring that all decisions are made collectively and in the best interests of Antarctica and its inhabitants. Regular meetings of treaty parties, scientific committees, and expert groups facilitate communication, cooperation, and the exchange of scientific knowledge and expertise.



### India at the Antarctic

India's Antarctic Programme represents a significant commitment to scientific research, environmental conservation, and international cooperation in Antarctica. Central to this programme are India's three research stations strategically located in the Antarctic region: Maitri, Bharati, and

Dakshin Gangotri.

- **Dakshin Gangotri (1983-1991):** This pioneering research station, established in 1983, marked India's initial foray into Antarctica. Notably, it was the first time an Indian team wintered over on the continent, a crucial milestone for scientific research. While eventually decommissioned due to being submerged by ice, Dakshin Gangotri's legacy lives on as a symbol of India's early Antarctic endeavours.
- **Maitri (1989):** Commissioned in 1989, Maitri stands as India's first permanent research station in Antarctica. Located near Schirmacher Oasis, this all-weather station allows researchers to conduct year-round scientific studies in various disciplines, including atmospheric sciences, biology, geology, and glaciology.
- **Bharati (2012):** India's most recent research station, Bharati, was inaugurated in 2012. Situated in a region with minimal snowfall, this station facilitates research on upper atmospheric studies, coastal processes, and the impact of climate change.

## SWISS NEUTRALITY

### Why in the News?

The Swiss government recently announced that it will host a two-day high-level conference in June to achieve peace in Ukraine. However, Russia has clarified that it will not participate in the initiative. The top Swiss diplomat said more than 100 countries would be invited to the gathering.

Switzerland said in January it would host a peace summit at the request of Ukrainian President Volodymyr Zelenskiy. Since then, it has held talks with the EU, G7 member states, and countries such as China and India to gauge their interest in participating.

### Backgrounds of the Swiss Neutrality:

Swiss neutrality refers to Switzerland's long-standing policy of neutrality in international conflicts. This policy has been a cornerstone of Swiss foreign policy for centuries, dating back to the Treaty of Westphalia in 1648, which recognized Switzerland as a neutral territory during the Thirty Years' War.

Switzerland has the oldest policy of military neutrality in the world. It has not participated in a foreign war since the Treaty of Paris in 1815 established its neutrality, although the country did have a civil war in 1847. Switzerland's commitment to neutrality is enshrined in its constitution, and the country has not been involved in any military conflict since the early 19th century. This neutrality has allowed

Switzerland to avoid entanglement in the wars that have plagued Europe, even during the World Wars.

### The Objective of the Swiss Neutrality:

It will "provide a platform for a high-level dialogue on achieving a comprehensive, just and lasting peace for Ukraine based on international law and the UN Charter". The conference will aim to "create a common understanding of the framework conducive to this goal and a concrete roadmap for the peace process". **Some more objectives are:**

- **Protecting Swiss sovereignty:** Neutrality helps safeguard Switzerland's independence and sovereignty by avoiding entanglement in foreign conflicts. This allows Switzerland to pursue its interests and policies without being influenced by the agendas of other nations.
- **Preserving peace:** Switzerland contributes to preserving peace regionally and globally by remaining neutral. Its stance reduces the risk of being drawn into conflicts and helps mitigate tensions between conflicting parties.
- **Facilitating diplomacy and mediation:** Switzerland's neutral status enables it to act as a mediator and facilitator in international disputes. Its reputation for impartiality and trustworthiness makes it a preferred location for diplomatic negotiations and peace talks.
- **Promoting humanitarianism:** Swiss neutrality aligns with the country's tradition of humanitarianism. Switzerland has a long history of providing aid and assistance to victims of conflict and natural disasters, and its neutral status enhances its ability to do so effectively.

### About Russi-Ukraine Conflicts:

- The conflict between Russia and Ukraine is a deeply complex and multifaceted issue with historical, political, ethnic, and territorial dimensions. Any attempt to resolve this conflict requires a comprehensive understanding of its root causes and all parties' interests.
- Tensions between Ukraine and Russia escalated in late 2013 over a landmark political and trade deal with the European Union.
- In March 2014, Russia annexed Crimea from Ukraine, claiming to protect its interests and Russian-speaking citizens.
- In 2014, pro-Russian separatists in Ukraine's Donetsk and Luhansk regions declared independence, forming the Donetsk People's Republic, which Russia recognized in February 2022.
- In February 2022, Russian President Vladimir Putin de-

clared war on Ukraine in a televised address.

- Russia launched a full-scale invasion of Ukraine's mainland across a broad front, significantly escalating the conflict that resulted in Ukraine stopping all formal diplomatic ties with Russia.
- The United States, The European Union, and other nations have imposed economic sanctions on Russia.

#### Suggestions for Resolving the Issues:

- **Diplomatic Dialogue:** Encourage both sides to engage in direct, open, and constructive dialogue to address the root causes of the conflict. This can involve formal negotiations mediated by a neutral third party or informal talks facilitated by diplomatic channels.
- **Conflict Resolution Mechanisms:** Advocate for the establishment or strengthening of international conflict resolution mechanisms, such as mediation, arbitration, or peacekeeping initiatives, to help facilitate peaceful resolutions to disputes.
- **Humanitarian Assistance:** Provide humanitarian assistance to mitigate the impact of the conflict on civilians and alleviate humanitarian suffering. This can help build goodwill and create opportunities for trust-building between conflicting parties.
- **Incentives for Peace:** Offer incentives for peace, such as economic aid, trade agreements, security guarantees, or diplomatic recognition, to encourage both sides to compromise and commit to peaceful resolutions.
- **Minsk Agreements:** Supporting the implementation of the Minsk Agreements, which were brokered in 2014 and 2015 to facilitate a ceasefire and a political resolution to the conflict in eastern Ukraine, remains an important diplomatic framework for addressing the crisis.
- **Dialogue with Separatist Groups:** Exploring avenues for dialogue with separatist groups in eastern Ukraine while upholding Ukraine's sovereignty and territorial integrity could be necessary for achieving a lasting political settlement to the conflict.
- **International Law and Norms:** Emphasizing the importance of respecting international law and norms, including Ukraine's sovereignty and territorial integrity as recognized by the international community, is essential for any resolution efforts.

### PRELIMS QUESTIONS

**Q1. How many votes are required to pass a resolution in**

**the UN Security Council?**

- (a) Simple majority
- (b) Two-thirds majority
- (c) Unanimous consent
- (d) Four-fifths majority

**Q2. Consider the following statements:**

1. The value of Indo-Sri Lanka trade has consistently increased in the last decade.
2. "Textile and textile articles" constitute an important item of trade between India and Bangladesh.
3. In the last five years, Nepal has been the largest trading partner of India in South Asia.

**How many of the statements above are correct?**

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

**Q3. Consider the following pairs:**

Regions	Country
1. Catalonia	Spain
2. Crimea	Hungary
3. Mindanao	Philippines
4. Oromia	Nigeria

**How many of the pairs given above are correctly matched?**

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

**Q4. Which of the following countries DOES NOT share a border with Israel?**

- (a). Syria
- (b). Jordan
- (c). Saudi Arabia
- (d). Lebanon

**Q5. Consider the following statements regarding the Israel – Palestine conflict.**

1. The main reason for the Israel-Palestine conflict is the city called Jerusalem.
2. Jerusalem is one of the holiest sites in both Judaism and Islam.
3. Jerusalem is located on the border between Israel and the West Bank.
4. Israel-Palestine conflict resolution There may be a two-state theory.

**Which of the above statement / statements is/are correct?**

- (a) Only 1, 2 and 3.
- (b) Only 2, 3 and 4.
- (c) Only 1, 3 and 4.
- (d) All of these.

**Q6. Consider the following statements about the Clean Energy Economic Forum:**

1. It is the initiative of the World Economic Forum.
2. India is not part of this forum.
3. The forum only focuses on reducing CO2 emissions.

**Which of the above statements is correct?**

- (a) Only one
- (b) Only two
- (c) All three
- (d) None of the above

**Q7. Which of the following countries does NOT share boundaries with Ukraine?**

1. Poland
2. Slovakia
3. Hungary
4. Romania
5. Moldova

**How many of the above statements are correct?**

- (a) Only two
- (b) Only three

(c) Only four

(d) All five

**Q8. Which of the following pairs of islands is divided by the 'Ten Degree Channel'?**

- (a) Andaman and Nicobar
- (b) Nicobar and Sumatra
- (c) Maldives and Lakshadweep
- (d) Sumatra and Java

**Q9. Which of the following options exhibits coral reefs?**

1. Andaman and Nicobar Islands
2. Gulf of Kachchh
3. Gulf of Mannar
4. Sunderbans

**Select the correct answer using the code given below:**

- (a) 1, 2 and 3 only
- (b) 2 and 4 only
- (c) 1 and 3 only
- (d) 1, 2, 3 and 4

**Q10. Which island is closest to both Andaman and Nicobar among the maritime nations?**

- (a) Sunda Islands
- (b) Java Islands
- (c) Maldives
- (d) Mauritius

**Q11. Consider the following statements:**

1. Emperor penguin is native to Antarctica
2. Aurora borealis phenomena cause the sky to appear greenish-blue in Antarctica
3. Ross Ice Shelf is the largest ice shelf in Antarctica

**How many of the above statements are correct?**

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

**ANSWERS**

S. No.	Answers
1.	C
2.	A
3.	B
4.	C
5.	D
6.	D
7.	D
8.	A
9.	A
10.	B
11.	B

**MAINS QUESTION**

**Q1.** Assess the potential socio-economic consequences of resolving the dispute over Katchatheevu Island for the livelihoods of fishermen and the diplomatic relations between India and Sri Lanka.

**Q2.** Explore the challenges faced by the UN Security Council in responding to humanitarian crises caused by human rights violations. How do geopolitical considerations and divergent national interests hinder its ability to intervene effectively?

**Q3.** What are the historical and geopolitical factors that have contributed to the ongoing conflict between Iran and Israel, and how has this conflict impacted the geopolitical dynamics of the Middle East? How can this conflict

impact India’s regional interests?

**Q4.** Outline the main reasons for the Israel-Palestine conflict and discuss what America’s role in this conflict is and what can be the permanent solution to this ongoing conflict.

**Q5.** What are the most effective strategies for overcoming the technological, financial, and policy barriers to significantly increase the global adoption of clean energy sources, such as solar and wind power, to ensure a sustainable and environmentally friendly future?

**Q6.** War is not the solution to every problem. It leads to all kinds of crises. Critically examine.

**Q7.** What are the most effective strategies for overcoming the technological, financial, and policy barriers to significantly increase the global adoption of clean energy sources, such as solar and wind power, to ensure a sustainable and environmentally friendly future?

**Q7.** What specific resources or capabilities do the Andaman and Nicobar Islands possess that make them crucial for enhancing India’s soft power through disaster relief and humanitarian assistance efforts?

**Q8.** How does the establishment of infrastructure and facilities, such as naval bases and communication networks, on the Andaman and Nicobar Islands enhance India’s ability to project power and maintain security in the region?

**Q9.** Analyse the strategic importance of Antarctica in India’s diplomatic endeavours, exploring how the nation’s involvement in Antarctic affairs contributes to its stature as a responsible global actor and enhances its soft power on the international stage.

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## PROFITS AND POVERTY: THE ECONOMICS OF FORCED LABOUR

### Why in the News?

A recent report titled 'Profits and poverty: The economics of forced labour', published by the International Labour Organization (ILO), reveals that forced labour yields illicit profits totalling USD 36 billion annually.

### About Forced Labour or Bonded Labour

- Forced labour, also known as **involuntary servitude or bonded labour**, is a form of exploitation where individuals are coerced to work against their will, often under threat of violence or other forms of punishment.
- This egregious **violation of human rights** persists in various forms across the globe, affecting millions of people, including men, women, and children.
- One of the most concerning aspects of **forced labour** is its **prevalence in multiple industries, including agriculture, manufacturing, construction, domestic work, and the sex trade.**
- Victims of forced labour may be trafficked across borders or exploited within their own countries, trapped in situations of debt bondage, coercion, or outright

slavery.

### Important Findings of the Report

#### The Alarming Rise of Forced Labour Profits

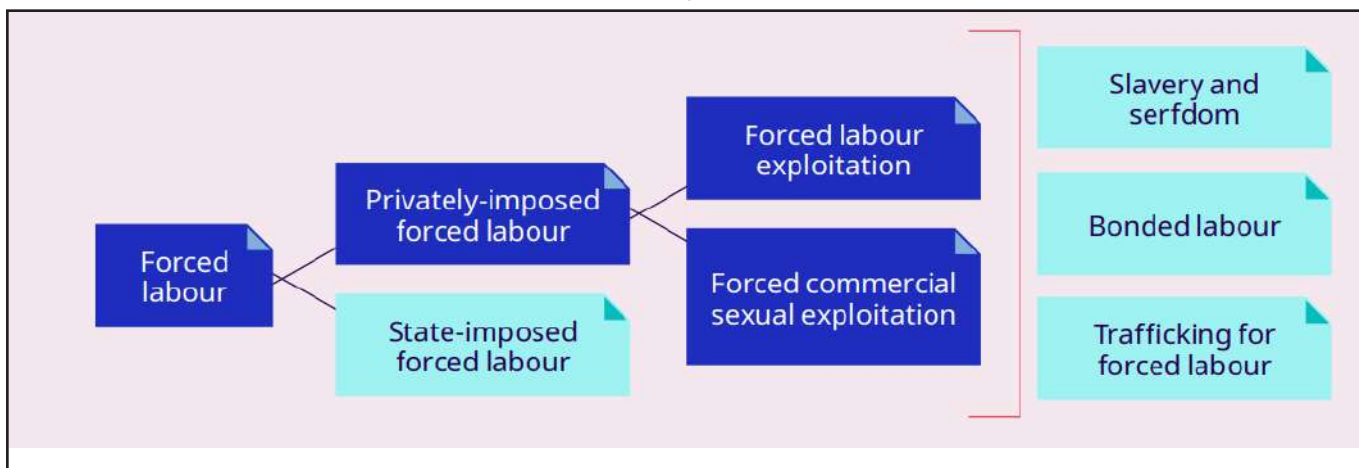
- Forced labour is a horrific global injustice, generating a **staggering \$36 billion in illegal profits annually.** This represents a **37% increase since 2014**, highlighting a growing problem with devastating human consequences.
- The surge in **profits is fueled by two factors:** a significant **increase in the number of victims** being forced into labour and a **rise in the level of exploitation** each victim endures.

#### Geographic Distribution of Illegal Profits

The distribution of these illegal profits is uneven across regions. **Europe and Central Asia have the highest total, with a shocking \$84 billion**, followed by Asia and the Pacific, the Americas, Africa, and the Arab States.

#### Profits Per Victim

The estimated profits per victim are equally concerning, with **criminals making nearly \$10,000 per person.** This number has risen significantly over the past decade. Perhaps most disturbing is that forced commercial **sexual exploitation accounts for the vast majority (73%) of illegal profits** despite representing only 27% of total forced labour





victims.

**Industries Where Forced Labour Thrives**

Beyond sexual exploitation, forced labour permeates various sectors of the global economy. Here’s a breakdown of some of the most impacted industries:

- **Industry:** This includes mining, manufacturing, construction, and utilities. These sectors generate an estimated \$35 billion in illegal profits through forced labour.
- **Services:** This broad sector encompasses activities like wholesale trade, hospitality, and transportation. Forced labour in these services is estimated to generate \$20.8 billion in illegal profits.
- **Agriculture:** This sector includes forestry, farming, and fishing. The estimated illegal profits from forced labour in agriculture are around \$5 billion.
- **Domestic Work:** This involves work performed in private households and generates an estimated \$2.6 billion in illegal profits.

**A Growing Number of Victims**

The number of people trapped in forced labour is also on the rise. There were an estimated **27.6 million people** in forced labour on any given day in 2021, **representing a worrying 2.7 million increase since 2016**. This paints a grim picture of the expanding reach of forced labour and the urgent need for global action to eradicate it.

**Recommendations Given by the Report**

- **Dismantling Forced labour:** The report exposes the brutal reality of forced labour, highlighting its devas-

tating impact on human dignity and its role in perpetuating poverty. In response to this injustice, the report calls for a united international effort to eradicate forced labour.

- **Combating Illegal Profits:** A central recommendation is to curb the flow of illegal profits. This requires significant investment in enforcement measures to hold perpetrators accountable and disrupt these financial lifelines.
- **Strengthening Legal Frameworks:** The report emphasises the need to bolster legal frameworks. This includes:
  - Strengthening legislation to combat forced labour.
  - Training law enforcement officials to identify and address forced labour cases.
  - Expanding labour inspections to focus on high-risk sectors.
  - Enhancing coordination between labour and criminal justice systems.
  - Beyond Enforcement: A Holistic Approach
- **Promoting Worker Rights:** The report identifies fair recruitment practices as crucial in preventing forced labour. Abuses during recruitment often pave the way for exploitation. It also emphasises the importance of freedom of association and collective bargaining. When workers have a voice and can organise, they are better equipped to resist forced labour practices.

## GOVERNMENT BONDS

### Why in the News?

State governments recently raised a record Rs 50,206 crore through State Development Loan (SDL) Bond auctions, surpassing the Rs 27,810 crore target. This signals a strong demand for state government securities, which are part of Government Securities (G-Sec), issued similarly to Central Government securities.

### About Bonds

- Within the financial system, bonds serve as debt security utilised by governments and corporations to procure capital.
- **Functioning similarly to an IOU** (an informal acknowledgement of debt), a bond represents a loan agreement between the issuer (borrower) and the investor (the creditor).
- By purchasing a bond, the investor extends credit to the issuer in exchange for a predetermined future repayment with interest.

### Government Bonds

Government bonds, often called G-Secs in India, Treasuries in the US, or Gilts in the UK, are considered some of the safest investments. This is because they are **backed by the issuing government's guarantee**, reducing the risk of default. Here's a breakdown of **some common G-Secs**:

**Treasury Bills (T-Bills):** These are **short-term loans** issued at a **discount** and redeemed at face value upon maturity. They don't offer regular interest payments, but you earn a return based on the difference between the purchase price and the redemption value.

**Cash Management Bills (CMBs):** Introduced in India, CMBs are **ultra-short-term instruments** used by the government

to manage temporary cash flow imbalances. Their maturities are even shorter than T-bills, **typically under 91 days**.

**Dated G-Secs:** These are **longer-term bonds offering fixed or floating interest rates** (coupon rates) paid twice a year. They provide investors with predictable income streams over periods ranging from 5 to 40 years.

**State Development Loans (SDLs):** Beyond G-Secs, **some states in India may issue State Development Loans (SDLs)**. These function similarly to dated G-Secs but are backed by the creditworthiness of the issuing state instead of the national government.

### Bond Yield

A bond's yield represents the effective annual return an investor can expect to earn on their investment. Unlike some financial instruments, bond yields are not predetermined but rather possess a dynamic nature. This means they can fluctuate based on the prevailing market price of the bond itself.

To delve deeper into bond yields, it's essential to comprehend the fundamental structure of a bond. Each bond is characterised by three key components:

- **Face Value:** This pre-defined sum represents the amount of money that will be repaid to the investor upon the bond's maturity.
- **Coupon Payment:** This signifies the fixed amount of interest distributed to the bondholder at periodic intervals, typically occurring twice a year.
- **Market Price:** In contrast to the face value, the market price of a bond is not fixed. It can deviate based on various factors influencing supply and demand within the secondary market where bonds are traded.

It's important to note that bonds also have a **coupon rate**. This fixed annual interest rate is expressed as a percentage of the bond's face value and serves as the basis for calculating the coupon payment.

**The Yield Curve: A Graphical Insight into Investor Expectations**





## tations

- The yield curve is a critical tool in **fixed-income analysis**, presenting a visual representation of interest rates for bonds with varying maturities. In essence, it depicts the returns that investors anticipate for lending their money over different time frames.
- This curve **serves as a valuable economic indicator**, particularly when its shape transforms. A noteworthy shift to an inverted yield curve, where **short-term rates exceed long-term rates**, can signal a potential economic slowdown.
- This inversion suggests that investors may be prioritising the security of shorter-term investments, potentially anticipating future interest rate cuts by the central bank or a weakening economy that could lead to reduced long-term returns.

## Factors Influencing the Yield Curve

**Market Demand and Bond Prices:** Consider a scenario where there's only one bond available, but multiple buyers are interested. This competition among buyers can drive up the bond's price during bidding.

**Alignment with Economy's Interest Rate:** When the prevailing interest rate in the economy differs from the bond's initial coupon payment, market dynamics adjust the bond's yield to align with the current interest rate.

**Analogy:** When the economy's interest rate exceeds the bond's yield, it's akin to placing a heavier weight on the side, representing the economy's interest rate in a seesaw analogy. This imbalance causes the seesaw to tilt towards the economy's interest rate side, indicating that the bond's yield is comparatively lower.

**BASMATI CONUNDRUM: INDIA-PAKISTAN INTELLECTUAL PROPERTY DISPUTE**



## Why in the News?

Lately, notable types of basmati rice from India, such as Pusa-1121 and 1509 Basmati, have been found in Pakistan but marketed under different names. This development has prompted Indian scientists at the Indian Agricultural Research Institute (IARI) to express apprehension, advocating for legal measures to protect the interests of Indian farmers and exporters. It underscores the immediate need for coordinated efforts to safeguard Indian farmers and uphold fair trade practices.

## India's Basmati Under Threat: Unauthorised Cultivation in

## Pakistan

### Pakistan's Cultivation of Indian Basmati Varieties

Pakistan's cultivation of Indian basmati rice varieties throws a wrench into India's long-held dominance in this prestigious grain. Popular IARI-developed varieties like **Pusa Basmati-1121** (PB-1121) have been found **growing in Pakistan under a different name ('PK 1121 Aromatic')**. Even newer, disease-resistant strains like Pusa Basmati-1847 haven't escaped this trend, raising concerns about the control and protection of these intellectual properties.

### Indian Safeguards for Basmati Cultivation

- India has a **robust legal framework to safeguard its basmati varieties**. The **Seeds Act of 1966** restricts the cultivation of these specific, high-quality strains to designated regions within India, ensuring optimal growing conditions and maintaining the unique characteristics of the grain.
- The **Protection of Plant Varieties and Farmers' Rights Act (PPV & FR Act) of 2001** further strengthens this framework by protecting the rights of Indian farmers and breeders. **This act allows Indian farmers to cultivate, save, and exchange seeds within the designated areas** but prohibits them from selling branded basmati seeds without proper licensing.

### Challenges Posed by Unauthorised Cultivation

Pakistan's unauthorised cultivation of these protected varieties poses a significant threat to the Indian basmati industry.

- **Firstly, it undermines the efforts and investments made by Indian farmers and breeders** who have spent years developing these superior strains.
- Secondly, the **potential for quality dilution exists if these basmati varieties are not cultivated** under the specific conditions outlined by IARI. This **could tarnish India's reputation as a premium supplier** of authentic basmati rice. Lastly, increased competition from Pakistan could lead to lower basmati prices in the global market, impacting Indian farmers' livelihoods.

### Potential Solutions

- To address this challenge, India might consider **raising the issue in international forums like the World Trade Organization (WTO)**.
- By **highlighting the intellectual property rights (IPR) associated with these basmati varieties**, India can seek to curb unauthorised cultivation in Pakistan and protect its legitimate interests in the global basmati market.

- Additionally, India could explore **strengthening its seed security measures and collaborating with international bodies** to establish stricter regulations on the trade of protected agricultural varieties.

### Impact on the Global Basmati Market

#### India's Basmati Exports Soar, But a Challenge Emerges

India's basmati rice exports are poised for record highs, with **projections exceeding 5 million tonnes in the current fiscal year**. However, a **growing concern threatens** this success: Pakistan's unauthorised cultivation of Indian-bred basmati varieties.

#### India's Advantage: Superior Quality and Established Reputation

India enjoys a dominant position in the global basmati market due to its focus on **high-quality, IARI-developed basmati strains**. These varieties are **renowned for their distinct aroma, long grain structure, and optimal cooking characteristics**. This commitment to quality has **fostered a loyal customer base in markets like Iran and Saudi Arabia**, where discerning consumers prioritise taste and texture.

#### Pakistan's Strategy: Competitive Pricing Through Currency Fluctuations

Pakistan's basmati exports have gained traction due to the **depreciation of the Pakistani rupee, enabling them to offer competitive pricing in international markets**, particularly the **EU and UK**. Here, Pakistan currently holds a **significant 85% market share**. However, **concerns exist regarding the quality of Pakistani basmati**. While these varieties may share names with their Indian counterparts, unauthorised cultivation outside designated growing areas with specific climate and soil conditions could compromise the delicate characteristics that define authentic basmati rice.

#### Navigating the Future of Basmati Rice

To address the issue of unauthorised cultivation, India might consider **raising the matter at international forums like the WTO**, leveraging its strong case built on intellectual property rights and Geographical Indication (GI) status. Additionally, exploring collaborative efforts with Pakistan on seed regulations and basmati research could be a long-term solution.

#### About Protection of Plant Varieties and Farmers' Rights Act, 2001

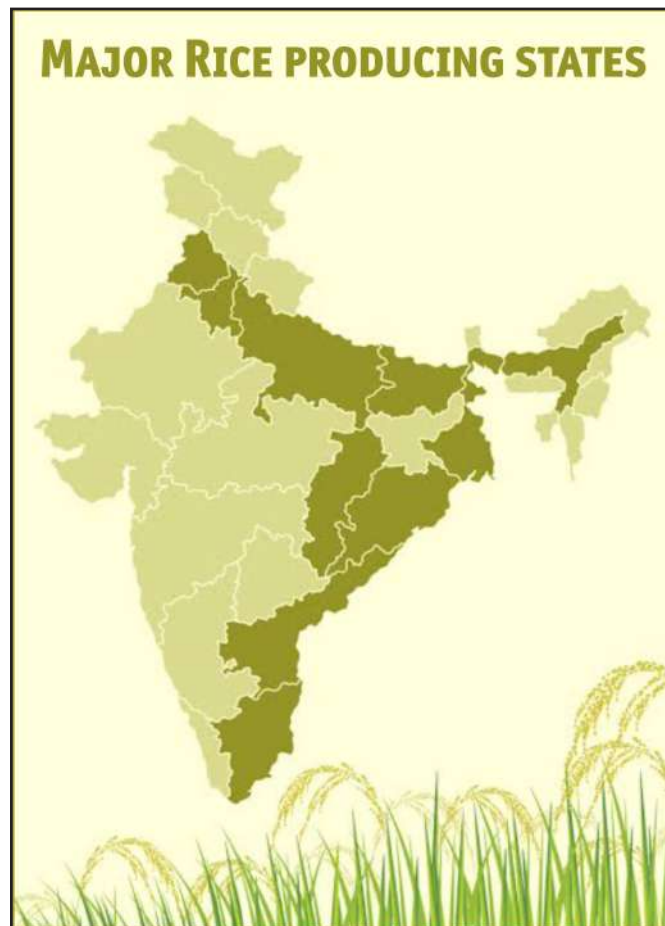
India's Protection of Plant Varieties and Farmers' Rights Act (PPVFR Act) **strikes a balance between promoting innovation and protecting the rights of those who drive agricultural progress**.

- **Breeders** benefit from exclusive rights to control

and profit from new varieties they develop.

- **Researchers** have the freedom to use registered varieties for research, but must seek permission for repeated use in developing new ones.
- **Farmers** can register their own varieties, save seeds, and sell produce, while also being acknowledged for their role in conserving plant diversity.

By safeguarding intellectual property and empowering all stakeholders, the PPVFR Act fosters a robust agricultural ecosystem in India



**T+0 BETA VERSION OF THE SETTLEMENT CYCLE RELEASED**

#### Why in the News?

The Bombay Stock Exchange (BSE) and National Stock Exchange (NSE) have recently implemented an optional trading feature in the equity segment, known as the T+0 beta version of the settlement cycle. This development follows the issuance of operational guidelines by the Securities and Exchange Board of India (SEBI) for the introduction of this

shorter tenure settlement cycle.

### About the T+0 Settlement Cycle

- The Securities and Exchange Board of India (SEBI) took a bold step towards faster trade settlements in December 2023. They proposed a new, **optional T+0 (same-day) settlement system alongside the existing T+1 cycle**.
- This revolutionary system aims to **complete trade settlements on the same day the market closes**. Conversely, **buyers would acquire their purchased shares within the same day**. This would make India's stock market the leader in settlement speed globally.
- Currently, the **T+1 cycle poses a one-day wait between trade execution and settlement**. This means sellers only receive **80% of their proceeds on the day of sale**, with the **remaining 20% arriving the next day**. **T+0 eliminates this delay**, granting sellers full access to their funds instantly.
- While still in the proposal stage, the potential benefits of T+0 are significant. **It could enhance market efficiency, boost liquidity, and give investors greater control over their finances**. As India paves the way for faster settlements, the future of its stock market looks increasingly dynamic.

### Features of the T+0 Settlement Cycle

- **Faster Transactions:** Unlike the current T+1 cycle that involves a one-day wait, T+0 allows for the immediate transfer of securities and funds. Buyers would receive their purchased shares within the same day. **This eliminates delays and empowers investors with greater control over their finances**.
- **Early Pay:** Interestingly, a significant portion of retail investors already make "early pay-ins" of funds and securities, demonstrating their comfort with a faster settlement system. T+0 capitalises on this existing trend, streamlining the process for a large investor segment.
- **Reduced Risk:** T+0 settlement **minimises the risk of settlement failures often caused by delays or insufficient funds**. With same-day completion, both buyers and sellers fulfil their obligations promptly, fostering greater confidence in the market.
- **Instant Receipt:** Beyond speed, T+0 offers the advantage of instant receipt of funds and securities. **This eliminates settlement shortages, where discrepancies occur between the expected and received amount**. This translates to a more transparent and reliable system for investors.
- **Investor Protection:** The proposed T+0 system prior-

itises investor protection. Funds and securities would be directly credited to investors' accounts, particularly for those using UPI (Unified Payments Interface). This reduces the risk of intermediary mishandling and strengthens investor confidence.

### Potential Benefits of the T+0 Settlement Cycle

- **Enhanced Liquidity:** Under the current T+1 system, funds from selling shares become available the next day. T+0 unlocks this liquidity instantly. Investors can then use these funds to reinvest in new opportunities or withdraw them quickly, making their portfolios more agile and responsive to market fluctuations.
- **Faster Decision-Making:** The ability to access funds and securities immediately empowers investors to react swiftly to market movements. They can capitalise on short-term trading opportunities that might disappear overnight under the T+1 system. This fosters a more dynamic and action-oriented investment environment.
- **Reduced Settlement Risk:** Settlement risk arises when a buyer or seller fails to fulfil their trade obligation due to delays or insufficient funds. T+0 minimises this risk by ensuring same-day completion of trades. Both parties fulfil their obligations promptly, leading to a more secure and stable trading environment.
- **Cost Savings:** Faster settlements could potentially lead to lower operational costs for brokers and exchanges. With less need to manage funds and securities overnight, streamlining the process could result in cost savings that could benefit investors in the long run.
- **Increased Market Efficiency:** T+0 settlement has the potential to streamline the overall trade execution process. Faster settlements could lead to increased trading volumes and a more efficient allocation of capital within the market. This could benefit the entire financial ecosystem in India.

### Need of T+0 Settlement Cycle

The introduction of T+0 settlement is a strategic response to this changing landscape. Here's how it aligns with current trends:

- **Following the "Digital" Economy:** Indian consumers have readily adopted UPI and other instant payment platforms, demonstrating a strong preference for speed and convenience. T+0 settlement extends this concept to the stock market, allowing for the immediate transfer of funds and securities.
- **Serving Modern Investor Needs:** Today's investors prioritise reliability, cost-effectiveness, and lightning-fast

transactions. T+0 addresses these needs by streamlining the settlement process, potentially lowering operational costs, and providing faster access to funds and securities. This could make equities a more attractive asset class for a wider pool of investors.

- **More Market Efficiency:** A shorter settlement cycle, like T+0, has the potential to optimise the entire trade execution process. Faster settlements could lead to increased trading volumes and a more efficient allocation of capital within the market. This efficiency could benefit all stakeholders in the Indian financial system.

#### A Phased Approach towards T+0 Settlement

India's rollout of the T+0 settlement will be a cautious two-stage process designed to ensure a smooth transition for the market.

- **Dual Phases for Settlement:** The system will operate in **two phases. Trades executed up to 1:30 pm will be settled by 4:30 pm on the same day (Phase 1). After 1:30 pm, trading will continue until 3:30 pm (Phase 2),** but settlement for these trades will likely occur later. This phased approach allows for proper management of the initial trading rush and ensures timely settlement for early trades.
- **Gradual Expansion:** SEBI plans to introduce T+0 settlement initially for the top 500 listed equities, **divided into three tranches based on market capitalisation (200, 200, 100).** This phased rollout allows regulators to monitor the system's impact and make adjustments if necessary before expanding it to encompass the entire market.

#### EMPLOYMENT CRISIS IN SOUTH ASIA AS PER WB REPORT



#### Why in the News?

A new World Bank report, "Jobs for Resilience," warns that South Asia, including India, is failing to create enough jobs for its young population. This could jeopardise the region's demographic dividend, even though it's expected to have the world's fastest economic growth (6.0-6.1%) in 2024-25.

#### Significant Findings of the Report

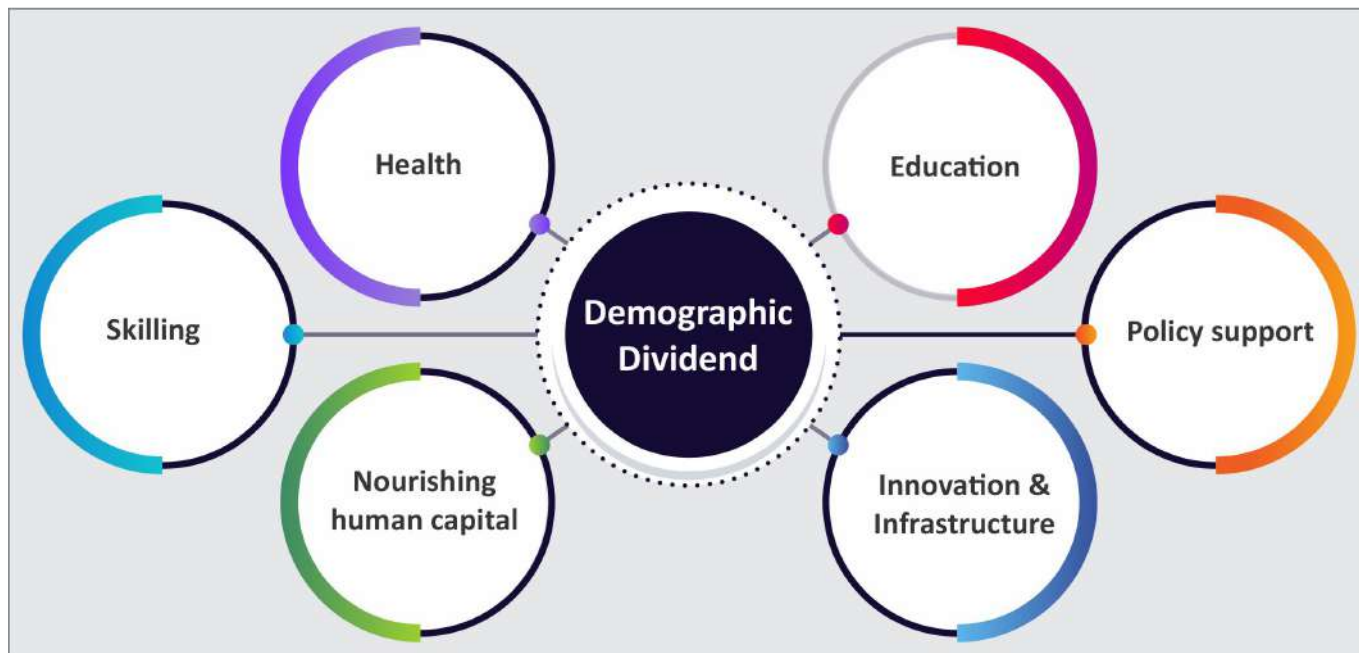
- **Decline in Employment in South Asia:** South Asia's employment ratio dropped by 2% from 2000 to 2023, while most emerging markets held steady. This weakness persists even after a post-pandemic surge.
- **Low Participation:** Compared to other developing

economies, South Asia has significantly lower employment ratios across the board. In 2023, only 59% of the working-age population was employed, far below the 70% average in other regions.

- **Climate Vulnerability of the region:** South Asia is caught between a rock and a hard place. The region is particularly **susceptible to the impacts of climate change, but its limited government resources make it difficult to implement large-scale adaptation policies.** This leaves the burden of coping with climate shocks on businesses, farmers, and especially poor households, who are often hit the hardest.
- **Jobless Growth:** Unlike other emerging economies, South Asia's labour markets have been plagued by declining employment ratios for decades. This means a shrinking share of the working-age population is actually employed. The root of the problem lies in the slow job creation within the non-agricultural sector. While agriculture has seen a decline in its workforce, other sectors haven't been able to absorb these displaced workers efficiently. This sluggishness is partly attributed to complex regulations and economic conditions that hinder business growth, further limiting job opportunities.
- **Employment trend in Men and Women:** Men's employment rates in South Asia have declined over the past two decades, while women's rates remain persistently low – contributing significantly to the overall weakness.
- **Impact on overall growth:** While South Asia saw strong labour productivity growth in the 2010s, it faltered after 2020 and now falls below the average for developing economies. Unlike other regions, South Asia's economic growth relied heavily on both productivity gains and population growth. However, declining employment ratios are now hindering further output growth.

#### What Does the Report Talk About India's Scenario?

- **Migration Patterns:** The pandemic led to a return of migrant workers to rural areas in India, with emigration from rural areas also slowing down. India also has the second-highest percentage of workers in agriculture (44%) after Nepal.
- **Market trend:** India's employment growth was sluggish in the 2010s but showed signs of improvement after the pandemic. The employment ratio, however, remains a concern, declining significantly until 2022, with a partial recovery in 2023.
- **Uneven Composition:** India's industrial sector is seeing some growth due to government investments, relaxed regulations, and an increase in contract labour. The



services sector, particularly IT, BPO, and healthcare, thrives due to a skilled workforce and digital infrastructure, but this limits opportunities for unskilled workers.

#### Strategies for Maximising the Output From the Demographic Dividend

- **Investing in Human Capital:** Prioritise quality education for all, with a focus on STEM fields (Science, Technology, Engineering, and Math) to equip the workforce with in-demand skills.
- **Bridging the Gender Gap:** Address gender disparities in education and training to unlock the full potential of the female workforce.
- **Invest in Infrastructure:** Upgrade infrastructure like transportation and communication networks to improve connectivity and facilitate business growth.
- **Vocational Training:** Expand vocational training programs to equip individuals with practical skills relevant to the needs of the labour market.
- **Modernisation of Labour Laws:** Review and update labour laws to create a more flexible and responsive labour market.
- **Embracing Technology of the digital era:** Invest in digital skills training and promote digital literacy to prepare the workforce for the increasing role of technology in the workplace.
- **Healthcare Investments:** Invest in healthcare systems to ensure a healthy and productive workforce.
- **Social Safety Nets:** Strengthen social safety nets to

provide support for vulnerable populations, particularly the elderly and those transitioning out of the workforce.

#### ASSESSMENT OF RERA, 2016 BY CENTRAL GOVERNMENT

##### Why in the News?

The Ministry of Housing and Urban Affairs is currently assessing the operations of the Real Estate (Regulation and Development) Act, 2016.

##### What is the Need to Review RERA?

**Assessment of the impact of RERA:** A crucial aspect of the review involves **evaluating RERA's real-world impact**. This includes examining how effectively the Act has fostered transparency in real estate transactions, promoted accountability among developers, and provided efficient mechanisms for homebuyers to address grievances.

**Data-Driven Decisions:** To move beyond anecdotal evidence, the **Ministry is establishing a dedicated data collection unit**. This unit will gather crucial data on the functioning of RERAs across various states over the years. Data on project approvals, progress reports, and delays will provide a more comprehensive picture of RERA's effectiveness and identify potential bottlenecks in implementation.

**Gathering the stakeholder's Feedback:** Recognizing the importance of firsthand experiences, the government is actively **seeking feedback from stakeholders, particularly homebuyers**. Through regular meetings, homebuyers

can voice their experiences with RERA, highlighting areas where the Act has fallen short or exceeded expectations. This feedback will be instrumental in identifying areas for improvement and potential amendments.

**Amendment for the improvement:** The RERA review process serves as a springboard for **potential future amendments**. By proactively identifying and addressing shortcomings in the Act's implementation, the government aims to enhance its effectiveness and ultimately safeguard the interests of homebuyers. This proactive approach demonstrates a commitment to a real estate sector that prioritises fairness, transparency, and protects home buyers' investments.

**Standardised Information and Ensuring Consistency:** The government is focusing on **ensuring consistency in the information available on RERA websites across different states**. This will provide homebuyers with easy access to crucial project details and developer updates, regardless of location. It also reinforces the **mandatory publication of annual reports and quarterly progress reports from builders**, fostering greater transparency. Discrepancies identified during the review, such as websites lacking information or projects being registered without proper document verification, will be addressed **to ensure developers comply with the Act's provisions**.

### About RERA

The Real Estate (Regulation and Development) Act (RERA) is a notable law passed by the Indian government in 2016. The RERA Act was put into effect in March 2016 under the jurisdiction of Entry 6 and 7 of the Concurrent List of the Indian Constitution, which pertains to contracts and property transfer. It officially came into force in May 2017. Key Objectives of RERA are:

- **Protecting Homebuyers:** RERA prioritises safeguarding homebuyers' interests. It establishes a regulatory authority (RERA) in each state, acting as a watchdog to ensure fair practices and speedy dispute resolution mechanisms.
- **Boosting Transparency:** The Act promotes transparency in real estate transactions. Builders are obligated to register projects with RERA and provide comprehensive information to homebuyers. This empowers buyers with better decision-making through access to accurate details about projects.
- **Timely Deliveries:** RERA aims to combat delays in project completion. The Act emphasises the timely delivery of projects without compromising quality standards, ensuring homebuyers receive their investments within the agreed-upon timeframe.
- **Standardisation and Professionalism:** RERA aims to

establish a nationwide standard for real estate transactions, promoting professionalism within the sector.

- **Enhanced Information Flow:** The Act facilitates a smooth flow of accurate information between homebuyers and sellers, empowering informed decision-making.
- **Increased Accountability:** RERA fosters accountability by placing greater responsibility on both developers and investors, ensuring a fair and balanced environment.
- **Building Investor Confidence:** By promoting transparency and accountability, RERA strengthens trust within the real estate sector, potentially attracting more investors.

### Important Provisions of RERA

#### Regulatory Oversight

- **State-Level RERAs:** RERA mandates the establishment of Real Estate Regulatory Authorities (RERAs) in each state. These authorities handle project registration, maintain databases, and promote fair practices within the sector.
- **Appeals Process:** The Act establishes Real Estate Appellate Tribunals to address appeals against RERA decisions. Hence, provides a dispute resolution mechanism for aggrieved parties.

#### Project Registration and Transparency

- **Mandatory Registration:** Real estate projects exceeding a minimum size threshold (plot size or number of apartments) must be registered with the relevant RERA authority. This ensures transparency and provides a central repository of project information.
- **Public Access to Information:** Registered projects and related details are made available on the RERA website for public viewing. This empowers homebuyers with access to crucial project information before making investment decisions.

#### Financial Safeguards and Accountability

- **Escrow Account Mandate:** Developers are required to deposit at least 70% of the funds collected from homebuyers into a separate escrow bank account. These funds can only be used for project construction, mitigating the risk of misuse.
- **Structural Defect Liability:** Developers are held accountable for repairing structural defects in a property for a period of five years after handover. This protects homebuyers from shoddy workmanship.

- **Penal Interest for Delays:** Both developers and buyers are liable to pay an equal rate of interest for any delays in fulfilling their obligations as per the sale agreement. This incentivises timely project completion and protects homebuyers from financial losses due to developer delays.

#### Consumer Protection Measures

- **Advance Payment Limits:** Developers are restricted from accepting more than 10% of the property cost as an advance payment or application fee before entering into a formal sale agreement. This safeguards buyers from losing significant sums if a project falls through.
- **Focus on Carpet Area:** RERA emphasises the use of carpet area, which refers to the usable floor space within an apartment, as the basis for pricing. This protects buyers from inflated costs based on the total built-up area, which includes walls and common areas.
- **Penalties for Violations:** The Act prescribes penalties for violations, including imprisonment for developers and agents/buyers who disregard orders from RERA or the Appellate Tribunals. This enforcement mechanism discourages malpractices and ensures compliance.

#### Issues Arising from Rera

##### Exclusion of Past Real Estate Projects

- Only new projects fall under the purview of the Act, leaving ongoing, completed, or stalled projects due to clearance or financial issues unaffected.
- Consequently, many buyers may not receive the benefits envisioned by the Act.

##### Government Delays

- Government agencies sometimes take considerable time to approve projects, leading to delays.
- Timely approval by government bodies is essential for developers to initiate, complete, and deliver projects on schedule.

##### Lack of Compulsory Regulation for Small Projects

- Projects smaller than 500 square metres are not required to register with the regulator, exempting small developers from this obligation.

##### Expected Delays in New Project Launches

- Projects cannot commence without necessary clearances from the government, typically taking two to three years, resulting in automatic delays.

##### Unaddressed Developer Concerns Regarding Force Ma-

#### jeure and Land Title Repository

- The Act does not address developer concerns related to force majeure events, such as labour shortages or the absence of a central repository for land titles and deeds.

#### INDIA EMPLOYMENT REPORT 2024 AND UNEMPLOYMENT IN INDIA



#### Why in the News?

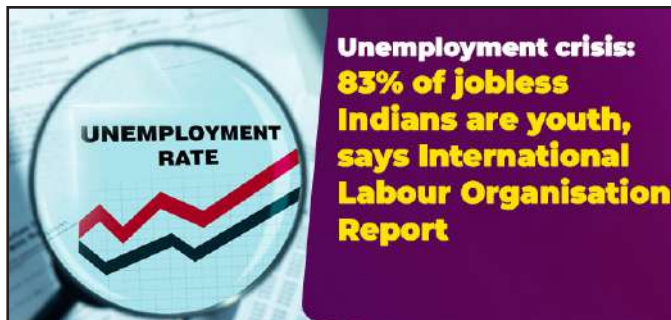
- Recently on 26 March 2024, the International Labor Organization (ILO) and the Institute for Human Development (IHD) have jointly published a report named India Employment Report 2024.
- According to this report, a total of 83% of the unemployed youth looking for work in India are unemployed.
- According to the report, overall labor force participation, workforce participation and employment rates in India have improved in recent years after a long-term decline during 2000-2019.
- India's youth population was 27% in 2021, which will reduce to 21% by 2036 and 70 to 80 lakh more youth will join the workforce every year.
- The report states that youth employment in India is largely of poor quality compared to adult employment.
- Youth in India are most likely to be employed in vulnerable occupations or informal sectors.
- According to this report, India has the highest youth unemployment rate among youth with graduate degrees and it is higher among women than men.
- The proportion of women who are not engaged in employment, education or training is almost 5 times higher than their male counterparts (48.4% vs. 9.8%).

#### Introduction to Human Development Institute:

- The Institute of Human Development (IHD) was established in the year 1998 under the aegis of the Indian Society of Labor Economics (ISLE).
- Its objective is to contribute to the building of a society that promotes and values an inclusive social, economic and political system that is free from poverty and deprivation.
- It conducts research in the areas of labor and employment, livelihoods, gender, health, education and other

aspects of human development.

**Important Facts of India Employment Report 2024:**



- The India Employment Report 2024 is the third edition in a series of regular publications by the Human Development Institute on labor and employment issues, jointly released in partnership with the International Labor Organization (ILO).
- This report examines the emerging economic labor market, educational and skill scenarios in India and the challenges facing youth employment in the context of the changes witnessed over the last two decades.
- The report also highlights recent trends in the Indian labor market, indicating the challenges that currently exist with respect to youth unemployment and new challenges that may arise in the future, as well as improvements in some outcomes, including COVID-19. Challenges arising from the 19 pandemic are also included.

**Highlights of India Employment Report 2024:**

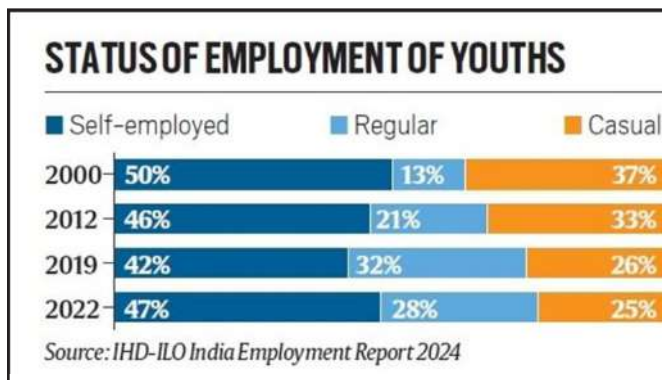
- The India Employment Report 2024 is based primarily on the analysis of data from the National Sample Survey and Periodic Labor Force Survey between the year 2000 and the year 2022..

**Employment Scenario and Current Trends in India:**

- The female labor market participation rate in India, especially in rural areas, has increased rapidly by 2019 after a significant decline in earlier years.
- One of the most important features of the Indian labor market is the slow and steady transition of the workforce from agricultural to non-agricultural sectors.
- The main areas of employment available in India are self-employment and casual employment.
- In India, about 90 percent of the workforce is employed informally while about 82 percent of the workforce is engaged in the informal sector.
- There was a slight upward trend in wages of casual

workers during 2012–22, while real wages of regular workers either remained stable or declined.

- Migration levels in India have not been adequately recorded through official surveys.
- Rates of urbanization and migration are expected to increase significantly in the future.
- The migration rate in India is expected to be around 40 percent in 2030 and the urban population will be around 607 million.



**Major Challenges Related to Youth Employment in India:**

- A large portion of India’s population is of working age, which is expected to remain in the potential demographic dividend zone for at least another decade.
- Every year in India, about 7-8 million youth join the labor force whose productive utilization could yield a demographic dividend for India.
- Labor market participation of youth in India has been much lower than that of adults and was on a long-term (2000–19) declining trend, mainly due to greater participation in education.
- At present, youth unemployment in India has increased almost three times, from 5.7 percent in the year 2000 to 17.5 percent in 2019, but it is expected to reduce to 12.1 percent in the year 2022.

**Major Suggestions of India Employment Report 2024 to Improve the Employment Sector:**

The report recommends focusing on five key policy areas for action to tackle unemployment in India. Which is an important suggestion especially related to youth unemployment in India –

- To promote employment creation.
- To improve the quality of employment.
- Addressing labor market inequalities and making changes at the policy level.



- strengthening skills and active labor market policies, and
- Bridging the knowledge gap on labor market patterns and youth employment.

**Path to Solution:**

- **‘The India Employment Report 2024’** The employment sector in India presents a disappointing scenario.
- Focusing on the current state of youth employment in India, the report paints a sobering picture of the widely publicized ‘demographic dividend’ in the country, calling for prompt and targeted policy interventions to tackle it and for India’s technologically growing economy. There is a need to give priority to the training of youth.
- A large number of educated youth are still unable to meet the job criteria due to unavailability of jobs and deficiencies in the quality of education relative to the participation of educated youth in better paying jobs in India. On which there is a great need to pay attention to the policy makers of India.
- India has high rates of youth deprived of employment, education or training, and working conditions among the majority of employed youth are poor, with large groups of youth taking advantage of broader socio-economic benefits. Wages in India have either stagnated or seen a decline due to inflation, even though India’s economy is growing at a high rate.
- As the process of 2024 general elections to the Lok Sabha in India begins, politicians have focused on creating employment and improving the quality of education and training for a technologically growing economy, not only in their election campaigns but also in their policy making. There is an urgent need to consider the causes by giving priority.

**INDIA’S FISCAL DEFICIT TARGET**

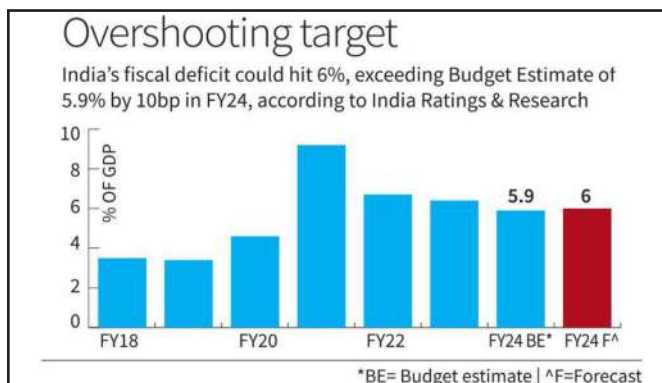


**Why in the News?**

- India’s central government has increased the fiscal deficit to Rs 15 lakh crore by the end of February 2024 from Rs 11 lakh crore in January 2024. This has led to an increase in the fiscal deficit by 86.5%, which has been significantly contributed by the increase in tax devolution and capital expenditure of the states.
- The Finance Ministry has also lowered its target for

gross domestic product (GDP), which will be reduced to 5.1% in 2024-25. It is an effort by the central government in India to address financial challenges.

- The central government still has the capacity to spend Rs 6 lakh crore in March, which can help the central government handle the current financial challenges. Because India is facing financial challenges in dealing with national debts.
- Therefore, the Union Finance Ministry in its Interim Budget 2024-25 has projected India’s fiscal deficit as the GDP for the financial year 2024-25.. It has been decided to reduce the Gross Domestic Product (GDP) to 5.1%.



**Fiscal Deficit and National Debt:**

- The total amount owed by the government of a country to its creditors at a given time is called national debt.
- Government debt comprises various liabilities including domestic and external debt along with obligations of schemes such as small savings, provident funds and special securities.
- These liabilities include both interest payments and repayment of the principal amount, placing a considerable financial burden on the government’s finances.
- This is the amount of debt that the government has accumulated while borrowing to overcome fiscal deficit over several years.
- The higher the government’s fiscal deficit as a share of GDP, the less likely it is to make payments to its creditors.
- The fiscal deficit of countries with large economies cannot be high.
- By 2022, major deficit countries include Italy -7.8%, Hungary -6.3%, South Africa -4.8%, Spain -4.7%, France -4.7%.

**Importance of Fiscal Consolidation in an Emerging Economy:**

- Ways and means of reducing fiscal deficit is called fiscal consolidation.
- Any government can control its economy in reinforcement Borrows to cover the losses. Due to which he has to allocate a part of his earnings to repay the loan. Therefore as the debt increases, the interest burden will also increase.

#### Meaning of Fiscal Deficit:



- The difference between the total expenditure of any government and its total revenue (except borrowing) is called fiscal deficit.
- It is an indicator of the extent to which a government must borrow to finance its operations.
- This country's Gross domestic product (GDP) is expressed as a percentage.
- from high fiscal deficit inflation, currency devaluation And the debt burden may increase, while the low fiscal deficit is seen as a positive sign of fiscal discipline and a healthy economy.

#### Positive Aspects of Fiscal Deficit:

**Increase in government expenditure:** Fiscal deficit enables the government to increase spending on public services, infrastructure and other critical sectors that can stimulate economic growth.

**Financing of public investment:** The government can finance long-term investments such as infrastructure projects through fiscal deficit.

**Employment Creation:** Increasing government spending can lead to job creation, which can help reduce unemployment and raise standards of living.

#### Negative Aspects of Fiscal Deficit:

**Balance of Payment Problems:** If a country is facing a large fiscal deficit, it may have to borrow from foreign sources, which may lead to a decrease in foreign exchange reserves

and put pressure on the balance of payments.

**Inflationary Pressure:** Large fiscal deficits can lead to increased money supply and high inflation, which reduces the purchasing power of the general public.

**Increase in debt burden:** Persistently high fiscal deficits lead to increased government debt, putting pressure on future generations to repay the debt.

**Flow of private investment:** The government may have to borrow heavily to meet the fiscal deficit, causing interest rates to rise, and the private sector may find it difficult to obtain credit, leading to the exit of private investment.

#### Other Types of Fiscal Deficit in India:

##### Effective Revenue Deficit:

- The difference between the revenue deficit and the grants given for creation of capital assets is called effective revenue deficit.
- The concept of effective revenue deficit on public expenditure was suggested by the Rangarajan Committee in India.

##### Revenue Loss:

- It shows the excess of government revenue expenditure over revenue receipts.
- **So Revenue deficit = Revenue expenditure – Revenue receipts.**

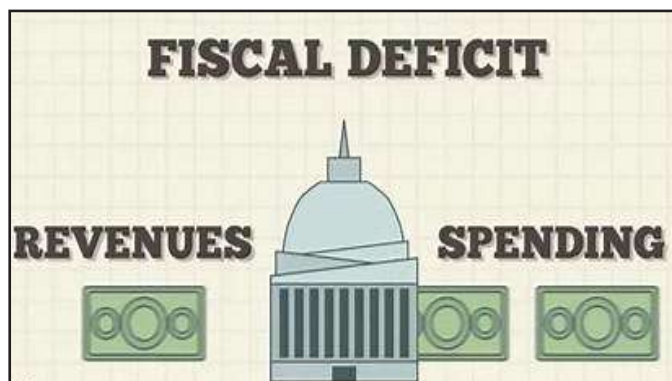
##### Primary Deficit:

- A primary deficit is equal to a fiscal deficit plus interest payments.
- It states the difference between a government's expenditure requirements and its receipts, not taking into account the expenditure incurred on interest payments on loans taken by a government during previous years to fuel its economy.
- **Hence, Primary Deficit = Fiscal Deficit – Interest Payments.**

##### Conclusion:

- According to the data of the Central Government in India, despite the increase in fiscal deficit in February, this year's fiscal deficit target set by the government can be achieved.
- The priority of the Central Government of India is to bring the economy out of imbalance through capital expenditure (capex) in present time

- Increasing government investment in the infrastructure of the Indian economy will also increase private investment, which will boost economic (GDP) growth and result in reducing the fiscal deficit to GDP ratio.
- By implementing a combination of fiscal consolidation measures, India can effectively manage its national debt and fiscal deficit while ensuring fiscal stability, economic growth and long-term prosperity.
- Achieving fiscal sustainability in India requires a balance between short-term stabilization efforts and long-term structural reforms.
- It is quite commendable that some ministries, despite missing their targets, will still deliver positive results in terms of deficit figures for the full year.
- It is good for the government to tighten the reins for better economic outcomes at the macro level, but consistently missing spending targets compromises the desired results and indicates the need for better outlay planning and less borrowing in the coming years. There may be scope for taking.



## IMPORTED INFLATION



### Why in the News?

Recently, the Asian Development Bank highlighted that India could face Imported inflation and the depreciation of rupee due to global conflicts happening in Ukraine and Middle east.

### What is Imported Inflation?

Imported inflation refers to the **increase in domestic prices of goods and services caused by the rising cost of imported inputs** or finished products. It occurs when a country's currency depreciates relative to the currencies of its trading partners or when global commodity prices rise.

For example, if the cost of imported oil rises, it can lead to higher transportation costs, which may then translate into higher prices for various goods and services throughout the economy.

### Factors which Contribute for Imported Inflation

Several factors can contribute to imported inflation:

- **Exchange Rate Fluctuations:** can increase the cost of imported goods and services. If a country's currency depreciates relative to the currencies of its trading partners, the cost of imports increases, leading to higher prices for imported products. This phenomenon is particularly relevant for countries that heavily rely on imports for consumer goods, raw materials, or intermediate inputs. For example recent inflation in India because of U.S. bank rate hikes.
- **Global Commodity Prices:** Many countries rely on imported commodities such as oil, metals, and agricultural products. Changes in global commodity prices can directly influence the cost of imports and subsequently affect domestic inflation. For instance, a surge in oil prices can lead to higher transportation costs and production expenses, resulting in increased prices for various goods and services.
- **Trade Policies and Tariffs:** Trade policies, including tariffs and quotas, can affect the cost of imports. The imposition of tariffs on imported goods raises their prices, leading to inflationary pressures. Additionally, retaliatory tariffs between trading partners can disrupt supply chains and increase costs for businesses, ultimately contributing to imported inflation.
- **Supply Chain Disruptions:** Disruptions in supply chains globally, such as natural disasters, geopolitical tensions, or pandemics, can lead to shortages of goods and services. When demand is higher than supply, prices rise, contributing to imported inflation. Supply chain disruptions can also increase transportation and logistics costs, further exacerbating inflationary pressures.
- **Domestic Demand for Imports:** Strong domestic demand for imported goods and services can drive up their prices, especially if supply cannot keep pace with demand. This situation can occur during periods of robust economic growth or when consumers prefer imported products due to quality or brand preferences.
- **Imported Wage Pressures:** In some cases, imported inflation can also result from wage pressures in other countries. If labour costs increase in key exporting countries, the prices of imported goods produced in those countries may rise, contributing to inflation in importing countries.

## What Steps Can We Take?

Addressing imported inflation requires a combination of monetary, fiscal, and trade policies. Here are some strategies that policymakers can employ to tackle imported inflation:

- **Monetary Policy:** Central banks can use monetary policy tools, such as interest rate adjustments, to manage inflationary pressures stemming from imported inflation. If imported inflation becomes a significant concern, central banks may raise interest rates to reduce domestic demand and dampen inflationary pressures. Conversely, if the economy is experiencing other headwinds, central banks may choose to maintain accommodative monetary policy while closely monitoring inflation dynamics.
- **Exchange Rate Management:** Governments and central banks can intervene in currency markets to stabilize exchange rates and mitigate the impact of currency depreciation on imported inflation. This intervention can involve buying or selling foreign currency reserves to influence exchange rate movements. Additionally, policymakers may implement measures to improve currency stability, such as adopting exchange rate pegs or bands.
- **Trade Policies:** Governments can adjust trade policies to address imported inflation. This may include reducing tariffs or import duties on certain goods to lower their prices for consumers. Conversely, policymakers may consider imposing temporary tariffs or quotas on specific imports to protect domestic industries or address unfair trade practices that contribute to inflationary pressures.
- **Supply-Side Measures:** Policymakers can implement measures to enhance domestic production capacity and reduce reliance on imports. This involves investing in infrastructure, technology, and education to boost productivity and competitiveness in key industries. By increasing domestic production, countries can mitigate the impact of imported inflation on consumer prices and improve resilience to external shocks.
- **Supply Chain Management:** Governments and businesses can work together to strengthen supply chains and reduce vulnerabilities to disruptions. This may involve diversifying sourcing strategies, investing in inventory management systems, and enhancing coordination among suppliers and logistics providers. By improving supply chain resilience, countries can minimize the transmission of inflationary pressures from global markets to domestic economies.
- **Demand Management:** Policymakers can use fiscal policy tools like, taxation and government spending, to manage domestic demand and mitigate inflationary pressures. For example, targeted fiscal stimulus mea-

asures can support sectors facing supply constraints or encourage investment in productive capacity. Additionally, policies aimed at promoting savings and reducing consumption can help moderate demand and alleviate inflationary pressures.

## Consumer Price Index and Wholesale Price Index

**The Consumer Price Index (CPI)** stands as a crucial indicator for tracking shifts in the prices urban consumers pay for a designated basket of goods and services over time. This index holds significant importance as it offers insights into inflationary patterns within the economy, serving as a key reference point for policymakers, economists, and investors alike to assess changes in the cost of living for citizens.

The computation of the CPI in India falls under the responsibility of the Central Statistics Office (CSO), an integral part of MoSPI. Drawing from a predetermined assortment of essential items, the CPI reflects the evolving prices of goods and services crucial to daily urban life. This selection encompasses a diverse range of necessities, spanning from food essentials and housing costs to transportation expenses, medical services, educational fees, and other vital expenditures.

### WPI:

The **Wholesale Price Index (WPI)** stands as a critical indicator for monitoring changes in the average prices of goods at the wholesale level over time. This index serves as a valuable tool for assessing inflationary patterns within the economy and is extensively utilized by policymakers, economists, and businesses to analyze shifts in production costs and overall price levels.

Administered by the Office of the Economic Adviser under the Ministry of Commerce and Industry, the WPI encompasses a wide array of commodities traded in bulk, spanning raw materials, intermediate goods, and finished products. Unlike the Consumer Price Index (CPI), which focuses on retail prices paid by consumers, the WPI primarily reflects price movements occurring at wholesale level.

## INFLATION IN INDIA



### Why in the News?

In March, India's retail inflation eased to its lowest level in 10 months, registering at 4.85%, down from February's 5.1%. However, **food inflation persisted at a high level**, staying nearly unchanged at 8.52% compared to the previous month's 8.66%. This was driven by accelerated price increases in cereals and meat, while double-digit inflation persisted in vegetables, pulses, spices, and eggs.

In March, **urban consumers** saw a significant decrease in inflation, dropping from 4.8% in February to 4.14%. However, rural consumers faced a slight increase, experiencing a higher inflation rate of 5.45% compared to 5.34% in the previous month.

This divergence was also noticeable in food price trends. Food inflation accelerated from 8.3% in February to 8.6% in March for rural India, while urban areas witnessed a decline from 9.2% to 8.35% during the same period.

### Important Reasons for Food Inflation

There can be several reasons for Food inflation;

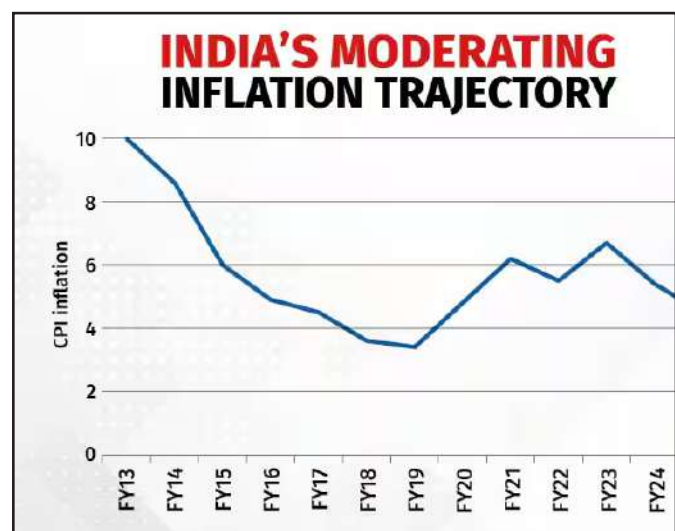
- **Supply and Demand Imbalance:** If the demand for food exceeds the available supply, prices tend to rise. Factors such as adverse weather conditions, pest infestations, or disruptions in transportation and distribution channels can lead to a shortage of food supply.
- **Cost of Production:** Increases in the cost of inputs like seeds, fertilizers, labor, and fuel can raise the cost of producing food. These increased production costs are often passed on to consumers in the form of higher prices.
- **Government Policies:** Government policies such as trade restrictions, export bans, import tariffs, and subsidies can influence food prices. For example, restrictions on exports or hoarding of essential commodities can lead to domestic shortages and price hikes.
- **Exchange Rates:** Fluctuations in currency exchange rates can affect the prices of imported food items. A weaker domestic currency can make imported food more expensive, leading to higher prices for consumers. For example rate hikes by U.S.A federal bank has a negative impact on Indian markets
- **Consumer Behavior:** Changes in consumer preferences or dietary habits can affect food prices. For example, increased demand for certain types of food, such as organic or specialty products, can lead to higher prices.
- **Global Factors:** Events or trends in the global economy, such as changes in oil prices, international trade agreements, or geopolitical tensions, can impact food prices worldwide. For example, Russia- Ukraine war.
- **Climate Change:** Long-term shifts in weather patterns and extreme weather events due to climate change can disrupt agricultural production, leading to crop failures and decreased food supply, which in turn can drive up prices.

### Basics of Inflation

- **Inflation** is the persistent increase in the general price level of goods and services over time, leading to a de-

crease in the purchasing power of money. Conversely, deflation represents a decline in prices, while disinflation refers to a slowing down of the rate of inflation.

- **Creeping inflation** is a gradual increase in price levels over time, which is generally considered beneficial for the economy. Bottleneck inflation, or structural inflation, arises from a significant decrease in supply coupled with unchanged demand levels.
- **Skewflation** occurs when the rise in prices primarily affects specific commodities or a small group of goods. Galloping inflation denotes very high inflation rates, often reaching double or triple digits, while hyperinflation involves extremely rapid and accelerating inflation, exceeding 50% per month.
- **Inflation tax** refers to the loss of purchasing power experienced by holding cash during times of high inflation. The Phillips Curve illustrates the inverse relationship between inflation and unemployment, suggesting that as unemployment declines, inflation tends to rise.
- In terms of origin, inflation is categorised into **cost-push and demand-pull**. Cost-push inflation results from increases in the prices of production factors such as raw materials, labour, and utilities. Demand-pull inflation occurs when demand rises due to excess money supply without a corresponding increase in supply.
- Inflation rates are typically measured using price indices, which gauge the average level of prices across various goods and services. Inflation is assessed on a point-to-point basis, comparing prices in the current month with those from the corresponding month in the previous year.



### Consumer Price Index and Wholesale Price Index

- The **Consumer Price Index (CPI)** stands as a crucial indi-

cator for tracking shifts in the prices urban consumers pay for a designated basket of goods and services over time. This index holds significant importance as it offers insights into inflationary patterns within the economy, serving as a key reference point for policymakers, economists, and investors alike to assess changes in the cost of living for citizens.

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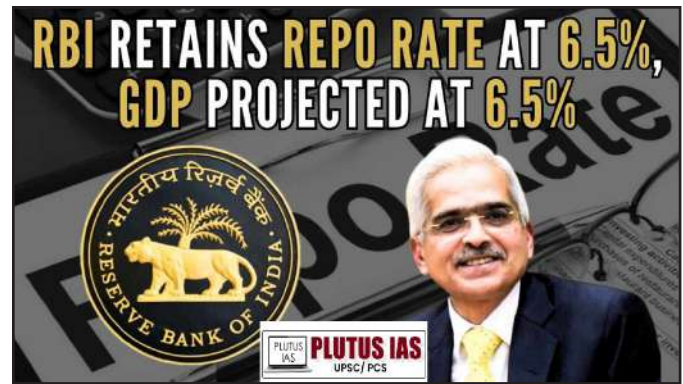
**DECISION REGARDING REPO RATE IN THE MEETING OF MONETARY POLICY COMMITTEE OF RESERVE BANK OF INDIA**



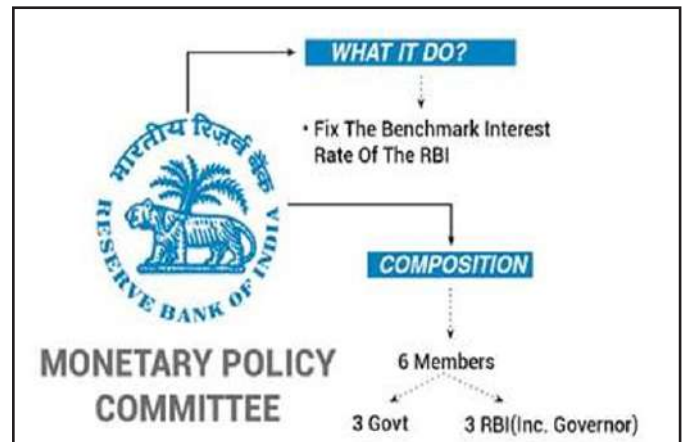
**Why in the News?**

- Recently in India, on April 5, 2024, the Monetary Policy Committee (MPC) of the Reserve Bank of India, in view of the pressure of rising food prices in India, in its meeting has kept the repo rate unchanged at 6.5 per cent for the seventh consecutive time.
- The pressure of rising food prices in India is hampering the RBI's efforts to slow the pace of inflation on a sustainable basis to the target of four per cent.
- In the recently held Monetary Policy Committee meeting of the Reserve Bank of India, the possibility of retail inflation falling below the critical level of four percent

in the second quarter (July-September) of the financial year 2024-2025 has also been expressed.



**What is the Monetary Policy Committee of the Reserve Bank of India?**



- The Monetary Policy Committee of the Reserve Bank of India is a committee constituted by the Government of India.
- It was formed in the year 2016 to make interest rate determination in India more useful and transparent.
- The Governor of the Reserve Bank is the ex-officio Chairman of the Committee.
- The Reserve Bank of India Act, 1934 (RBI Act) has been amended by the Finance Act, 2016 to provide a statutory and institutional framework in India to the Monetary Policy Committee of the Reserve Bank of India.
- In India, under Section 45ZB of the RBI Act 1934 as amended, the Central Government has the power to constitute a six-member MPC.
- By amending the Reserve Bank of India Act, monetary policy making in India has been handed over to a newly constituted Monetary Policy Committee (MPC).
- Monetary policy is the measure or tool by which the central bank controls the flow of money in the econ-

omy by controlling interest rates, maintains price stability and tries to achieve the goal of high growth rate.

- As per the provisions of the Reserve Bank of India Act, out of six members of the Monetary Policy Committee, three members are from the Reserve Bank, including the Governor, a Deputy Governor and one other officer.
- The other three members are appointed by the Central Government. Who are selected by a committee headed by the Cabinet Secretary. Their tenure is of 4 years, and they are not eligible for reappointment.
- It is mandatory to have 4 meetings of the Monetary Policy Committee (MPC) in a year in which the quorum for the meeting is four members.
- Decisions in this committee are taken on the basis of majority and in case of equal votes, the Governor of the Reserve Bank gives his casting vote.

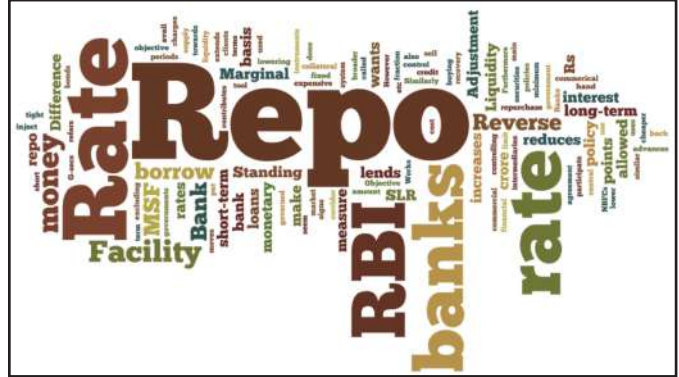
#### Current Members of MPC:

- The Monetary Policy Committee (MPC) has six members, three of whom are from the Reserve Bank of India (RBI) and the other three are eminent economists.
- The members of RBI are Shaktikanta Das (Governor of RBI), Dr. Michael Debabrata Patra (Deputy Governor of RBI), and Rajeev Ranjan (Executive Director of RBI).
- Renowned economists Dr. Jayanti Verma, Dr. Ashima Goyal and Dr. Shashank Bhide.
- As per the RBI Act, the MPC is required to meet at least four times in a financial year. The MPC is chaired by the RBI Governor.

#### Main Functions of Monetary Policy Committee:

- **Economic analysis and forecasting:** The MPC conducts in-depth analysis and forecasting of various economic indicators, including inflation, GDP growth, employment, fiscal conditions and global economic growth.
- **Establishing coordination between inflation target and consumer price index:** The current inflation target set by the government is a Consumer Price Index (CPI) inflation target of 4% with a tolerance band of +/- 2%.
- **Determining policy interest rates and repo rates in India:** The primary function of the MPC is to set policy interest rates, especially the repo rate.
- **Critical decision making:** Monetary Policy Committee of the Reserve Bank of India in India. The MPC schedules meetings at least four times a year to review the monetary policy stance.

#### Repo Rate:



- The interest rate that the Reserve Bank of India applies to short-term loans given to its customers is called repo rate. Hence repo rate is the interest rate at which commercial banks borrow or borrow money from the Reserve Bank of India.
- The Reserve Bank of India is called the bank of banks.
- The repo rate in India is determined by the Monetary Policy Committee of the Reserve Bank of India in India.
- Therefore, all the customers of the Reserve Bank in India – banks, central government or state government can get loan from the Reserve Bank of India under the repo rate.
- To avail loans from the Reserve Bank of India, customers have to pledge their government securities with the Reserve Bank of India.
- Banks cannot use the securities held with the Reserve Bank under the Statutory Liquidity Ratio (SLR) to borrow under the repo rate.

#### Effects Arising as a Result of Increase in Repo Rate in India:

- An increase in the repo rate in India means that loans will become costlier and the monthly installment of the existing loan will increase.
- Increasing the repo rate by the Monetary Policy Committee of the Reserve Bank of India causes banks to borrow less cash from the Reserve Bank, thereby reducing the money supply in the economy and this process is expected to reduce inflation in India.
- After the increase in repo rate, banks increase the rates of loans like home loan, auto loan, personal loan etc., due to which the expenses of the loan takers increase.
- An increase in repo rate in any economy can affect the consumption and demand of citizens.

#### Current Decisions Taken by the Monetary Policy Commit-

**tee of the Reserve Bank of India:**

- In this meeting, it has been decided to keep the repo rate unchanged at 6.5 percent, rejecting any kind of change regarding the repo rate.
- Despite the tightening of liquidity in recent weeks, the RBI has maintained its accommodative policy stance. Holding back housing means reducing the money supply in the economy to control inflation.
- The Monetary Policy Committee of the Reserve Bank of India has retained the GDP growth rate at 7 percent and retail inflation at 4.5 percent for the financial year 2024-25. In February 2024, Consumer Price Index (CPI) inflation stood at 5.09 per cent compared to 5.1 per cent in January 2024.
- Food inflation in India continues to cause considerable instability, hampering the process of disinflation.
- sustained and strong government capital expenditure; Healthy balance sheets of banks and corporates; The outlook for investment activity remains bright due to rising capacity utilization, which is driven by a continuing widening of the private capital expenditure cycle. However, long-standing geopolitical tensions and increasing disruption to trade routes pose risks to the landscape.
- The Indian rupee remained in a range against other currencies of emerging markets and some advanced economies during the financial year 2023-24. This stability would indicate that India's economy is strong, financially stable and its position in the world market has improved.

**New Measures Currently Announced by the Monetary Policy Committee of the Reserve Bank of India:**

- **Proposal to deposit cash in banks through UPI:** Keeping in mind the popularity and convenience of UPI, RBI has proposed to enable UPI for cash deposit facility.
- **UPI access proposed for pre-paid instruments (PPI):** To provide greater flexibility to PPI holders, RBI has proposed to allow linking of PPIs through third party UPI applications.
- PPI is a type of financial instrument that allows users to load money onto a prepaid account or card for future use. With this, PPI holders will be able to make UPI payments like bank account holders.
- Currently, UPI payments from bank accounts can be made through the bank's UPI app by linking the bank account or by using a third-party UPI application. However, the same facility is not available for PPI.

- PPI can currently be used to conduct UPI transactions only using applications provided by the PPI issuer.
- **Offers for CBDC through non-bank operators:** RBI also decided to distribute Central Bank Digital Currencies (CBDCs) through non-bank payment system operators.
- CBDC is legal tender issued in digital form by a central bank. Digital Rupee (e-Rupee) is a digital currency launched by the RBI.
- RBI has divided the digital rupee into two broad categories:- First general purpose (retail) and second wholesale. This will therefore make CBDC-retail accessible to a wider range of users.
- **Proposal to facilitate wider non-resident participation in Sovereign Green Bonds (SGRBs):** RBI is making it easier for non-residents to participate in Sovereign Green Bonds (SGRBs).
- Based on an announcement in the Union Budget for FY 2022-23, the government had released the SGRBs in January 2023. They have decided to allow eligible foreign investors in the International Financial Services Center (IFSC) to invest in these bonds.
- At present, foreign portfolio investors (FPIs) registered with SEBI are permitted to invest in SGRBs under various routes available for investment by FPIs in government securities.
- **Introduction of Mobile App for RBI Retail Direct Scheme:** RBI has decided to launch a mobile app for its RBI Retail Direct scheme, which was first introduced in November of the year 2021.
- This app will facilitate individual investors to maintain gilt accounts with RBI and invest in government securities.
- A Gilt account is a savings account for government securities, such as treasury bonds.
- It is similar to a bank account but uses government securities instead of cash.
- The scheme allows investors to purchase securities in the primary auction and trade the securities through the NDS-OM platform.
- **It was decided to review the Liquidity Coverage Ratio (LCR) framework:** Banks included in the LCR framework will have to hold reserves of high quality liquid assets (HQLA) to cover the expected net cash outflow over the next 30 days.
- Some recent developments show that during stressful times, depositors can quickly withdraw or transfer



their deposits, especially by using online banking.

- Such emerging risks may require revisiting some decisions under the LCR framework.
- Therefore, certain amendments are being proposed in the LCR framework to facilitate better management of liquidity risk by banks.

#### Conclusion / Way Forward:



- Monetary policy is a set of tools used by a country's central bank to control the overall money supply and promote economic growth and employ strategies such as modifying interest rates and changing bank reserve requirements.
- Therefore, regarding the economy of India. There cannot and should not be any compromise on price stability.
- According to the monetary policy makers of the Reserve Bank of India, the increase in income of citizens and increase in willingness to spend on non-essential items in the Indian economy is a good sign of strength in private consumption.
- The MPC is much more confident about its economic growth projections in the 12 months to March 2025. Therefore, this year also the GDP is expected to increase by an average of seven percent. For this, many factors are necessary – from the boost in agricultural activities and rural demand due to expectations of normal south-west monsoon to continued momentum in the manufacturing and service sectors.
- The Monetary Policy Committee points out that all five key parameters included in the RBI consumer confidence survey are expected to improve over a one-year period, indicating the Indian economy becoming stronger and growing at a faster pace.
- Therefore, it paves the way for a stronger and brighter future for both India's economy and India's Consumer

Price Index (CPI).

## INDIA SEMICONDUCTOR CONUNDRUM

#### Why in the News?

Recently, Tata Electronics, a subsidiary wholly owned by Tata Sons Pvt. Ltd., is collaborating with Powerchip Semiconductor Manufacturing Corporation (PSMC) of Taiwan to establish India's first cutting-edge semiconductor fabrication facility, integrating artificial intelligence capabilities.

#### About Semiconductor Chips?

- A semiconductor is a substance with electrical conductivity properties that lie between those of conductors like copper and insulators like glass.
- Semiconductor chips are tiny, wafer-like devices made from semiconductor materials, typically silicon, which possess unique electrical properties. Semiconductor chips serve as the building blocks for a wide array of electronic devices, from smartphones and computers to medical equipment and automotive systems.
- The fabrication process of semiconductor chips involves intricate layers of materials and precise patterning techniques. The most common type of semiconductor chip is the integrated circuit (IC), which contains interconnected electronic components such as transistors, diodes, and resistors.

#### Development of Semiconductor Chips in India–

- A semiconductor facility in Morigaon, Assam, will be established by Tata Semiconductor Assembly and Test Pvt Ltd (TSAT) with an investment of Rs 27,000 crore. It is expected to produce 48 million chips daily, primarily serving the automotive and electric vehicle industries.
- Another semiconductor facility in Sanand, Gujarat, will be developed by CG Power in collaboration with Renesas Electronics Corp from Japan and Stars Microelectronics from Thailand, involving an investment of Rs 7,600 crore.
- Both Foxconn and Vedanta proposed to set up a fabrication facility independently in the coming years.

#### Why the Government is Focusing on Semiconductor Manufacturing-

- **Rapidly growing Market**– India's semiconductor consumption is on a swift ascent. Rajeev Chandrasekhar, the country's Minister of State for IT and Electronics,

anticipates an expansion to \$110 billion by 2030.

- **Import Dependence-** India depends significantly on imports to meet its domestic semiconductor needs, rendering it susceptible to coercion and supply chain interruptions, particularly with China's dominance in the global semiconductor industry. Establishing local manufacturing facilities would shield India from potential future supply disruptions and facilitate self-sufficiency.
- **Strategic Significance-** Semiconductors are essential components in various critical industries such as telecommunications, defence, healthcare, and automotive. As such, having a robust domestic semiconductor manufacturing capability is crucial for national security and strategic autonomy.
- **High-skill Employment opportunities—**Semiconductor manufacturing has the potential to create high-skilled jobs and drive economic growth through technology innovation and ecosystem development.
- **Diversify Global supply chains of Semiconductor chips-** Currently, chip production is centralised in a limited number of nations. For instance, Taiwan alone accounts for more than 60% of global semiconductor manufacturing, while combined with South Korea, these two countries contribute to 100% of the production.

#### Challenges for India-

- **Huge initial investment-** Semiconductor production is a highly intricate and technology-driven industry demanding substantial capital investments, enduring risks, extended periods for development and return on investment, and frequent technological advancements. These factors necessitate substantial and continuous financial commitments.
- **Infrastructure deficit-** Establishing a chip manufacturing ecosystem in a new area poses significant hurdles. It necessitates robust infrastructure, including a consistent power supply and ample clean water, alongside costly water purification setups. Moreover, the process involves numerous chemicals and gasses essential for chip fabrication, adding to the complexity and expenses.
- **Sophisticated technology-** Sophisticated technology is imperative for high-end chip manufacturing, a capability possessed by only a handful of corporations in India.
- **Lack of skilled manpower-** India tremendously lacks skilled human resources, which is imperative for semiconductor manufacturing.

#### Initiatives Taken by India to Promote Semiconductor Manufacturing-

- **Modified Scheme for Setting up of Semiconductor Fabs in India-** The scheme intends to draw significant investments for establishing semiconductor wafer fabrication plants within the nation. Under this scheme, 50% of the fiscal assistance of the project expenditure is provided equally, specifically targeting the establishment of silicon complementary metal-oxide semiconductor (CMOS) based semiconductor fabrication facilities in India.
- **Design Design-linked incentive Scheme-** It provides monetary benefits and supportive infrastructure for semiconductor design throughout its various developmental and deployment phases. This scheme provides incentives like "Product Design Linked Incentive" and "Deployment Linked Incentive."
- **India Semiconductor Mission-** It aims to spearhead the formulation of enduring strategies for cultivating a resilient semiconductor and display ecosystem. This specialised and autonomous initiative will be overseen by leading experts from the global semiconductor and display sectors. Serving as the central authority, ISM will ensure the effective and seamless execution of schemes designed to establish Semiconductor and Display Fabrication facilities.
- **Semiconductor laboratory-** The Union Cabinet has sanctioned the Ministry of Electronics and Information Technology to initiate the necessary measures for upgrading and commercializing the Semi-conductor Laboratory (SCL) located in Mohali. The Ministry will investigate the potential for a collaborative venture between SCL and a commercial fab partner to enhance the existing brownfield fab facility.

#### Conclusion-

Semiconductor chips are vital in modern electronics, yet India faces import dependency risks. Government initiatives like design-linked incentives and the India Semiconductor Mission aim for self-reliance and technological advancement. Strengthening domestic semiconductor capabilities is crucial for innovation, economic growth, and strategic autonomy in India's tech-driven future.

### FISCAL FEDERALISM VS CENTRE – STATE RELATIONS IN INDIA

#### Why in the News ?

- Recently, the Supreme Court of India has ordered to refer to the Constitution Bench a case filed by the State Government of Kerala, in which the decision of the Central Government in India to cut the borrowing giv-

en to the State of Kerala was challenged.

- The Supreme Court of India has refused to pass any order on the interim order restoring the situation before the imposition of the borrowing limit by the Central Government but has referred it to a larger bench which will provide an opportunity to examine whether the Central To what extent can the government regulate state borrowing? This step taken by the Supreme Court of India in this matter is a welcome development.
- The Kerala government has claimed in this case that the central government’s borrowing limit restriction violates the fundamental nature and provisions of India’s fiscal federalism.



**The Root Cause of the Dispute Between Fiscal Federalism in India Versus the State of Kerala:**

- The issue has been filed by Kerala in the Supreme Court of India and the Center has net borrowing limit(NBC) refers to the imposition of restrictions, thereby limiting the borrowing capacity of any state in India.
- Kerala challenged the legality of the NBC in the Supreme Court, arguing that it hampers the state’s ability to finance essential services and welfare schemes.

**Meaning of Fiscal Federalism in India:**

- Origin of the word fiscal ‘Fisk’ It is derived from the word which means public treasury or government money.
- Therefore, fiscal policy is related to the revenue and expenditure policy of the government.
- Fiscal federalism in India refers to the distribution of resources between the Center and the states.
- The distribution of taxes between the Center and the States is clearly mentioned in.the Indian Constitution **7th schedule** in India.
- There are 3 lists in the Constitution of India where taxes are distributed between the Center and the States.



They are as follows –

- Union list
- State list
- Concurrent list

**Main Objectives of Fiscal Policy in India**

The following are the objectives of fiscal policy in India-

1. High economic growth
2. Price stability
3. Reduction in inequality

The above objectives are accomplished in the following ways –

- Consumption control – In this way, the ratio of savings to income is increased.
- Increasing the rate of investment.
- Taxation, infrastructure development.
- Imposition of progressive taxes.
- Weaker sections were exempted from taxes.
- Imposing heavy taxes on luxury items.
- Discouraging unearned income.

**Main Components of Fiscal Policy in India:**

India’s fiscal policy mainly has three components. Which are as follows –

- Government receipts

- Government spending
- Public debt

**WHAT IS "FISCAL FEDERALISM?"**

- **FISCAL FEDERALISM = THE CENTRAL GOVERNMENT PROVIDING GRANTS-IN-AID TO STATE GOVERNMENTS**
- **GRANTS-IN-AID – MONEY GIVEN BY THE FEDERAL GOVERNMENT TO THE STATES**
- **PRIMARY WAY THE FEDERAL GOVERNMENT CAN INFLUENCE STATES → "STRINGS ATTACHED"**

All receipts and all types of expenditure of the Government in India are deposited and issued or spent from the following funds.

- Consolidated Fund of India
- Contingency fund of India
- Public account of India

**Net Borrowing Limit (NBC):**

- Net borrowing limit (NBC) is a restriction imposed by the central government on the borrowing capacity of states in India. In which it limits the amount of money under which any state in India can borrow either from the open market or from various sources.
- As of December 2023, the general net borrowing limit for states in India is ₹8,59,988 crore or 3% of state gross domestic product (GDP).
- However, the central government national pension scheme additional borrowing limit of ₹60,880 crore has been approved by 22 states of India to participate in NPS.
- The main objective of NBC is to regulate state finances, prevent excessive borrowing and ensure fiscal discipline in India.

**Extra – Budgetary Borrowings Covered Under NBC:**

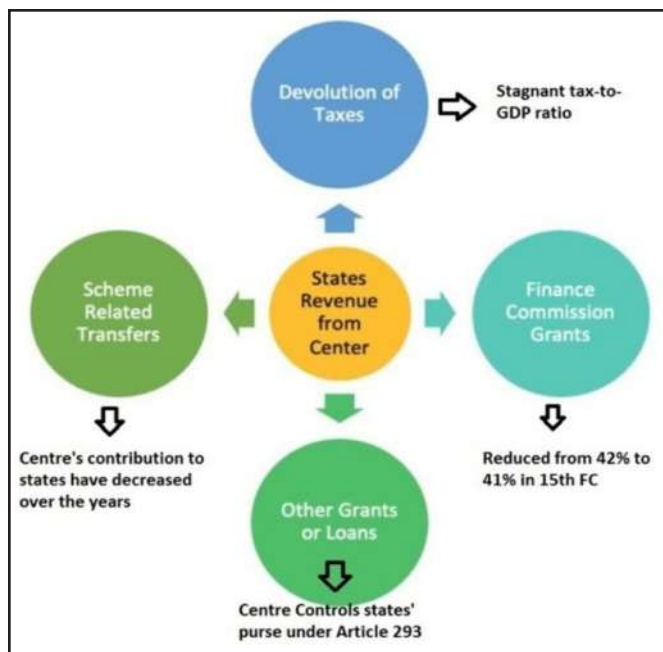
- The Center has included loans taken by state-owned enterprises in the NBC. As such, statutory bodies in many states (such as the Kerala Infrastructure Investment Fund Board) cannot raise additional debt beyond the NBC’s 3% limit. The move has raised constitutional

concerns regarding the right of the central government to regulate state finances.

**Kerala’s Argument in NBC’s Case:**

- **Fiscal autonomy of states:** The amendment made to the FRBM Act, 2003 violates the fiscal autonomy of the state by center.
- **Borrowing limit:** The Centre’s amendments have significantly reduced Kerala’s borrowing limit, impacting the state’s financial crisis management.
- **Constitutional violation:** Kerala argues that the Centre’s action is an encroachment on the state’s legislative domain, in violation of the provisions of the 7th Schedule of the Constitution.
- **Financial Crisis:** The state fears that without intervention, the financial constraints imposed could have long-term detrimental effects.
- **Lump sum package:** The move was suggested by the Supreme Court to help Kerala deal with the funding shortfall by imposing stringent conditions for the next financial year. The state rejected the loan of Rs 5000 crore because it would need about Rs 10,000 crore as loan.

**Central Government’s Argument:**



- **Financial crisis of the state:** The Centre’s argument in this case is that Kerala’s financial crisis is due to the state’s mismanagement and wastage, and not due to borrowing limits.
- **FRBM Act 2003:** Fiscal transactions between Center and n States are governed by the FRBM Act, 2003, in

which the borrowing limit is set at 3% of Gross State Domestic Product (GSDP).

- **Recommendations of the 15th Finance Commission:** The Center has refused to relax the borrowing limit citing the recommendations of the 15th Finance Commission. This led to Kerala exceeding the fiscal deficit target and high expenditure on salaries. **“Highly indebted state”** is shown as. The Center said its one-time package offer (Rs 5,000 crore) comes with strict conditions to prevent other states from approaching courts for similar packages.

#### Fiscal Responsibility and Budget Management Act (FRBMA), 2003:

- The main objective of the FRBM Act in India is to impose fiscal discipline on the government. Therefore, under this Act the government should conduct its fiscal policy in a disciplined manner or in a responsible manner i.e. the government deficit or borrowing should be kept within reasonable limits and the government should plan its expenditure according to its revenue so that the borrowing stays within limits.

#### How is State Borrowing Regulated in India ?



- **Article 293:** It provides financial autonomy to the states, allowing them to borrow only from within the territory of India on guarantee from the Consolidated Fund of the State.
- **FRBM Act 2003:** The Fiscal Responsibility and Budget Management Act 2003 was enacted to ensure inter-generational equity in fiscal management. It states fiscal deficit and borrowing limits for both the central and state governments.
- **Finance Commission:** Finance Commission in India makes recommendations from time to time with respect to fiscal matters, including borrowing limits for the States, it is important to determine the borrowing limits for the States taking into account factors such as

economic conditions, fiscal health and developmental needs .

- **State Fiscal Responsibility Act:** Each state may have its own fiscal responsibility act, which defines limits and guidelines for borrowing and fiscal management within the state.
- **Role of the Centre:** It plays an important role in overseeing financial matters, including approving borrowing limits for states based on the recommendations of bodies such as the Finance Commission. It can influence the state's borrowing limits through legislative changes, amendments to existing laws such as the FRBM Act, or by exercising discretion in granting additional funds or by relaxing borrowing constraints in exceptional circumstances.
- **Pay off debts:** The state's borrowings are used to finance ongoing expenses rather than profitable investments, affecting its credit rating.
- **Revenue Generation:** The state's revenue generation may not be sufficient to meet its expenditure requirements, the state depends heavily on revenues from taxes including GST but fluctuations in economic activity and external factors affect tax collections.
- **Expenditure System:** There is a high level of recurrent expenditure on items like salaries, pensions and subsidies which creates financial imbalance in the state.
- **Natural Disasters:** Kerala is prone to natural disasters such as floods, landslides, etc., which can cause extensive damage to infrastructure and disrupt economic activities.

#### Solution / Way Forward:



- Kerala's challenge highlights an important constitutional dispute over fiscal federalism and state autonomy in financial management. The state argues that the Centre's restrictions on borrowing, including loans of state-owned enterprises and public account balances, violate its constitutional rights. This legal battle high-

lights the tension between central oversight and state financial independence, potentially reshaping the dynamics of federal-state financial relations in India.

- **Recommendations of the 15th Finance Commission To review again:** Issues arising from the recommendations of the 15th Finance Commission may be re-examined. States can share their concerns with the Finance Commission or the Union Finance Ministry, so that states do not have to violate their fiscal autonomy while maintaining their fiscal stability.
- **Need for judicial review and judicial clarification:** Kerala has taken refuge in the Supreme Court of India in the NBC case. Hence, one solution is judicial review of the constitutional validity of NBC in relation to Article 293(3) and Article 266(2). The Court's interpretation may resolve disputes related to the constitutional limits of the Centre's authority over state borrowing.
- **To cooperative federalism Need to strengthen:** Regular high-level meetings between the Center and states through forums such as the GST Council or a specially convened Fiscal Policy Council can help facilitate interactions. The objective of these meetings will be to negotiate borrowing limits and ensure that states have sufficient financial leeway to meet their obligations.
- **Legislative action:** Parliament may consider making laws or amending existing laws (subject to constitutional limits) to clarify the scope of central monitoring over state borrowings. It should respect the balance of fiscal federalism and be prepared after extensive consultation with the states.
- **Promoting fiscal responsibility at the state level:** State fiscal management Can take proactive steps to strengthen, as Kerala has done through the Kerala Fiscal Responsibility Act. By setting clear deficit targets and budget management practices, states can demonstrate their commitment to fiscal prudence, potentially increasing their negotiating power with the Centre.
- **Public account management Building consensus on:** The issue of inclusion of public account withdrawals within the NBC can be addressed by creating a broad consensus among all the states, which can then be presented to the Center on a united front to exclude such transactions from the borrowing limit. ,
- **By promoting economic reform and development:** Economic reforms Expanding the tax base through taxation, promoting investment climate and promoting growth in the state's own source revenue can be sustainable ways of ensuring adequate funding for state expenditure without dependence on borrowing.

## GROSS GOODS AND SERVICES TAX (GST) COLLECTIONS IN INDIA MARCH 2024



### Why in the News ?

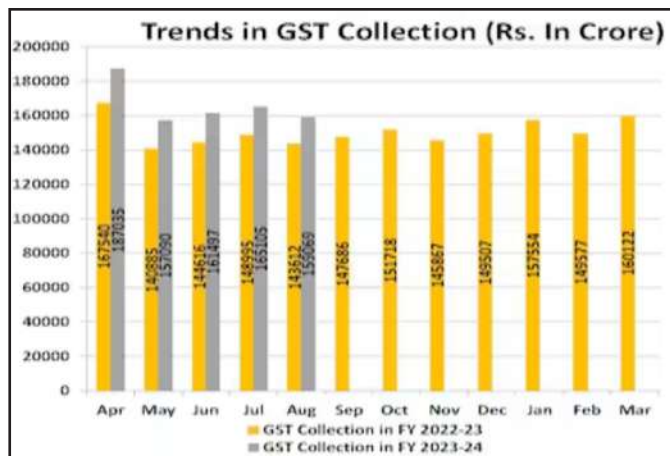
- This is the first time in the historical journey of revenue and total tax collection in India that for the first time in a financial year, the total collection of Gross Goods and Services Tax (GST) has crossed Rs 20 lakh crore.
- The total gross GST collection in the financial year 2023-24 was Rs 20.18 lakh crore, showing a growth rate of 11.7% over the previous financial year.
- The average monthly collection for fiscal year 2023-24 was Rs 1.68 lakh crore, higher than last year's average tax collection of Rs 1.5 lakh crore.
- The net GST revenue after settlement till March 2024 for the current financial year is Rs 18.01 lakh crore, showing a growth rate of 13.4 per cent compared to the same period last year.
- The highest gross GST collection in India in March 2024 was Rs 1.78 lakh, which is an increase of 11.5% over the previous year i.e. March 2023.
- This was the second highest monthly collection of GST in a month since the implementation of GST in India in the month of July 2017.
- The highest ever single-month gross GST collection of Rs 1.87 lakh crore was achieved in India in the month of April 2023.
- According to the Union Finance Ministry, the main reason for the highest gross GST collection in March 2024 is the increase in domestic transactions.
- Net GST revenue after refund in March 2024 in India is Rs 1.65 lakh crore, which is 18.4% higher tax collection compared to the same period last year.
- Maharashtra ranks first in GST collection in India in March 2024. In India, only the state of Maharashtra has the highest contribution to the total tax collection of Rs 27,688 crore.

India has witnessed a positive performance across all components of tax collection. Therefore, the details of total tax collection in March 2024 are as follows –

- Central Goods and Services Tax (CGST): ₹34,532 crore
- State Goods and Services Tax (SGST): ₹43,746 crore

- Integrated Goods and Services Tax (IGST): ₹87,947 crore, including ₹40,322 crore collected on imported goods.
- ₹12,259 crore in cess, which includes ₹996 crore collected on imported goods.

**Details of Gross GST Collection in the Financial Year 2023 – 24:**



**The contribution of various sectors in GST collection during the financial year 2023 – 24 is as follows –**

- Central Goods and Services Tax (CGST) Rs 3,75,710 crore,
- State Goods and Services Tax (SGST) Rs 4,71,195 crore;
- Integrated Goods and Services Tax (IGST) was Rs 10,26,790 crore, which also includes Rs 4,83,086 crore collected on imported goods.
- Cess: Rs 1,44,554 crore collected, including Rs 11,915 crore on imported goods.

**Some Important Facts Related to Goods and Services Tax in India:**

- The continued strong performance in terms of total gross GST collections in India in FY 2023-24 is a milestone. The average monthly tax collection this financial year is ₹1.68 lakh crore, which is higher than last year’s average of ₹1.5 lakh crore.
- The GST revenue net of refunds till March 2024 for the current financial year is ₹18.01 lakh crore, an increase of 13.4% over the same period last year.
- Under the Inter-Governmental Settlement in India, in the month of March, 2024, the Central Government has settled ₹43,264 crore to CGST and ₹37,704 crore to SGST from the collected IGST.
- In India, this amounts to a total revenue of ₹77,796

crore for CGST and ₹81,450 crore for SGST for March, 2024 after regular settlement in terms of taxes.

- For FY 2023-24, the Central Government has settled ₹4,87,039 crore to CGST and ₹4,12,028 crore to SGST from the collected IGST.

**What is Goods and Services Tax ?**

- GST is known as Goods and Services Tax. It is an indirect tax which has replaced many indirect taxes in India like excise duty, VAT, service tax etc.
- Goods and Services Tax (GST) was passed by the Parliament in India on 29 March 2017 and this tax system was implemented across India from 1 July 2017.
- Goods and Services Tax was included in the Constitution of India by the 101st Constitutional Amendment Act 2016.
- This Amendment Act made provision for Goods and Services Tax by including a new Article 246A in the Constitution.
- Goods and Services Tax (GST) It is imposed on the supply of goods and services.
- The Goods and Services Tax law in India is a comprehensive, multi-stage, destination-based tax that is levied on every value addition.
- GST is a single domestic indirect tax law for the entire country.
- The Goods and Services Tax has simultaneously replaced almost all the indirect taxes imposed by the Central Government and the State Government.

**Indirect taxes in India which have not been replaced by GST. Well the tax is as follows–**

- Basic customs duty
- Value added tax on petrol and diesel
- Tax on tobacco and alcohol
- Stamp duty on property
- Electricity charges
- Vehicle tax
- Property tax

**Process of Transfer of Central Taxes Under Centre – State Relations in India:**

- The central government transfers taxes to the states on the basis of the recommendations of the Finance

Commission. Which is transferred through monthly installments.

- In the last two years, a significant portion of the total funds were transferred in the latter half of the financial year.
- In 2021-22, the Center transferred 50% of the funds during the fourth quarter (January-March). This figure was 36% in 2022-23.
- In the first quarter (April-June) of 2023-24, the Center has transferred 23% of the total funds allocated to the states.
- This is significantly higher than 2021-22 and 2022-23. Advance transfer of central taxes may allow states to avoid spending in the final months of the financial year.
- According to the General Financial Rules, 2017 issued by the Finance Ministry of India – excess of expenditure in the last months of the financial year is considered a violation of propriety.
- The uneven pace of expenditure by states in a financial year may be affected by the patterns of receipts. Tax transfers from central taxes to states may also allow states to better plan their expenditure patterns during that financial year.



#### Solution / Way Forward:

- The journey of GST in India so far and the huge surge in GST revenues provide an opportunity to make some much needed reforms in this tax system, indicating the opening of a window for GST.
- The surge in overall GST growth should allow the next government to be formed after the Lok Sabha general elections in 2024 to focus on much-needed reforms in this tax system.
- The increase in GST collections is due to tax demands made for previous years and crackdown on known methods of tax evasion such as fake invoices and fraudulent input tax credits.

- Therefore, the government also needs to tighten its grip on tax evaders in India so that a transparent tax system can be ensured in India.
- These reforms should include reimagining the plan to rationalize this tax by removing different rates and bringing excluded items like electricity and petroleum products under its ambit and reducing high duties on key products like cement and insurance. .
- The GST compensation cess, which is now being used to compensate states for repaying COVID-19 pandemic-era borrowings, was worth Rs 1.44 lakh crore last year, before being settled before the extended deadline of March 2026. Let it be given.
- It is extremely important for the Central Government to avoid the temptation to impose implicit cess except on genuinely demerit items like tobacco.
- Imposing taxes on hybrid vehicles at more than 40 per cent, despite encouraging consumption and private investment, will make it difficult for India to achieve its green goals. Therefore, the Central Government also needs to rationalize this existing tax system, so that India can easily and successfully achieve its green target.



**CENTRE LIBERALISED FDI  
NORMS FOR THE SPACE  
SECTOR**



#### Why in the News?

The central government has notified amendments to the space sector's Foreign Direct Investment (FDI) policy to attract offshore investors in satellite manufacturing and satellite launch vehicles segments. A notification from the finance ministry said the new rules are called Foreign Exchange Management (Non-debt Instruments).



An amendment to the FDI policy for the space sector, made through a gazette notification dated April 16, 2024, prescribes a liberalized entry route and provides clarity for FDI in satellites, launch vehicles and associated systems or subsystems, the creation of spaceports for launching and receiving Spacecraft, and the manufacturing of space-related components and systems.

#### The New Rule Under FDI for the Space Sector:

- 100 per cent FDI has been allowed for the space sector category of manufacturing and operation of satellites, satellite data products, and ground segment and user segment.
- Up to 74 per cent FDI for satellite manufacturing & operation, satellite data products, ground segment & user segment are allowed under automatic route. Beyond 74 per cent, these activities are carried out by the government.
- FDI of up to 49 per cent is allowed for Launch Vehicles and associated systems or subsystems. Creation of Spaceports for launching and receiving Spacecraft is under the automatic route, but beyond 49 per cent, government permission would be required.

#### Foreign Direct Investment:

FDI refers to an investment made by a company or individual in one country in business interests in another country, either in establishing business operations or acquiring business assets in the other country, such as ownership or a controlling interest in a foreign company.

FDI plays a significant role in the global economy, fostering economic growth, technological transfer, job creation, and international trade. Governments often implement policies to attract FDI, offering incentives such as tax breaks, infrastructure development, and streamlined regulations to encourage foreign investors to invest in their countries.

FDI inflows can contribute to government revenue through taxes, royalties, and other fees levied on foreign investors. This additional revenue can fund public services, infrastructure projects, and social welfare programs, benefiting the economy and creating more employment. FDI promotes trade integration by facilitating access to global markets. FDI can stimulate domestic investment by creating a more competitive business environment, fostering entrepreneurship, and encouraging local firms to upgrade their operations to remain competitive in the face of foreign competition.

#### FDI in India:

India began economic liberalization in the early 1990s, opening its economy to foreign investment. Foreign Invest-

ment in India is governed by the FDI policy announced by the Government of India and the provisions of the Foreign Exchange Management Act (FEMA), 1999. The Indian government has introduced several policy measures to promote FDI across various sectors. These include increasing FDI limits, simplifying procedures, and offering incentives in strategic sectors like manufacturing, infrastructure, and technology.

India has been attracting substantial FDI inflows in recent years. Key sources of FDI include countries like the United States, Singapore, Mauritius, Netherlands, and Japan, among others. In FY 22-23, India witnessed total FDI inflows of \$70.97 Bn, with FDI equity inflows reaching \$46.03 Bn. The top five contributors to FDI equity inflows during FY 2022-23 were Mauritius (26%), Singapore (23%), the USA (9%), the Netherlands (7%), and Japan (6%).

#### Routes For FDI in India:

In India, foreign investors can make investments through two main routes: the Automatic Route and the Government Approval Route. These routes determine the scrutiny and approval required for foreign investment in different sectors.

### PRELIMS QUESTIONS

#### Q.1 In the context of the Indian economy, non-financial debt includes which of the following?

1. Housing loans owed by households
2. Amounts outstanding on credit cards
3. Treasury bills

#### How many of the statements above are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

#### Q.2 Consider the following statements:

1. The Reserve Bank of India manages and services Government of India Securities but not any State Government Securities.
2. Treasury bills are issued by the Government of India and there are no treasury bills issued by the State Governments.
3. Treasury bills offer are issued at a discount from the

par value.

**Which of the statements given above is/are correct?**

- (a) 1 and 2 only
- (b) 3 only
- (c) 2 and 3 only
- (d) 1, 2 and 3

**Q3. What is/are the advantages/advantages of zero tillage in agriculture?**

1. Sowing of wheat is possible without burning the residue of the previous crops.
2. Without the need for a nursery of rice saplings, direct planting of paddy seeds in the wet soil is possible.
3. Carbon sequestration in the soil is possible.

**How many of the statements given above are correct?**

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

**Q4. Which of the following is NOT a type of intellectual property covered under TRIPS?**

- (a) Copyrights
- (b) Trademarks
- (c) Patents
- (d) Sovereign rights

**Q5. With reference to India, consider the following:**

1. Nationalisation of Banks
2. Formation of Regional Rural Banks
3. Adoption of Village by Bank Branches

**How many of the above can be considered as steps taken to achieve “financial inclusion” in India?**

- (a) Only one
- (b) Only two
- (c) Only three
- (d) None

**Q6. Consider the following statements regarding the Monetary Policy Committee of the Reserve Bank of India.**

1. It has been amended by the Finance Act, 2016 of the Reserve Bank of India Act, 1934 (RBI Act).
2. The tenure of the members of this committee is 4 years, and they are not eligible for reappointment.
3. The Finance Minister of India is the ex-officio chairman of this committee.
4. It is mandatory for this committee to hold 6 meetings in a year during any financial year.

**Which of the above statement/ statements is/ are correct?**

- (a) Only 1, 2 and 3.
- (b) Only 2, 3 and 4 only
- (c) Only 1 and 4
- (d) Only 1 and 2.

**Q7. How does the T+0 settlement cycle differ from the existing T+1 cycle?**

- (a) T+0 involves a one-day wait for trade settlements.
- (b) T+0 allows for the immediate transfer of securities and funds.
- (c) T+0 increases delays in accessing funds and securities.
- (d) T+0 extends the settlement duration beyond the market closing time.

**Q8. Consider the following statements regarding the Periodic Labour Force Survey (PLFS) Annual Report 2022-2023:**

1. The Worker Population Ratio (WPR) in rural India has declined in the last 10 years
2. The agriculture sector has witnessed a growth in employment opportunities in the last few years

**Which of the above statements is/are correct?**

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Q9. What does the term “demographic dividend” refer to?**

- (a) The decrease in birth rates within a population

(b) The economic benefits derived from a youthful population

(c) The increase in life expectancy in a society

(d) The redistribution of wealth among different age groups

**Q10. Consider the following statements about semiconductor technology:**

1. Silicon is predominantly used in the fabrication of semiconductor chips.
2. The transistor is a basic building block of a semiconductor device.

**Choose the correct answer using the codes given below:**

- (a) 1 Only  
 (b) 2 Only  
 (c) Both 1 and 2  
 (d) Neither 1 nor 2

**Q11. Consider the following statements regarding India Employment Report 2024.**

1. According to this report, A total of 83% of youth in India are unemployed.
2. The Human Development Institute was established in the year 1998 by the Indian Society of Labor Economics.
3. This report is jointly published by the International Labor Organization and the Institute of Human Development.
4. There is a slow and steady transition of the workforce from agricultural to non-agricultural sectors in the Indian labor market.

**Which of the above statement / statements is/are correct ?**

- (a) Only 1, 2 and 3  
 (b) Only 2, 3 and 4  
 (c) None of these.  
 (d) All of these.

**Q12. Consider the following statements regarding reducing India's fiscal deficit target.**

1. The Finance Ministry has decided to reduce India's fiscal deficit to 5.1% of GDP in the financial year 2024-25 in the interim Budget 2024-25.
2. Government debt comprises various liabilities including domestic and external debt along with obligations of schemes such as small savings, provident funds and special

securities.

3. The Finance Ministry has set a target of reducing GDP growth to 5.1% in the financial year 2024-25.

4. The higher the fiscal deficit of the government, the less likely it is to make payments to its creditors.

**Which of the above statement / statements is/ are correct?**

- (a) Only 1, 2 and 3.  
 (b) Only 2, 3 and 4  
 (c) None of these  
 (d) All of these

**Q13. Consider the following statements regarding fiscal federalism in India.**

1. The 7th Schedule of the Constitution deals with the distribution of taxes between the Center and the States.
2. The restriction imposed by the central government on the borrowing capacity of states is called net borrowing limit (NBC) In India.
3. Loans taken by state-owned enterprises are included in the NBC by the Centre.
4. Setting borrowing limit restrictions for the states by the Center violates the fundamental nature and provisions of India's fiscal federalism.

**Which of the above statement / statements is/are correct?**

- (a) Only 1, 2 and 3.  
 (b) Only 2, 3 and 4.  
 (c) Only 1, 3 and 4.  
 (d) All of these.

**Q14. Consider the following statements regarding Goods and Services Tax (GST) in India.**

1. Goods and Services Tax in India has been implemented by the 101st Constitutional Amendment Act 2016.
2. GST in India is a single domestic indirect tax law for the entire country.
3. The contribution of Central Goods and Services Tax (CGST) is ₹34,532 crore while the contribution of State Goods and Services Tax (SGST) is ₹43,746 crore in India in March 2024.
4. Taxes on tobacco and alcohol and property tax are also

included in GST In India.

Which of the above statement / statements is/are correct ?

- (a) Only 1, 2 and 3.
- (b) Only 2, 3 and 4.
- (c) Only 3 and 4.
- (d) Only 1, 3 and 4.

**ANSWER**

S. No.	Answers
1.	C
2.	C
3.	C
4.	D
5.	C
6.	D
7.	B
8.	A
9.	B
10.	C
11.	D
12.	D
13.	D
14.	A

**MAINS QUESTION**

**Q1.** Do you think a focus on high bond yields can be detrimental to long-term infrastructure projects in a country? Why or why not?

**Q2.** What constitutional provisions and legal safeguards exist in India to protect individuals from forced labour and ensure their right to fair and humane working conditions?

**Q3.** To what extent do socio-economic factors, such as poverty, caste-based discrimination, and lack of access to education, contribute to the prevalence of forced labour in India, and how does this intersect with constitutional principles of equality and social justice?

**Q4.** The post-harvest value chain offers significant opportunities for income generation. Discuss the role of R&D in developing innovative food processing and storage technologies to enhance the value of agricultural produce in India.

**Q5.** Evaluate the role of government policies and institutions in fostering the development of human capital, drawing from Robert Putnam’s research on social capital and community development. How can governments effectively promote human capital accumulation to enhance overall societal well-being?

**Q6.** Assess the potential risks associated with the adoption of T+0 settlement in India, particularly in terms of market volatility, liquidity management, and investor protection.

**Q6.** Explore the long-term implications of T+0 settlement on the efficiency and resilience of the Indian financial ecosystem, considering factors such as market liquidity, operational costs, and capital allocation.

**Q7.** Evaluate the role of government policies and institutions in fostering the development of human capital, drawing from Robert Putnam’s research on social capital and community development. How can governments effectively promote human capital accumulation to enhance overall societal well-being?

**Q8.** What are the challenges hindering growth in India’s semiconductor sector, and what policy measures and reforms could be implemented to overcome these obstacles and foster its development?

**Q9.** Underlining the important facts of India Employment Report 2024, Discuss in detail the major challenges related to youth employment in India and its solutions.

**Q10.** Highlight the various aspects of the fiscal deficit in India and discuss in detail the importance of fiscal consolidation in an emerging economy and the important factors in meeting the fiscal deficit target set by the government.

**Q11.** In recent years the concept of cooperative federalism has been increasingly emphasized. Throwing light on the shortcomings prevailing in the existing structure of cooperative federalism, discuss to what extent fiscal federalism will solve these shortcomings ?

**Q12.** What do you understand about the Goods and Services Tax? Discuss in detail the effects of GST on the Indian economy, its challenges and its solutions.

**Q12.** To what extent do you think cooperation, competition and conflict have shaped the nature of the union in India? Cite some recent examples to support your answer.

**Q13.** Outlining the main functions of the Monetary Policy Committee of the Reserve Bank of India, discuss how low inflation and stable GDP growth in India affects the Indian economy? Give a logical answer.



## DISRUPTED IMMUNISATION PROGRAMS DUE TO COVID-19

### Why in the News?

A recent publication in The Lancet Global Health titled “Estimating the Health Effects of Covid-19-Related Immunisation Disruptions in 112 Countries During 2020–30: A Modelling Study” underscores the decline in global Immunisation amidst the Covid-19 pandemic, leading to heightened disease burden and outbreak susceptibility.

### Significant Findings of the Report

#### Covid-19 Disrupts Immunisation, Leaving Children Vulnerable

The COVID-19 pandemic significantly **disrupted global Immunisation efforts**, leading to a **decline in vaccine coverage** and raising concerns about outbreaks and increased disease burden across various countries.

- **Measles Makes a Deadly Return: Disruptions to vaccinations for measles, rubella, HPV (Human Papillomavirus), Hepatitis B, meningitis A, and yellow fever** could lead to an estimated 49,119 additional deaths during the calendar years 2020-2030, with measles being the main contributor. This highlights the critical role that routine vaccinations play in preventing serious and potentially fatal illnesses.
- **Catch-Up Programs Offer Hope:** The study **emphasises the importance of catch-up vaccination programs, particularly for diseases like measles and yellow fever**, which experienced an immediate increase in cases following the pandemic. These programs have been shown to be effective in averting excess deaths, **with the potential to prevent approximately 79% of additional deaths related to these diseases**. Investing in catch-up programs can significantly improve public health outcomes.

#### Missed Vaccinations and Measles Resurgence

The pandemic’s impact went beyond just delaying vaccinations. Disruptions also affected routine vaccinations, result-

ing in an **additional 6 million children globally missing out on their DTP (Diphtheria, Tetanus, and Pertussis) vaccines in 2021**. This highlights the importance of strengthening healthcare systems to ensure they can continue to deliver essential services even during crises.

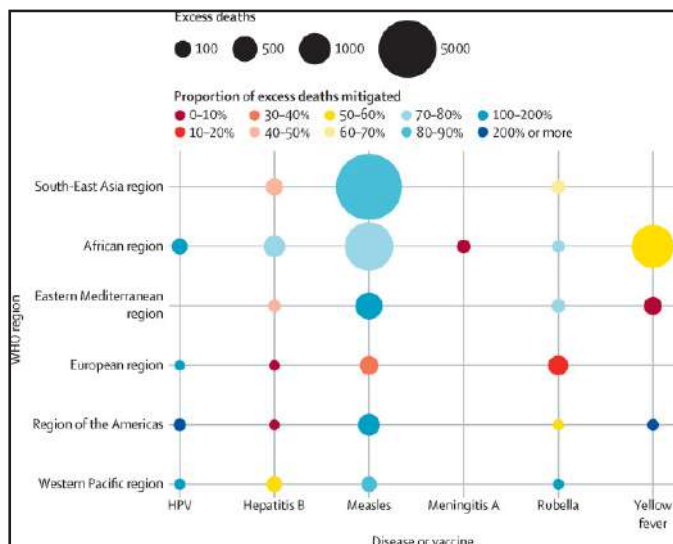
- **A Global Measles Threat:** There has been a concerning **resurgence of measles cases reported in several countries**, including those where measles was previously considered eradicated, such as the United Kingdom and the United States. This resurgence is a direct consequence of declining vaccination rates.
- **2021 Delays, 2022 Outbreaks: COVID-19 disruptions led to a significant number of missed measles vaccine doses – nearly 61 million – in 18 countries in 2021.** This contributed to a rise in measles cases and deaths globally in 2022, particularly in countries with low vaccination rates, such as Nigeria, Pakistan, and India. This situation underscores the need for international collaboration to ensure equitable access to vaccines and strengthen Immunisation programs worldwide.

### Recommendations for a Healthier Future

The study offers valuable recommendations to help us recover from the setbacks caused by the pandemic and ensure long-term public health benefits.

- **Prioritise Catch-Up Efforts:** The research suggests that implementing catch-up vaccination activities **could potentially avert 78.9% of excess deaths between calendar years 2023 and 2030**. However, for these programs to be most effective, they need to be implemented promptly and targeted towards the specific cohorts and regions most affected by disruptions. This targeted approach can significantly improve vaccine coverage and mitigate the adverse effects of under-immunisation.
- **Continued Immunisation Efforts Remain Crucial:** The importance of sustained Immunisation efforts, particularly for vaccines like HPV, which play a crucial role in preventing cervical cancer, cannot be overstated. The study **emphasises the necessity of ongoing vaccination campaigns even amidst disruptions to ensure**

**long-term public health benefits.** By prioritising catch-up programs, targeted interventions, and continued Immunisation efforts, we can mitigate the negative effects of vaccine coverage decline and ensure a healthier future for all.



**Major Initiatives Taken by the Indian Government Related to Immunisation**

- **Universal Immunisation Programme (UIP):** This is the backbone of India’s Immunisation strategy, offering a range of vaccines to children and pregnant women.
- **Mission Indradhanush:** Launched in 2014, this special drive focuses on reaching unvaccinated or partially vaccinated children in high-focus districts to achieve at least 90% full Immunisation coverage.
- **Electronic Vaccine Intelligence Network (eVIN):** This digital system tracks vaccine stocks and temperature across all storage levels, ensuring smooth logistics and proper storage conditions.
- **Measles-Rubella (MR) Campaign:** Recent campaigns like the 2023 MR drive aim to bridge the gap in measles and rubella immunisation.

**Way Forward**

- **Community Engagement:** Public awareness campaigns promoting the importance of vaccination and addressing vaccine hesitancy are critical. Engaging community leaders and healthcare providers can build trust and encourage vaccine uptake.
- **Data-Driven Strategies:** Utilising real-time data to identify areas with low vaccination rates and track outbreaks allows for targeted interventions and resource allocation.
- **Innovation in Vaccine Delivery:** Exploring new vaccine

delivery methods, such as mobile clinics and community outreach programs, can improve access to immunisation services, particularly in remote areas.

**INDIA TB REPORT 2024**



**Why in the News?**

As per the India TB Report 2024 published by the Union Health Ministry, the disparity between the projected and confirmed cases of tuberculosis (TB) is diminishing.

**Significant Findings of the Report**

**Closing the Gap on Missed Cases**

A significant drop in undetected TB cases is a major victory. **In 2023, the number of missing cases fell to 2.3 lakh, compared to 3.2 lakh the year before.** This progress is attributed to **improved tracking through the Ni-kshay portal**, a centralised platform for TB management.

**Boosting Private Sector Involvement**

Private healthcare providers are playing an increasingly important role in TB detection. **In 2023, nearly one-third (8.4 lakh) of reported cases came from the private sector**, compared to a mere 1.9 lakh in 2015. This collaboration strengthens India’s overall detection capacity.

	India TB Report 2020	2023	2024
Estimated TB cases	26.9 lakh	27.4 lakh	27.8 lakh
Number of cases reported	24.04 lakh	24.2 lakh	25.5 lakh
Reporting from private sector	6.8 lakh	7.3 lakh	8.4 lakh
% cases from private sector	28.20%	30%	32.90%
Estimated mortality	4.36 lakh	3.2 lakh	3.2 lakh

**Refined Estimates for a Clearer Picture**

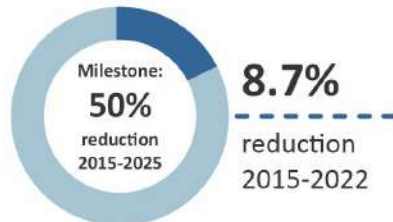
India’s new TB incidence estimates, accepted by the World Health Organization (WHO), offer a more precise understanding of the disease burden. While the **estimated incidence increased slightly to 27.8 lakh in 2023**, the **mortality rate remained stable at 3.2 lakh**. This new model led to a significant adjustment in global TB mortality figures reported by the WHO.

**Treatment on Track**

India successfully achieved its target of **initiating treatment in 95% of diagnosed TB patients in 2023**. This ensures timely access to life-saving medication.

## WHO End TB Strategy: 2025 milestones

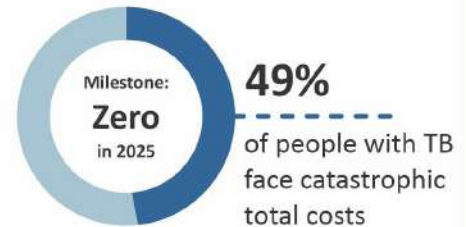
### TB INCIDENCE RATE



### NUMBER OF TB DEATHS



### PERCENTAGE OF PEOPLE WITH TB FACING CATASTROPHIC TOTAL COSTS\*



### Battling Drug Resistance

- The fight against drug-resistant TB is gaining ground. The **percentage of patients tested for medication resistance jumped from 25% in 2015 to 58% in 2023**. This allows for early detection and prompt administration of appropriate treatments.
- India's comprehensive approach towards TB detection, treatment, and drug resistance is yielding positive results. Continued efforts are crucial to further reduce the TB burden and ultimately eliminate the disease.

### About Tuberculosis

- Tuberculosis (TB) casts a long shadow on global health. Caused by the **bacterium Mycobacterium tuberculosis**, TB is a major infectious disease with a concerning prevalence.
- While treatable and curable, TB remains the **world's leading infectious killer**, taking millions of lives annually. This highlights the critical need for continued efforts in prevention, diagnosis, and treatment.
- In humans, TB **primarily targets the lungs** (pulmonary TB), **but it can spread and cause extra-pulmonary TB in other organs**. This versatility of the bacteria and the potential for severe illness make TB a global public health concern.
- The **history of TB stretches back millennia**, with **evidence of the disease documented in Egypt as early as 3000 BC**. This demonstrates the enduring nature of TB and the ongoing challenge it presents.
- The burden of TB is particularly **heavy in low- and middle-income countries**. **Eight nations** – Bangladesh, China, India, Indonesia, Nigeria, Pakistan, Philippines, and South Africa – account for nearly half of all TB cases globally. This uneven distribution underscores the

need for a global approach to combating TB.

### Combating Tuberculosis

- The first line of defence is a **6-month regimen of four antibiotics** combined with patient education and support. This approach improves completion rates and reduces resistance.

### The Challenge of Resistance

Decades of antibiotic use have led to resistant strains. These strains, documented worldwide, highlight the need for proper antibiotic use to minimise resistance.

- MDR-TB:** Multidrug-resistant tuberculosis (MDR-TB) is a serious form where **bacteria resist the two most powerful first-line drugs**. Thankfully, MDR-TB is treatable with alternative drugs, but this emphasises the need for new medications.
- XDR-TB:** Extensively drug-resistant TB (XDR-TB) is **resistant to many effective drugs, limiting treatment options**. Stricter adherence to protocols, research into new antibiotics, and advocating for proper medication use are all crucial to combating drug resistance and ensuring effective TB treatment.

### Initiatives Taken to Combat Tuberculosis

- Ni-kshay Portal:** This government platform acts as a central hub for TB notification, treatment management, and patient tracking. It facilitates better monitoring and reduces the number of missed cases.
- Ni-kshay Poshan Portal:** It's a financial incentive program under India's National Health Mission. Registered TB patients receive a monthly **cash transfer of Rs. 500 to help them meet their nutritional needs during the 6-month treatment period**, improving treatment adherence and overall health outcomes.

- **TB-Mukt Bharat Abhiyan:** It aims to raise public awareness about TB in order to reduce stigma and encourage people to seek diagnosis and treatment.

## FOOD WASTE INDEX REPORT 2024



### Why in the News?

Based on the most recent Food Waste Index Report from the UN Environment Programme, approximately 19% of the food generated worldwide in 2022, equivalent to around 1.05 billion metric tons, was wasted.

### Significant Findings of the Report

#### Wasting Away

In 2022, the **world wasted** a staggering **1.05 billion tonnes of food**. This equates to nearly **one-fifth (19%) of all food available to consumers being discarded** at the retail, restaurant, and household level. This is on top of the estimated 13% of food lost earlier in the supply chain, highlighting the extensive problem of food waste.

#### Households Lead the Waste Parade

The report identifies **households** as the **biggest contributor to food waste**. In 2022, households were **responsible for throwing away 631 million tonnes of food**, which translates to a whopping 60% of the total waste. The food service sector follows closely at 290 million tonnes (28%), and the **retail sector discards 131 million tonnes (13%)**.

#### Daily Dose of Waste

Even more concerning is the daily amount of food wasted by households – at least **one billion meals are thrown away every single day**. This translates to an annual average of 79 kilograms of wasted food per person.

#### Climate Connection: Hotter Countries, More Waste

The report also explores the link between temperature and food waste. **Countries with warmer climates seem to have higher per capita household food waste**, possibly due to greater consumption of fresh produce with inedible parts and a lack of efficient cold chain infrastructure.

#### Urban Vs. Rural Divide

The study reveals disparities in food waste patterns between urban and rural areas in middle-income countries. **Rural communities generally waste less food, potentially due to practices like feeding scraps to pets or livestock or composting them at home**. This finding suggests a need

to focus on food waste reduction efforts in urban centres.

### G20: Leading the Way in Tracking Waste

Unfortunately, **only four G20 nations** (Australia, Japan, the United Kingdom, and the United States) **and the European Union have implemented food waste measurement systems** that allow them to track progress towards the 2030 goal of halving food waste. While Canada and Saudi Arabia have established methods to estimate household waste, and Brazil is expected to do so later in 2024, a significant gap remains.

### Need For a Multi-Pronged Approach

The report underscores the urgency of tackling food waste on both individual and systemic levels. This includes **targeted efforts to reduce waste in urban areas, international collaboration among countries, and improved coordination** across the entire food supply chain. Only through a comprehensive approach can we address this global challenge and ensure a more sustainable food system for the future.



### Some Prominent Reasons Behind Food Waste

- **Household Waste:** Homes are the biggest culprit, discarding a shocking amount of food due to factors like improper storage, poor planning, and confusion over labels and expiration dates.
- **Overproduction and Unrealistic Standards:** Sometimes, more food is produced than can be consumed, leading to waste. Additionally, cosmetic imperfections or sizing discrepancies can cause perfectly edible produce to be discarded.
- **Inefficient Infrastructure:** Lack of proper storage and transportation facilities, particularly in developing countries, can lead to spoilage before food even reaches consumers.
- **Confusing Labels and Miscommunication:** Unclear "use by" and "best before" labels, coupled with a lack of awareness, can lead to consumers throwing away food prematurely.



- **Oversized Portions:** Restaurants and supermarkets often offer portions larger than necessary, contributing to plate waste and leftover discards.

#### About Food Waste Index Report

- It tracks food waste across retail, households, and food service (since 2021). A **joint effort by UNEP and WRAP** to support the UN's SDG 12.3 on sustainable consumption.
- Focuses on reducing food waste **to achieve the SDG 12.3 target** of halving per capita global food waste by 2030.
- Defines food waste broadly to include inedible parts removed from the food supply chain.
- Highlights the need for global collaboration to improve food waste measurement, especially among G20 nations.

#### About UNEP

Founded in 1972 at the Stockholm Conference, the United Nations Environment Programme (UNEP) has become a leading voice for environmental action. Its mission is clear: to inspire, inform, and empower nations to care for our planet, ensuring a sustainable future for all.

UNEP approaches environmental challenges through six key areas:

- **Combating Climate Change:** UNEP addresses the pressing issue of climate change, providing leadership and solutions.
- **Restoring After Disaster:** In the aftermath of environmental disasters and conflicts, UNEP aids recovery efforts and promotes sustainable rebuilding.
- **Protecting Ecosystems:** From forests to oceans, UNEP works to manage and restore vital ecosystems for the health of our planet.
- **Strengthening Environmental Governance:** UNEP helps countries implement environmental regulations and best practices.
- **Minimising Harmful Substances:** The fight against harmful substances and hazardous waste is a key focus of UNEP's work.
- **Promoting Resource Efficiency:** Encouraging sustainable consumption and production patterns is another crucial area for UNEP.

## THE DEMOGRAPHIC TRANSITION- OPPORTUNITIES AND CHALLENGES



#### Why in the News?

The UN population division estimates the population will close to 1.7 billion by 2065 before it starts declining. It will also accompany a demographic transition, which is going to provide various opportunities and challenges for the country, which we must prepare for.

Recently, the LANCET report has highlighted India's total fertility rate to decline to 1.29 by 2051. Though it is much higher than estimated by UN or NFHS surveys but, it highlights interesting pictures about the population dynamics. This highlights our population will stabilize at the 1.7 billion mark much before 2065.



#### Factors Responsible for Demographic Transition (DT)

Several factors have triggered DT in India:

**Rapid economic growth**– An important **transition** in the economic history of countries occurs when they move from a regime of low prosperity, high child mortality and high fertility to a state of high prosperity, low child mortality and low fertility. Same thing is happening in India.

**Low infant and child mortality rates**- reducing the need for having a large family for old age support.

**Rise in levels of women's education and workforce participation**- various studies have suggested an inverse relation between women's education and fertility rates.

**Late marriages**- Combined with rising levels of education it leads to reduction in child bearing years and hence lower fertility rates.

**Increase mobility**- Increasing urbanisation has led to higher numbers of people living in urban areas and, hence change in patriarchal norms. Also, in urban areas, couples

prefer other aspects of life.

### Impact of Decline in Fertility Rate

The decline in TFR has a manifold impact:

**Fall in Dependency ratio-** As new births have reduced so the number of dependent population also reduces. It also leads to a larger proportion of working adults in the economy **boosting economic growth** and surplus income, which can further invest in infrastructure, skill development and education.

### Increase in Labor productivity

– Decline in population growth leads to an increase in resources and infrastructure available in per capita terms.

-Reallocation of resources for skill development and education

-Increasing the proportion of the labour force in a population.

**Enhancing educational outcomes-** as the number of children enrolled in primary education reduces.

**Positive intergenerational transfers-** families allocating resources for children for better education and skill development.

**Women empowerment-** As women's educational years increase, it leads to higher levels of literacy and financial independence. It also helps tackle the problem of various patriarchal barriers.

### Challenges of Declining Fertility Rate

**Increase in dependency ratio in long term-** while fall in TFR leads to initial surplus income but higher number of elderly population in the long term.

**Labor force shortage-** a declining workforce due to low TFR can lead to lower economic production. Industries may face shortage of skilled workforce, or increase in labor cost, acting as a disincentive for foreign investors.

**Social support network-** smaller families means less people for mentoring and caregiving and emotional support.

**Better healthcare and social security network-** aging population requires better healthcare facilities and social security which is major concern in India.

**Economic Implications:** A shrinking workforce affects tax revenues, social security contributions, and economic stability.

In this regard, policymakers have to take appropriate actions to reap the demographic dividend by focusing on so-

cial expenditures and building capabilities. Also recognizing the challenges in the future related to aging population and building a holistic approach should be the way forward.

## NEED OF WOMENOMICS IN INDIA



### Why in the News?

The rate of women participating in the workforce in Japan saw a significant boost, climbing by ten percentage points from 2013 to 2023, reaching 75.2%. This surge represents the most rapid increase in Japan's workforce participation in recent years and positions Japan at the top among G7 nations in the past decade. These positive results were achieved through the reforms carried out during Abenomics (During Shinzo Abe period).

### What is Womenomics?

“**Womenomics**” refers to an economic concept and strategy that focuses on increasing women's participation and advancement in the workforce as a means to drive economic growth and development. Originally popularized in Japan, where it was recognised as a response to the country's ageing population and labour shortages, Womenomics aims to leverage the talents and skills of women to boost productivity and innovation. This approach involves implementing policies and initiatives that support gender equality in employment, such as promoting flexible work arrangements, providing childcare support, and addressing gender-based discrimination in the workplace.

### Japan's Womenomics Reforms

- **Expansion of Creche Capacity:** The Japanese government's investment in increasing daycare capacity from 2.2 million in 2012 to 2.8 million in 2018 effectively reduced lengthy waiting lists for daycare placements. In 2023, Japan announced an additional investment of \$26 billion for childcare initiatives spanning 2023 to 2026.
- **Gender-neutral Parental Leave:** Initially, Japanese parents were entitled to year-long partially paid parental leaves, with women receiving 58 weeks and men 52 weeks. However, in 2022, amendments were made to allow greater flexibility in paternity leave, including shortened notice periods and the option for men to split their paternity leave. Additional measures included mandatory disclosure of paternity leave uptake, promotion of flexible work arrangements, and encouragement for companies to ensure paternity leave does not hinder career advancement. These efforts contrib-

uted to a significant increase in paternity leave uptake, rising from 2 per cent in 2012 to 17 per cent in 2023.

- **Effective implementation of Promotion of Women's Participation and Advancement in the Workplace, 2016 Act:** This legislation mandated the disclosure of diversity action plans and diversity data, fostering the introduction of the "Eruboshi" certification—a five-star rating system recognising companies committed to workforce diversity. The certification has garnered significant attention among Japanese firms, with the number of certified companies growing from 815 in 2019 to 1905 in 2022.
- **Gender Gaps in Unpaid Care:** In comparison to other G20 countries, India and Japan exhibit the widest gender gaps in unpaid care work. Women in India perform approximately 8.4 times more unpaid work, valued at 15 to 17 per cent of GDP, while in Japan, women perform 5.5 times more unpaid work, valued at about a fifth of GDP.

#### What India can Learn from Japan?

- **Addressing Gender Disparities in Domestic and Care Work:** Interventions aimed at bridging gender gaps in domestic and care responsibilities have a notable impact on Women's Labor Force Participation Rate (WLFPR). Japan witnessed significant increases in WLFPR when it made sustained public investments in care infrastructure and services, particularly in childcare. As per the **PLFS(Periodic labour force survey) report**, the participation rate of women in the labour force in India surged from 23.3% in 2017-18 to 37.0% in 2022-23. Despite this growth, India's female labour force participation rate remains at approximately 25%, significantly lower than the global average of 47%.
- **Shifting Social Attitude:** Altering societal perceptions of traditional social norms is equally crucial alongside the implementation of progressive policies. Japan's experience demonstrates that merely granting legal entitlement to gender-neutral parental leave is insufficient. Encouraging men to take parental leave requires employers to lead initiatives that challenge gender stereotypes associated with caregiving.
- **Investment in Care Infrastructure:** Investing in a diverse range of care infrastructure and services is vital, covering childcare, elder care, domestic assistance, and long-term care for individuals with significant dependencies, ultimately reducing reliance and tapping into the potential of the ageing population. Japan, for instance, has engaged in partnerships with the private sector to invest in affordable senior living and care services.
- **India's Growing Need for Elder Care:** With India's el-

derly population projected to double by 2050, prioritising investments in elder care infrastructure and services is vital. This will mirror the approach taken by Japan to support women's workforce participation.

#### Challenges for India

- **Cultural Barriers:** India faces cultural obstacles where traditional gender roles limit women's participation in societal contributions.
- **Relationship between LFPR and Women's Education:** The pattern of Women's Labor Force Participation Rate (LFPR) exhibits a U-shaped relationship with education. Initially, as women attain higher education levels, LFPR declines due to societal constraints that confine them to domestic roles.
- **Absence of Social Welfare:** A considerable number of women engage in low-productivity employment, often devoid of social benefits. Factors such as a scarcity of suitable job opportunities and inadequate marketable skills deter women from entering the workforce.
- **Inadequate Care Infrastructure:** The burden of childcare, eldercare, and housework often falls on women, hindering their ability to work outside the home.
- **Gender Pay Gap:** Women often receive lower wages than men for similar work, making work less financially attractive. There is a huge wage disparity between the two sexes in India.

#### Initiatives taken by the Government to Bridge Labour Force Participation

- **Maternity Benefit Act, 2017-** The legislation increased the paid maternity leave entitlement for female employees to 26 weeks, more than doubling the previous duration. Additionally, it introduced the possibility of working remotely after this period, subject to mutual agreement between the employer and the employee. Furthermore, the act mandated the provision of childcare facilities, such as crèches, for organisations employing 50 or more female workers.
- **The Sexual Harassment of Women at Workplace Act, 2013-** This act aims to safeguard women from experiencing sexual harassment in their workplace.
- **Stand up India-** The program enables individuals from Scheduled Castes (SC), Scheduled Tribes (ST), and women to obtain bank loans for initiating new ventures in manufacturing, services, agricultural-related activities, or trading. It offers loan amounts ranging from INR 10 lakh to 1 crore.
- **Anganwadi centres-** These centres ensure maternal and child nutritional well-being, promote a hygienic

and secure environment and offer early childhood education. Consequently, they support women in resuming work after giving birth.

### Way Forward

Five-Pronged Approach to Exploit Business Prospects in India's Care Sector

- Policies ensuring gender-neutral and paternity leave
- Subsidies to facilitate access to/provision of care services
- Increased investments in care infrastructure and services from both public and private sectors
- Training programs aimed at enhancing the skills of care workers
- Implementation of quality standards to ensure excellence in care services and infrastructure.

A sustained emphasis on the care economy is essential to harnessing #NariShakti for the realization of a developed India by 2047.

## CLIMATE CRISIS AND GENDER NEUTRALITY



### Why in the News?

Recently, the Supreme court of India in Ranjit kumar and others v/s Union of India pronounced that people have a right to be free from the adverse impacts of climate change under Articles 14 and Article 21 of the Constitution of India. The United Nations Development Programme (UNDP) also highlighted that women and children are 14 times more likely than men to succumb to the impacts of a climate-induced disaster.

### What is Climate Crisis?

The climate crisis refers to the significant and rapid changes in Earth's climate patterns, primarily driven by human activities such as burning fossil fuels and deforestation. These changes result in rising temperatures, extreme weather events, sea-level rise, and other environmental disruptions, posing profound threats to ecosystems and human societies worldwide.

### How the Climate Crisis is Disproportionately Impacting Women?

- **Vulnerability in Agriculture A Gendered Perspective**—Women living in rural areas of India depend large-

ly on agriculture as their main source of livelihood. Climate change-related issues like unpredictable rainfall, droughts, and floods can drastically decrease crop production, impacting these women's food availability and earnings. Furthermore, limited access to land, credit, and technology amplifies their exposure to climate-related challenges. This not only leads to physical health issues but also places additional burdens on women, contributing to mental health challenges and emotional distress.

- **Health Impacts: The Silent Crisis**—Rising temperatures and air pollution pose significant health risks, particularly for vulnerable groups such as pregnant women, children, and the elderly. Exposure to pollutants not only affects women's respiratory and cardiovascular health but also hampers the physical and cognitive development of unborn children. Urgent action is needed to mitigate these risks and protect public health.
- **Linking Extreme Events with Gender-based Violence**—The escalation of extreme weather events due to climate change correlates with increased incidents of gender-based violence against women. Moreover, disruptions in water cycles further compound the issue by impeding access to safe drinking water, intensifying women's caregiving responsibilities, and limiting their opportunities for productive work and healthcare.
- **Child marriages**—In areas prone to drought, women and girls face a higher risk of malnutrition due to inadequate access to food. NFHS findings reveal that women residing in these drought-prone regions exhibit higher rates of underweight and are more susceptible to early marriages, contributing to the persistence of poverty and gender disparities.



### The Imperative of Gender-Inclusive Climate Action—Empowering Women for Resilience

Effective climate action demands the active participation of all segments of society. Empowering women with equal

access to resources can enhance the effectiveness of climate solutions, as evidenced by the significant increase in agricultural yields when women receive equitable support. Moreover, women, especially in rural and tribal communities, have historically played pivotal roles in environmental conservation efforts.

### Addressing Immediate Challenges: Heatwaves and Water Scarcity

Immediate measures are necessary to mitigate the impact of heatwaves on vulnerable groups and ensure access to safe drinking water. Strategies such as heatwave warnings, urban planning for heat resilience, and community-based water management initiatives can significantly reduce risks and enhance resilience at the grassroots level.

### Local Solutions for Global Challenges

Community-led initiatives, driven by local knowledge and participation, are crucial for building resilience to climate change. By devolving power and resources to grassroots institutions like panchayats and self-help groups, India can pave the way for inclusive and sustainable adaptation measures.

### Mainstreaming Gender in Climate Policy

Efforts to mainstream gender considerations in climate policy are essential for addressing the specific vulnerabilities and capacities of women. State Action Plans on Climate Change must move beyond portraying women as mere victims and adopt gender-transformative strategies that empower women as agents of change.

### Enhancing Urban Resilience to Climate Impacts

Cities face growing susceptibility to climate-induced risks like heatwaves, floods, and air pollution. Prioritising green infrastructure in urban planning, including parks, vegetated roofs, and tree-shaded streets, can mitigate the urban heat island effect and minimise exposure to extreme heat. Moreover, efforts to enhance air quality, such as curbing vehicle emissions and advocating for clean energy solutions, are critical for safeguarding public health, especially for vulnerable groups like women and children, who are more prone to respiratory and heart ailments.

### Improved Availability of Potable Water

Climate-induced disturbances to water reservoirs and supply networks intensify water scarcity, jeopardising public well-being. Immediate actions are imperative to enhance access to safe drinking water, especially for women and girls, who often shoulder the main burden of water retrieval in numerous societies. Allocating resources to water infrastructure, rainwater collection mechanisms, and purification technologies can alleviate the adverse effects of

water scarcity on at-risk communities.

### International Conventions on Climate Crisis and Gender Neutrality

The significance of women's involvement in sustainable development has been recognised in several key global events, including the **International Conference on Population and Development (1994)**, the **Beijing Declaration and Platform for Action (1995)**, the **World Summit on Sustainable Development (2002)**.

Additionally, the Convention to Combat Desertification (UNCCD), which boasted 193 State Parties as of March 2008, acknowledges the crucial contribution of women, especially in rural areas of developing countries affected by desertification and drought. It calls for its Member States to promote women's participation in decision-making policies and programmes that address desertification and drought conditions.

### Conclusion: Women as Leaders in Climate Action

Rather than being passive victims of climate change, women possess valuable insights and capabilities that can drive meaningful progress in climate action. By acknowledging and addressing gender disparities, we can forge a path towards a more equitable and resilient future for all. Addressing climate change is expected to have differential impacts on various social groups, particularly those who are most vulnerable and lack empowerment. It is imperative that global and national strategies, along with sector-specific responses, integrate gender perspectives, conduct thorough analyses, and foster inclusive participation to effectively tackle this challenge.

## IMPORTANCE OF GLOBAL HAPPINESS INDEX 2024 IN INDIA



### Why in the News?



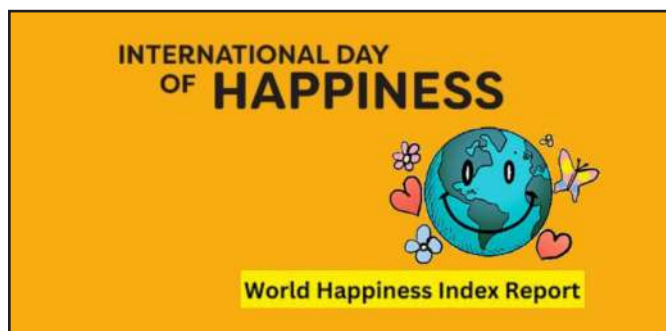
- Finland remained the happiest country in the world for the seventh consecutive year in the annual Global Happiness Index 2024, published on March 20, 2024,

sponsored by the United Nations.

- According to the Global Happiness Index 2024, the top 10 happiest countries around the world are Denmark, Iceland, Sweden, Israel, Netherlands, Norway, Luxembourg, Switzerland and Australia. According to the declared findings of this index – after countries like Libya, Iraq, Palestine and Niger **India is at 126th position in this index like last year.**
- **‘International Day of Happiness’ is celebrated every year on 20 March all over the world.** The main objective of celebrating this day is to inform the people of many countries around the world about the importance of happiness as a way of living a healthy life and to make people aware to adopt a healthy lifestyle. On this occasion, people of many countries around the world are made aware globally about the importance of happy moments in their lives and the benefits that come from these happy moments in their lives.
- The Nordic countries have retained their place among the 10 happiest countries according to the Global Happiness Index 2024, with Denmark, Iceland and Sweden still far behind Finland.
- Afghanistan, which has been plagued by humanitarian devastation since the Taliban took control in 2020, is at the bottom among the 143 countries included in the Global Happiness Index 2024 and is the unhappiest country in the world.
- For more than a decade and for the first time since the index was published, the US and Germany are not among the top 20 happiest countries in the world.
- According to this index of 2024, America and Germany are the happiest countries globally for the first time, ranked 23rd and 24th respectively.
- According to the Global Happiness Index 2024, China is ranked 60th, Nepal 93rd, Pakistan 108th, Myanmar 118th, Sri Lanka 128th and Bangladesh 129th.
- Among Middle Eastern countries, UAE was ranked 22nd and Saudi Arabia was ranked 28th. Singapore ranked 30th among Asian countries. Japan is at 50th place and South Korea is at 51st place.
- **World Happiness Index Gallup World Poll Data is a publication of the Sustainable Development Solutions Network, run by the Oxford University Research Centre, UN Sustainable Development and WHR. This reflects a worldwide demand for greater focus on happiness and well-being as a benchmark of government policy. It reviews the state of happiness in the world today and shows how the science of happiness explains individual and national variations in happiness.**



#### Main Topics of Global Happiness Index 2024 :



- Every year at the global level, a theme is set to celebrate the International Day of Happiness.
- The main theme of the International Day of Happiness for the year 2024 is – **“Reconnecting for Happiness: Building Resilient Communities”.**
- The United Nations invites people from all countries globally to join in celebrating the International Day of Happiness.

#### History of International Day of Happiness :

- The history of this day starts from 2013 when it was first celebrated by the United Nations (UN).
- It was launched in 2012 by the United Nations General Assembly (UNGA) to recognize the importance of happiness in life and ways to make people happy.
- According to the United Nations, this proposal was initiated by Bhutan.
- On 12 July 2012, the General Assembly of the United Nations passed a resolution declaring 20 March as the International Day of Happiness.
- The first ‘International Day of Happiness’ was celebrated in the year 2013.
- Therefore, since 2013, this day has been celebrated globally on 20 March every year.

- Bhutan had recognized the value of national happiness on national income since the early 1970s. Bhutan had adopted the goal of gross national happiness over gross national product.
- Bhutan during the 66th session of the United Nations General Assembly “**Happiness and Well-Being: Defining a New Economic Paradigm**” also hosted a high-level meeting on the topic.

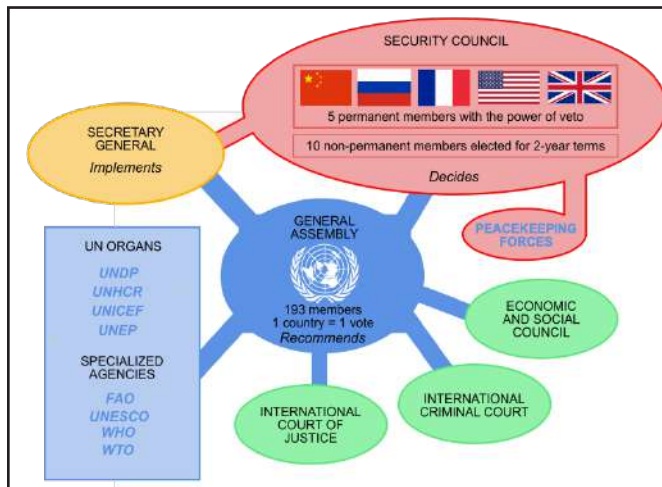
**United Nations Sustainable Development Solutions Network (UN SDSN) :**



- The UN SDSN has been operating under the auspices of the UN Secretary-General since 2012.
- SDSN mobilizes global scientific and technical expertise to promote practical solutions for sustainable development, including the implementation of the Sustainable Development Goals (SDGs) and the Paris Climate Agreement.
- It aims to accelerate joint learning and promote integrated approaches that address the interconnected economic, social and environmental challenges facing the world.
- SDSN works closely with United Nations agencies, multilateral funding institutions, the private sector and civil society.

- The organization and governance of the SDSN aims to enable a large number of leaders from all sectors and diverse backgrounds to participate in the development of the network.
- **SDSN has a small secretariat with offices in New York, New Delhi and Paris.**

**Important Factors for Ranking Countries in the Global Happiness Index :**



Global Happiness Index Provides ranking to many countries of the world on the basis of many factors. **of which the important factors are the following –**

- Real social support,
- GDP per capita,
- Freedom of choice in one’s life,
- Healthy Life Expectancy and Life Expectancy Rate
- Perceptions of corruption and
- Kindness.

**Importance of International Happiness Day :**

- Being happy in the life of every person in this world is a universal right and no citizen of any country in the world can be deprived of the right to be happy.
- We find many ways to please our loved ones. When we see them smiling and happy, those moments only make our life happy.
- International Day of Happiness provides an opportunity to make everyone around us happy with the small efforts or initiatives we take.
- Through this day, we include efforts ranging from inspiring people to achieve happiness in their lives to having a ‘positive attitude towards life’ in the lives of the people

around us and spreading it to our society. Can.

- The United Nations General Assembly calls for a more inclusive, equitable and balanced approach to economic development globally that promotes happiness in the lives of all around us and a vision of well-being for all and humanity. gives.
- International Happiness Day encourages people to consider that there are many ways to find happiness, including meaningful relationships with others, good mental health and self-fulfillment. The day is celebrated as a call for people and organizations to focus on raising the standards of happiness of themselves and their communities.
- An important purpose of celebrating International Day of Happiness is that if we accept the happy moments in our life and make them the main priority, then we can make this world a happier and more fulfilling place for all the people. Are.
- This index/report states that women are less happy than men in every region around the world.☐
- According to this index, with the increase in age at the global level, the gender gap (difference based on gender) is also increasing.

#### Importance of the International Happiness Index in the Context of India :



- India has always had the feeling of **“Vasudhaiva Kutumbakam”** towards all the living beings of this entire world.
- Indian religious scriptures have always **“ May all be happy and may all be in good health. Let all look for the good and let no one suffer.” That is, all the creatures of this world should be happy, all should be free from diseases, all should be witnesses of auspiciousness and no one should have to become a part of sorrow. There should not be any trouble in anyone’s life.**
- In India, older age is associated with higher life satis-

faction. However, older Indian women have reported lower life satisfaction and lower life expectancy than older men.

- This index also states that education and its caste also play an important role among the people in India.
- Older adults with secondary or higher education and people from higher social castes reported higher life satisfaction than their counterparts without formal education and people from Scheduled Castes and Scheduled Tribes.
- The index also shows that India’s elderly population is the second largest in the world. Of which there are 14 crore Indians aged 60 years and above, which is second only to their Chinese counterparts of 25 crore.
- The average growth rate of Indians aged 60 years and above in India is three times higher than the overall population rate of the country.
- Education found among Indian citizens in terms of happiness in India. Higher education, caste and social status (his status on economic basis) is also an important factor.

#### HEALTH DRINK IN INDIA



#### Why in the News?

The Ministry of Commerce and Industry has recently instructed e-commerce platforms like Amazon, Flipkart, and BigBasket to remove products like Bournvita, Horlicks, and Protinex from the health drinks category due to undefined standards and definitions under India’s food laws.

This decision follows the National Commission for Protection of Child Rights (NCPCR), which said that there is no “health drink defined under the FSS Act 2006, rules and regulations as submitted by FSSAI & Mondelez India”. “NCPCR, a statutory body constituted under Section (3) of the Commission for Protection of Child Rights (CPCR) Act, 2005, after its inquiry under Section 14 of CPCR Act, 2005, concluded that there is no health drink defined under FSS Act 2006, rules and regulations as submitted by FSSAI and Mondelez India Food Pvt Ltd.” The FSSAI also instructed e-commerce portals earlier this month not to label dairy- or malt-based beverages as ‘health drinks’.

#### Health Drinks:

A health drink is formulated to provide specific health benefits beyond basic hydration. These drinks typically contain vitamins, minerals, herbs, botanical extracts, proteins, and



other nutrients supporting overall health and well-being. Health drinks can come in various forms, including powders, concentrates, ready-to-drink liquids, or diluted or prepared mixes before consumption.

Health food drinks in India are primarily malt-based milk drinks that act as taste enhancers and offer nutritional benefits. For years, such mixes have been sold to kids and adults, making health food drinks an over \$1-billion category. **Some health drinks offer benefits such as:**

- **Nutritional Support:** Health drinks may be fortified with essential vitamins, minerals, and other nutrients that may be lacking in one's diet, helping to fill nutritional gaps and promote overall health. Fruit and vegetable juices are a natural source of vitamins, minerals, and antioxidants and are widely consumed for health benefits.
- **Malted Drinks:** Malted drinks are popular as nutritious beverages for children and adults. They are often fortified with vitamins and minerals and may contain malted barley, milk powder, cocoa, and other ingredients.
- **Energy Boost:** Some health drinks contain ingredients like caffeine, taurine, or B vitamins that can provide a quick energy boost, increase alertness, and combat fatigue. However, they may also contain high levels of sugar and artificial additives.
- **Hydration:** Some health drinks are designed to help maintain proper hydration levels by replenishing electrolytes lost through sweating during physical activity or illness.
- **Immune Support:** Health drinks fortified with vitamins, minerals, antioxidants, and botanical extracts are believed to strengthen the immune system and help the body fight off infections and illness.
- **Protein Shakes:** Protein shakes are popular among fitness enthusiasts and individuals looking to increase their protein intake for muscle building, weight management, or general health.

#### **About the Commissions for Protection of Child Rights Act, 2005:**

The Commission for Protection of Child Rights (CPCR) Act, 2005, is legislation enacted by the Government of India to establish commissions at the national and state levels to protect and promote children's rights. The Act provides for establishing the National Commission for Protection of Child Rights (NCPCR) at the national level and State Commissions for Protection of Child Rights (SCPCRs) in each state and union territory. The commission began operation a year later, in March 2007. **The primary functions of the NCPCR include:**

- Monitoring and implementing the provisions of the Convention on the Rights of the Child (CRC) and other related laws and policies.
- Inquiring into complaints regarding child rights violations and taking appropriate action.
- Conducting research, studies, and advocacy on issues related to child rights.
- Advising the government on policy and legislative measures for the protection and welfare of children.
- Promoting public awareness and understanding of child rights issues.

The commissions have the **powers of a civil court while trying a suit under the Code of Civil Procedure, 1908**. They can summon and enforce the attendance of witnesses, examine them on oath, require the discovery and production of documents, and issue commissions for the examination of witnesses or documents.

The NCPCR and SCPCRs comprise **a chairperson and six members** appointed by the central or state government. The members are chosen based on their expertise and experience in child rights areas. **Shri Priyank Kanoongo is currently the chairperson of the NCPCR**. The commissions submit annual and special reports to the government, highlighting the status of child rights in the country or state and making recommendations for improvement.

#### **Food Safety and Standards Authority of India:**

The Food Safety and Standards Authority of India (FSSAI) is a statutory body established under the Ministry of Health & Family Welfare, Government of India. It was created under the Food Safety and Standards Act of 2006, consolidating various acts and orders that have hitherto handled food-related issues in various Ministries and Departments.

FSSAI is responsible for setting standards for food products and regulating their production, storage, distribution, sale, and import to ensure they meet the safety and quality standards laid down by the authority. It aims to promote public health by ensuring the availability of safe and wholesome food for human consumption. **Some key functions include:**

- Framing of regulations to lay down the standards and guidelines for food safety.
- Setting up of food laboratories for testing and analysis.
- Providing scientific advice and technical support to the government.
- Monitoring and enforcing food safety standards across the food industry.

- Licensing and registration of food businesses.



The FSSAI is an autonomous statutory body which maintains the food standards and safety across India. FSSAI is administered by the Ministry of Health and Family Welfare. FSSAI has been managing the food safety in our country since 2008. The organization was set up as per the Food Safety and Standards act of 2006.

### Conclusion:

Reclassifying certain beverages on e-commerce websites marks a commendable move towards upholding consumer rights and well-being. This initiative fosters healthier choices among consumers and underlines a shared commitment to improving societal health. The concerted effort to adjust how these drinks are presented and marketed online reflects a growing awareness of the impact of such products on consumer health, promoting a more informed and health-conscious society.

## NEEDS TO FIX INDIA'S FOOD SYSTEMS

### Why in the News?

The current government requests different ministries to develop plans they want to announce within the first 100 days of their third term. The ministries are contacting various experts to help them frame the proper policy framework that is in sync with the vision of Viksit Bharat@2047, and suggestions to improve the Agri-food space stem from discussions with experts at a four-day forum hosted by the Asian Development Bank on food security in response to climate change.

The new government should prioritize enhancing agricultural productivity, expanding processing and retailing capacities, and encouraging the adoption of new technologies.

### Why Does the Indian Food System Need to be Fixed?

Currently, India's GDP ranks fifth among the world's top economies. Nearly half of the country's population depends on agriculture for their livelihood. Over the past few

decades, the manufacturing and services sectors have increasingly contributed to the economy's growth, while the agriculture sector's contribution has decreased.

The Indian Economy is an agro-economy. The difficulty with such an economy is that the agriculture sector depends on the production, distribution, and consumption cycle. Another problem with the Agro-economy is productivity. The agriculture sector holds an important place in the economy. Why does the Indian food system need to be fixed discussed in the following sentence:

- **Large Population:** India is the world's second-most populous country, and its population is expected to reach about 1.6 billion by 2047. Ensuring an adequate and stable food supply is essential to meeting the nutritional needs of such a vast population. This requires efficient use of land, water, labour, and inputs like fertilizers and machinery, especially sustainable development in the agricultural sector.
- **Nutrition and Health:** Access to sufficient, safe, and nutritious food is fundamental for the overall health and well-being of the population. Malnutrition, including undernutrition, micronutrient deficiencies, and obesity, remains a significant public health concern in India.
- **Climate Change:** Climate change is a big issue in India's agricultural system. India's agriculture heavily relies on the monsoon rains, which provide most of the country's annual precipitation. Climate change has significantly impacted India's agriculture by altering monsoon patterns, leading to erratic rainfall, which affects crop yields, livestock, and rural livelihoods. Last year's El Niño effect notably reduced agricultural GDP growth from 4.7% in 2022-23 to 0.7% in 2023-24.
- **Rural Development:** Agriculture is closely linked to rural development in India. Investments in agriculture, infrastructure development, irrigation facilities, and market linkages can stimulate economic growth, alleviate poverty, and improve living standards in rural communities.
- **Poverty Alleviation:** Food security is closely linked to poverty alleviation efforts. Many vulnerable populations, particularly those living in rural areas and urban slums, spend a significant portion of their income on food. India has one of the highest numbers of stunted and wasted children.
- **Social and Economic Stability:** Food security is essential for maintaining social stability and preventing social unrest. Adequate food availability and accessibility reduce the risk of food riots, protests, and conflicts arising from food shortages. A stable food supply is crucial for economic stability and sustainable development. Agriculture is a significant con-

tributor to India's GDP.

### Suggestions to Fix India's Food Systems:

- **Public-Private Partnerships:** The private sector can develop efficient value chains and produce climate-resilient and nutritious seeds. The government needs to establish a supportive policy framework, similar to the PLI-type schemes for industry, to facilitate the transformation of food systems.
- **Invest in Agricultural Infrastructure:** Enhance irrigation facilities, storage infrastructure, and transportation networks to reduce post-harvest losses and ensure efficient produce distribution.
- **Subsidy for Agriculture:** Subsidies are crucial in enhancing the farmer's income. The current subsidy regimes for fertilizers and food must be "re-purposed." Transitioning from a price-subsidy approach to direct income transfers for beneficiaries can save 25-30% of the Rs 4 trillion subsidy on food and fertilizers.
- **Promote Sustainable Farming Practices:** Encourage the adoption of organic farming, agroforestry, and precision agriculture techniques to improve soil health, conserve water, and minimize chemical usage.
- **Promote Urban Agriculture:** Encourage urban and peri-urban agriculture initiatives such as rooftop gardens, community gardens, and vertical farming to increase local food production, reduce food miles, and enhance food security in urban areas.
- **Invest in Research and Innovation:** Allocate resources for research and development in agriculture to develop high-yielding crop varieties, climate-resilient farming practices, and innovative solutions for sustainable agriculture.
- **Address Food Waste:** Implement measures to reduce food wastage at various stages of the food supply chain, including production, distribution, and consumption. Encourage the use of surplus food for food banks or composting.

### Conclusion:

Improving India's food systems requires a multifaceted approach addressing various challenges like food security, agricultural productivity, sustainability, and equitable distribution. India should work towards building a more resilient, inclusive, and sustainable food system that ensures food security for all its citizens.

## RIGHTS OF LGBTQIA AND QUEER COMMUNITY

### Why in the News?

Issues related to Queer community in India are a matter of great debate. Conservative outlook has prevailed in the discourse which was visible in dealing with matters like opposition to the legalisation of same sex marriage.

Recently, the Centre has released a notification of a committee to examine various issues related to queer community.



### Evolution Of LGBTQIA+ Rights

- In 1861, the British colonial administration introduced Section 377 of the Indian Penal Code, criminalizing any sexual activity deemed "against the order of nature," effectively outlawing all forms of homosexual behavior.
- Shakuntala Devi's groundbreaking study, "The World of Homosexuals," was published in 1977, offering one of the earliest explorations of homosexuality in India.
- In a significant milestone for LGBTQIA+ rights, 1994 saw the legal recognition of transgender individuals, granting them voting rights as a distinct third sex.
- In 2014, the Supreme Court of India delivered a landmark judgment, recognizing transgender people as a third gender and affirming their right to equal treatment under the law.
- 2017 marked a pivotal moment when the Supreme Court affirmed the right of India's LGBTQIA+ community to freely express their sexual orientation, a significant step toward greater societal acceptance and inclusivity.
- The Right to Privacy, enshrined in law, began to serve as a shield protecting individuals' sexual orientation from unwarranted intrusion or discrimination.

- On September 6, 2018, the Supreme Court delivered a historic verdict, striking down the portion of Section 377 that criminalized consensual homosexual activities, marking a major victory for LGBTQIA+ rights in India.
- The year 2019 saw the enactment of the Transgender Persons (Protection of Rights) Act by Parliament, aimed at safeguarding the rights and welfare of transgender people, along with addressing related matters pertaining to their well-being and inclusion.
- In 2023, SC court by 3:2 judgment stopped short of granting Constitutional validity to same sex marriage. Through this judgment SC shifted the onus on the legislature to decide this socially controversial issue.

### Challenges Faced by LGBTQIA

- **Legal Status:** Section 377 of the Indian Penal Code, which criminalized homosexuality, was struck down in 2018, decriminalizing consensual same-sex relations. However, legal recognition of same-sex relationships and marriage remains absent, leaving queer individuals without legal protection and recognition.
- **Social Stigma and Discrimination:** Despite legal progress, queer individuals still face significant social stigma and discrimination, including ostracization from families, workplace discrimination, and verbal or physical harassment. This stigma can lead to mental health issues such as depression and anxiety.
- **Access to Healthcare:** Queer individuals often encounter difficulties accessing healthcare services that are sensitive to their needs. Many healthcare providers lack awareness and training on LGBTQ+ issues, leading to inadequate or discriminatory care.
- **Family Rejection and Homelessness:** Coming out can result in rejection from family members, leaving queer individuals at risk of homelessness and isolation. There are limited shelters and support systems tailored to the specific needs of homeless LGBTQ+ individuals.
- **Education and Employment Discrimination:** LGBTQ+ youth frequently face discrimination and bullying in educational institutions, which can negatively impact their academic performance and mental well-being. In the workplace, queer individuals may encounter discrimination in hiring, promotions, and workplace culture.
- **Intersectional Challenges:** Queer individuals belonging to marginalized communities, such as Dalits, Muslims, or those with disabilities, face compounded discrimination due to their intersecting identities.
- **Lack of Legal Protections:** Beyond marriage rights, there's a lack of legal protection against discrimination based on sexual orientation and gender identity in areas such as employment, housing, and public accommodations. This leaves queer individuals vulnerable to discrimination and harassment.
- **Limited Representation:** The mainstream media often lacks accurate and positive representation of LGBTQ+ individuals, perpetuating stereotypes and misconceptions. This lack of representation can contribute to societal ignorance and prejudice.

### What Can be Done?

- **Legal Reforms:**
  - Push for comprehensive anti-discrimination laws that explicitly protect individuals based on sexual orientation and gender identity.
  - Advocate for legal recognition of same-sex relationships, including marriage equality.
  - Ensure the effective implementation of existing laws and policies that protect LGBTQIA+ rights.
- **Education and Awareness:**
  - Introduce LGBTQIA+ inclusive education in schools and universities to foster understanding, empathy, and acceptance from a young age.
  - Conduct sensitization programs for healthcare providers, law enforcement agencies, and other service providers to ensure they are equipped to provide non-discriminatory services.
  - Promote positive and accurate representation of LGBTQIA+ individuals in media and popular culture to combat stereotypes and prejudices.
- **Healthcare Reforms:**
  - Ensure access to LGBTQIA+-friendly healthcare services, including mental health support, hormone therapy, and gender-affirming surgeries.
  - Train healthcare professionals to provide culturally competent care to LGBTQIA+ patients, addressing their unique health needs and concerns.
- **Social Support and Community Building:**
  - Establish support networks, community centers, and helplines for LGBTQIA+ individuals, particularly those facing family rejection or homelessness.
  - Create safe spaces and inclusive environments where queer individuals can socialize, access re-

sources, and receive support without fear of discrimination or harassment.

- **Employment and Economic Empowerment:**

- Enforce anti-discrimination policies in the workplace to prevent discrimination based on sexual orientation and gender identity.
- Provide vocational training and job placement programs specifically targeted at LGBTQIA+ individuals to enhance their economic independence and stability.

- **Political Advocacy:**

- Mobilize political support for LGBTQIA+ rights through advocacy campaigns, lobbying efforts, and engagement with policymakers.
- Support the formation and strengthening of LGBTQIA+ rights organizations and activist groups to amplify voices and push for policy reforms.

- **Intersectional Approaches:**

- Recognize and address the intersecting forms of discrimination faced by LGBTQIA+ individuals belonging to marginalized communities, such as Dalits, Muslims, or those with disabilities.
- Ensure that policy interventions and support services are inclusive and accessible to all members of the queer community, regardless of their intersecting identities.

## PRELIMS QUESTION

### Q1. Consider the following statements

1. Adenoviruses have single-stranded DNA genomes, whereas retroviruses have double-stranded DNA genomes.
2. An adenovirus sometimes causes the common cold, whereas a retrovirus causes AIDS.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Q2. How does the Nikshay portal contribute to national TB control programs?

- (a) By providing funding for TB treatment
- (b) By facilitating collaboration between healthcare providers
- (c) By monitoring progress and evaluating program effectiveness
- (d) By conducting TB research studies

### Q3. Consider the following statements:

1. HIV/AIDS increases the risk of drug-resistant TB
2. Levofloxacin is a second-line drug used to treat drug-resistant TB
3. Both healthcare providers and government officials can access the Nikshay portal

How many of the statements above are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Q4. The FAO and the World Health Organization (WHO) work together on

- (a) Climate change mitigation
- (b) Codex Alimentarius Commission
- (c) Refugee resettlement
- (d) Global economic development

Q5. Consider the following statements regarding Trans Fat:

1. These fats are of the unsaturated variety and are synthesised exclusively through artificial means.
2. India had set a goal to eradicate trans fats from food by the year 2022.
3. Consuming trans fats heightens the likelihood of developing type 2 diabetes.

How many of the statements above are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

**Q6. Consider the following statements:**

1. India's TFR has passed the replacement level.
2. The TFR in rural areas is lower than in urban areas.
3. There is a negative correlation between TFR and women's level of education.

**Which of these statements are correct?**

- (a) Only 1
- (b) Only 2
- (c) Only 3
- (d) None

**Q7. Consider the following statements with reference to the Female labour force participation rate in India:**

1. India's female labour force participation rate is lower than the Global average.
2. It is currently lower than the Male force participation rate.

**Choose the correct answer using the codes given below:**

- (a) 1 Only
- (b) 2 Only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Q8. Consider the following statements regarding the National Air Quality Index:**

1. It is developed by CPCB in collaboration with IIT Kanpur.
2. The index is based on the measurement of the eight pollutants.

**Choose the correct answer using the codes given below:**

- (a) 1 Only
- (b) 2 Only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Q9. Consider the following statements regarding Global Happiness Index 2024.**

1. India ranks 126th among 134 countries in this index.
2. In this index, Finland is the happiest country in the world for the seventh consecutive year in 2024.

3. The main theme of the International Day of Happiness for the year 2024 is – "Reconnecting for Happiness: Building Resilient Communities".

4. Afghanistan ranks lowest among the countries included in the Global Happiness Index 2024 and is the happiest country in the world.

**Which of the above statement / statements is/ are correct ?**

- (a) Only 1 and 3
- (b) Only 2 and 4
- (c) Only 1 and 4
- (d) Only 2 and 3

**Q10. Consider the following statements about the Food Safety and Standards Authority of India (FSSAI):**

1. FSSAI comes under the Ministry of Consumer Affairs.
2. It is a statutory body that provides a licence to the food business.
3. The president of India appoints the Chairman of FSSAI.

**How many of the above statements are correct?**

- (a) Only one
- (b) Only two
- (c) All three
- (d) None of the above

**ANSWER**

S. No.	Answers
1.	B
2.	C
3.	C
4.	B
5.	A
6.	B
7.	C
8.	C
9.	D
10.	A

## MAIN QUESTION

**Q1.** How do disruptions in vaccination programs exacerbate existing inequalities within society, particularly in economically disadvantaged regions?

**Q2.** compare and contrast the transmission, symptoms, and treatment approaches for drug-sensitive TB and extensively drug-resistant TB (XDR-TB). How does the prevalence of XDR-TB affect healthcare systems and patient outcomes?

**Q3.** Compare and contrast the transmission, symptoms, and treatment approaches for drug-sensitive TB and extensively drug-resistant TB (XDR-TB). How does the prevalence of XDR-TB affect healthcare systems and patient outcomes?

**Q4.** Analyse the socio-economic factors that contribute to food waste in urban areas and rural communities and how addressing these factors could improve food security outcomes.

**Q5.** Share your insights on the potential benefits and drawbacks of processed foods in mitigating food waste and supporting food security goals.

**Q6.** Critically evaluate the effectiveness of government initiatives and policies aimed at increasing the Female Labor Force Participation Rate (FLFPR) in India. Discuss the strengths and limitations of existing schemes and suggest innovative strategies to promote women's workforce participation.

**Q7.** Evaluate the role of women in climate action and propose strategies for incorporating gender-transformative approaches into national and state-level climate action plans in India.

**Q8.** Outline the factors used to provide ranking in the Global Happiness Index and discuss which factors are important for happiness in the context of India and what measures can be taken to improve the overall happiness rank in the lives of the citizens of India. What can be the solution for this? Present a logical explanation.

**Q9.** How do the marketing strategies of health drinks align with the ethical responsibility to accurately inform consumers about potential health benefits and risks?

**Q10.** Analyse the ethical considerations in formulating and promoting healthy drinks targeting children and adolescents. How does this practice impact consumer behaviour and trust?

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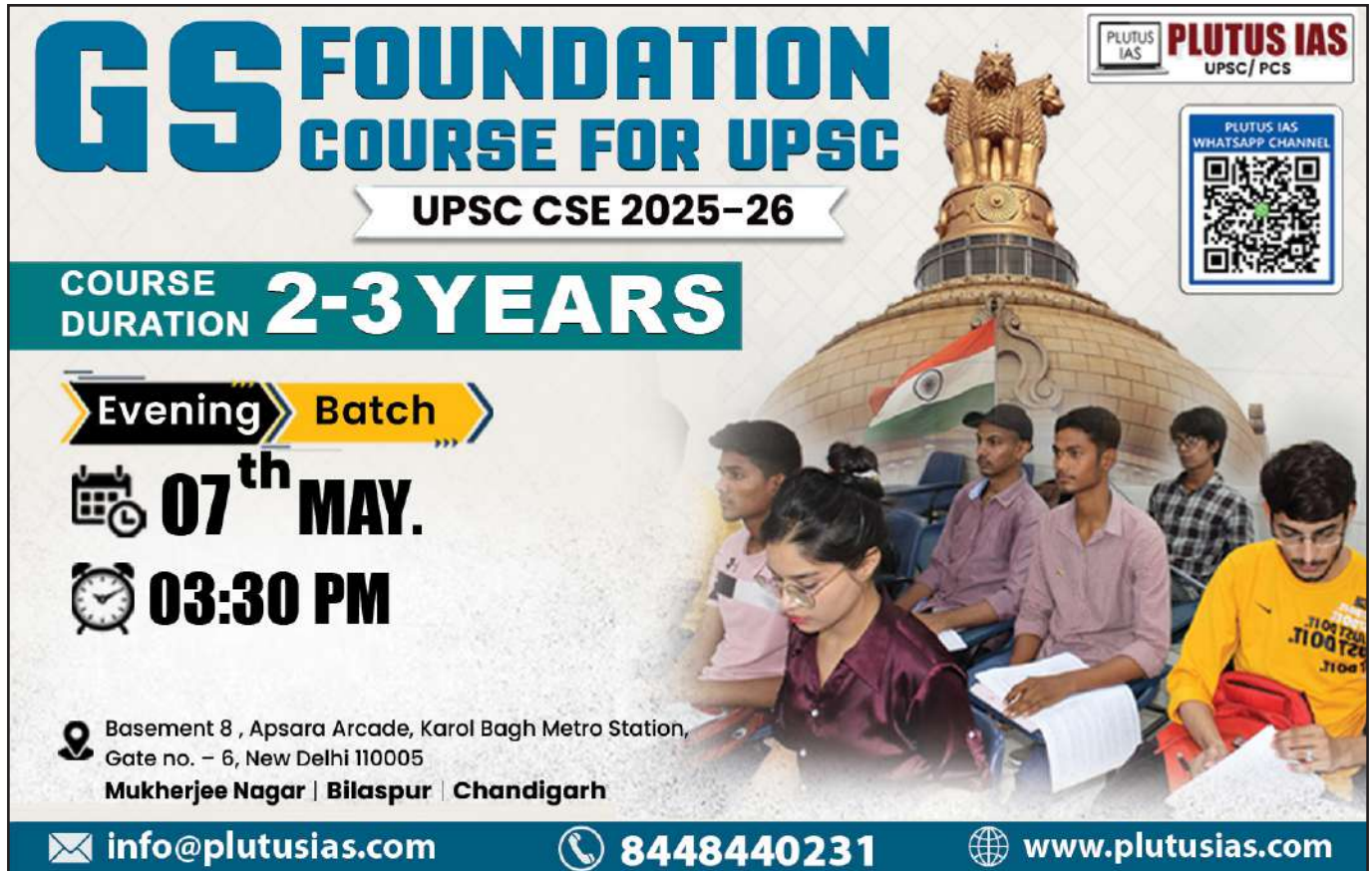
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**GOOGLE RELEASES AI PRODUCTS SIMA AND ALPHAGEOMETRY**



**Why in the News?**

Google DeepMind has recently unveiled a range of Artificial Intelligence (AI) products centred around Predictive AI Models. These include SIMA (Scalable Instructable Multi-world Agent) and AlphaGeometry.

**About SIMA**

- SIMA stands out from traditional AI models like OpenAI’s ChatGPT or Google Gemini. Unlike AI models, SIMA is an AI Agent capable of independent decision-making and action.
- Enhancing gaming experiences with its ability to process data and take autonomous actions.
- SIMA serves as a versatile AI assistant that is adept at various tasks within virtual environments.

**How Sima Works**

- Acting as a game-assisting AI, SIMA enhances gaming experiences through its autonomous capabilities.
- Capable of understanding and executing commands in diverse virtual settings, from dungeon exploration to castle construction.
- Learns and adapts through user interactions, continually improving its performance and versatility.

**Sima’s Training Journey**

- Developed through a collaboration between Google DeepMind and eight game studios. Trained on nine different video games, including Teardown and No Man’s Sky.
- Mastered skills like navigation, resource mining, and spaceship flying to excel in diverse gaming scenarios.

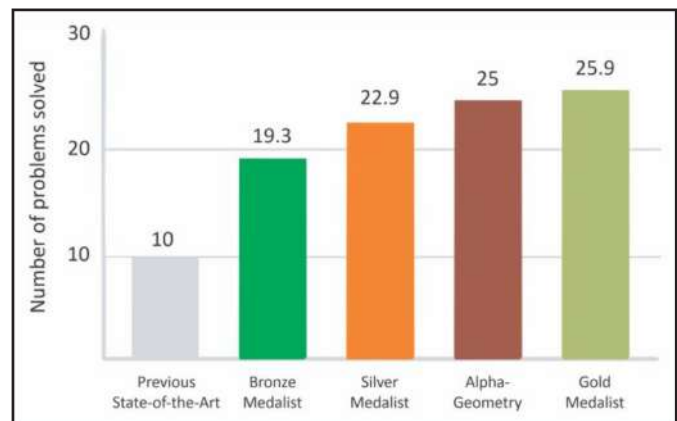
- Tested in various research environments, including Unity’s Construction Lab, to validate its capabilities.

**About AlphaGeometry**

DeepMind’s latest innovation, AlphaGeometry, is revolutionising the way AI tackles the complexities of geometry. Unlike its general-purpose AI counterparts, **AlphaGeometry is a specialised system designed to crack challenging geometric problems** often encountered in higher mathematics.

This powerful tool leverages a unique combination of two key techniques:

- **Neural Language Processing (NLP) Inspiration:** Borrowing from the human brain’s structure and function, AlphaGeometry **utilises a cutting-edge neural language model**. This component excels at generating intuitive ideas and potential solutions, mimicking the initial brainstorming phase of human problem-solving.
- **Symbolic Reasoning:** AlphaGeometry doesn’t stop at creative brainstorming. It houses a symbolic deduction engine, the system’s reasoning powerhouse. This engine applies established logical rules and mathematical knowledge to refine the ideas suggested by the NLP model. Through a systematic approach, it guides AlphaGeometry towards a solution.



**Predictive AI Functionality**

Predictive AI models use a combination of techniques



to analyse data and make forecasts about future events. Here's a breakdown of their key functionalities:

### Data Analysis

**Large Datasets:** Predictive AI models are trained on massive amounts of historical data. This data can include anything from sales figures and customer behaviour to weather patterns and social media trends.

**Pattern Recognition:** The models use sophisticated algorithms to identify patterns and relationships within the data. These patterns can then be used to make predictions about future events.

**Statistical Techniques:** Predictive AI models often leverage statistical methods to analyse data and calculate probabilities. This allows them to quantify the likelihood of different future outcomes.

### Making Predictions

**Regression Analysis:** This technique is used to identify relationships between variables and predict continuous outcomes, such as future sales or stock prices.

**Classification:** Classification algorithms categorise data points into different groups. This is useful for tasks like predicting whether a customer is likely to churn (cancel their service) or whether a loan applicant is a good credit risk.

**Time Series Analysis:** This technique focuses on analysing data that is collected over time, such as daily sales figures or website traffic patterns. It allows models to identify trends and forecast future values in the time series.

### Model Refinement

**Machine Learning:** Many predictive AI models are machine learning models. This means they can learn and improve over time as they are exposed to new data.

**Validation:** The accuracy of a predictive AI model is crucial. Model developers use validation techniques to assess the model's performance and identify areas for improvement.

### Real-World Applications

Predictive AI models are used in a wide range of industries and applications, including:

**Finance:** Predicting stock market trends, assessing credit risk, and detecting fraudulent activity.

**Healthcare:** Identifying patients at risk of developing certain diseases, optimising resource allocation, and personalising treatment plans.

**Retail:** Predicting customer demand, optimising inventory management, and personalising marketing campaigns.

**Manufacturing:** Predicting equipment failures, optimising production processes, and improving supply chain efficiency.

## TECHNIQUES OF BONE GRAFTING

### Why in the News?

Recently, the Indian Institute of Technology (IIT) Kanpur entered into an agreement with a biotechnology company based in Canada, Conlis Global, through a Memorandum of Understanding (MoU). This agreement involves the licensing of a pioneering technology developed domestically by IIT Kanpur known as "Nano Hydroxyapatite-Based Porous Polymer Composite Scaffold for Bioactive Molecule Delivery in Musculoskeletal Regeneration".

### About Nano Hydroxyapatite-Based Porous Polymer Composite Scaffold

Nano hydroxyapatite-based porous composite scaffolds are a new generation of biomaterial with immense potential in bone repair. Here's a closer look at their properties and applications:

### Properties

- **Biodegradable:** These scaffolds naturally break down over time within the body, eliminating the need for additional surgery.
- **Bone Regeneration:** They possess both osteoinductive and osteopromotive properties, meaning they can stimulate bone growth and formation.
- **Biocompatible:** The material is highly compatible with living tissues, promoting good interaction with osteoblast cells, which are crucial for bone formation.
- **Strong and Stable:** These scaffolds exhibit high mechanical strength, providing a sturdy support structure for bone regrowth.

### Applications

- **Orthopaedics and Dentistry:** They are finding use in various orthopaedic and dental implants, including bone graft substitutes, coatings for prosthetic devices, and tissue engineering scaffolds.
- **Large Bone Defects:** Functionalized versions of these scaffolds can be used as fillers for large bone defects. Their porous structure ensures proper blood circulation and oxygen supply, which is vital for bone healing.
- **Enhanced Healing:** By promoting tissue formation and

mineralisation, these scaffolds can accelerate bone defect repair.

### About Bone Grafting

Bone grafting is a surgical technique to address missing bone or heal complex fractures. It essentially involves transplanting bone tissue to promote bone growth and regeneration. This procedure is employed in various fields like orthopaedics, dentistry, and maxillofacial surgery.

### Types of Graft Materials

- **Autografts:** The patient's own bone, often taken from the hip, ribs, or other suitable sites. This offers the best compatibility but requires additional surgery for harvesting.
- **Allografts:** Bone from a deceased donor, processed to minimise rejection risks.
- **Xenografts:** Animal bone, typically from cows or pigs, specially treated for biocompatibility.
- **Alloplastic Grafts:** Synthetic materials like ceramics, polymers, or biocompatible metals that mimic bone structure and stimulate new bone growth.

### Common Reasons for Bone Grafting

- **Fracture Healing:** To promote healing in complex fractures, non-unions (fractures that haven't healed on their own), or bone defects.
- **Filling Bone Defects:** Bone loss due to trauma, tumours, infections, or birth defects can be addressed with grafts.
- **Spinal Fusion:** For stabilising the spine, treating disc problems, or correcting spinal deformities in orthopaedic and neurosurgical procedures.
- **Dental Implants:** To increase jawbone volume for successful placement of dental implants.
- **Maxillofacial Reconstruction:** Restoring facial bone structure and function after trauma, birth defects, or tumour removal.

### Bone Grafting Process & Techniques

- **Harvesting Bone Grafts:** Techniques for obtaining autografts can involve traditional open surgery or minimally invasive procedures.
- **Preparing the Graft:** Allografts and xenografts undergo processing to remove cellular components while preserving the bone structure and growth factors.
- **Graft Placement:** The graft material is surgically inserted into the defect site and often secured with fixation

devices like screws, plates, or meshes.

- **Bone Graft Substitutes:** Synthetic materials or biological agents can be used to stimulate bone formation and regeneration in some cases.

## ATOMIC CLOCKS AND INDIA

### Why in the News?

India is strategically distributing atomic clocks nationwide to synchronise the time displayed on digital devices such as watches, smartphones, and laptops with Indian Standard Time. This initiative, initiated over twenty years ago following the Kargil war, aims to ensure accuracy and reliability in timekeeping across the country.

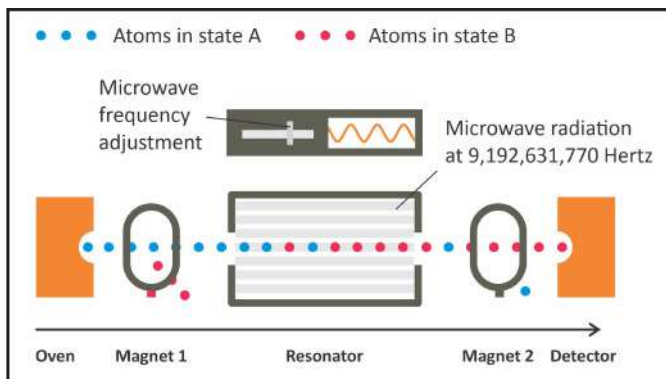
### About Atomic Clocks

- Atomic clocks are advanced timekeeping devices that utilise the natural vibrations of atoms to measure time with exceptional accuracy.
- These clocks rely on the oscillations of atoms, usually caesium or rubidium, which serve as highly stable timekeeping references.
- By detecting the frequency of these atomic vibrations, atomic clocks can maintain timekeeping precision to within a few billionths of a second per day.
- The atomic clock was developed by Louise Essen in 1955. Presently, India has operational atomic clocks located in Ahmedabad and Faridabad.

### How do Atomic Clocks Work?

- Atomic clocks operate by employing a specific type of atom known as "**caesium atoms.**" Caesium atoms are **highly stable and exhibit a precise frequency at which their electrons oscillate.** This frequency serves as the fundamental reference for timekeeping in the atomic clock.
- In the process of measuring time using caesium atoms, **an atomic clock utilises a component called a "microwave cavity."** This cavity functions as a chamber containing caesium vapour. A microwave signal is introduced into the cavity, prompting the caesium atoms to undergo vibration.
- During this vibration, the caesium atoms emit radiation characterised by a highly specific frequency. **A detector within the atomic clock then captures this emitted radiation and compares it against a predetermined standard frequency.** Any disparity between these fre-

quencies is utilised to make adjustments to the clock's timekeeping mechanism.



### Some Different Types of Atomic Clocks are:

- Cesium Atomic Clocks:** The most widely used type, caesium atomic clocks, measure the frequency of transitions in the caesium-133 atom, typically using a microwave resonance method. These clocks are highly accurate and serve as the primary standard for defining the second in the International System of Units (SI).
  - Rubidium Atomic Clocks:** Rubidium atomic clocks operate similarly to caesium clocks but use rubidium atoms as the reference instead. They are generally smaller, less expensive, and more portable than caesium clocks, making them suitable for applications where size and cost are important factors.
  - Hydrogen Maser Clocks:** Hydrogen maser clocks are even more precise than caesium clocks. They rely on the hyperfine transition of hydrogen atoms and operate at much higher frequencies, resulting in superior short-term stability and accuracy. These clocks are commonly used in scientific research, satellite navigation systems, and space missions.
  - Optical Atomic Clocks:** Optical atomic clocks use optical transitions in atoms, such as those of strontium or ytterbium, to achieve even higher precision than traditional atomic clocks. By operating at optical frequencies, they can potentially redefine the second with even greater accuracy. Research in this field is ongoing, with optical clocks showing promise for future applications in areas like fundamental physics research and global positioning systems.
- National Security and Self-Reliance:** Currently, India relies on foreign atomic clocks, particularly those in the US, for critical infrastructure like the Indian Regional Navigation Satellite System (NavIC). Developing its own atomic clocks allows India to control its timekeeping infrastructure, reducing dependence on external sources. This is vital during potential conflicts where access to foreign signals could be restricted.
  - Enhanced Accuracy and Reliability:** Atomic clocks offer unmatched precision compared to conventional methods. By deploying them across the nation, India can synchronise all digital devices with Indian Standard Time (IST), ensuring a unified and highly accurate time reference. This translates to improved performance in various sectors:
    - Telecommunications:** Precise timing is essential for the smooth operation of communication networks, minimising errors and ensuring seamless data transfer.
    - Financial Systems:** Timestamping financial transactions with atomic clock accuracy minimises errors and safeguards against fraud in high-frequency trading.
    - Navigation Services:** India's NavIC system can benefit from the enhanced timing provided by domestic atomic clocks, leading to more reliable positioning data.
    - Cyber security:** In India's burgeoning digital economy, atomic clocks ensure the accuracy of timestamps for transactions, preventing fraud, ensuring data integrity, and bolstering cybersecurity measures.
    - "One Nation, One Time":** With a network of atomic clocks, India can achieve a unified and precise time standard across the country. This fosters a sense of national coherence and simplifies time-related activities for citizens and businesses alike.
    - Critical Infrastructure and Power Grids:** Atomic clocks play a vital role in synchronising critical infrastructure, including power grids, transportation systems, and emergency services.

### What is the Rationale Behind India Going for Atomic Clocks?

India started efforts to develop atomic clocks in response to the denial of Global Positioning System (GPS) information during the Kargil War. The establishment of independent timekeeping capabilities is necessary for defence, cybersecurity, and online transactions.

### SPACE OPPORTUNITIES IN INDIA



### Why in the News?

As per a recent study conducted by the World Economic Forum (WEF), it is projected that the worldwide space economy will attain a valuation of \$1.8 trillion by the year 2035, mirroring the magnitude of the global semiconductor sector. This analysis, titled '**Space: The \$1.8 Trillion Op-**

**portunity for Global Economic Growth'**, is collaboratively authored by the WEF and consulting firm McKinsey & Co.

### What Constitutes the Space Economy?

The space economy encompasses all economic activities related to space exploration, satellite technology, and space-enabled services. It includes sectors such as satellite communication, Earth observation, satellite navigation, space tourism, and space mining. Advancements in technology have expanded opportunities for commercial ventures in space, leading to the emergence of a thriving industry with significant economic potential.

### How is the Space Economy Becoming so Attractive?

- **Economic expansion within the space sector**– The Space Report 2022 indicates that the space economy reached a value of \$469 billion in 2021, marking a 9% rise compared to the previous year. Forecasts suggest that the global space market is anticipated to surpass \$1 trillion by 2040.
- **State-supported investment**– As outlined in the Space Foundation report, there has been a noticeable surge in government-supported funding for space endeavours worldwide. Specifically, there was a significant 19% increase in total government expenditure allocated towards both military and civilian space programs during the year 2021.

### Factors Fueling the Global Space Economy–

- **Reduction in Launch Costs:** There has been a significant and rapid decline in the costs associated with launching satellites and rockets, with a tenfold decrease observed over the past two decades.
- **Affordability of Data and Connectivity:** As demand for data and connectivity increases substantially, it is anticipated that prices will decrease by at least 10% by 2035, despite the surge in demand expected to reach 60%.
- **Commercial Innovations:** Notably, advancements such as enhanced resolution in Earth-observation technology have led to a reduction in the cost of accessing such technologies, fostering commercial innovations.
- **Cultural Impact:** Growing cultural awareness and enthusiasm surrounding space exploration are significant drivers of interest, particularly among future generations.
- **Emergence of New Space Entrepreneurship:** India has witnessed the emergence of numerous startups in the space sector, focusing on providing end-to-end services in both the Business-to-Business and Business-to-Consumer segments, utilizing New Space technologies.

### Condition of Space Economy in India-

- **Contribution to Global Space Economy**– Presently, India's space industry constitutes approximately two per cent of the worldwide space economy. India's space sector holds the potential to achieve a valuation of \$44 billion by the year 2033, representing roughly 8 per cent of the global share. According to several market surveys, the space economy has experienced an average Compound Annual Growth Rate (CAGR) of 8%.
- **Increase in Space Start-Up Activity**- According to the DPIIT Start-Up India Portal, the number of space start-ups has surged from only one in 2014 to 189 in 2023.

### Investment in Indian space start-ups reached \$124.7 million in 2023.

- **Growing Involvement of Private Sector:** Private companies are actively engaged in exploring solutions related to satellite-based communication, as well as providing satellite integration and testing facilities. Additionally, the private sector is increasingly involved in the local manufacturing of satellite subsystems and ground systems. Prominent entities like Skyroot Aerospace, Pixxel, and Agnikul Cosmos are offering launch services and facilitating space tourism, demonstrating the expanding role of private enterprises in the space sector.
- **Rise in Satellite Launch Activity**– The Indian Space Research Organisation (ISRO) has witnessed a notable increase in the number of satellite launches. Out of the 424 foreign satellites launched by ISRO since the 1990s, more than 90% (389) were launched within the last nine years. India generated \$174 million in revenue from the launch of foreign satellites.



### Challenges in Advancing the Space Economy-

- **Space Debris:** According to NASA, there are over 100

million pieces of space debris measuring one millimeter or larger orbiting Earth. This debris comprises non-functional spacecraft, discarded equipment, and remnants from missions, all moving at speeds of up to 17,500 miles per hour (28,160 kilometres per hour). Even minute debris poses a significant risk of damaging satellites or spacecraft.

- **Lack of Regulatory Clarity for Startups:** The space startup ecosystem in India faces hurdles due to the absence of clear regulations. These startups require a supportive environment encompassing accelerators, incubators, venture capitalists, and mentors, akin to the thriving ecosystem in Bengaluru, where most New Space startups have flourished. Transforming these startups into robust industries is crucial for accelerating India's prominence in the space sector.
- **Cybersecurity Threats:** The draft National Cyber Security Strategy overlooks space security, despite concerns raised by the Data Security Council of India regarding potential cyberattacks on critical infrastructure, including space agencies.
- **Limited Share in Global Market:** India's share in the global space market is merely 2%. Over one-third of transponders utilised for Indian services are leased from foreign satellites, a proportion expected to increase with rising demand. Collaborative efforts with partners are essential for India to enhance its market share in the global space industry.

#### Initiatives Taken by India to Boost Space Economy-

- **Indian Space Policy, 2023:** This policy facilitates the comprehensive involvement of Non-Governmental Entities (NGEs) across all facets of space endeavours.
- **Foreign Direct Investment (FDI) Regulations via Automatic Route:** The policy permits up to 100 percent investment via the automatic route for the manufacture of satellite components, systems, and subsystems for various segments, including satellites, ground infrastructure, and user segments. Additionally, for the complete manufacturing and operation of a satellite, up to 74 percent investment is allowed through the automatic route.
- **Foreign Direct Investment (FDI) Regulations via Government Approval Route:** Investments exceeding the specified limit necessitate government approval. Presently, any foreign investment related to satellite manufacturing and operation mandates government approval under the current policy.
- **Establishment of Defense Space Agency (DSA):** In 2019, India inaugurated the Defense Space Agency (DSA) alongside the Defense Space Research Organi-

sation (DSRO). Functioning akin to a U.S. fighter command, the DSRO oversees the coordination of space assets among various military branches. The DSA, functioning as a research entity, incorporates civilian space technology into military applications.

- **Indian Space Station Project:** India aims to establish the 'Bharatiya Antariksha Station' (Indian space station) by 2035 and intends to conduct its first lunar mission with an Indian astronaut by 2040.
- **Indian National Space Promotion and Authorization Centre (IN-SPACe)-**It will serve as a centralised platform connecting the Indian Space Research Organisation (ISRO) with all entities interested in engaging in space-related endeavours or utilising India's space assets. Additionally, it will support, encourage, and provide guidance to private industries involved in space activities by implementing favourable policies and creating a conducive regulatory framework.
- **Indian National Space Promotion Board-** It is established to enhance the capabilities of the Department of Space and to foster the growth of private or non-governmental space entrepreneurs.
- **New Space India Limited-** NSIL serves as the commercial division of the Indian Space Research Organisation (ISRO), tasked primarily with facilitating Indian industries to engage in advanced technology space-related endeavors. Additionally, NSIL is responsible for promoting and commercially leveraging the products and services generated by the space industry.

#### Way Forward-

**Integration of Space into National Cyber Security Strategy:** It is imperative to incorporate robust cybersecurity measures into India's national space policy, aligning it with the National Cyber Security Strategy and National Security Strategy. Implementing a Purple Revolution strategy, which includes cybersecurity exercises such as red and blue teaming under the Ministry of Defence and Home Affairs, is essential to enhance both offensive and defensive capabilities. ISRO currently combats over 100 cyberattacks daily.

**Increase in Indian Space Budget:** To bolster research facilities and elevate space standards, the allocation for the space budget should be raised from 0.04 per cent to a minimum of 0.5 per cent of the GDP.

**Promoting Startup Initiatives:** India should strategically incentivise startups to develop innovative space logistics solutions akin to the success achieved in its satellite launch program.

## GEROSCIENCE: THE SCIENCE RELATED TO AGING

### Why in the News?

At Columbia University in New York, Dr. Daniel Belsky, an epidemiologist, has introduced the concept of “geroscience,” focusing on the **study of aging and related factors**.

His innovative work includes the development of a **ground-breaking blood test designed to gauge the rate of aging in individuals**. This test, often referred to as “gerozyme,” examines the **formation of methyl groups** within DNA, a process intricately linked to the aging process.

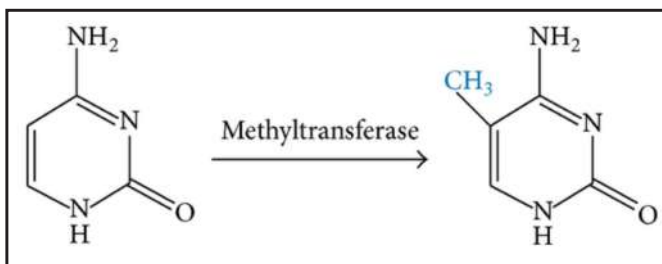
By analysing methylation patterns, particularly in senior citizens, Dr Belsky’s research provides valuable insights into the dynamics of ageing and offers potential avenues for personalised interventions aimed at promoting healthier ageing trajectories.

### What is DNA Methylation?

DNA methylation is a mechanism that involves the addition of a methyl group in a DNA molecule, specifically to cytosine bases within the DNA sequence.

DNA methylation is crucial for **regulating gene expression and various cellular processes** by influencing chromatin structure and accessibility to transcriptional machinery. However, the relationship between DNA methylation and gene expression can be **complex and context-dependent**.

DNA methylation an important **role in the aging process**. As individuals age, there are changes in DNA methylation patterns throughout the genome, which can affect gene expression and cellular function.



### Drugs Related to Anti-Ageing Process

**Metformin**— a medication primarily prescribed for managing type 2 diabetes, has attracted increasing attention for its potential beyond glycemic control. Studies indicate that metformin could potentially play a role in combating aging and regulating metabolism.

**TORC1**- Target Of Rapamycin Complex 1, is a **pivotal protein**

**assembly fundamental to cell growth, metabolic functions, and the aging process**. It acts as a master controller, overseeing a multitude of cellular activities in reaction to external signals like nutrient levels, energy resources, and growth signals.

**Resveratrol**: It is found in red wine, grapes, and certain berries. It is for its potential anti-aging effects, including its ability to activate sirtuins, a family of proteins involved in cellular regulation and longevity.

**Nicotinamide riboside (NR)**: NR is a form of vitamin B3 that has been investigated for its role in cellular energy metabolism and its potential to promote healthy ageing.

**Senolytics**: Senolytics are those drugs that target senescent cells, which are cells that have ceased to divide and accumulate with age. It aims to selectively eliminate senescent cells, thereby reducing inflammation and improving tissue function.

### Lifestyle Factors for Anti-Ageing

**Regular Exercise**: Engaging in regular physical activity is one of the most effective ways to promote healthy ageing. Exercise helps maintain muscle mass, enhance mobility, and improve cardiovascular health, such as heart disease, diabetes, and osteoporosis.

**Balanced diet**: A balanced diet comprising fruits, whole grains, vegetables, lean proteins gives essential nutrients and antioxidants which supports overall health and longevity. Nutrient-dense foods help in maintaining a healthy weight, support immune system, and reduce the risk of age-related diseases.

**Adequate Sleep**: Good Quality sleep is essential for overall health and well-being, including cognitive function, immune function, and hormone regulation. Aim for 7-9 hours of sleep per night and practice good sleep and hygiene habits to promote restful sleep.

**Stress management**: Addressing chronic stress is crucial as it not only speeds up ageing but also heightens susceptibility to age-related illnesses. Introducing stress-relieving practices like mindfulness meditation, deep breathing exercises, yoga, or reconnecting with nature can be beneficial in fostering a sense of calmness and improving emotional health.

**Social Connections**: Maintaining strong social connections and staying engaged with family, friends, and community leads to positive impact on mental or emotional health as well as cognitive function. Social interaction helps combat loneliness, reduces stress, and promotes a sense of purpose and belonging.

**Sun Protection**: Protecting skin from the sun’s harmful UV

rays by wearing sunscreen, protective clothing, and sunglasses, and seeking shade when outdoors. Sun exposure can increase skin aging and increase the risk of skin cancer.

**Avoidance of Harmful Habits:** Limit or avoid habits that can increase the pace of aging and increase the risk of smoking, excessive alcohol consumption, and recreational drug use.

Yual Noah Harare, describes in the book 'Homo Deus' about humans overcoming the boundation of natural boundaries by the use of technology. Geroscience is part of that pursuit of Homsapiens which can lead to longevity and healthy lifestyle.

## SOLAR PHOTOVOLTAIC CELL MANUFACTURING IN INDIA



### Why in the News?

Media outlets have extensively covered recent governmental directives aimed at bolstering India's renewable energy sector by bolstering the domestic manufacturing of solar modules. These actions are often portrayed as '**import restrictions**', following the Ministry of New and Renewable Energy's (MNRE) March 29 announcement to reinstate its 2021 notification regarding the 'Approved List of Models and Manufacturers of Solar Photovoltaic [PV] Modules', commonly referred to as the ALMM list.

### What is the ALMM List? Why is it Being Reinstated?

- The ALMM list comprises **manufacturers eligible for utilisation** in various government projects, government-assisted projects, and projects under government schemes and programs.
- However, this notification **was put on hold two years** after its issuance for the past financial year. Although the government did not provide a specific reason for this action, it is believed to have stemmed from concerns raised by renewable power producers.
- These producers had secured sale contracts with the government before the implementation of these rules when solar modules and cells were predominantly imported from China at highly competitive rates. At that time, India's domestic renewable sector was unable to match the sudden surge in demand for solar power production equipment at rates offered by Chinese manufacturers.

The government's decision to reintroduce this regulation is based on the assessment that various measures, such as the **Production Linked Incentive (PLI) scheme**, have **enhanced the production capacities** of India's domestic sector and improved its price competitiveness to meet local

demand. It is important to note that this initiative is aimed at import substitution rather than restricting imports.



### Status of Solar PV Cells Production in India

- **India heavily relies on imports** to fulfil its demand for solar cells and modules, primarily sourcing from China and Vietnam. According to data provided by the Minister for New and Renewable Energy in Parliament in February of the previous year, India imported approximately \$11.17 billion worth of solar cells and modules over the past five years.
- As of January in the fiscal year 2023-24, data from the Ministry of Commerce's Import-Export division revealed that **China accounted for 53% of India's solar cell imports and 63% of solar PV module imports**. Rating agency ICRA has estimated that China dominates over 80% of the manufacturing capacity across polysilicon, wafer, cell, and module production.
- In contrast, **India's manufacturing capacity remains relatively low and is mainly concentrated in the final manufacturing stage**. ICRA noted in its November 2023 report that the Production Linked Incentive (PLI) scheme can address this imbalance, with integrated module units expected to emerge in India within the next 2-3 years.

### Steps Taken by India

Over the past five years, India has taken significant steps to reduce its reliance on imports in the solar energy sector.

It all began with the **introduction of the ALMM order** in January 2019, but the issue gained prominence during the COVID-19 pandemic when global supply chains were severely disrupted.

Responding to this challenge, Finance Minister Nirmala Sitharaman unveiled the ₹19,500 crore **PLI scheme in the Union Budget of 2022-23**. The primary objective of this scheme is **to boost domestic manufacturing** across the en-

tire solar supply chain, covering everything from polysilicon to solar modules.

The government also implemented a **high customs duty** of 40% on PV modules and 25% on PV cells. However, these duties were later reduced as the pace of solar capacity additions slowed down. Reuters reported that developers had bid exceptionally low tariffs to secure power purchase contracts, relying heavily on imports of Chinese equipment.

#### Way Forward:

- **Policy Support:** Implementing policies that provide incentives and support for domestic manufacturing, such as tax breaks, subsidies, and tariff protection. Continuously reviewing and updating regulations to create a conducive environment for investment and growth in the solar PV cells industry.
- **Financial Incentives:** Offering financial incentives such as grants, subsidies, and low-interest loans to encourage investment in solar PV cell manufacturing facilities. This could include the continuation and expansion of schemes like the Production Linked Incentive (PLI) scheme.
- **Research and Development (R&D):** Investing in R&D to foster innovation and develop indigenous technology for solar PV cell manufacturing. Collaboration between government, academia, and industry can accelerate technological advancements and improve the efficiency and cost-effectiveness of solar PV cells.
- **Infrastructure Development:** Developing infrastructure such as industrial parks and special economic zones dedicated to solar PV cell manufacturing. Providing access to reliable power, water, transportation, and logistics infrastructure can attract investments and support the growth of the industry.
- **Skill Development:** Investing in skill development programs to train a skilled workforce for the solar PV cells industry. Developing specialised training programs and partnerships with educational institutions can ensure a steady supply of qualified professionals and technicians.
- **Market Development:** Promoting domestic demand for solar PV cells through incentives such as net metering, feed-in tariffs, and renewable energy targets. Encouraging the adoption of solar PV systems in residential, commercial, industrial, and utility-scale applications can create a stable market for domestic manufacturers.

Finally, we can learn from China's case, where the Government engaged itself in **hand-holdin approach** to support the Industry by providing Cheap electricity which consti-

tutes almost 40% of the cost. Also, Chinese government policies have prioritised solar PV as a **strategic sector**.

## NEED FOR REGULATION OF ARTIFICIAL INTELLIGENCE



#### Why in the News?

The UN General Assembly has taken a significant step by unanimously adopting the first global resolution on artificial intelligence (AI). The resolution, titled "Seizing the opportunities of safe, secure, and trustworthy artificial intelligence systems for sustainable development," aims at bridging the gap in AI regulation for safe, secure use in interest of global good.

#### Why is there a Need to Regulate AI?

**Bias in algorithm-** AI systems are trained on big data which may inherit biases of the creators. For example, An AI system may be better for some demographics than others.

**Job losses-** every technology has some impact on the livelihood of the people, AI is no different. AI will proliferate automation technology which will lead to a large number of job losses in multiple sectors.

**Privacy issues-** AI systems either intentionally or unintentionally captures data of the people, sometimes without the consent which raises privacy concerns.

**Manipulative content creation-** such as deepfakes which can be used to serve narrow interests of certain sections of society. For example, recently there was a deep fake video of a famous actress that got viral which raised attention of the potential misuse.

**Ensuring transparency and accountability-** It is important to hold companies working on these AI tools accountable for their actions.

#### Regulatory Framework in Some Countries

##### The EU's Approach

The EU uses a risk-based approach, That categorizes systems into four categories, namely unacceptable, high, limited, and minimal risks, prescribing guidelines for each.

The Act prescribes a ban on applications that risk citizens' rights, like manipulation of human behaviour, emotion recognition, mass surveillance etc.

It recognises two things: acknowledging the compliance burden placed on business enterprises and start-ups and regulating the much-deliberated Generative AI systems



such as ChatGPT.

### China's Stand On AI

Chinese regulatory framework focuses on three subjects content moderation- which includes identification of content generated through any AI system personal data protection- with a specific focus on the need to procure users' consent before accessing and processing their data algorithmic governance,-with a focus on security and ethics while developing and running algorithms over any gathered dataset.

### The U.K.'s Framework

The UK, has a principled and context-based approach

The approach requires mandatory consultations with regulatory bodies to know regulatory loopholes if any. Thus, the U.K. has adopted a decentralised approach. There is a mechanism for consultation that is a bit softer than the Chinese and EU approach.

### What is Artificial Intelligence?

Artificial Intelligence (AI) refers to the field of computer science focused on creating systems that can perform tasks typically requiring human intelligence. This technology aims to replicate human-like cognitive abilities such as problem-solving, learning, decision-making, and pattern recognition. Today, AI finds applications across diverse industries, ranging from finance to healthcare, due to its capability to analyse vast amounts of data and make insightful decisions.

The evolution of AI has surpassed its original conception, driven by significant advancements in data processing, computational power, and algorithmic sophistication. These improvements have expanded AI's utility and enabled its integration into various fields.

The applications of AI are extensive and impactful:

- In the realm of e-commerce, AI is employed to enhance user experience through personalized shopping recommendations and AI-powered virtual assistants like chatbots.
- Facial recognition technology, implemented in devices such as mobile phones and computers, utilizes AI algorithms for authentication, security, and user convenience.
- Automobile manufacturers like Audi, Toyota, and Tesla leverage AI to develop self-driving vehicles capable of navigating diverse environments and detecting potential hazards to prevent accidents.
- AI systems, integrated into platforms like Uber and logistics companies, optimize transportation routes, analyze

traffic patterns, and enhance operational efficiency.

- In education, AI facilitates personalized learning experiences by monitoring student progress, adapting lesson plans, and providing tailored study materials and reminders.
- In agriculture, AI technologies such as computer vision and machine learning help identify soil defects, nutrient deficiencies, and crop diseases, enabling farmers to optimize yields and resource usage.

Numerous AI startups and private companies contribute to the advancement of this technology, including Tata Elxsi, Bosch, Happiest Mind, Zensar Technologies, and Oracle. These entities drive innovation across industries, developing AI-driven solutions to address complex challenges and unlock new opportunities for growth and efficiency.

### Way Forward for India

India has one of the largest populations of internet users in the world which makes the country more vulnerable to such threats posed by AI. Also, considering the potential impact of the livelihoods of people it is crucial for the government to formulate comprehensive regulations which keep in mind different stakeholders.

## PRELIMS QUESTIONS

### Q1. Consider the following diseases:

1. Hepatitis B
2. HIV-AIDS

**How many of the diseases above can be transmitted from one person to another through tattooing?**

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

### Q2. With the present state of development, Artificial Intelligence can effectively do which of the following?

1. Bring down electricity consumption in industrial units
2. Create meaningful short stories and songs
3. Disease diagnosis
4. Text-to-Speech Conversion
5. Wireless transmission of electrical energy

Select the correct answer using the code given below:

- (a) 1, 2, 3 and 5 only
- (b) 1, 3 and 4 only
- (c) 2, 4 and 5 only
- (d) 1, 2, 3, 4 and 5

**Q3. Consider the following statements with reference to IN-SPACE:**

1. The headquarters of IN-SPACE is in Bopal, Ahmedabad.
2. It is an autonomous agency within the Department of Space dedicated to promoting, encouraging, and regulating space activities conducted by both government and private entities.

Choose the correct answer using the codes given below:

- (a) 1 Only
- (b) 2 Only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**ANSWER**

S. No.	Answers
1.	B
2.	B

3.	C
----	---

**MAINS QUESTION**

**Q1. Examine the ethical considerations surrounding the use of AI in surveillance and privacy infringement. How does the collection and analysis of personal data by AI systems raise concerns about individual privacy, autonomy, and civil liberties? What ethical guidelines should govern the development and deployment of AI surveillance technologies?**

**Q2. What are the potential applications of nanotechnology, such as nanobots, in the healthcare sector? Discuss how these nanotechnologies could revolutionise medical treatment, diagnosis, and drug delivery methods.**

**Q3. Highlight the benefits of Artificial Intelligence and also point out some challenges associated to realize its full potential.**

**Q4. Discuss the significance of opening up the Indian space sector for private participation in enhancing the diffusion of space technology and fostering the growth of the space economy.**



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## FOREST FIRE IN NILGIRIS



### Why in the News?

Lately, there have been extensive forest fires occurring in the Coonoor forest range located in the Nilgiris region of Tamil Nadu. To aid in combating these fires, the Indian Air Force has become involved in the ongoing firefighting endeavours led by the state forest department. They have deployed a Mi-17 V5 helicopter to carry out numerous operations using “Bambi Buckets.”

### About Forest Fires

- Forest fires, also known as wildfires, bushfires, or vegetation fires, are a terrifying force of nature. They are uncontrolled and unplanned blazes that erupt in natural areas like forests, grasslands, brushlands, or even tundras. Fueled by dry vegetation and driven by environmental conditions like wind and topography, these fires consume everything in their path, leaving a trail of destruction.
- For any fire to burn, three key ingredients are essential: fuel, oxygen, and heat. In a forest, the fuel comes from dead leaves, twigs, dry grasses, and other organic matter on the forest floor and within the trees themselves.
- Oxygen is readily available in the atmosphere, and the heat source can be triggered by lightning strikes, human activities, or even natural friction from rubbing branches during strong winds.

### Different Types of Forest Fires

Forest fires can be categorised into the following types based on where they burn:

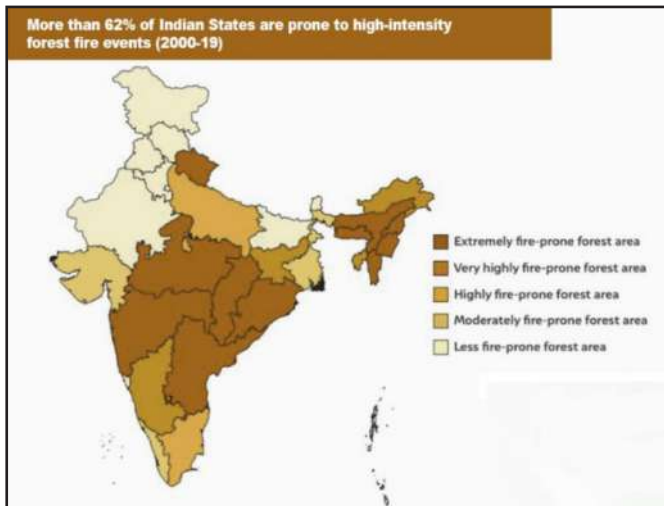
- **Surface Fires:** These are the most common type, burning the forest floor litter like leaves, twigs, and dry grasses. They are generally easier to contain compared to other fire types.

- **Underground Fires:** These stealthy fires creep beneath the surface, consuming organic matter like peat and roots. Often found in dense forests with thick layers of organic matter, they can be challenging to detect and extinguish, sometimes smouldering for months.
- **Canopy or Crown Fires:** The most ferocious of the bunch, crown fires rage through the upper tree canopy, fueled by dry leaves and branches. Driven by strong winds, they are incredibly intense and difficult to control, posing a significant threat to both life and property.
- **Controlled Burns:** Not all fires are destructive. Prescribed burns, or controlled deliberate fires, are strategically set by forest managers. These controlled fires help reduce built-up fuel loads, minimising the risk of future wildfires and promoting overall ecosystem health. Careful planning and execution are crucial for prescribed burns to achieve their intended benefits.

### Forest Fires in India

- Forest fires in India present a significant environmental challenge, with various statistics and facts shedding light on their impact. **According to the Forest Survey of India, there have been approximately 277,758 forest fire points detected across the country from 2004/5 to 2017**, highlighting the widespread nature of this issue.
- Mizoram stands out as one of the areas with a high incidence of forest fires in India.
- The forest fire season in India typically **coincides with the onset of summer**, characterised by rising temperatures and dry conditions that create a conducive environment for wildfires. **For instance, between 13 and 20 February 2023, nearly 1,156 forest fires were reported in India**, marking an early start to the forest fire season and indicating a spike in daytime temperatures.
- **Human activity** has been identified as a **primary cause of forest fires in India**, with climate change exacerbating the situation.
- Studies have shown a link between climate change and

the increased frequency and severity of fire weather, with **rising global temperatures, heatwaves, and droughts** contributing to the likelihood of wildfires by creating hot and dry conditions favourable for fire outbreaks.



### Reasons Behind the Forest Fires

#### Natural Factors

- **Lightning Strikes:** One of Nature's Ignition Sources: Lightning strikes, especially during dry seasons, can trigger forest fires by igniting dry vegetation.
- **Extreme Weather Conditions:** Fueling the Flames: Hot and dry weather conditions create a conducive environment for the rapid spread of forest fires, amplifying their frequency and intensity.

#### Human Activities

- **Agricultural Practices:** The Double-Edged Sword: Clearing land for agriculture through slash-and-burn techniques or improper disposal of crop residues can inadvertently spark forest fires.
- **Uncontrolled Burning:** The Unseen Consequences: Deliberate burning of vegetation for various purposes, such as land clearing, hunting, or waste disposal, often leads to uncontrolled wildfires.
- **Industrial Activities:** Igniting Environmental Hazards: Industrial activities like mining, logging, and construction can inadvertently cause forest fires through machinery sparks or negligence.

#### Social And Cultural Factors

- **Discarded Waste:** A Smouldering Issue: Improper disposal of cigarette butts, glass bottles, or other flammable materials in forested areas poses a significant fire risk.

- **Human Settlements:** Living on the Edge: Encroachment of human settlements into forested areas increases the likelihood of accidental fires due to cooking, smoking, or other human activities.

## THREATS OF GLACIAL LAKE OUTBURST FLOOD

### Why in the News?

The Uttarakhand administration has formed two expert teams tasked with assessing the danger posed by five potentially perilous glacial lakes situated in the area. These lakes are susceptible to Glacial Lake Outburst Floods (GLOFs), incidents that have caused numerous calamities in the Himalayan regions in recent times.

### Glacial Lakes in Uttarakhand

- Uttarakhand is home to 13 of the 188 glacial lakes identified in the Himalayan region. These lakes gained significant attention following a catastrophic event in February 2021 when a glacial lake outburst in Chamoli district resulted in the destruction of a small hydro-power project on the Rishi Ganga river and triggered devastating flash floods that claimed numerous lives.
- The glacial lakes in Uttarakhand are classified into **three categories: 'A', 'B', and 'C'**, with **'A' denoting the most sensitive ones**. Among the 13 lakes in Uttarakhand, five are classified as 'A' (highly sensitive), four as 'B' (sensitive), and four as 'C' (relatively less sensitive).
- Notably, the **Pithoragarh district hosts four of the highly sensitive lakes**, while **one is situated in the Chamoli district**. In terms of sensitive lakes, Pithoragarh has two, with one each in Chamoli and Tehri districts.

### Teams Deployed to Assess Uttarakhand's Riskiest Glacial Lakes

- The **first team comprises** experts from various institutions such as the National Institute of Hydrology, Roorkee; the Geological Survey of India, Lucknow; the Indian Institute of Remote Sensing, Dehradun; the Uttarakhand State Disaster Management Authority; and the Uttarakhand Landslide Mitigation and Management Centre. Their **focus is on evaluating two glacial lakes, utilising satellite data analysis, data collection, bathymetry, and area surveys**.
- Simultaneously, a second team **led by the Centre for Development of Advanced Computing (C-DAC), Pune**, in collaboration with institutions like the Indian Institute of Remote Sensing in Dehradun, the Wadia In-

stitute of Himalayan Geology, the Uttarakhand State Disaster Management Authority, and the Uttarakhand Landslide Mitigation and Management Centre, **will undertake the study of the remaining three 'A' category glacial lakes.**

#### About Glacial Lake Outburst Flood (GLOF)

- A Glacial Lake Outburst Flood (GLOF) is a devastating flood event occurring when the natural dam containing a glacial lake collapses, leading to the sudden release of a large volume of water. Such floods are typically instigated by accelerated glacier melting, excessive precipitation, or an influx of meltwater into the lake. In February 2021, Chamoli district in Uttarakhand experienced flash floods suspected to be caused by GLOFs.
- **Various factors can trigger these floods**, including glacier volume changes, lake water level fluctuations, and seismic activity. The National Disaster Management Authority (NDMA) attributes the emergence of numerous new glacial lakes in the Hindu Kush Himalayas, primarily due to climate change-induced glacial retreat, as a major driver of GLOFs.

#### NDMA Guidelines to Address Glacial Lake Outburst Flood Threats

- **Identification of Potentially Hazardous Lakes:** Identification involves field assessments, historical event records, and analysis of the lake's physical characteristics and surroundings.
- **Flood Management Techniques:** Techniques include reducing water volume through controlled breaching, pumping, or creating tunnels through moraine barriers or ice dams.
- **Early Warning Systems (EWS):** Enhancing operational GLOF Early Warning System, which are currently limited in number globally. Some instances in the Himalayan region demonstrate the use of sensor and monitoring-based systems for early warning.
- **Comprehensive Alarm Systems:** Utilising modern communication technologies, such as cell phones, to complement or replace traditional alarm infrastructure like acoustic sirens, ensuring efficient warning dissemination.
- **Technological Utilisation:** The promotion of Synthetic-Aperture Radar imagery aids in automatically detecting changes in water bodies, especially new lake formations, during monsoon periods.
- **Local Manpower Training:** Emphasising the importance of trained local personnel alongside specialised forces like the National Disaster Response Force

(NDRF), ITBP, and the Army. Local communities often play a crucial role in search and rescue operations before formal intervention.

### IMPACT OF KUNMING-MONTREAL GLOBAL BIODIVERSITY FRAMEWORK ON TRIBES

#### Why in the News?

A recent conference hosted by the University of Arizona shed light on apprehensions regarding the Kunming-Montreal Global Biodiversity Framework (GBF) and its potential ramifications, specifically concerning the indigenous tribes of India.

#### About Kunming-Montreal Global Biodiversity Framework

- In December 2022, at the 15th Conference of the Parties (COP15) to the UN Convention on Biological Diversity, a landmark agreement emerged – the Kunming-Montreal Global Biodiversity Framework (GBF).
- This framework builds on past efforts and seeks to achieve the ambitious goal of living in harmony with nature by 2050, aligning with broader sustainable development objectives.

#### Targets Set by Kunming-Montreal Global Biodiversity Framework

- The GBF outlines a clear path for a future where biodiversity thrives. **It establishes four overarching goals for 2050**, encompassing aspects like maintaining healthy ecosystems, reducing threats to biodiversity, ensuring sustainable use benefits everyone, and ultimately achieving a harmonious relationship between humans and nature.
- To translate these goals into action, the **GBF sets 23 specific targets to be achieved by 2030**. These targets focus on key areas like **mitigating threats to biodiversity, promoting sustainable use with fair benefit-sharing, and establishing effective tools** for implementation and mainstreaming biodiversity considerations.

#### Legal Mandate of the Framework

- Although GBF **isn't a legally binding treaty**, it serves as a powerful international instrument fostering collective action. All participating countries agree to set national targets aligned with the framework's goals and targets.
- This collaborative approach promotes a sense of shared responsibility and accountability for achieving a sustainable future.

### India's Progress in Achieving the Targets Till Now

- **Target 3 – 30×30:** India has announced the inclusion of 22% of its terrestrial area and 5% of marine and coastal areas within the Protected Area Network.
- Although India demonstrates progress in expanding protected areas, concerns have surfaced regarding the legal definitions and potential diversion of these areas for non-conservation purposes.
- **India's Forest (Conservation) Amendment Act of 2023** broadened the scope of forest activities to incorporate commercial ventures such as zoos and ecotourism, indicating a commitment to sustainable development.
- Nevertheless, the Supreme Court has issued directives mandating that any proposals for establishing zoos and safaris within forest areas (excluding protected areas) must undergo prior approval from the court.
- **Other Effective Area-Based Conservation Measures (OECMs):** India has identified 14 categories of OECMs, including initiatives led by citizens. However, the voluntary nature of their declaration raises questions regarding legal protection.

### Controversy Around Target 3 of the Kunming-Montreal Framework

- **Target 3 of the GBF aims to ensure that by 2030,** at least 30% of the world's land, waters, and seas are preserved. Currently, protected areas (PAs) encompass approximately 16% of these areas. **This objective is commonly referred to as the "30 by 30" target.**
- Analysts argue that while this target appears beneficial, it often **prioritises corporate interests over those of indigenous communities, particularly in Southeast Asia.** For instance, in **Cambodia's Beng Per Wildlife Sanctuary**, an indigenous leader named Heng Saphen was unjustly convicted for cultivating her own land.
- Critics contend that **involving the private sector in forest conservation is problematic.** They point to India's Forest (Conservation) Amendment Act of 2023 as an example of this trend. The act expands the definition of forest activities to include zoos, safaris, and ecotourism facilities.
- According to experts, **colonial elites initially established protected areas for recreational and hunting purposes.** This legacy persists today, with ecotourism projects often treating indigenous peoples as attractions, showcasing their traditional cultures in contrived settings.



### Steps that Can be Taken to Protect Tribal Lands

- **Consent from tribals:** The Panchayats (Extension to Scheduled Areas) Act emphasises “free, prior, and informed consent” from tribals before any decisions affecting their land are made. Upholding this right is essential for ensuring their agency and protecting their cultural heritage.
- **Capacity Building:** Provide educational and training opportunities to equip tribal communities with the skills and knowledge needed to manage their lands effectively and advocate for their rights.
- **Considering them as Guardians of the forests:** Laws should be amended to formally recognise tribal communities as guardians of protected areas. Their deep understanding of the local ecosystem and traditional conservation practices make them invaluable partners in protecting biodiversity. This approach fosters a sense of ownership and empowers communities to manage their lands sustainably.
- **Community-Based Conservation:** Support collaborative conservation initiatives led by tribal communities, ensuring their knowledge and practices are integrated into land management strategies.
- **Legal Framework and Enforcement:** Strengthen the legal framework by enforcing existing legislations like the Forest Rights Act to secure individual and community ownership of land for forest-dwelling Scheduled Tribes and other traditional forest dwellers.

- **Incorporating Indigenous and Expertise Knowledge:** Governments have the opportunity to utilise the traditional wisdom held by indigenous communities, such as the Khasi and Jaintia tribes of Meghalaya, who possess a deep-rooted heritage in safeguarding “sacred groves” – regions of natural flora and fauna preserved through local customs and prohibitions.

## SUPREME COURT NULLIFIES 2020 EARTH EXTRACTION EXEMPTION



### Why in the News?

The Supreme Court has nullified a notification issued by the Ministry of Environment three years prior, which granted an exemption for obtaining Environmental Clearance (EC) for extracting ordinary earth used in linear projects such as road and railway construction. The exemption, initiated in March 2020, came under scrutiny by the National Green Tribunal (NGT), which directed the Ministry in October 2020 to review it within a three-month period.

### What was the 2020 Notification for Linear Projects?

- The 2020 exemption pertained to the addition of “Extraction or sourcing or borrowing of ordinary earth for linear projects such as roads, pipelines, etc.” to the list of activities exempted from prior Environmental Clearance (EC). This exemption was introduced through a notification issued by the Environment Ministry under The Environment (Protection) Act, 1986.
- In 2006, the Environment Ministry initially issued a notification outlining activities requiring prior Environmental Clearance (EC). Subsequently, in 2016, another notification exempted certain categories of projects from this requirement.
- The rationale behind the 2020 notification was to align with amendments made to the Mines and Minerals (Development and Regulation) Act, 1957, which **permitted lessees to continue mining for up to two years with the statutory clearances and licences issued to their predecessors.**

### What are the Linear Projects?

- Linear construction projects are those that involve **development stretching out in a long, narrow strip of land.** These projects typically involve repetitive construction activities carried out along the entire length. Some common examples of linear construction projects are:

1. Highways, roads, and expressways
2. Railways
3. Airports
4. Canals and irrigation channels
5. Fences and border walls
6. Communication lines
7. Pipelines for oil, gas, water, and sewage
8. Power transmission lines

### Why was the 2020 Notification and Exemption Under it were Challenged

- **Equality Under Threat (Article 14):** Critics argued that the exemption violated Article 14 of the Indian Constitution, which guarantees equal protection of the law. The notification, they claimed, allowed unrestricted earth removal without clear guidelines or safeguards, raising concerns about fairness and potential abuse.
- **Transparency Issues:** The Ministry’s failure to justify waiving the requirement of public notice or issuing a blanket exemption raised questions about transparency and accountability. Critics pointed out the absence of proper justification for bypassing environmental assessments and scrutiny.
- **Favouritism:** The exemption was seen as potentially favouring private miners and contractors at the expense of public interest. Additionally, critics argued that the Ministry misused its power under the guise of public interest during the COVID-19 lockdown to benefit private entities, bypassing established legal procedures for environmental assessment.
- **Previous Judgments:** The case of Deepak Kumar vs State of Haryana (2012) was referenced, where the Supreme Court mandated prior EC for leases. This established precedent was seen as being violated by the 2020 exemption.
- **Environmental Concerns:** A major concern was the lack of environmental safeguards in the exemption. Without defined limits on extraction quantities or designated areas, the notification posed a risk to environmental conservation efforts.
- **NGT’s Ruling and Delays:** The NGT acknowledged the need for balance and directed the Ministry to revise the exemption with appropriate safeguards, including regulations on excavation procedures and the amount of earth allowed for extraction. However, the Ministry’s delay in revising the exemption led the issue to

escalate to the Supreme Court.

### Concerns Raised by SC

- The court highlighted that it violates **Article 14**.
- The Court deemed the **exemption given in the notification arbitrary due to:**
  - Unclear definitions of key terms like “linear projects” and permissible extraction amounts.
  - Lack of justification for waiving public notice requirements.
- A subsequent attempt by the Ministry to clarify the exemption in 2023 failed to address these concerns. The Court further **questioned the timing of the initial exemption, issued during a nationwide lockdown** that halted construction.
- This decision underscores the importance of environmental safeguards in infrastructure development. Clear regulations, defined terms, and limitations on earth removal are necessary to minimise environmental damage from such projects.

## EARTHQUAKE IN TAIWAN

### Why in the News?

Taiwan experienced its most powerful earthquake in the past 25 years, registering a magnitude of 7.2. The epicentre of the seismic activity was pinpointed a mere 18 kilometres south-southwest of Hualien County, located in eastern Taiwan. This occurrence underscores Taiwan’s vulnerability to earthquakes due to its location along the Pacific “Ring of Fire.”

### Reasons Behind Earthquakes in Taiwan

- Earthquakes are a frequent occurrence in Taiwan due to its location along the Pacific “Ring of Fire,” which accounts for around 90% of the world’s seismic activity.
- This ring comprises a network of seismic faults encircling the Pacific Ocean, where the majority of earthquakes globally take place. Taiwan’s vulnerability to earthquakes is exacerbated by the dynamic interaction of the Philippine Sea Plate and the Eurasian Plate, which accumulate tension and periodically release it through seismic events.
- The **mountainous terrain of Taiwan can intensify ground shaking**, leading to landslides. Recent incidents in Taiwan’s eastern coast, close to the epicentre, saw

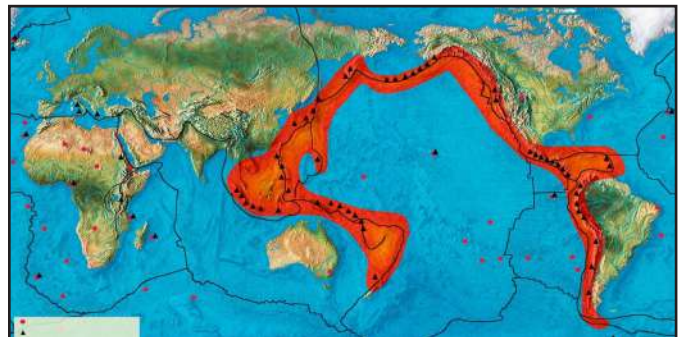
landslides triggered by falling debris, resulting in the destruction of tunnels and highways, along with casualties from crushed vehicles.

### About the Pacific Ring of Fire

- Alternatively referred to as the Pacific Rim or the Circum-Pacific Belt, denotes a region encircling the Pacific Ocean distinguished by active volcanoes and recurrent seismic activity.

### Boundaries of Pacific Ring of Fire

- This area encompasses **approximately 40,000 kilometres** and delineates the boundaries between several tectonic plates, including the Pacific, Juan de Fuca, Cocos, Indian-Australian, Nazca, American, and Philippine Plates.
- Its trajectory spans along the western coast of South and North America, traverses the Aleutian Islands in Alaska, extends down the eastern coast of Asia, passes New Zealand, and culminates at the northern coast of Antarctica. The Ring of Fire hosts roughly **75% of the world’s volcanoes, with approximately 90% of global earthquakes occurring within its confines.**



### Volcanic Activities in the Region

- The volcanic activity within the Ring of Fire arises from the movement of tectonic plates converging, leading to the creation of subduction zones where one plate is forced beneath another.
- This process occurs gradually, with plates shifting merely one or two inches per year. As subduction transpires, rocks undergo melting, transforming into magma that ascends to the Earth’s surface, instigating volcanic eruptions.
- The Ring of Fire harbours a significant concentration of volcanoes primarily because the majority of the planet’s subduction zones are situated within its bounds. Particularly noteworthy are the volcanoes in Indonesia, renowned for their high activity levels within the Pacific Ring of Fire. These volcanic formations stem from the interaction of three principal active tectonic



plates: the Eurasian Plate, Pacific Plate, and Indo-Australian Plate, which undergo subduction processes in this region.

### Cooling Patterns in the Pacific Plate

- Recent scientific studies have illuminated the cooling trend observed in the Pacific Plate, which significantly influences the tectonic dynamics within the Ring of Fire. This cooling phenomenon may impact plate boundaries and subduction zones, potentially altering mountain-building processes.
- Researchers have discerned that the younger segments of the Pacific Plate, approximately 2 million years old, are cooling at an accelerated pace compared to older sections, around 100 million years old. This cooling process could heighten stress accumulation along plate boundaries, potentially leading to increased frequency and intensity of earthquakes.
- Notably, the most active regions within the Ring of Fire coincide with the northern and western extents of the Pacific Plate, where the younger portions are predominant.

### About Volcanism

- Volcanism encompasses the eruption of molten rock, ash, and gases from beneath the Earth's crust onto its surface or into the atmosphere.
- It occurs in various types of volcanoes, including stratovolcanoes, shield volcanoes, and cinder cone volcanoes, each with distinct characteristics and eruption styles.

### Causes of Volcanism

- Tectonic Activity:** Volcanic eruptions often result from the movement and interaction of tectonic plates. Subduction zones are the regions where one tectonic plate is forced beneath another. It is the common sites of volcanic activity.
- Hotspots:** Some volcanic eruptions are caused by hotspots, areas where magma from the mantle rises to the surface, creating volcanic features such as islands or volcanic chains.

### Types of Volcanoes

- Stratovolcanoes:** Tall, steep-sided volcanoes characterised by explosive eruptions of viscous magma.
- Shield Volcanoes:** Broad, gently sloping volcanoes formed by the eruption of low-viscosity lava flows.
- Cinder Cone Volcanoes:** Small, steep-sided cones com-

posed of volcanic fragments ejected during explosive eruptions.

## INDIA'S WINTER ARCTIC EXPEDITION

### Why in the News?

Recently, the Union Minister of Earth Sciences initiated India's inaugural winter scientific mission to Himadri, the country's Arctic Research Station located in Ny-Ålesund, part of the Norwegian archipelago of Svalbard in the Arctic region. The expedition aims to explore the Arctic's profound influence on global climate, sea levels, and biodiversity and will also focus on studying the radio frequency environment in the Svalbard region of the Arctic.

### History of India's Involvement in the Arctic



- In its early stages, India's involvement with the Arctic began in 1920 when it signed the Svalbard Treaty in Paris. India stands out among a limited number of nations for establishing a permanent station in the Arctic dedicated to scientific research.
- The Indian involvement in the Arctic research began

with the establishment of the Indian Antarctic Station at the Indian-Antarctic base in the Antarctic Peninsula in 1983. This marked the beginning of India's foray into polar research. Subsequently, India established its first Arctic research station, Himadri, in Ny-Ålesund, Svalbard, in March 2013.

- In 2014, India installed IndArc, a multisensory observatory situated in Kongsfjorden.
- In 2016, India established its northernmost atmospheric laboratory at Gruebadet, aimed at investigating clouds, precipitation, long-distance pollutants, and various fundamental atmospheric factors.
- Since 2013, India has held observer status in the Arctic Council, and this designation was extended for an additional five years in 2019.
- The Indian government introduced an Arctic policy in March 2022.
- This policy outlines India's involvement in the Arctic region, focusing on climate research, environmental surveillance, maritime collaboration, and energy security.

#### Why is the Winter Arctic Expedition Important for India?

- **Growing China's Interest-** India is becoming increasingly worried about China's escalating investments in the Arctic. Russia's move to grant China greater access to the Northern Sea Route has intensified these concerns. India's heightened interest in the Arctic coincides with rising tensions in the region, exacerbated by the ongoing Russia-Ukraine conflict.
- **Global Warming-** The melting of Arctic ice has led to the opening of sea routes such as the Northwest Passage and the Northern Sea Route. These routes offer shorter paths between Europe, Asia, and North America compared to traditional routes through the Suez Canal or Panama Canal. Consequently, this has sparked interest among shipping companies and nations looking to capitalise on these more efficient routes for trade and transportation.
- **Research Advancement-** It provides an opportunity to conduct scientific studies in extreme Arctic conditions, enabling researchers to gather valuable data on climate, biodiversity, oceanography, and other relevant fields.
- **Understanding Climate Change-** Given the Arctic's vulnerability to climate change, studying it during winter provides insights into seasonal variations and long-term trends, contributing to a better understanding of global climate dynamics.
- **Resource Exploration-** Exploration during winter can offer unique insights into the region's natural resources, such as oil, gas, and minerals, potentially aiding in sustainable resource management.
- **Environmental Importance-** Despite their geographical separation, the Arctic and the Himalayas are interconnected and face similar environmental challenges. The ongoing meltdown in the Arctic serves as a valuable learning opportunity for understanding glacial retreat in the Himalayas, often referred to as the 'third pole' due to its substantial freshwater reserves after the North and South poles. Consequently, the study of the Arctic holds significant relevance for Indian scientists.
- **International Collaboration:** Participation in Arctic expeditions fosters collaboration with other Arctic nations and indigenous communities, promoting diplomatic ties and knowledge exchange. Norway, currently holding the chairmanship of the Arctic Council, maintains strong relations with India. Since the late 1980s, these two nations have partnered to study evolving conditions in both the Arctic and Antarctic regions.

#### Challenges in Arctic Expeditions-

- **Extreme weather conditions:** The Arctic region is characterised by extreme cold, high winds, and snowstorms. These harsh conditions can make it difficult for researchers to carry out their work, as they need to wear specialised clothing and equipment to protect themselves from freezing temperatures and harsh environment.
- **Limited resources:** Conducting research in the Arctic can be expensive due to the need for specialised equipment, transportation, and logistics. Additionally, the remote locations of some Arctic research stations can make it difficult to access essential supplies and resources.
- **Remote locations:** The Arctic region is vast and sparsely populated, with many research stations located in isolated areas. This can make it challenging for researchers to travel to and from the region, as well as to access essential resources and support.
- **Safety concerns:** The Arctic is known for its unpredictable weather, which can create dangerous conditions for researchers. Additionally, the remote locations of some research stations can make it difficult for rescue teams to reach stranded or injured scientists.
- **Multiple State Jurisdiction:** Due to the presence of multiple state jurisdictions in the Arctic, there is restricted availability of land for the establishment of autonomous research stations.
- **Logistical Challenges:** Transporting equipment, sup-

plies, and personnel to remote Arctic locations involves intricate planning and coordination. Limited transportation options, particularly during winter when sea routes may be impassable, add to the logistical complexity.

### Way Forward for India in the Arctic Region

- **Enhanced Scientific Research:** India can continue to invest in Arctic research initiatives, expanding its scientific footprint in areas such as climate change, biodiversity, oceanography, and glaciology. Collaborative research projects with Arctic nations can facilitate knowledge exchange and capacity building.
- **Strategic Partnerships:** India can forge strategic partnerships with Arctic countries, leveraging existing collaborations and exploring new avenues for cooperation in areas of mutual interest, such as climate resilience, sustainable development, and maritime security.
- **Infrastructure Development:** India can invest in the development of Arctic infrastructure, including research stations, icebreakers, and satellite monitoring systems, to support its scientific endeavours and ensure a sustained presence in the region.
- **Diplomatic Engagement:** India can actively engage in Arctic governance forums, such as the Arctic Council and the International Maritime Organization, to contribute its perspectives on Arctic issues and advocate for the interests of non-Arctic states.
- **Develop a long-term research plan:** India should develop a comprehensive long-term research plan for its Arctic research program, outlining specific objectives, timelines, and resource allocation. This plan should be regularly reviewed and updated to ensure that the country remains at the forefront of Arctic research.

### WATER CONSERVATION: MANAGEMENT AND PROMOTION



### Why in the News?

- Recently on March 22, 2024 'all over the world ' **world Water Day** "Celebrated.
- World Water Day, held annually on 22 March since 1993, is an annual day of the United Nations. The main objective of which is to focus on the importance of freshwater.
- The main objective of World Water Day is to spread or raise awareness about people living without access to

safe water.

- The main focus of World Water Day is to support the achievement of Sustainable Development Goal 6 and achieve the goal of providing clean water and sanitation for all by 2030.
- **The main theme of World Water Day 2024 is "Leveraging Water for Peace".**
- Recently India's Jal Shakti Ministry has launched an initiative to optimize rainwater harvesting and other sustainable water management systems. **'Jal Shakti Abhiyan: Catch the Rain – 2024 Campaign'** start on have done.
- India's Jal Shakti Minister Gajendra Singh Shekhawat launched the campaign in New Delhi and also underlined the important role of women in water management, conservation and sustainability.
- This program's theme was based on '**Water power through women power**' in India.
- In India, it was organized at the Convention Center of New Delhi Municipal Council, as part of the fifth edition of the campaign of the Ministry of Jal Shakti.
- **India 'Water power through women power'** The campaign seeks to establish a strong link between women empowerment and sustainable management of water resources.
- Among the main attractions of this event organized in India '**Jal Shakti Abhiyaan 2019 to 2023' – A public-led movement towards water security'** Screening of a documentary titled and two books – '**Jal Shakti Abhiyaan: 2019 to 2023'** and '**Champions of 101 Water Life Mission'** and '**Women Water Warriors'** The talks were also unveiled.
- According to a recently released report, India's Bengaluru city is in a serious water crisis, leading to significant shortages in various sectors.
- According to the report, 223 out of 236 taluks of Karnataka are affected by drought, including Mandya and Mysore districts, which are the water sources of Bengaluru.
- As summer heats up in India, about 7,082 villages across Karnataka are at risk of drinking water crisis in the coming months.

### History of World Water Day:

- The Environment and Development Conference held in Brazil in 1992, a proposal was passed on the topic of celebrating 'World Water Day' and availability of clean

water.

- Adopting this resolution in 1992, the United Nations General Assembly (UNGA) announced to celebrate 'World Water Day' on 22 March every year at the global level.
- Therefore, 'World Water Day' was celebrated for the first time in the year 1993.
- In 2010, the UN recognized the right to safe, clean drinking water and sanitation as a human right.
- The main objective of recognizing the right to safe, clean drinking water and sanitation as a human right is to focus people's attention on the global water crisis.



#### Importance of World Water Day:

- The main focus of World Water Day is to support the achievement of Sustainable Development Goal (SDG) 6.
- The main goal of celebrating World Water Day is to provide clean water and sanitation to all by 2030 at the global level.

#### Present Need for Water Conservation:



- According to the United Nations, 1.4 million people die every year from diseases caused by lack of sanitation, hygiene and clean water. About 25% of the world's

population lacks access to clean water, and almost half the global population lacks clean toilets. The global water situation is projected to increase by 55% by the year 2050.

- Water is extremely essential for everyday activities in human life. Proper use of water plays an important role in the management of freshwater reserves. An average person wastes up to 45 liters of water a day through his daily activities. Therefore, making a few changes in daily water usage can save a considerable amount of water for future use.
- More than 3 billion people around the world migrate to other countries due to water dependence.
- Only 24 countries worldwide have signed cooperation agreements for shared water use.
- Public health and prosperity, food and energy systems, economic productivity, and environmental integrity all depend on a managed water cycle.

#### Current Status of Management and Promotion for Water Conservation in India:



- At present, due to increasing demand for water in all areas and changing rainfall patterns, dependence on groundwater has increased. There is a great need to make concrete efforts with appropriate action for its proper management and sustainable use.
- According to the United Nations World Water Development Report 2022, groundwater accounts for approximately 99 percent of all liquid freshwater on Earth which has the potential to provide social, economic and environmental benefits to society.
- Groundwater accounts for about 50 percent of the total water used for domestic purposes, including drinking water.
- India's population is about 1.4 billion, which is the highest in the world. The population is expected to increase to 1.7 billion by 2050.

- According to the World Bank, India is home to 18 percent of the world's population, but has enough water resources for only about 4 percent of the people.
- Nearly 90 million in India do not have access to safe water. The normal annual rainfall of India is 1100 mm which is more than the world average rainfall of 700 mm.
- According to data released by the India Meteorological Department, the southwest monsoon during June-August 2023 has been below normal in 42 percent of the districts. In August 2023, rainfall in the country was 32 percent below normal and 62 percent below normal in the southern states.
- India received the least rainfall in August last year after 1901 i.e. in the last 122 years.
- Less rainfall in India will not only have a serious impact on Indian agriculture, but it can also lead to severe water shortage in various areas of the country.
- The net quantity of water that can be used in a year in India is estimated at 1,121 billion cubic meters (BCM). However, data published by the Water Resources Ministry shows that the total water demand will be 1,093 BCM in 2025 and 1,447 BCM in 2050. As a result, there is a possibility of a huge reduction in water availability in the next 10 years.
- India exploits groundwater the most in the world. This quantity is more than the combined exploitation of the world's second and third largest groundwater exploiters (China and the United States).
- According to the Falkenmark Water Index, about 76 percent of the people in India are already facing water shortage. Although in India only 8 percent of the extracted groundwater is used as drinking water. 80 percent of it is used in irrigation and the remaining 12 percent is used by industries.
- According to the NITI Aayog report, by the year 2030 the country's water demand will double the available supply.

#### **Solutions to be Taken to Overcome the Problem of Water Crisis in India and for Water Conservation:**

- There can be many remedial measures to reduce the water crisis and its over-exploitation in India. In which **some remedial measures are as follows –**
- Water consumption can be measured and limited using modern technologies like Artificial Intelligence, Remote Sensing etc.
- Expanding water sources, improving water efficiency,

and protecting water resources can improve water availability and quality in India.

- Technical measures like Buried Clay Pot Plantation Irrigation can also be used to overcome the water crisis in India and for water conservation which can save water and improve crop productivity.
- To overcome the water crisis in India and for water conservation, it is extremely important to improve the policies at the government level to conserve water resources and expand micro irrigation techniques to ensure accurate and correct consumption of water. Can go.
- Watershed management can prove to be a good option for water conservation and groundwater recharge in India.
- The main objective of development of water harvesting in India is to conserve every drop of rain water, control soil erosion, increase soil moisture and recharge, water harvesting per unit area and per unit water despite adversities of weather. Productivity has to be maximized.
- Special emphasis should be given to the traditional system of water conservation in India.
- In order for the rivers flowing in different areas of India to remain perennial, it is very important to make policies at the government level and make efforts for water conservation.
- It is extremely important to establish a water bank in each area along with creating a clear framework for water budgeting and water auditing in villages in rural areas of India.
- Groundwater scientists can play an important role in water conservation. Also, symposiums and seminars should be organized from time to time to bring awareness about water conservation in the society. In the present situation, for a permanent solution to this problem, everyone will have to make collective efforts for water conservation and promotion.

#### **Challenges Facing Water Management In India:**

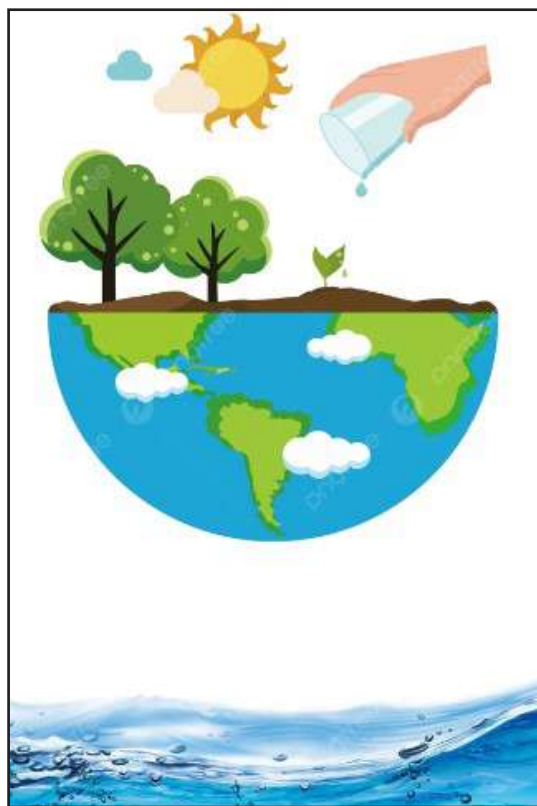
The following challenges exist before water management in India. Only by finding solutions to these challenges can India move forward in the direction of water conservation, management and promotion.

- To reduce the gap between demand and supply of water.
- Providing sufficient water for food production and balancing use among competing demands.

- To meet the growing demands of metros and other big cities.
- Treatment of wastewater.
- Sharing of water with neighboring countries and co-basin states etc.



**Conclusion / Path To Solution:**



- Bureaucratic, non-transparent and non-participatory approach still persists in the functioning of water governance institutions in India. Therefore, it cannot be denied that there is a need for improvement in the water administration of the country.
- It is necessary that reliable information and related data about natural disasters like drought and flood

are available to us as soon as possible so that they can be dealt with in time and possible damage can be reduced.

- It is necessary that important decisions regarding raising the ground water level and regulating ground water use are taken immediately.
- The condition of the rivers in the country remains pathetic and the efforts of the present government to make the river Ganga pollution free may not have achieved the expected success, therefore it is necessary to seriously consider the condition of the rivers in the country and to make them pollution free. For this, the above mentioned policies should be formulated.
- Water is the most valuable resource on earth and we have to protect it not only for ourselves but also for future generations.
- At present, when India as well as the entire world is facing water crisis, it is necessary to pay serious attention to this. There are policies related to water management or conservation in India, but the problem lies at the level of implementation of those policies.
- Therefore, the laxity in the implementation of policies should be removed and their better implementation should be ensured so that the biggest problem of water mismanagement in the country can be addressed.

**CLIMATE CHANGE AND THE NEED FOR WATER CONSERVATION AND PROMOTION**



**Why in the News?**

- According to the latest report released recently by the Central Water Commission, only 23 percent of the total water holding capacity is available in all the reservoirs of South India. This is nine percentage points less than the recurring decadal average, indicating the magnitude of the water crisis in India.
- Even before the latest report released by the Central Water Commission, South India had to face a water crisis in summer 2017. This year the water crisis is set to be different and worse due to some other reasons.
- 223 of Karnataka’s 236 taluks are affected by drought, including Mandya and Mysore districts, which are Bengaluru’s water sources.
- As summer heats up in India, around 7,082 villages across Karnataka are at risk of drinking water crisis in the coming months.

- India's monsoon is affected by various factors. One of the major factors of which is El Nino which has made the Indian monsoon more irregular.
- El Nino – occurred in the year 2014-16, but this phenomenon was so significant that it is one of the five strongest phenomena in the contemporary history of India.
- Due to the effect of El Nino in India, irregularities occur in the Indian monsoon.
- Due to climate change, after the record heat in the year 2023, the current heat situation is expected to get worse in 2024 also.
- Record-breaking heat could occur by 2026, the United Kingdom's Meteorological Office reports.
- Due to climate change, India's agricultural system, which is dependent on monsoon, will have to face more devastating effects. Therefore, the Government of India also needs to bring positive changes in the implementation of its sustainable development policies.
- Recently, 'World Water Day' was celebrated all over the world on 22 March 2024.
- World Water Day, held annually on 22 March since 1993, is an annual day of the United Nations. The main objective of which is to focus on the importance of freshwater.
- The main objective of World Water Day is to raise awareness about people living without access to safe water.
- Main topic or theme of World Water Day 2024 is "Le-veraging Water for Peace".
- Recently, India's Jal Shakti Ministry launched a program for rainwater harvesting and other sustainable water management systems by starting 'Jal Shakti Abhiyan: Catch the Rain – 2024 Campaign'.
- This program in India 'Water power through women power' was based on a theme. It was organized at the Convention Center of New Delhi Municipal Council, as part of the fifth edition of the campaign of the Ministry of Jal Shakti.
- The campaign 'Water power through women power' seeks to establish a strong link between women empowerment and sustainable management of water resources in India.
- In this program which was organized in India 'Jal Shakti Abhiyaan 2019 to 2023 – A public-led movement towards water security' screening of a documentary

titled and two books – **Talks by champions and women water warriors of 'Jal Shakti Abhiyan: 2019 to 2023' and '101 Jal Jeevan Mission'** was also unveiled.

#### History of World Water Day:

- A proposal was passed on the topic of celebrating the festival and availability of clean water in the Environment and Development Conference held in Brazil in 1992 'World Water Day'.
- The United Nations General Assembly (UNGA) adopted this resolution in 1992 and every year at the global level 'World Water Day' on 22 March 'announced to be celebrated.
- **Therefore, 'World Water Day' was celebrated for the first time in the year 1993.**
- The UN recognized the right to safe, clean drinking water and sanitation as a human right in 2010,.
- The main objective of recognizing the right to safe, clean drinking water and sanitation as a human right is to focus people's attention on the global water crisis.

#### Importance of World Water Day:

- The main goal of World Water Day is to support the achievement of Sustainable Development Goal (SDG) 6.
- The main goal of celebrating World Water Day is to provide clean water and sanitation to all by 2030 at the global level.

#### Why is There a Need for Water Conservation in the Present Times?

- According to the United Nations, 1.4 million people die every year from diseases caused by lack of sanitation, hygiene and clean water. About 25% of the world's population lacks access to clean water and almost half the global population lacks clean toilets. The global water scarcity is projected to increase by 55% by the year 2050.
- Water is extremely essential for everyday activities in human life. Proper use of water plays an important role in the management of freshwater reserves.
- On an average, a person wastes 45 liters of water a day through his daily activities. Therefore, making a few changes in daily water usage can save a considerable amount of water for future use.
- More than 3 billion people around the world migrate to other countries due to water dependence.
- Only 24 countries worldwide have signed cooperation

agreements for shared water use.

### Challenges For Water Management in India:

The following challenges exist before water management in India –

- To reduce the gap between demand and supply of water.
- Providing sufficient water for food production and balancing use among competing demands.
- To meet the growing demands of metros and other big cities.
- Treatment of wastewater.
- Sharing of water among neighboring countries as well as among the states.

### Way Forward:

- India is home to 18 percent of the world's population, but only about 4 percent of the people have access to adequate water resources.
- Nearly 90 million people in India do not have access to safe water. The normal annual rainfall of India is 1100 mm which is more than the world average rainfall of 700 mm.
- According to data released by the India Meteorological Department, the south-west monsoon has been below normal in 42 percent of the districts during June to August 2023. In August 2023, rainfall in the country was 32 percent below normal and 62 percent below normal in the southern states.
- India received the least rainfall in August last year after 1901 i.e. in the last 122 years.
- Less rainfall in India will not only have a serious impact on Indian agriculture, but it can also lead to severe water shortage in various areas of the country.
- The net quantity of water that can be used in a year in India is estimated at 1,121 billion cubic meters (BCM).
- Data published by the Water Resources Ministry shows that the total water demand will be 1,093 BCM in 2025 and 1,447 BCM in 2050. As a result, there is a possibility of a huge reduction in water availability in the next 10 years.
- India exploits groundwater the most in the world. This quantity is more than the combined exploitation of the world's second and third largest groundwater exploiters (China and the United States).

- According to the Falkenmark Water Index, about 76 percent of the people in India are already facing water shortage.
- According to a NITI Aayog report, by the year 2030 the country's water demand will double compared to the current available supply.
- Water consumption can be measured and limited using modern technologies like Artificial Intelligence, Remote Sensing etc.
- Expanding water sources, improving water efficiency, and protecting water resources can improve water availability and quality in India.
- Technological measures like buried clay pot plantation irrigation can also be used to overcome water crisis in India and for water conservation, thereby saving water and improving crop productivity.
- To overcome the water crisis in India and for water conservation, it is extremely important to improve policies at the government level to conserve water resources and expand micro irrigation techniques to ensure accurate and correct consumption of water. Can go.
- Watershed management can prove to be a good option for water conservation and groundwater recharge in India.
- The main objective of development of water harvesting in India is to conserve every drop of rain water, control soil erosion, increase soil moisture and recharge, water harvesting per unit area and per unit water despite adversities of weather. Productivity has to be maximized.
- Special emphasis should also be given to the traditional system of water conservation in India.
- In order for the rivers flowing in different areas of India to remain perennial, it is very important to make policies at the government level and make efforts for water conservation.
- It is extremely important to establish a water bank in each area along with creating a clear framework for water budgeting and water auditing in rural areas of India.
- In water conservation, symposiums and seminars should be organized from time to time with groundwater scientists to create awareness about water conservation in the society. In the present situation, for a permanent solution to this problem, everyone will have to make collective efforts for water conservation and promotion.
- Bureaucratic, non-transparent and non-participato-



ry approach still persists in the functioning of water governance institutions in India. Therefore, it cannot be denied that there is a need for improvement in the water administration of the country.

- It is necessary that reliable information and related data about natural disasters like drought and flood are available to us as soon as possible so that they can be dealt with in time and possible damage can be reduced. Therefore, important decisions regarding increasing the groundwater level and regulating groundwater use in India need to be taken urgently.
- The condition of rivers in the country is pathetic. Therefore, the condition of rivers can be seriously considered.
- There are policies related to water management or conservation in India, but the problem lies at the level of implementation of those policies. The laxity in the implementation of water conservation policies in India should be removed and better implementation should be ensured so that the biggest problem of water mismanagement in the country can be tackled.
- In low and middle income countries like India Climate change will have a more lethal impact by creating multiple crises simultaneously. While this process will change the way weather events co-evolve, it will also affect their frequency such that two events will be more likely to occur simultaneously than before – for example, drought and disease. outbreak, which will further worsen the socio-economic conditions of marginalized groups.
- Governments and policy makers need to keep in mind that other future crises may not just be due to climate change but will be connected to water.

### PM SOLAR ROOFTOP SCHEME



#### Why in the News?

- Recently, the Finance Minister of India, while presenting the interim budget in the Parliament on 1 February 2024, has announced the PM Solar Rooftop Scheme to promote solar energy in India.
- Under this scheme, up to 300 units of free electricity will be given every month to one crore families in India.
- The primary goal of this scheme is to make India self-re-

liant in the energy sector and reduce the electricity bills for the poor and middle class people of India.

- The government aims to promote the use of renewable energy and encourage widespread adoption of solar energy at the household level by reducing dependence on traditional energy sources.



#### Importance of Solar Energy in the Energy Sector in India:

- According to the International Energy Agency (IEA), India is expected to experience the largest energy demand growth globally in the next 30 years.
- A reliable and sustainable source of energy is important to meet the growing demand in the energy sector in India, which requires India to reduce its dependence on traditional sources of energy such as coal.
- Solar power has seen particularly significant growth in recent times, from 10 MW in 2010 to 70.10 GW in 2023.

#### Current Solar Energy Capacity of India:

- Currently, according to a report released by the Ministry of Renewable Energy, by December 2023, India's total solar capacity is about 73.31 gigawatt (GW), of which rooftop solar power contributes about 11.08 GW. ,
- In terms of solar power capacity in India, Rajasthan leads among all the states in India in terms of total rooftop solar power capacity (18.7 GW) while Gujarat tops in India in terms of total rooftop solar power capacity (2.8 GW). .
- Solar energy has an important place in India's total renewable energy capacity, which is about 180 GW.
- India has set a target of becoming completely self-reliant in the field of renewable energy by the year 2030, under which a target has been set to achieve 500 GW renewable energy capacity by 2030.

#### What is a Rooftop Solar Panel?

- Rooftop solar panels are installed on the roof of the

house. Solar plates are installed in these panels. This is a technology that produces electricity by absorbing energy from the sun's rays.

- Photovoltaic batteries are installed in its panels which convert solar energy into electricity.
- The electricity produced under solar energy also works the same as the electricity coming from the power grid.

#### PM Solar Rooftop Scheme:

- The PM Solar Rooftop Scheme was started in the year 2014. The scheme focuses on expanding the capacity to install rooftop solar in the residential sector.
- The main objective of this scheme is to provide financial assistance and incentives to solar power distribution companies (DISCOMs) at the central level.
- Under this program, a target has been set to achieve 40 GW rooftop solar installed capacity by March 2026.
- There has been significant progress in the PM Solar Rooftop Scheme in recent days. Under its plan, it has increased from 1.8 GW in March 2019 to 10.4 GW in November 2023.
- Under this scheme, any consumer in India can avail the benefits of this scheme through tender projects or national portal ([www.solarrooftop.gov.in](http://www.solarrooftop.gov.in)). The scheme empowers consumers to choose the vendor and solar equipment based on their preferences.
- Under this scheme, after the installation and inspection of solar plants, the subsidy given by the government is directly transferred to the bank accounts of the consumers.
- Consumers have been provided the right to export surplus solar power to the grid, while receiving monetary benefits as per the prevailing rules laid down by the State Electricity Regulatory Commissions (SERCs) or Joint Electricity Regulatory Commissions (JERCs).

#### Why is this Scheme so Important?

- The scheme will help India meet its commitment under the Paris Agreement to reduce its carbon emission intensity by 33-35% by 2030.
- Under this scheme, India will be helped in reducing its energy dependence on fossil fuels and becoming self-reliant in the energy sector.
- With the aim of also accelerating the social and economic development of India, this scheme can provide clean and affordable electricity to millions of homes in India.

- Along with this, access to energy can be ensured through renewable sources of energy, especially in rural and remote areas of India where access to the electricity grid is limited.

#### Important Features of PM Solar Rooftop Scheme:

- The main goal of this scheme is to target low and middle income households of India who can benefit through lower electricity bills and additional income from surplus power generation.
- Under this scheme, financial assistance will be provided in the form of subsidy, loan or incentive to those eligible families of India, depending on their category and location, whose homes have still not reached electricity or other sources of energy.
- Under this scheme, technical assistance will also be provided by the government in the installation, operation and maintenance of rooftop solar systems to people's homes in India.
- In India, the scheme will be implemented by the Ministry of New and Renewable Energy (MNRE) in collaboration with state governments, distribution companies, banks and other stakeholders.

#### Other Government Initiatives for Solar Energy:

1. Solar park scheme
2. Atal Jyoti Yojana (Ajay)
3. National Solar Mission
4. rishti Yojana
5. International Solar Alliance (ISA)

#### Challenges Existing in PM Solar Rooftop Scheme in India:

- Even after so many years of independence in India, there is a lack of awareness and knowledge among consumers about the benefits and processes of rooftop solar installation.
- This is due to the high upfront costs incurred under the scheme and the lack of easy financing options for consumers to invest in rooftop solar systems.
- There are a number of regulatory constraints and policy uncertainties in India with respect to net metering, grid connectivity, tariff structure, etc., which vary across states and regions in India.
- Poor quality of solar energy related equipment, technical issues like grid integration and management in its installation and its maintenance services etc. affect the performance of rooftop solar systems and its reliability

in India,

### Way Forward:



- Pradhan Mantri Suryodaya Yojana is a welcome initiative and a very important scheme of the government to promote rooftop solar in India.
- The scheme can also help India achieve its renewable energy targets and climate goals as well as enhance its energy security and social and economic development.
- At present many challenges exist in this scheme. Therefore, for successful implementation of this scheme, there is a need to find solutions to those challenges through effective implementation and coordination among various stakeholders.
- For successful implementation of the scheme in India, there is a need to increase awareness and reach among consumers through large scale media campaigns, workshops, exhibitions etc.
- It is extremely important to provide financial incentives and subsidies to consumers, especially low and middle income households, to reduce the upfront cost and payback period of rooftop solar systems.
- There is a need to streamline and harmonize the regulatory and policy framework across different states and regions of India to ensure uniformity, clarity and consistency for rooftop solar installation and operations.
- In India, there is a need to improve the technical standards and quality of services related to installation and maintenance of rooftop solar equipment, grid integration and management etc. under this scheme.
- There is also a need to ensure the safety, efficiency and sustainability of rooftop solar systems under the PM Solar Rooftop Scheme in India.
- India's domestic manufacturers should also be brought under strict quality scrutiny and should not have to compromise on input costs and quality merely on the basis of being nationalistic or indigenous.

- While the Indian solar industry should also become another high quality exporter, it should also not forget that the scheme in India is like a road with no easy destination and they have a long way to go, so that This scheme can be successfully implemented in India and every house in India can get freedom from darkness.

### INDIA METEOROLOGICAL DEPARTMENT: FUNCTIONS AND RESPONSIBILITIES

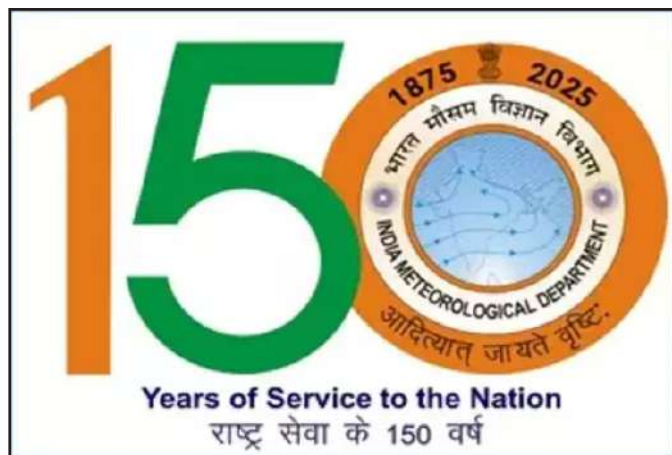


### Why in the News?



- Recently the India Meteorological Department (IMD) has released data related to an updated seasonal outlook for the summer season in India (April to June) 2024.
- India Meteorological Department has released the forecast for New Delhi weather related rainfall and temperature for April 2024. An updated seasonal outlook related data has also been released.
- India Meteorological Department (IMD) is completing 150 years of service in the history of scientific progress of our country. The beginning of meteorology in India can be traced back to ancient times.
- The history of meteorology in India is rich and spans many centuries. Meteorology, the study of the Earth's atmosphere and its phenomena, has played an important role in understanding weather patterns, predicting natural disasters, and supporting various sectors of the economy.
- India Meteorological Department (IMD) with the mandate of providing public meteorological services will complete 150 years of its establishment on 15 January 2025.

### Historical Development of Meteorological Services in India:

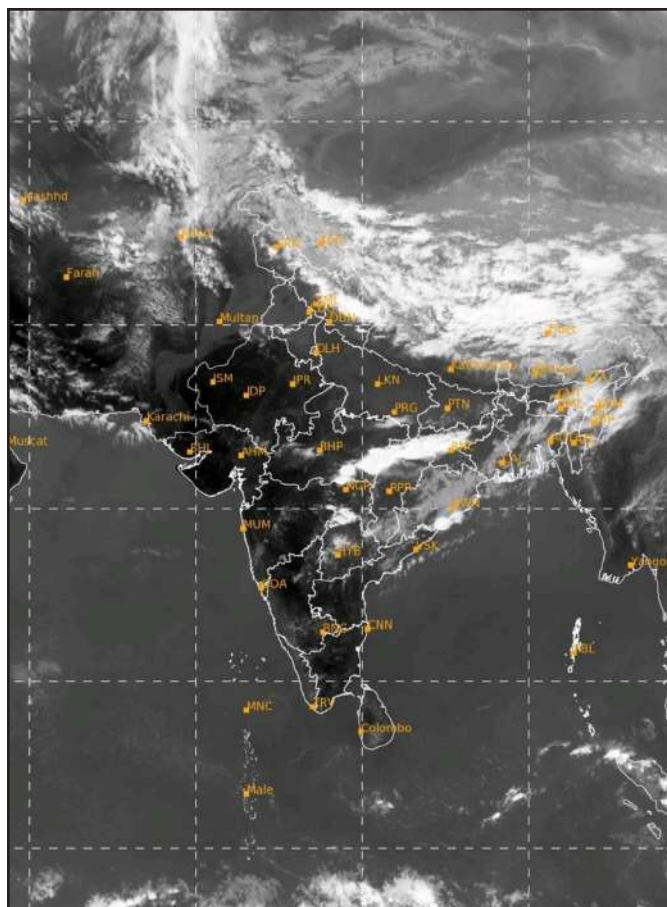


- There is evidence of serious discussions about the processes of cloud formation and rainfall and the seasonal cycles caused by the Earth's movement around the Sun in the early philosophical literature and Upanishads of India dating back to 3000 BC.
- Varahamihira's classical work, Brihatsamhita, written around 500 BCE. It was written in 1755, providing clear evidence that deep knowledge of atmospheric processes existed even at that time.
- Kautilya's Arthashastra Contains records of scientific measurement of rainfall and its application to the country's revenue and relief operations.
- Kalidasa's epic 'Meghdoot', written around the seventh century, also mentions the date of onset of monsoon in central India and also reveals the path of monsoon clouds.
- The British East India Company established observatories in various parts of India during the 17th and 18th centuries. These observatories focused on astronomical observations, including meteorological phenomena.
- British administrators and scientists conducted climatic studies to understand seasonal patterns in different regions of India. The Bombay Observatory, established in 1826, played an important role in early weather research.
- Some of the oldest meteorological observatories in the world still exist in India.
- The British East India Company established several stations to study the weather and climate of India, in Calcutta in 1785 and in Madras (now Chennai) in 1796.
- The Asiatic Society of Bengal, founded in Calcutta in

1784 and Bombay (now Mumbai) in 1804, promoted scientific study in meteorology in India.

- Captain Harry Piddington in Calcutta published 40 papers relating to tropical storms in the Journal of the Asiatic Society during 1835–1855 and coined the term "cyclone", meaning serpentine coil.
- In 1842 he published his monumental work on the "Laws of the Storms".
- In the first half of the 19th century, many observatories started functioning under the provincial governments in India.

### India Meteorological Department (IMD):



- It was established in the year 1875. It is the National Meteorological Service of the country and is the principal government agency for all matters relating to meteorology and allied subjects.
- All meteorological functions in the country were brought under one central authority, the India Meteorological Department.
- HF Blanford was appointed Weather Reporter to the Government of India.

- The first Director General of the India Meteorological Department in India was Sir John Eliot who was appointed to the Calcutta headquarters in May 1889.
- The headquarters of IMD was later shifted to Shimla, then to Poona (now Pune) and finally to New Delhi.
- Therefore, at present the headquarters of India Meteorological Department is located in New Delhi.
- IMD has expanded its network through a number of observatories across India to monitor and record weather conditions.
- The Indian Meteorological Department works under the Ministry of Earth Sciences (MoES).
- The Director General of the Meteorological Department is the head of this organization.
- At present there are 6 regional meteorological centers in India.
- Each Regional Meteorological Center is headed by a Deputy Director General, with headquarters at Mumbai, Chennai, New Delhi, Calcutta, Nagpur and Guwahati.
- The India Meteorological Department focuses on providing weather forecasts and warnings to support agriculture, shipping and other sectors in India.
- It has made significant efforts to understand the study of tropical cyclones in the Bay of Bengal.
- IMD has developed its capabilities for cyclone tracking and weather forecasting in India, which has now improved disaster-management preparedness in India.
- After India's independence, the IMD has also modernized itself by incorporating advanced technologies, weather radar, satellite imagery and computer models into its meteorological practices.
- IMD established Regional Meteorological Centers to increase the coverage of weather monitoring and forecasting services in different states of India.
- IMD expanded its services to provide specific agriculture, aviation and disaster management forecasts.
- In India, the role of IMD has now expanded beyond weather forecasting to climate monitoring and research.
- India became a member of the World Meteorological Organization (WMO) in 1948, which also facilitates international cooperation in research and data exchange in the Meteorological Department.

### Functions and Responsibilities of India Meteorological Department (IMD) :

- **Issuance of weather forecast** : IMD is responsible for issuing weather forecasts for short-term and extended periods for various regions of India. These forecasts are important for planning various activities including agriculture, external events and disaster response.
- **To provide specialized services for agricultural meteorology** : IMD provides specialized services to agriculture, including providing weather related advisories to Indian farmers. These advisories assist in crop planning, irrigation and pest management in India.
- **Providing climate information** : IMD provides information related to climate and its associated temperature patterns and rainfall in India. It contributes to climate studies and assessments, including the impacts of climate change.
- **Cyclone Tracking and Warning** : The IMD monitors and tracks tropical cyclones in the Bay of Bengal and the Arabian Sea. It issues warnings and advisories to the public, coastal authorities and disaster management agencies to minimize the impact of cyclones.
- **Providing information related to aviation services** : The IMD supports aviation operations by providing weather forecasts for airports across the country. This ensures safe take-off and landing during adverse weather conditions.
- **To provide information on meteorological research and development activities** : IMD is engaged in meteorological research and development activities. It constantly updates its technologies and methodology to increase the accuracy of weather forecasts and climate predictions.
- **Providing earthquake monitoring information** : IMD monitors seismic activities and provides earthquake related information. Earthquake monitoring forms a part of overall disaster management efforts in India.

### Major Initiatives Undertaken by India Meteorological Department :

The India Meteorological Department (IMD) operates a network of observatories to collect meteorological data, including surface weather stations, upper air observatories and coastal observatories. **Therefore, the major initiatives run by the Meteorological Department in India are as follows –**

1. **National Monsoon Mission (NMM)**
2. **Weather app**

## 3. Doppler weather radar

## 4. Meghdoot Agro

## 5. Damini Bijli

## 6. Enthusiasm

- India developed its remote sensing capabilities and launched satellites for weather monitoring, including the Indian National Satellite System (INSAT) and the Indian Meteorological Satellite Program (Kalpana, INSAT-3DR, etc.).
- India Meteorological Department (IMD) has launched the National Framework for Climate Services (NFCS) on its 150th anniversary. **Which are as follows –**
  - The goal of NFCS is to strengthen the production, availability, delivery and application of science-based climate monitoring and prediction services.
  - The NFCS is based on the Global Framework for Climate Services (GFCS) launched by the World Meteorological Organization (WMO).
  - NFCS will reduce climate risks to key sectors, namely disaster risk reduction, agriculture and food security, water resources, public health and energy.

**Conclusion / Way Forward :**

- The history of the Meteorological Department in India shows a gradual process of evolution from the early observations and observatories of the British period to the establishment of the modern and technologically

advanced Indian Meteorological Department.

- At present, the India Meteorological Department (IMD) plays an important role in providing weather forecasts, monitoring climate trends and contributing to international efforts in meteorological research.
- The continuous efforts by the India Meteorological Department in areas such as weather forecasting, climate monitoring and disaster management in India contribute significantly to the safety and welfare of the people.
- There is no requirement that polling stations give priority to cooling beyond the seating areas of officials.
- It has been suggested by many prominent politicians in India that the general elections in India should be held in the pleasant weather of February-March or October-November, but this discussion cools down as soon as the voting is over. There is a strong need to implement this now.
- Due to India's size and organizational challenges, the election process has seen innovation and measures such as multi-stage voting processes and EVMs have been adopted. With temperature records being broken every year and the links between heat waves, climate and health becoming ever more apparent, now is the time for the election process to consider creative ways to address this crisis.

**PRELIMS QUESTIONS****Q1. Consider the following statements regarding National Disaster Management Authority:**

- The President is the head of the National Disaster Management Authority in India.
- National Disaster Management Authority (NDMA) was established in 2005
- Disaster Management Act, 1999 provides the legal framework for the functioning of the National Disaster Management Authority in India

**How many of the above statements are correct?**

- Only one
- Only two
- All three
- None

**Q2. Consider the following statements:**

1. Forest rights can be asserted by individuals who have resided in the area for a minimum of two generations prior to the specified date.
2. The gram sabha holds the authority to commence the procedure for ascertaining the type and scope of forest rights.

**Which of the above statements is/are correct?**

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Q3. Which constitutional body in India is responsible for environmental impact assessment (EIA) of developmental projects?**

- (a) Ministry of Environment, Forest and Climate Change
- (b) National Green Tribunal
- (c) Pollution Control Boards
- (d) Central Pollution Control Board

**Q4. The Supreme Court has interpreted the right to life under Article 21 to include the right to a healthy environment in which landmark case?**

- (a) Kesavananda Bharati v. State of Kerala
- (b) Vishaka v. State of Rajasthan
- (c) Olga Tellis v. Bombay Municipal Corporation
- (d) M.C. Mehta v. Union of India

**Q5. Which of the following best describes a stratovolcano?**

- (a) A broad, gently sloping volcano formed by the eruption of low-viscosity lava flows.
- (b) A small, steep-sided cone composed of volcanic fragments ejected during explosive eruptions.
- (c) A tall, steep-sided volcano characterised by explosive eruptions of viscous magma.
- (d) A volcano formed by the accumulation of volcanic ash and debris around a central vent.

**Q6. Consider the following statements:**

1. Basic lava tends to have a lower content of Acidic lava
2. Tephra is the term used for the solidified remains of lava

flows and other volcanic material

3. The San Andreas Fault in California is an example of a Subduction zone

**How many of the statements given above are correct?**

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

**Q7. Consider the following statements about the Arctic Council:**

1. It is an intergovernmental body established in 1996 through the Ottawa Declaration.
2. India holds the Observer status in the Arctic Council.

**Choose the correct answer using the codes given below:**

- (a) 1 Only
- (b) 2 Only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Q8. CONSIDER THE FOLLOWING STATEMENTS REGARDING WATER CONSERVATION: MANAGEMENT AND PROMOTION.**

1. The main objective of World Water Day is to spread or raise awareness about people living without access to safe water.
2. 'Jal Shakti Abhiyan: Catch the Rain – 2024 Campaign' has been jointly launched by the Ministry of Human Resource and Development and Nehru Yuva Kendra in India.
3. Main topic/theme of World Water Day 2024 is "Leveraging Water for Peace".
4. Main theme of World Water Day 2024 Was "Water power through women power" in India.

**Which of the above statement/ statements is/are correct?**

- (a) Only 1, 2 and 3
- (b) Only 1 and 4
- (c) Only 2 and 4
- (d) Only 2, 3 and 4

**Q9. Consider the following statements regarding the PM Solar Rooftop Scheme.**

1. This scheme has a provision to provide up to 300 units of free electricity every month to one crore families in India.
2. This will help India become self-reliant in the energy sector by reducing its energy dependence on fossil fuels.
3. India has set a target of becoming completely self-reliant in the field of renewable energy by the year 2030.
4. This scheme is operated by the Ministry of Renewable Energy in India.

**Which of the above statement(s) is/are correct ?**

- (a) Only 1, 2 and 3
- (b) Only 2, 3 and 4
- (c) None of these.
- (d) All of the above.

**ANSWERS**

S. No.	Answers
1.	A
2.	A
3.	A
4.	D
5.	C
6.	A
7.	C
8.	D
9.	D

**MAINS QUESTIONS**

**Q1. Discuss the socio-economic impacts of forest fires on local communities in India. How do these events affect livelihoods, biodiversity, and ecosystem services, and what strategies can be employed to address these challenges?**

**Q2. Evaluate the guidelines outlined by the National Disaster Management Authority (NDMA) to address Glacial Lake Outburst Flood threats. How effective are these guidelines in enhancing disaster preparedness and resilience in vulnerable regions like Uttarakhand?**

**Q3. How can collaborative efforts between indigenous peoples and conservation organisations harness traditional knowledge to combat threats like deforestation and habitat degradation?**

**Q4. Discuss the concept of consumerism and its impact on environmental degradation, considering the relentless pursuit of material possessions and the consumption of resources beyond sustainable levels.**

**Q5. Analyse the role of hotspot volcanoes in the creation of island chains, such as the Hawaiian-Emperor seamount chain. How does the movement of tectonic plates over stationary hotspots lead to the sequential formation of volcanic islands?**

**Q6. "Discuss the significance of India's winter scientific expedition to the Arctic region and analyse the challenges associated with conducting research in extreme Arctic conditions."**

**Q7. Underlining the importance of World Water Day, discuss what is the importance of water conservation, management and promotion in India and describe the challenges coming in its way and suggest ways to solve the challenges?**

**Q9. What is the future of renewable energy in India? Discuss in detail the major challenges and their solutions for successful implementation of PM Solar Rooftop Scheme in India.**

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## INDIA'S BORDER INFRASTRUCTURE PUSH

### Why in the News?

In early March, Indian Prime Minister Narendra Modi inaugurated the Sela Tunnel in Arunachal Pradesh, close to the Sino-India border. This tunnel is crucial for strengthening India's defense at the Border region to counter China's aggression at the border.

PM Modi's visit in Arunachal Pradesh for the inauguration of Sela Tunnel was criticized by China which it claims as its eastern territory and part of Tibet.

China has developed state-of-the-art infrastructure across the Sino-Indian border as well as in the Tibetan Autonomous Region (TAR)



### About Sela Tunnel:

According to an Indian media report, the Sela tunnel project, including the tunnels — a main tunnel and an escape tunnel for emergency services — the approach and link roads is around 12 km.

It will reduce the distance between the strategically critical monastery town of Tawang and Dirang by 12 km and save around 90 minutes for travelers in each direction.

More importantly, the tunnel provides a huge relief from weather-related issues.

### Need for Building Border Infrastructure:

**Unfriendly neighbourhood-** India has tough relations on its northern frontier with China and Pakistan. There is also the possibility of a two-front war due to the increasing closeness between China and Pakistan.

**Hilly terrain-** The geography in the northern frontier includes Himalayan mountains and cold desert. Where it is highly difficult to mobilize army personnel.

**Chinese aggression-** China's **salami-slicing strategy**, which reflects an aggressive attitude towards neighbouring countries is visible in its border incursions in Ladakh's Galwan Valley, Doklam in Bhutan (an important strategic point for India).

**Neglected areas-** Many border regions especially in North-eastern frontier were neglected till the last decade. Chinese claim on the Arunachal Pradesh compels India to build strong border infrastructure.

**Strategic advantage-** As the world is getting more and more polarised considering the recent conflict in Ukraine and the Middle East, building a resilient border infrastructure is part of India's futuristic insight for its national security.

### Recent Initiatives for Building Border Infrastructure

**Bharatmala Project:** Launched in 2017, Bharatmala is a flagship road development program aimed at connecting major cities and economic corridors across the country. A significant portion of this project focuses on enhancing road connectivity in border areas to facilitate easier movement of goods and personnel.

**Vibrant village program:** Building hitherto neglected villages which are sparsely populated across border areas. It also aims to boost tourism and infrastructure development of these regions.

**Strategic Roads and Bridges:** There has been a concerted effort to construct strategic roads and bridges along India's borders, especially in regions prone to security challenges.

These roads and bridges not only improve accessibility for border security forces but also aid in faster deployment during emergencies.

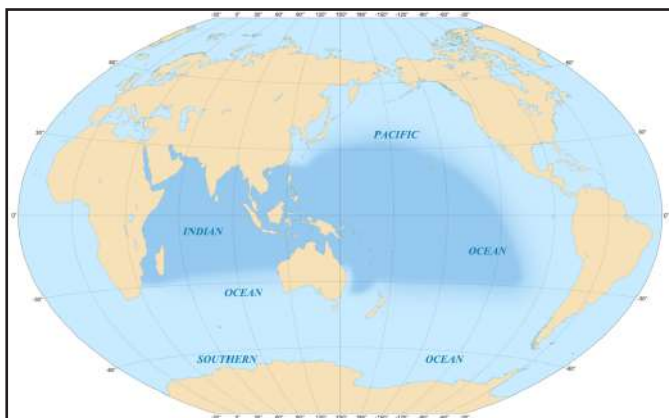
**Border Infrastructure Development Fund (BIDF):** The Border Infrastructure Development Fund was established to ensure systematic development of infrastructure along India's borders. It provides funding for the construction of roads, bridges, and other infrastructure projects in border areas.

**Integrated Check Posts (ICPs):** Integrated Check Posts have been set up at key border crossings to facilitate trade and commerce while ensuring security. These facilities provide customs clearance, immigration services, and other amenities to facilitate smoother movement of goods and people across the border.

**Strategic Railway Lines:** In addition to road infrastructure, there are plans to develop strategic railway lines along the border to enhance connectivity and logistics support for defence forces.

In the past, India has faced a loss of its territory to China due to neglect of its security architecture. India can no longer afford the same to happen again. That is why focussing on building border Infrastructure is a crucial strategic move for national security.

## INDIA'S CHANGING STRATEGIC GEOGRAPHY



There is a visible **shift in the power dynamics** from west to east especially after the belligerent rise of China, which is exercising its assertive foreign policy across the **Indo-Pacific**. China has been implementing its **String of Pearls** policy by establishing a network of ports and commercial and military outposts across numerous nations. China has used this tactic to safeguard its commercial interests because a significant portion of its trade goes via the Indian Ocean and several **choke points**, including the Strait of Hormuz,

the Strait of Malacca, and the Strait of Lombok.

Indian policymakers view Chinese strategy as its **strategic encirclement** and breach in its sphere of influence in South Asia and Indo-Pacific. In this context, India has to maneuver its foreign policy to tackle Chinese belligerent rise in South Asia.

India's engagement with the island nation in the Indo-Pacific is a reflection of this trend in changing foreign policy and a realisation of the importance of increasing its sphere of influence in the Indian Ocean region.

### Importance of the Indian Ocean Region for India

The Indian Ocean holds immense significance for India due to several reasons:

- **Trade and Connectivity:** The Indian Ocean serves as a vital maritime route, connecting various international economies. Approximately 90% of India's trade by volume and nearly all its oil imports are facilitated through sea routes. This underscores the region's critical role in maintaining global trade networks.
- **Resource Dependence:** India heavily relies on the resources of the Indian Ocean. These resources include fisheries, minerals, and other valuable marine assets. Sustainable utilisation of these resources is crucial for India's economic growth.
- **Energy Security:** The Indian Ocean acts as a major conduit for international energy trade. Oil tankers and liquefied natural gas (LNG) carriers navigate these waters, ensuring a steady supply of energy to India and other countries.
- **Security and Stability:** Ensuring security and stability in the Indian Ocean region is paramount. India actively participates in maritime security initiatives to counter piracy, terrorism, and other threats.
- **Geostrategic Position:** India's geographical location along the northern rim of the Indian Ocean grants it strategic advantages. It allows India to engage with neighbouring countries, foster diplomatic ties, and safeguard its interests.

### India's Recent Initiatives In Indian Ocean

India has taken several measures to increase cooperation in the Indian Ocean region:

- **SAGAR Initiative** 2015, India unveiled its strategic vision for the Indian Ocean, i.e. Security and Growth for All in the Region (SAGAR). It is an increasing recognition of the increasing importance of maritime security, maritime commons and cooperation.

- Joint development of **Agalega island** with Mauritius to boost strategic partnership in the Indian ocean region.
- Development of **Nicobar Island** as a transshipment terminal.
- India's role as **Net security provider** in the Indian ocean region, which was reflected when Indian navy safeguarded Pakistani fishing vehicles from pirates.
- India was actively engaged in various **humanitarian operations** such as disaster relief operations deploying personnel and resources to address the aftermath of events such as earthquakes and cyclones.
- **Medical diplomacy**— India through its vaccine 'Maytri' program delivered free vaccines to many countries in the Indo-pacific.
- **India's Necklace of Diamond policy**- The Necklace of Diamonds strategy is India's response to China's String of Pearls strategy, which involves expanding its military network and influence in the Indo-Pacific and Indian Ocean regions. The Necklace of Diamonds strategy involves encircling China by improving India's naval presence, expanding its military bases, and enhancing its relationships with other nations in the region.

Thus, the Indo-Pacific region is increasingly becoming an important focal point of India's foreign policy. In this respect, cooperation with small island nations in the indo pacific is strategically crucial for protecting national interest in changing geopolitics.

## YEAR OF TECHNOLOGY ABSORPTION



### Why in the News?

On Monday, The Chief of Army Staff extended his greetings on 76th Army Day. The Chief of Army Staff pointed out that the Indian Army will observe the year 2024 as the '**Year of Technology Absorption**' — a theme that underscores the Army's focus and efforts to leverage technology as a catalyst for transformative change.

"The character of warfare continues to change. To prepare ourselves for the future, we set into motion a holistic transformation process last year. We have made good progress, and many milestones have been achieved. Our capability development endeavours stand on the tower of Atmanirbharta, to which we are firmly committed. The transition towards becoming a modern, agile, adaptive and technology-enabled future-ready force shall continue as part of the Transformation Roadmap," He said.

### What is Technology Absorption?

Technology absorption refers to the process by which organizations acquire, assimilate, and effectively utilize new technologies to improve their products, services, processes, or capabilities. Technology absorption in the defence sector involves military organizations acquiring and integrating new technologies, such as weapons systems and communication networks, into their operations to improve their capabilities and effectiveness in national security. They integrate external technological knowledge, innovations, and practices into existing operations and systems to enhance performance, competitiveness, and efficiency.

### Disruptive Technology in the Defence Sector:

Disruptive technologies in the defence sector are innovations that significantly alter the way military organizations operate, fight wars, and maintain security. These technologies can potentially revolutionize military capabilities, strategies, and doctrines. Disruptive Technology plays a crucial role in Indian defence sectors.

### Disruptive Technologies Impacting the Defence Sector Include:

- **Artificial Intelligence (AI):** AI enables autonomous decision-making, predictive analytics, and unmanned systems in defence. It can analyze vast amounts of data, enhance situational awareness, optimize logistics, and support decision-making processes on the battlefield.
- **Autonomous Systems:** Autonomous systems such as unmanned aerial vehicles (UAVs), unmanned ground vehicles (UGVs), and unmanned maritime vehicles (UMVs) are revolutionizing warfare by performing military tasks such as reconnaissance, surveillance, logistics, and offensive operations with little human intervention.
- **Cyber Warfare and Cybersecurity:** The growing dependence on digital systems has made cybersecurity and cyber warfare essential in today's conflicts. Innovations like advanced encryption, quantum computing, and machine learning are vital for detecting and responding to cyber threats.
- **Directed Energy Weapons (DEWs):** DEWs, employing lasers or microwaves, can disable or destroy targets with advantages like instant targeting, precision, and cost-effectiveness over traditional weapons.
- **Space-Based Technologies:** Space-based technologies, such as satellites, are vital in modern warfare for various purposes, including communication, navigation, and surveillance. Innovations like small satellites and constellations enhance global battlefield awareness.

- **3D Printing/Additive Manufacturing:** Additive manufacturing technologies facilitate the quick creation and production of parts and military equipment, supporting decentralized manufacturing, lowering logistical challenges, and enabling customizing military gear.
- **Biotechnology and Bioengineering:** Advances in biotechnology and bioengineering can significantly impact defence by creating new materials, medical treatments, and enhancements for soldiers. These biologically inspired innovations offer the potential for improved battlefield protection, sustainability, and performance.
- **Quantum Technologies:** Quantum technologies can significantly enhance defence capabilities through faster problem-solving, quantum computing, and secure communication via unbreakable quantum cryptography.
- **Electromagnetic Railguns and Advanced Munitions:** Electromagnetic railguns launch projectiles at high speeds using electromagnetic forces, providing greater range, accuracy, and lethality than traditional artillery. They also use advanced guided munitions for precise targeting.

#### Here are Some Key Challenges in Technology Absorption in the Defence Sector:

- **Security Concerns:** The technologies must adhere to strict standards to protect data integrity, confidentiality, and availability. The challenge lies in adopting emerging technologies such as AI, IoT, and cloud computing without jeopardizing security.
- **Complex Procurement Processes:** The procurement process in the defence sector is lengthy and highly regulated. Bureaucratic hurdles, strict procurement guidelines, and lengthy approval cycles can delay the adoption of new technologies.
- **Human Capital and Training:** Adopting new technologies in the defence sector is limited by the shortage of skilled personnel and the high costs of training programs.
- **Cost Constraints:** Limited defence budgets and competing priorities make investing in and adopting new technologies challenging due to cost constraints.
- **Regulatory Compliance:** Defence organizations face challenges in ensuring new and emerging technologies comply with various domestic and international regulations and standards.

**Enhancing indigenous technology in the defence sector involves fostering domestic innovation, research, and development capabilities to create cutting-edge technologies**

**that meet the unique requirements of national defence. "Atmanirbhar Bharat (self-reliant India) is a policy initiative launched by the Government of India to foster economic growth, promote indigenous manufacturing, and reduce import dependency. Atmanirbhar Bharat plays a significant role in India's defence sector.**

#### Here's a Roadmap that India Could Follow to Enhance its Self-Reliance (Atmanirbhar) in Defence:

- Develop a comprehensive policy framework that prioritizes indigenous defence production and technology development. This framework should include clear objectives, targets, and timelines for self-reliance in critical defence technologies and capabilities.
- Increase investment in defence R&D to foster innovation and technology development. Establish dedicated R&D institutions, laboratories, and centres of excellence focused on defence technologies. Encourage collaboration between the public and private sectors, academia, and research institutions to drive innovation. India spends only 0.8% of its GDP on all R&D, which is very low compared to other developed countries.
- Provide incentives and support for domestic defence manufacturing companies to produce a wide range of defence equipment and systems within India. This could include tax incentives, subsidies, and access to finance. Streamline regulatory processes and create a conducive business environment to attract investment in defence manufacturing.
- Facilitate technology transfer and collaboration with foreign defence companies to acquire advanced technologies and expertise. Establish partnerships, joint ventures, and technology-sharing agreements with global defence firms to leverage their capabilities and strengthen indigenous defence production.
- Invest in skill development programs to build a skilled workforce supporting indigenous defence production and technology development. Establish specialized training institutes and apprenticeship programs to train personnel in designing, manufacturing, testing, and maintaining defence equipment.
- Simplify and expedite the defence procurement process to reduce delays and bureaucratic hurdles. Implement transparent and efficient procurement policies that prioritize domestically developed technologies and products. Encourage participation from domestic companies, including SMEs, in defence procurement initiatives.

#### Conclusion:

Successful technology absorption in the defence sector

requires a strategic approach, comprehensive risk management, investment in human capital, and collaboration with diverse stakeholders to leverage emerging technologies effectively and maintain technological superiority in an evolving threat landscape.

Atmanirbhar Bharat initiative aims to transform India into a global manufacturing hub and a self-reliant economy across various sectors, including defence. By promoting indigenous manufacturing, technology development, and innovation, India seeks to strengthen its defence capabilities, promote economic growth, and enhance its strategic autonomy on the world stage.

## INSURGENCY URGENCY

### Why in the News?

Recently, paramilitary and police forces dealt significant blows to the insurgents, resulting in the deaths of at least 29 Maoists in the Bastar region of Chhattisgarh. This marked the most significant loss of Maoist lives in a single operation within the Bastar region. The operation was conducted collaboratively by a team comprising the DRG (District Reserve Guards) and BSF (Border Security Force).

### Origin of Left-Wing Extremism

- The term “Naxalism” or “Naxalite movement” originates from Naxalbari and has since been used to describe various leftist extremist movements across India. Left-wing extremism (LWE) in India has its roots in various historical, socio-economic, and political factors. One of the primary origins can be traced back to the Naxalbari uprising of 1967 in the state of West Bengal.
- Over time, the movement spread to other states with significant rural poverty and tribal populations, such as Andhra Pradesh, Bihar, Chhattisgarh, Jharkhand, Odisha, and Maharashtra.

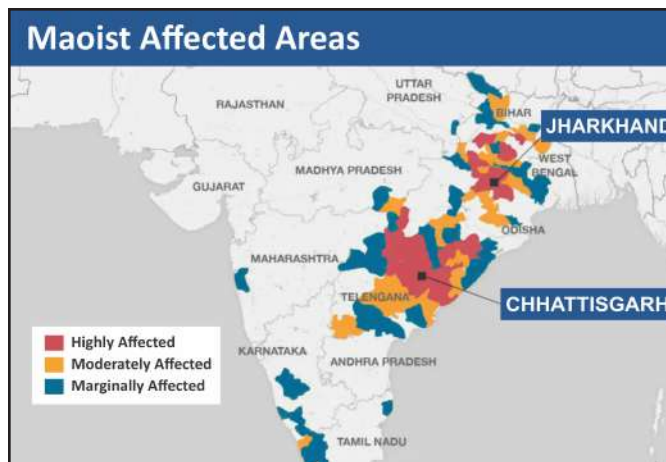
### Reasons Behind the Growth and Sustenance of LWE In India

- **Poverty and unemployment:** Poverty and unemployment are significant factors that contribute to the radicalization of individuals in affected regions. People from impoverished backgrounds often feel marginalized and exploited, leading them to seek alternative means of survival, such as joining LWE groups.
- **Political grievances:** The lack of political representation and voice for marginalized communities in some regions has led to feelings of alienation and resentment. This can result in the formation of LWE groups

that promise to fight for the rights and aspirations of these communities.

- **Social exclusion:** Social exclusion due to caste, religion, or ethnicity can also contribute to the formation of LWE groups. People who feel socially excluded often seek to establish their dominance by engaging in violence and creating fear among the local population.
- **4. Failure of governance:** Inadequate governance, corruption, and the inability of the state to address socio-economic disparities have led to disillusionment and alienation, particularly among tribal and rural communities.
- **Influence of global terrorism:** The rise of global terrorism and extremist ideologies has had a significant impact on the formation of LWE groups in India. The spread of extremist ideologies through the internet, recruitment by terrorist organizations, and the flow of funds and arms from neighboring countries have all contributed to the growth of LWE groups.
- **Development deficit:** In some remote and underdeveloped areas, the government’s inability to provide basic services like education, healthcare, and infrastructure development has led to a sense of hopelessness among the local population. This can result in the formation of LWE groups that promise to bring change and development to these areas.

### Current Situation of Insurgency in India



- As per the Ministry of Home Affairs, LWE impacts 90 districts across 10 states to differing extents. These states include Andhra Pradesh, Bihar, Chhattisgarh, Jharkhand, Kerala, Madhya Pradesh, Maharashtra, Odisha, Telangana, and West Bengal. Among these, Chhattisgarh, Jharkhand, Odisha, and Bihar bear the brunt of LWE activity, with these groups exhibiting significant influence and regularly engaging in assaults on both security personnel and civilians.

- From 2004 to 2022, a total of 8625 individuals lost their lives due to LWE activities in various regions of India. The victims predominantly consist of tribal civilians who are frequently labeled as 'Police informers' before undergoing severe torture and ultimately being killed.

### Initiatives Taken by Government

#### Infrastructure Initiatives-

- **Road Requirement Plan-I (RRP-I) for LWE affected areas:** The Ministry of Road Transport & Highways is executing this initiative to enhance road connectivity in 34 districts affected by LWE across 8 states: Andhra Pradesh, Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Maharashtra, Odisha, and Uttar Pradesh. The scheme aims to construct a total of 5,362 km of roads in these affected states, with 5,136 km of roads already completed.
- **LWE Mobile Tower Project:** In order to enhance mobile connectivity in regions affected by LWE, the government sanctioned the installation of mobile towers in affected states on 20.08.2014.
- **Aspirational District:** The Ministry of Home Affairs has been assigned the responsibility of overseeing the Aspirational Districts program in 35 districts affected by LWE.

#### Development Initiatives

- **Integrated Tribal Development Programme:** The government has initiated several programs such as the Integrated Tribal Development Programme (ITDP) and Pradhan Mantri Gram Sadak Yojana (PMGSY) to enhance infrastructure, create livelihood opportunities, and fulfill fundamental requirements such as education and healthcare in regions affected by LWE.
- **Skill development initiatives:** The government offers training in skill development to young individuals residing in LWE-affected regions with the goal of enhancing their employability and diminishing their susceptibility to recruitment by Naxalite groups.
- **Encouragement of sustainable livelihoods:** Programs such as Van Dhan Vikas Kendras and MGNREGA are designed to foster sustainable livelihood options for tribal communities through activities based in forests and rural employment opportunities.

#### Security Initiatives

- **Scheme of Fortified Police stations:** As part of the initiative, 400 Fortified Police Stations have been built across 10 states affected by LWE. In total, 604 Fortified Police Stations have been established in these areas.

- **Smart Police:** It is an acronym for **Strategic Management & Alternative Response Tactics**, entails the utilization of data-driven strategies by law enforcement agencies. Its objective is to enhance the effectiveness and precision of policing through the analysis of diverse data sources like crime statistics, public input, and social media. This approach informs decision-making processes and resource distribution, ultimately aiming to elevate the quality and efficiency of law enforcement efforts.
- **Creation of specialized task forces:** Dedicated units such as Cobra Commandos and Greyhounds have been formed to conduct precise operations targeting Naxalite leaders and hideouts.

#### Way Forward

- **Intelligence gathering and surveillance:** The government should invest in robust intelligence gathering and surveillance systems to monitor the activities of insurgents, gather information about their plans, and identify potential threats.
- **Community engagement:** The government should work with local communities to build trust and support. This can include implementing social programs, such as education, healthcare, and infrastructure development, to improve the living conditions of the population.
- **Counter-narrative strategy:** The government should work to counter the insurgents' propaganda and messaging by developing a communication strategy that promotes positive narratives and values. This can include working with media outlets, influencers, and community leaders to spread information that highlights the benefits of peace and stability.
- **Disarmament and reintegration:** The government should implement programs to disarm and demobilize insurgents, offering them opportunities for reintegration into society.
- **Long-term peacebuilding:** The government should work towards building long-term peace and reconciliation in areas affected by insurgency. This can include supporting local initiatives that promote dialogue, tolerance, and understanding between different communities, as well as fostering economic and social development to reduce the appeal of insurgency.

### PRELIMS QUESTIONS

- Q1. Which of the following weapons in Indian defence are indigenously developed?**

1. Pinaka Multi barrel rocket launchers.
2. ALH Dhruv choppers
3. Arjun tanks

Choose the correct answer using the code given below—


- (a) Only one
- (b) Only two
- (c) All three
- (d) None

### ANSWER


S. No.	Answers
1.	C

### MAINS QUESTIONS

**Q1. How can India become self-reliant (Atmanirbhar) in the defence sector? Critically examine the challenges of emerging technology in the defence sector.**



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## 900-YEAR-OLD CHALUKYAN INSCRIPTION DISCOVERED IN TELANGANA

### Why in the News?

- A Kannada inscription dating back 900 years from the Kalyana Chalukya dynasty has been unearthed in Gangapuram, a temple town situated in the Jadcherla mandal of Mahabubnagar, Telangana.
- The inscription, dated June 8, 1134 CE (Friday), was authorised by the Customs Officers of Tailapa-III, the son of Kalyana Chalukya Emperor 'Bhulokamalla' Someswara-III.
- It documents the exemption of toll taxes for the maintenance of the perpetual lamp and incense offerings at the temple of God Somanatha.

### About Chalukyas

#### Rise of the Chalukyan Empire

- The Chalukyas emerged as a dominant force in the 6th century CE, establishing their capital at Badami in present-day Karnataka.
- Pulakeshin I, the dynasty's founder, led a period of expansion, defeating neighbouring kingdoms like the Kadambas and Mauryas.
- Pulakeshin II, a renowned ruler, further solidified their power through conquests and alliances. Under his reign, the empire reached its zenith, encompassing vast territories across South and Central India.

#### Different Branches of the Dynasty

The Chalukya Empire eventually divided into distinct branches:

- **Badami Chalukyas:** Renowned for their artistic and architectural achievements, they ruled from Badami.
- **Western Chalukyas:** Based in Kalyani, they continued

their predecessors' legacy, dominating parts of Karnataka and Maharashtra.

- **Eastern Chalukyas:** Carving out their own kingdom in Vengi (Andhra Pradesh), they played a significant role in South Indian politics.

#### Faith and Art

- The Chalukyas were patrons of a rich cultural environment.
- While Hinduism flourished under their rule, with magnificent temples dedicated to various deities built, they also displayed religious tolerance.
- Jainism and Buddhism received support, leading to the construction of impressive caves and monasteries.

#### Administration of Chalukyas

##### Divisions and Revenue Collection

The vast Chalukyan Empire relied on a well-structured administrative system to maintain order and ensure a steady flow of income. The **empire was divided into smaller units called Rashtras or Mandalas**, each governed by a local administrator known as a **Mandaleshwara**. This ensured efficient local governance and responsiveness to the needs of the people.

##### Hierarchical Structure

For larger regions, the Chalukyas appointed **provincial governors called Rashtrakutas**. These governors **oversaw multiple Mandalas and reported directly to the king**, providing a centralised control mechanism. This hierarchical structure ensured **efficient communication and a clear chain of command**.

##### Land Revenue

**Land revenue was the primary source of income** for the Chalukyan Empire. The empire had a sophisticated system of land measurement and taxation. This **system ensured that taxes were levied fairly and accurately**, generating a consistent revenue stream to support the empire's infrastructure, military, and cultural endeavours.



## Decline of the Empire

- From the 12th century onwards, the Chalukya Empire faced internal conflicts, dynastic rivalries, and external threats, leading to its gradual decline.
- The Western Chalukyas succumbed to the Cholas in the 12th century, while the Eastern Chalukyas continued ruling in Vengi until the 13th century.
- They established an efficient administrative structure with well-defined divisions and a sophisticated revenue system.



## Architectural Marvels

- **Chalukyan temples** stand as testaments to their artistic brilliance, characterised by a unique blend of Dravidian and Nagara styles (known as the 'Gadag Style').
- The **Virupaksha Temple at Pattadakal**, a **UNESCO World Heritage Site**, exemplifies this style with its intricate carvings and towering gopurams.
- Similarly, the **Durga Temple at Aihole** showcases ornate pillars and sculpted panels depicting Hindu deities and mythological scenes.

## Literature and Art Forms

- The Chalukya era witnessed a flourishing of literature and classical dance forms.
- Pampa, a court poet, composed the epic poem "Vikramajuna Vijaya" in Kannada.
- Sculptures suggest the development of Bharatanatyam during this period.
- Ranna, another prominent poet, celebrated Jain figures in his poem "Ajita Tirthankara Purana."

## ASI TO DELIST 18 PROTECTED MONUMENTS

### Why in the News?

The Archaeological Survey of India (ASI) has chosen to remove 18 centrally protected monuments from its list, determining that they lack national significance. These 18 monuments were previously categorised by the ASI as untraceable on an earlier list.

### Delisting of Monuments

- The Archaeological Survey of India (ASI), operating **under the Union Ministry of Culture**, holds responsibility for safeguarding and preserving specific monuments and archaeological sites deemed of national significance.
- This **duty is outlined in The Ancient Monuments Preservation Act of 1904** and The Ancient Monuments and Archaeological Sites and Remains Act 1958 (**AMASR Act**).
- Delisting a monument entails its exclusion from ASI's conservation, protection, and maintenance efforts. **According to the AMASR Act, construction-related activities are prohibited around protected sites.** Once delisted, the area becomes open to regular construction and urbanisation endeavours.
- The list of protected monuments undergoes changes through additions and removals. **Presently, ASI oversees 3,693 monuments**, which will decrease to 3,675 after the ongoing delisting process concludes in the coming weeks. This marks the first significant delisting endeavour in several decades.
- According to **Section 35 of the AMASR Act**, if the **Central Government deems that any ancient or historical monument** or archaeological site and remains previously declared as nationally significant **no longer holds such importance, it reserves the right to declare through official notification in the Official Gazette that the said monument or site has ceased to be of national importance** for the purposes outlined in the AMASR Act.

### Rationale Behind Delisting

The rationale behind delisting stems from two primary challenges:

- **Enigma of Untraceable Monuments:** Over time, some monuments, particularly smaller or lesser-known ones, have vanished due to the relentless march of urbani-

sation, neglect, or the construction of dams and reservoirs. In some cases, the precise location or current state of these monuments remains a mystery, making preservation efforts impractical.

- **Haunting Absence of Missing Monuments:** A report from the Ministry of Culture submitted in December 2022 painted a concerning picture. It revealed that a staggering 50 of India's 3,693 centrally protected monuments were missing. This highlights the immense challenges faced in safeguarding historical sites across the vast expanse of the country.

### Development Vs. Preservation

- The delisting exercise, however, has triggered concerns that extend far beyond mere numbers. Critics argue that delisting signifies a potential loss of irreplaceable historical treasures. These monuments, even the smaller ones, represent invaluable threads in the tapestry of India's rich heritage. Losing them would be akin to erasing a part of the nation's collective memory.
- The delisting exercise also underscores the ongoing tension between development and heritage conservation. As India strides towards progress, infrastructure needs and rapid urbanisation often create pressure on historical sites. Striking a harmonious balance between these competing priorities remains a complex challenge.

### Charting a Course for the Future: Beyond Delisting

The delisting exercise serves as a stark reminder of the multifaceted challenges in safeguarding India's cultural heritage. To navigate this complex landscape effectively, a multi-pronged approach is necessary:

- **Strengthening Documentation:** Creating and maintaining comprehensive records of monuments, including their location, historical significance, and current condition, is crucial. Robust documentation can aid in better tracking and protection of these historical treasures.
- **Resource Allocation:** Preserving historical sites requires adequate funding for security personnel, conservation efforts, and restoration projects. Prioritising budgetary allocation for ASI's activities is essential for safeguarding these irreplaceable monuments.
- **Public Awareness and Community Engagement:** Raising public awareness about the importance of preserving cultural heritage is vital. Fostering a sense of community ownership and encouraging public participation in protecting historical sites can create a powerful bulwark against neglect and destruction.

### About Ancient Monuments and Archaeological Sites and Remains Act, 1958 (Amasr Act)

- **Preserves Historical Sites:** The AMASR Act aims to protect ancient and historical monuments, archaeological sites, and remains considered nationally important.
- **Regulates Archaeological Activities:** The Act regulates archaeological excavations to ensure responsible exploration and preservation of historical artefacts.
- **Protects Sculptures and Artefacts:** It safeguards sculptures, carvings, and other objects of historical significance.
- **Establishes ASI as Custodian:** The Act establishes the Archaeological Survey of India (ASI) as the official custodian responsible for managing and maintaining protected monuments.
- **Limits Construction Around Monuments:** To prevent damage from development activities, the Act prohibits construction within a 100-metre radius of protected monuments (known as the "prohibited area"). This restriction applies even to public works projects, with limited exceptions.
- **Safeguarding Iconic Monuments:** The AMASR Act provides protection to iconic Indian monuments like the Taj Mahal, Ajanta Caves, Sanchi Stupa, and Konark Sun Temple.

### 6 SITES OF MP ADDED TO THE TENTATIVE UNESCO LIST OF WORLD HERITAGE SITES

#### Why in the News?

Recently, six new sites from Madhya Pradesh have been added to the Tentative UNESCO list of World Heritage Sites (WHS).

#### Significant Features of the Selected 6 Sites

##### 1. Historical Group of Dhamnar

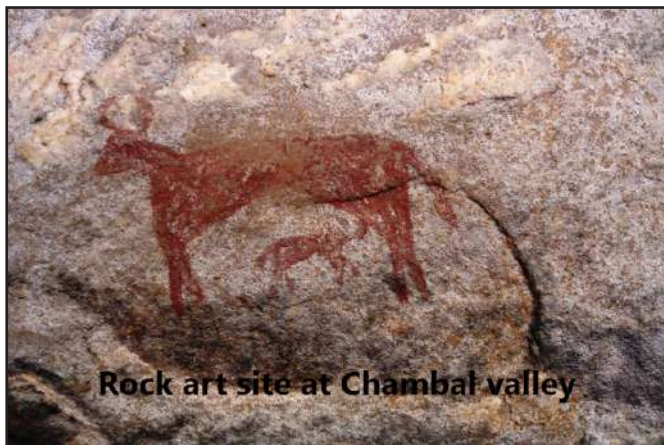
- The Historical Group of Dhamnar boasts a remarkable **collection of 51 caves, stupas, and dwellings**. Dating back to the 7th century AD, this site offers a glimpse into India's rich Buddhist heritage.
- A true centrepiece is the **colossal statue of Gautam Buddha in a peaceful reclining posture (nirvana pose)**. This awe-inspiring figure is just one of the many treasures found at Dhamnar.
- The significance of Dhamnar extends beyond its size. The northern caves, particularly **Bari Kacheri and Bhi-**

**ma Bazar**, stand out for their historical importance and architectural beauty.

- Interestingly, the site's modern name, Dhamnar, might have Shaivite roots. Some believe it stems from the term "**Dharmanatha**," which hints at the region's **diverse cultural influences**. While its historical name was Chandananagari-mahavihara, Dhamnar's current name reflects its enduring legacy.

## 2. Rock Art Sites of Chambal Valley

- The Chambal Valley is renowned for **hosting the largest concentration of rock art sites** globally, offering a captivating glimpse into ancient human life and cultural progression.
- These sites spread across Madhya Pradesh, Rajasthan, and Uttar Pradesh, portray scenes from diverse historical epochs and civilisations. Notable locations such as Bhimlat Mahadev, Chaturbhuj Nath Nala, and Garadia Mahadev contribute significantly to the region's rich rock art heritage.
- **Flourishing amidst the hilly terrain of the Vindhyan, Satpura, and Kaimur ranges**, this artistic expression seamlessly integrates with the surrounding natural landscape.



Rock art site at Chambal valley

## 3. Gond Memorial of Ramnagar

- The Gond Memorial in Ramnagar, Mandla, serves as a tribute to the esteemed cultural heritage of the Gond tribe, which is historically significant in the Central Provinces of India.
- **Comprising structures like Moti Mahal, Raibhagat ki Kothi, Suraj Mandir, Begum Mahal, and Dalbadal Mahal**, this collection embodies the architectural and historical richness of the area.
- Located at the heart of what was formerly recognised as Gondwana, the site provides insight into the diverse cultural heritage of India, spanning present-day Mad-

hya Pradesh, Chhattisgarh, and Maharashtra.

## 4. Burhanpur Khooni Bhandara

- Burhanpur's Khooni Bhandara stands as a fascinating **example of ancient water management systems** comprising eight subterranean water structures. **Constructed under the supervision of Abdurrahim Khankhana using the Persian Qanat technique**, this engineering marvel played a crucial role in sustaining the historical city.
- During the Mughal period, advancements like Persian Qanats were introduced to India, showcasing the cultural interchange and innovative engineering methods of that era. The **distinct mineral-rich water, tinted with a reddish hue, earned the name "khooni" (bloody)**, adding to the site's intrigue and historical importance.

## 5. Bhojeshwar Mahadev Temple

- Built under the patronage of Raja Bhoj during the 11th century, the Bhojeshwar Mahadev Temple serves as a symbol of ancient architectural excellence and reverence for Lord Shiva.
- Its magnificence is evident not just in its colossal Linga crafted from a single rock but also in its elaborate engravings and statues. The temple embodies the Bhumi-ja architectural style, which is marked by its towering shikhara and intricate adornments, incorporating elements influenced by the Dravidian architectural tradition.



Bhojeshwar Mahadev temple

## 6. Gwalior Fort

- Situated atop a hill, Gwalior Fort is famed not just for its imposing fortifications but also for offering awe-inspiring panoramic vistas of the surrounding city. Historical records attribute the fort's origins to the 6th century AD, credited to the Rajput warrior Suraj Sen.
- Throughout its existence, Gwalior Fort has witnessed a turbulent history marked by invasions, reconstructions,

and shifts in governance. Among its notable features are ancient temples like Teli ka Mandir, Chaturbhuj Temple, Sas Bahu Temples, and the Gurdwara Data Bandi Chhor, all contributing to its cultural significance.

- References in ancient Sanskrit inscriptions such as Gopachala or Gopagiri highlight its strategic perch atop basalt rock hills.

**PRELIMS QUESTION**

**Q1. Consider the following statements:**

1. Ranna, a prominent Chalukyan poet, composed the epic poem "Vikramarjuna Vijaya".
2. Rashtrakutas governed the administrative units known as 'Mandalas' in the Chalukyan Empire.
3. The Western Chalukyas were based on Kalyani

**How many of the statements above are NOT correct?**

- (a) Only one
- (b) Only two
- (c) All three

(d) None

**ANSWER**

S. No.	Answers
1.	A

**MAINS QUESTIONS**

**Q1. In what ways do monuments provide insights into the socio-economic structures, religious beliefs, and political systems of ancient civilisations?**

**Q2. What are the potential economic repercussions of neglecting or failing to adequately preserve historically significant monuments, both in terms of tourism revenue and broader economic development?**

**Q3. Discuss the architectural innovations introduced by the Chalukyas and their significance in shaping the temple architecture of Southern India during their era.**

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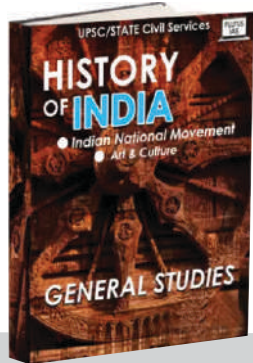
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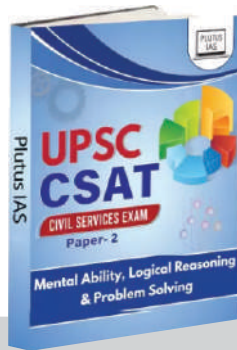
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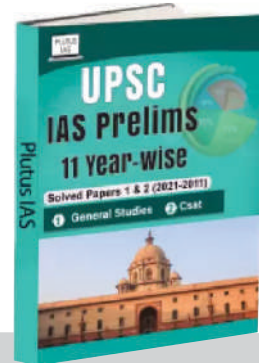
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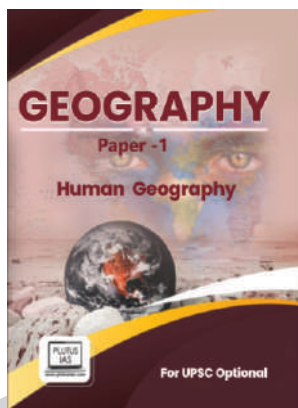


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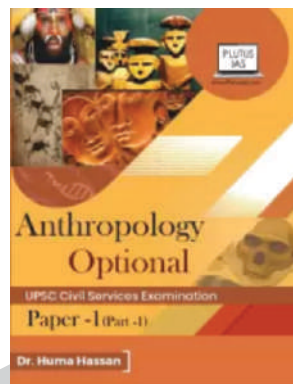


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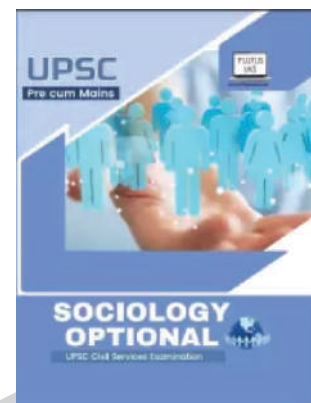
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