

# INSIGHTSIAS

SIMPLIFYING IAS EXAM PREPARATION

## MINI-MOON

EARTH WILL TEMPORARILY CAPTURE A SMALL ASTEROID NAMED 2024 PT5, WHICH WILL STAY FOR TWO MONTHS BEFORE MOVING BACK INTO SPACE.



16 SEP - 21 SEP 2024

# WEEKLY CURRENT AFFAIRS

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## GENERAL STUDIES - 1

Topics: [Women and women related issues.](#)

### 1. ADDRESSING GENDER DISCRIMINATION

#### Context:

Vice-President highlighted the need to change **the male mindset and address subtle gender discrimination**.

#### Key points highlighted by VC:

1. **Need for male mindset** change for gender justice.
2. **Subtle gender discrimination** is dangerous.
3. **Women's reservation** in Parliament is historic.
4. Shift from **"women-development" to "women-led development"**.
5. Highlighted initiatives like **Beti Padhao and Mudra for empowerment**.
6. Encouraged women to break the **"glass ceiling."**
7. Education is key to achieving **gender equality**.

#### What is Subtle gender discrimination?

**Subtle gender discrimination** refers to **indirect, often unnoticed, and less obvious forms** of bias against gender, typically women. Unlike overt discrimination, it is harder to detect and may appear as normal behaviour or attitudes but reinforces inequality.

**Example:** A workplace may have **equal hiring policies for men and women**, but women are often overlooked for leadership roles because they are perceived **as "less assertive" or "too emotional,"** even though no explicit statements are made against them. This type of discrimination isn't openly hostile but still undermines equality.

#### Other examples of "Subtle Gender Discrimination":

1. **Compliments that Reinforce Stereotyping:** Positive remarks that reinforce traditional gender roles, like praising a woman for being nurturing, can undermine her professional abilities.
2. **Microaggressions:** Small comments that reinforce gender stereotypes, such as suggesting women are less dedicated to their careers due to family obligations.
3. **Work-Life Balance Assumptions:** Societal expectations around caregiving can lead to assumptions that women need more flexibility or aren't as career-focused as men.
4. **Interrupting Women More Often:** Women are more likely to be interrupted or talked over in meetings compared to their male counterparts.
5. **Tokenism:** Including a woman in a team or project just to check a diversity box without valuing her input or expertise.
6. **Dress Code Expectations:** Imposing stricter or different dress codes on women that focus on appearance rather than professionalism.
7. **Attributing Success to Luck:** When a woman achieves something significant, her success may be attributed to luck rather than skill or effort.

#### India's Rank on Gender Development:

In the **UNDP Human Development Report 2023-24**, India ranks **108th out of 193 countries** on the Gender Inequality Index (GII) 2022 with a score of **0.437**. The GII measures gender inequality in reproductive health, empowerment, and labor market participation, with values ranging from 0 (equality) to 1 (extreme inequality). **India's improved rank from 122nd in 2021** reflects ongoing progress in gender equality over the past decade.

#### Steps Taken to Curb Gender Discrimination:

1. Equal Remuneration Act (1976): Aims to reduce wage gaps.
2. Beti Bachao Beti Padhao: Educates against gender bias and improves welfare services.
3. PMEGP: Supports women in starting their own businesses.
4. Mission Shakti: Provides safety, security, and empowerment for women.

### Addressing Subtle Gender Discrimination:

1. **Blind Evaluation:** Conceal physical attributes in job applications.
2. **Inclusive Culture:** Foster a workplace that values all input, regardless of gender.
3. **Unconscious Bias Assessment:** Use surveys, language analysis, and pay gap evaluations.
4. **Male Mindset Change:** Implement wider gender sensitization efforts.

### About the National Commission for Women (NCW):

It is a **statutory body established under the National Commission for Women Act, 1990** in India. Its mandate is to safeguard and promote the rights and interests of women, address gender-based discrimination, and ensure their empowerment.

### Role and challenges faced by the National Commission for Women (NCW) in India:

Role of NCW	Examples
Advancing Women's Rights and Awareness	<b>Raising Awareness:</b> Workshops in rural areas on gender-based violence. <b>Advocating for Policy Changes:</b> Support for the Protection of Women from Domestic Violence Act, 2005. <b>Providing Support:</b> Financial aid and rehabilitation for acid attack survivors.
Addressing Gender-Based Violence	<b>Taking Up Cases:</b> Intervention in the Bhanwari Devi rape case. <b>Conducting Investigations:</b> Legal recommendations for dowry-related crimes. <b>Creating Awareness:</b> Self-defense sessions for women.
Advocating for Gender Equality	<b>Addressing Discrimination:</b> Working to eliminate gender bias in hiring. <b>Providing a Platform:</b> Supporting women in reporting workplace harassment. <b>Promoting Participation:</b> Campaigns for increased women's political representation.

Challenges and Criticisms	Details
Limited Power and Autonomy	Lacks authority and autonomy, limiting effectiveness.
Dissatisfaction with Response to Violence	Criticized for inadequate response to violence against women, affecting credibility.
Patriarchal Attitudes and Statements	Criticized for reflecting patriarchal attitudes, undermining effectiveness.
Inability to Conduct Inquiries	Lacks the power to conduct inquiries, limiting its ability to address gender-based violence and discrimination.
Poor Functioning and Dissatisfaction	Reports indicate poor functioning and dissatisfaction among stakeholders.

### Conclusion

To enhance the effectiveness of the National Commission for Women (NCW), it is recommended to **grant the chairperson the status of Union Cabinet Minister and members the status of Minister of State**. The commission should have the power to select its own members, and funds should be allocated in both the Union and State Budgets to support its functioning. Implementing these recommendations would empower the NCW and strengthen its ability to protect and promote women's rights.

### Insta Links:

- SC Decision on Gender Discrimination

### Mains Links:

Q. "Empowering women is the key to control population growth". Discuss. (UPSC 2019)

Q. Discuss the positive and negative effects of globalization on women in India. (UPSC 2015)

Q. Male membership needs to be encouraged in order to make women's organization free from gender bias. Comment. (UPSC 2013)

Q. Distinguish between 'care economy' and 'monetized economy'. How can the care economy be brought into a

## monetized economy through women empowerment? (UPSC 2023)

### Prelims Link:

**Q. Which of the following gives 'Global Gender Gap Index' ranking to the countries of the world? (UPSC 2017)**

- (a) World Economic Forum
- (b) UN Human Rights Council
- (c) UN Women
- (d) World Health Organization

**Ans: (a)**

## GENERAL STUDIES – 2

Topics: Functions and responsibilities of the Union and the States, issues and challenges pertaining to the federal structure, devolution of powers and finances up to local levels and challenges therein.

### 1. CABINET APPROVED TO HOLD SIMULTANEOUS ELECTIONS

#### Context:

The **Union Cabinet has approved the move to hold simultaneous elections** for the **Lok Sabha, state Assemblies, and local bodies**. The proposal, is based on **recommendations from the Kovind Committee**.

#### Main points of the simultaneous election proposal:

1. **Simultaneous Elections:** Lok Sabha, state Assemblies, and local government bodies to hold elections together.
2. **Two Phases:**
  - Phase 1: Align Lok Sabha and state Assembly elections.
  - Phase 2: Conduct local body elections within 100 days of the first phase.
3. **Constitutional Amendments:**
  - Two amendments are required, passed with a special majority in both houses of Parliament.
  - State ratification: At least half of the states must ratify amendments.
4. **Mid-term Elections:** If a state Assembly or Lok Sabha is dissolved early, the new term will last only until the next scheduled simultaneous election.
5. **Single Electoral Roll:** A unified electoral roll for all elections will be created in consultation with State Election Commissions.
6. **Dissolution of Assemblies:** Some state Assemblies will dissolve earlier than their five-year term to align with the simultaneous election schedule.
7. **Election Commission Role:** The ECI can recommend delaying certain state elections but must align them with future simultaneous elections.

#### HOW THE NUMBERS STACK UP IN PARLIAMENT

##### WHAT PARTIES TOLD PANEL

**32 OF THE 47** parties that gave their opinion to the Kovind panel supported the idea; 15 opposed it. NDA ally TDP didn't give its opinion, but told *The Indian Express* that it backed One Nation, One Election in principle. The BSP was initially against it, but now has come out in support.

**ALL 32 PARTIES** were either BJP allies, or friendly towards the party then. Now, the BJD has turned against the BJP. Of the 15 parties against the move, five are in power in states, including Congress.



Kovind presents report to President Murmu in the presence of Home Minister Amit Shah. *File*

##### PARLIAMENT PICTURE NOW

**PARTIES THAT BACKED** the idea of simultaneous elections before the Kovind panel have 271 members in Lok Sabha now. This number includes the 240 MPs from the BJP.

**THE NDA**, including TDP and others who neither supported nor opposed simultaneous polls before the Kovind panel, has 293 MPs in Lok Sabha.

##### NUMBERS GAME IN LOK SABHA

**A TWO-THIRDS** majority of members present and voting is needed for the required constitutional amendment to go through – in the full House of

543, that works out to 362 MPs.

**NDA HAS 293 MPs** – so there is a possibility of passage of the amendment only if 439 MPs vote on the Bill, and the remaining 104 abstain. Alternatively, the government will have to convince non-NDA parties to back it.

##### ARITHMETIC IN RAJYA SABHA

**NDA HAS 121 MPS**, including the six nominated members. The opposition INDIA bloc has 85 MPs.

**IF ALL 250** members are present, a simple majority would be 125 and two-thirds would be 164 MPs. Currently, there are 234 MPs in RS.

#### What is One Nation One Election (ONOE)?

One Nation One Election is a proposal to **synchronize the timing of all elections in India, including those for the Lok Sabha, state legislative assemblies, and local bodies**. The aim is to streamline the electoral process, reduce campaign expenditures, minimize disruptions to governance, and enhance political stability by holding all elections simultaneously at regular intervals, **typically once every five years**. ONOE was the norm **until 1967** but after that cycle was broken. **Earlier Law Commission** also recommended the idea of ONOE in its report.

**Constitutional Articles involved:**

Article	Description	Amendment Required
Article 324A	Article 324 of the Constitution vests the Election Commission with the authority to supervise, direct, and control elections for Parliament, state legislatures, the President of India, and the Vice-President of India.  The committee has suggested the <u>inclusion of a new Article 324A</u> in the Constitution.	This new article would empower Parliament to make laws to ensure that municipality and panchayat elections are held simultaneously with the General Elections (to Lok Sabha and state Assemblies) without requiring state ratification.
Article 83 and Article 172	Article 83(2) and Article 172(1) stipulate a five-year term for the Lok Sabha and state legislative Assemblies, respectively, commencing from their first sitting unless dissolved earlier.	The committee recommended an amendment for synchronizing Assembly elections with Lok Sabha polls, suggesting no need for state ratification.
Article 325	Article 325 prohibits the exclusion of any person from a special electoral roll based on religion, race, caste, or sex.	The committee suggested amendment for a single electoral roll and electoral identity cards, requiring state ratification.
Articles 328 and 327	Article 328: Power of Legislature of a State to make provision with respect to elections to such Legislature.	As per the committee, the Constitution empowers Parliament, not states, to conduct Assembly elections, implying that simultaneous poll amendments do not mandate state ratification.

**Benefits of “one nation, one election”:**

Benefits	Description
Reducing Election Expenditure	Conducting all elections simultaneously minimizes expenses on logistics, security, and campaigning.  The Election Commission of India had pegged the expenditure for simultaneous elections at Rs 4,500 crore. In comparison, the 2014 Lok Sabha polls cost Rs 3,870 crore to the exchequer while the 2015 Bihar elections alone cost the government Rs 300 crore.
Better Governance	Simultaneous elections reduce distractions to governance and allow elected governments to focus on developmental and welfare activities.
Voter Convenience	Voters are spared from multiple rounds of voting throughout the year, ensuring better turnout and convenience.
Reduced Security Concerns	Simultaneous elections decrease security concerns by requiring a unified security setup across the country.
Level Playing Field	All parties and candidates have equal opportunities, promoting fairness and transparency in the electoral process.
Reduced Impact on Education	Simultaneous elections lessen the impact on the education sector by minimizing the involvement of teachers in the electoral process.

**Limitations of “one nation, one election”:**

Challenges	Description
Ratification by States	The committee proposal that Ratification by states is not needed for most of the amendments may increase tension between the centre and states and also be struck down by Judicial Review  In <i>Kihoto Hollohan v Zachillhu</i> (1992), the Supreme Court invalidated a law related to lawmaker disqualification because it lacked ratification by the states.
Constitutional Challenges	Implementing “one nation, one election” requires lengthy and complicated constitutional amendments, necessitating consensus among political parties and states.

Anti-federalism	Combining assembly elections with general elections risks submerging regional issues under the national narrative, potentially undermining local representation.
Complexity of Logistics	Managing simultaneous elections entails significant logistical arrangements, including security deployment, electoral roll preparation, and polling booth management.
	It would require greater numbers of electronic voting machines (EVMs) and voter-verifiable paper audit trail (VVPAT) machines
Dominance by National Parties	Simultaneous elections may favour national parties with more resources, potentially disadvantaging regional parties and diminishing the representation of regional issues.
Impact on Democracy	Conducting simultaneous elections might limit voters' engagement with all issues, possibly compromising informed decision-making and the overall democratic process.
Voter's choice and interests	Simultaneous elections may shift voter focus to national issues, potentially favouring larger national parties over regional ones. This could marginalize regional parties and diminish voter interests.
	Additionally, separate elections enhance accountability by subjecting politicians to more frequent electoral scrutiny.

**International Experience:**

1. South Africa: National and provincial legislature elections are simultaneous for five years, with municipal elections held two years later.
2. Sweden: Elections for the national legislature (Riksdag), provincial legislature/county council (Landsting), and municipal assemblies (Kommunfullmaktige) are held every fourth year on the second Sunday in September.
3. Britain: The Fixed-term Parliaments Act, 2011 ensures stability by holding elections on the first Thursday of May every fifth year, starting from May 7, 2015.

**Way forward**

- Parliamentary standing committee on Law and Justice recommended a two-phase election schedule, according to which elections to some legislative assemblies whose term end within six months to one year before or after the election date could be held during the midterm of Lok Sabha. For the rest of the states, elections could be held along with the general elections to Lok Sabha.
- Cost can be brought under control by ensuring that the legal cap on the expenditure of candidates is followed by all parties.
- Concept of One year, One election will be easier than ONOE, and will have the same benefits.

**Conclusion:**

While the objectives for simultaneous polls offer considerable opportunities, the challenges involved and practical limitations highlight the need for wider political support and legislative amendments. Going forward toward this goal, elaborate deliberations and a consensus-based mechanism for implementation are essential.

**Insta Links:**

- [Sansad TV: One Nation One Election](#)

**Mains Link:**

Q. 'Simultaneous election to the Lok Sabha and the State Assemblies will limit the amount of time and money spent in electioneering but it will reduce the government's accountability to the people' Discuss. (UPSC 2017)

**Prelims Links:**

Q1. Consider the following statements: (UPSC 2020)

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 offense 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  
 Answer: D

Consider the following statements: (UPSC 2017)

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

Which of the statements given above is/are correct?

- (a) 1 and 2 only  
 (b) 2 only  
 (c) 2 and 3 only  
 (d) 3 only  
 Answer: D

Topics: India and its neighbourhood- relations.

## 2. CALL FOR MODIFICATION OF THE INDUS WATERS TREATY (IWT)

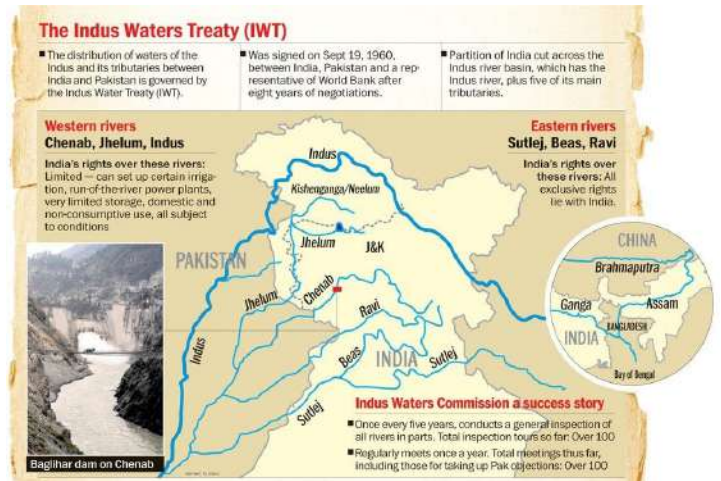
**Context:**

India issued a **notice to Pakistan on August 30, 2024**, seeking modification of the **Indus Waters Treaty (IWT)**, citing **“fundamental changes”** in circumstances. The notice comes after **Pakistan’s continued objections to India’s hydroelectric projects** on the **Kishanganga and Chenab rivers**.

**What is the Indus Water Treaty?**

The Indus Waters Treaty (IWT) is a water-sharing agreement signed in 1960 between India and Pakistan, mediated by the World Bank. It allocates the waters of the Indus River system between the two countries. Under the treaty:

- Pakistan receives the waters of the Western Rivers (Indus, Jhelum, Chenab)
- India receives water from the Eastern Rivers (Ravi, Beas, Sutlej).



### Indus Water Treaty

Also, India can use the Western Rivers for limited purposes like hydroelectric power generation, with certain restrictions and a dispute resolution mechanism managed by a Permanent Indus Commission and involving Neutral Experts and a Court of Arbitration if necessary.

**Dispute Resolution Mechanism:** The treaty provides a structured mechanism for resolving disputes related to water-sharing:

**Step 1:** The Permanent Indus Commission (PIC) is mandated to meet at least once a year to discuss and resolve issues arising from the implementation of the treaty.

**Step 2:** If disputes remain unresolved after PIC discussions, a Neutral Expert is appointed to adjudicate on technical matters concerning the interpretation or application of the treaty’s provisions.

**Step 3:** If disputes persist beyond the Neutral Expert’s determination, the matter can be referred to a Court of Arbitration, consisting of a seven-member arbitral tribunal. This tribunal is tasked with providing a binding decision on the dispute.

**Current Issue:**

India and Pakistan have disagreements over the design features and operation of certain hydroelectric projects, notably the Kishenganga and Ratle Hydroelectric Projects (HEPs), which are constructed on the Jhelum and Chenab rivers respectively.

**India’s arguments for seeking changes in the Indus Waters Treaty (IWT) include:**

1. **Pakistan’s Obstruction:** Pakistan’s repeated objections to India’s hydroelectric projects, particularly on the Kishanganga and Chenab rivers, have stalled development and created ongoing disputes.
2. **Failure to Use Dispute Mechanisms Properly:** Pakistan’s unilateral request for a Court of Arbitration, bypassing the treaty’s graded dispute resolution mechanism (Neutral Expert), violates the established process.

3. **Outdated Provisions:** The treaty, signed in 1960, does not fully account for current geopolitical, environmental, and technological realities, necessitating updates to reflect modern challenges. India claims that **“fundamental and unforeseen”** changes in circumstances since the treaty’s signing warrant a reassessment of the pact.
4. **Contradictory Legal Outcomes:** India argues that running both the Neutral Expert and Court of Arbitration processes in parallel could result in contradictory rulings, leading to legal confusion not addressed in the treaty.
5. **Security Concerns:** In light of terrorist attacks, such as the 2016 Uri attack, India has expressed that **“blood and water cannot flow together,”** raising security concerns about continued compliance with the treaty.

#### Other Issues faced by the IWT:

1. Challenges for setting up new power projects: The continuing dispute creates challenges for the setting up of new power projects
2. Limits water usage: The IWT permits Jammu and Kashmir to use the waters of the rivers in a limited manner, thus affecting water availability for agricultural purposes.
3. Lack of collaboration and mutual trust between countries
4. No regular data sharing as planned in the treaty.
5. Limited to a conflict-resolution mechanism instead of strengthening the interaction, trust and cooperation
6. Dispute resolution: The most crucial reason to alter the treaty is to clarify Article IX of the treaty’s dispute resolution system.
  1. Though India is rightful of using the western rivers for non-consumptive purposes, each time India plans a hydroelectric project, Pakistan challenges it by calling for international arbitration. E.g., the hydroelectric power plants, Kishanganga and Ratle.
7. Climate change factor: The treaty did not consider climate change, global warming, environmental impact assessments and such issues.
8. Ineffectiveness of the **Permanent Indus Commission**
9. Does not cover groundwater: The Treaty is no longer fit for its purpose as it only covers surface water but not groundwater.
  1. Groundwater depletion may increase by up to 75% in 2050, putting further pressure on the upstream portions of the Indus River.

#### Way Forward:

1. **Negotiation and Dialogue:** Use established mechanisms like the **Permanent Indus Commission (PIC)** to address and resolve disputes through direct discussions.
2. **Technical Solutions:** Employ technical experts to resolve disputes over the design, construction, and operation of water infrastructure, as seen in the Baglihar Dam case.
3. **Mediation:** Seek third-party mediation if negotiations fail, with potential assistance from the World Bank or other international organizations.
4. **Legal Recourse:** Utilize the treaty’s arbitration panel for unresolved disputes after failed negotiations or mediation.
5. **Long-term Solutions:** Address larger political issues through sustained dialogue and cooperation for lasting resolution.

#### Conclusion

As a document, the treaty may have certain weaknesses, but the larger problem is the fraught relationship between India and Pakistan. Experts are calling for the renegotiation of the treaty. There is a need for **both countries should revive the treaty** in such a way that the resources are equitably shared between both countries.

#### Mains Link:

Present an account of the Indus Water Treaty and examine its ecological, economic and political implications in the context of changing bilateral relations. (UPSC 2016)

#### Prelims Link:

Q1. With reference to the Indus river system, of the following four rivers, three of them pour into one of them which joins the Indus directly. Among the following, which one is such a river that joins the Indus direct? (UPSC 2021)

- (a) Chenab
- (b) Jhelum
- (c) Ravi
- (d) Sutlej

Ans: (d)

Q2. Consider the following pairs (UPSC 2019)

	Glacier	River
1.	Bandarpunch	Yamuna
2.	Bara Shigri	Chenab
3.	Milam	Mandakini
4.	Siachen	Nubra
5.	Zemu	Manas

Which of the pairs given above are correctly matched?

- (a) 1, 2 and 4
- (b) 1, 3 and 4
- (c) 2 and 5

(d) 3 and 5

Ans: (a)

Topics: Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.

### 3. TURKEY'S BID TO JOIN BRICS

#### Context:

Turkey's bid **to join BRICS could be a political move to gain leverage** in its stalled EU accession process or signal frustration with the EU.

#### Benefits:

1. Increases Turkey's global influence.
2. Provides economic cooperation with emerging markets.
3. Strengthens Turkey's political leverage in EU negotiations.

#### Concerns:

1. Strains relations with the EU and NATO.
2. Undermines Turkey's credibility within Western alliances.
3. Risks diplomatic isolation from Western powers.

#### India's stance on expansion:

- India welcomed the consensus-based expansion of the BRICS grouping during the 15th BRICS summit in Johannesburg.
- The move strengthens BRICS as a representative of developing countries
- India has proposed creating a BRICS space consortium, investing in skill mapping, technology, and education, and emphasising cooperation for conservation efforts.
- The expansion is aimed at making BRICS future-ready by enhancing cooperation, digital solutions, and development initiatives.

#### Significance for India:

The addition of new members to BRICS holds significance for India in terms of expanding partnerships and geopolitical influence, while also raising concerns about potential pro-China dominance within the alliance.

#### About BRICS:

Topic	Information
	<b>BRICS (founded: 2009; HQ: Shanghai)</b> is an acronym for the grouping of the <b>world's leading emerging economies</b> , namely Brazil, Russia, India, China, and South Africa (included in 2010)
<b>Origin</b>	The term " <b>BRIC</b> " was coined by the <b>British Economist Jim O'Neill in 2001</b> to describe the four emerging economies of Brazil, Russia, India, and China.
<b>Share of BRICS</b>	BRICS brings together five of the largest developing countries, representing <b>41% of the global population, 24% of the global GDP, and 16% of the global trade</b> (By 2028, BRICS is expected to make <b>up 35 per cent of the global economy</b> )
<b>Chairmanship</b>	The chairmanship of the forum is <b>rotated annually among</b> the members, in accordance with the acronym B-R-I-C-S. <b>South Africa</b> is the chair for 2023.
<b>Initiatives of BRICS</b>	1. New Development Bank (NDB) 2. Contingent Reserve Arrangement (CRA) 3. BRICS Payment System 4. Customs Agreements 5. Remote Sensing Satellite
<b>New Initiative</b>	BRICS is planning to launch its own " <b>new currency</b> " system, a major step towards <b>de-dollarization (reducing dependence on the US dollar for trade)</b>

### Importance of BRICS for India:

Importance	Example
<b>Geo-Politics</b>	BRICS provides India with an opportunity to <b>balance its strategic interests between the US and the Russia-China axis.</b>
<b>Global Economic Order</b>	BRICS plays an important role in the G20, in <b>shaping global economic policies</b> and promoting financial stability.
<b>Voice of Developing Nations</b>	BRICS has emerged as the <b>voice of developing countries</b> and is playing a significant role in protecting the rights of developing countries.
<b>Terrorism</b>	BRICS provides a platform for India to <b>galvanize its efforts against terrorism</b> and has worked within the grouping to take a strong stand against terrorism.
<b>Global Grouping</b>	BRICS provides an opportunity for India to <b>actively engage with China and resolve mutual disputes.</b> It also helps in garnering support from other partner countries.

### Challenges for BRICS:

Challenge	Example
<b>Economic Divergence</b>	<b>Brazil and Russia have been experiencing economic recessions</b> in recent years, while China and India have sustained high growth rates. <b>South Africa's economy</b> has been performing poorly, with high levels of unemployment and inequality.
<b>Political Differences</b>	<b>Russia's annexation of Crimea and involvement in conflicts in Ukraine and Syria</b> have strained its relations with other BRICS members. <b>China's territorial claims in the South China Sea</b> have been a source of tension with other BRICS countries that have competing claims in the region.
<b>Institutional Constraints</b>	The <b>New Development Bank (NDB)</b> , established by BRICS in 2014 to provide development financing, has <b>faced challenges in disbursing loans and identifying viable projects.</b> The <b>Contingent Reserve Arrangement (CRA)</b> , a pool of foreign exchange reserves, has not been tested yet.
<b>Coordination Difficulties</b>	<b>Disagreements over the governance structure of the NDB and the CRA</b> , as well as differing priorities in areas such as trade, investment, and climate change, have made it difficult for BRICS to present a unified front on many issues.
<b>External Pressures</b>	The rise of <b>protectionism, nationalism, and populism in some advanced economies</b> has posed challenges for BRICS in terms of trade, investment, and access to capital.

### Way forward for BRICS:

	Example
<b>Reform of Multilateral Institutions</b>	BRICS countries could jointly advocate for the reform of the <b>UN Security Council</b> , calling for the inclusion of more developing countries as permanent members.
<b>Resolve to Combat Terrorism</b>	BRICS countries could <b>share best practices and intelligence</b> to combat terrorism, as well as work together to cut off funding and resources for terrorist groups.
<b>Promoting Technological and Digital Solutions for the SDGs</b>	BRICS countries could <b>share their experiences in adopting and implementing digital solutions</b> in these sectors
<b>Expanding People-to-People Cooperation</b>	BRICS countries could <b>organize joint cultural events and exhibitions, establish more student exchange programs</b> and scholarships, and encourage more tourism and business visits to each other's countries.

### Conclusion:

While BRICS membership might strengthen Turkey's global presence, it could strain relations with the EU, which expects alignment with its values and foreign policy. Turkey's balancing act **between the West and non-Western alliances** could backfire, further diminishing its credibility within transatlantic circles. However, Turkey remains crucial due to its strategic location, making its foreign policy a complex balancing act.

**Mains Links**

Discuss the importance of BRICS for India. (250 Words)

**Prelims Links**

Consider the following statements: (UPSC 2016)

1. New Development Bank has been set up by APEC.
2. The headquarters of the New Development Bank is in Shanghai.

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

Ans: B

## GENERAL STUDIES – 3

Topics: Indian Economy and issues relating to planning, mobilization of resources, growth, development and employment.

### 4. US FED CUT INTEREST RATES AND ITS IMPACT ON INDIA

**Context:**

The US Federal Reserve cut the **benchmark interest rate by 50 basis points** to stimulate economic activity and job creation. Lower rates encourage borrowing and spending, while higher rates can hinder growth.

**What is the US Federal Reserve (Fed)?**

The US Federal Reserve, commonly known as the Fed, is the central banking system of the United States. Established in 1913, its primary functions include:

1. **Monetary Policy:** Managing the nation's money supply and interest rates to promote economic stability and growth.
2. **Banking Supervision:** Regulating and supervising banks and financial institutions to ensure safety and soundness.
3. **Financial Services:** Providing banking services to the government and financial institutions.

The Fed aims to achieve **maximum employment, stable prices, and moderate long-term interest rates.**

**What is a Fed Rate Cut?**

A Fed rate cut refers to a decision by the Federal Reserve to lower the Federal Funds Rate, the interest rate at which banks lend money to each other overnight. Key points about the rate cut include:

1. **Purpose:** Rate cuts are intended to stimulate economic activity by making borrowing cheaper, and encouraging consumer spending and business investment.

2. **Impact:** Lower interest rates can lead to increased lending, higher consumer spending, and job creation, while also helping to combat deflation.

**Why Did the US Federal Reserve Cut Interest Rates?**

1. **Post-Pandemic Recovery:** Initially cut rates to stimulate the economy after COVID-19, then raised them to combat rising inflation.
2. **Moderation of Inflation:** By mid-2023, inflation stabilized near the 2% target.
3. **Employment Concerns:** Rising unemployment (4.2% in August 2024) indicated high rates were harming job growth, prompting a focus on job creation.
4. **Dual Mandate:** The Fed aims to maintain stable prices and maximum employment; a rate cut helps balance these goals.
5. **Implications:** Lower rates make loans cheaper, encouraging business expansion and hiring while maintaining inflation control.

**Impact on India from US Fed Rate Cut**

1. **Increased Foreign Investment:** Lower US rates may attract global investors to India.
2. **Currency Exchange Rates:** Potential strengthening of the Indian rupee against the US dollar.
3. **Exports and Imports:** Exporters may face challenges, while importers benefit from a stronger rupee.
4. **Pressure on RBI:** The Reserve Bank of India may feel compelled to adjust its own rates.
5. **Economic Growth:** Lower borrowing costs could stimulate investment and economic activity in India.
6. **Carry Trade Appeal:** Investors might borrow in the US at low rates to profit from higher Indian rates.

**Prelims Links:**

**Q. Indian Government Bond Yields are influenced by which of the following? (UPSC 2021)**

1. Actions of the United States Federal Reserve
2. Actions of the Reserve Bank of India
3. Inflation and short-term interest rates

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

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

Ans: (d)

**Insta Links:**

- U.S. Fed raises rate by 75 bps to tame inflation

Topics: [Major crops cropping patterns in various parts of the country](#), [different types of irrigation and irrigation systems storage, transport and marketing of agricultural produce and issues and related constraints](#); [e-technology in the aid of farmers](#).

## 5. DECLINE IN JUTE PRODUCTION IN INDIA

### Context:

Jute production is projected to **decline by 20% this year due to floods in West Bengal and Assam.**

### Jute Industry in India

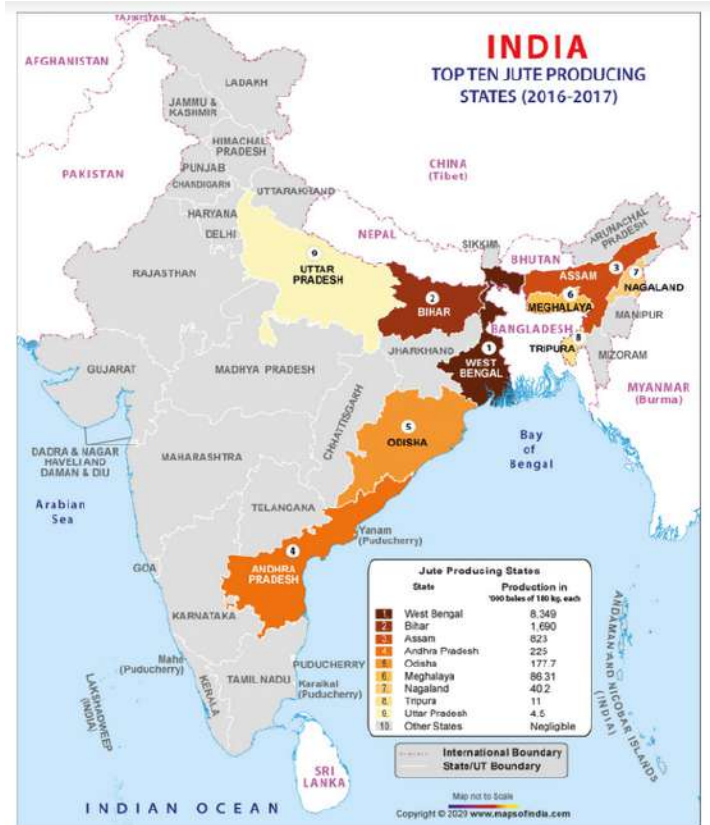
1. India produces about **70% of the world's jute goods.**
2. West Bengal contributes about **73% of this production.**
3. **90% of jute production** is consumed locally.

### Opportunities

1. Directly employs **0.37 million** workers.
2. Jute exports could reach ₹4,500 crore annually (₹3,000 crore in 2023-24).

### About the Jute crop in India:

About Jute Crop	
Temperature	Between 25-35°C
Rainfall	Around 150-250 cm
Soil Type	Well-drained alluvial soil
Production	India is the Largest producer of jute followed by Bangladesh and China.
Acreage and Trade	Bangladesh leads in acreage and trade, accounting for <b>three-fourths of global jute exports.</b>
Concentration	Mainly in <b>eastern India</b> due to the rich alluvial soil of the Ganga-Brahmaputra delta
Major Producing States	West Bengal, Bihar, Odisha, Assam, Andhra Pradesh, Meghalaya, Tripura Approximately <b>73% of the country's jute industries</b> are concentrated in West Bengal.
Uses	Known as the <b>golden fibre</b> , used in making gunny bags, mats, ropes, yarn, carpets, and other artefacts
Production Share	India accounts for <b>70% of the world's jute production. It employs over 3 lakh workers. 90%</b> of production is consumed locally



### Challenges in the Jute Industry:

1. Declining cultivation area, down by **1.7 lakh hectares** between 2013-14 and 2021-22.
2. **Competition from low-cost synthetic alternatives** and higher quality jute products from Bangladesh and China.
3. **Over 80%** of raw jute is of poor quality.
4. **Lack of modernization** and outdated mills needing technological upgrades.
5. **Insufficient raw material** supply despite government efforts.
6. **Decrease in demand** due to the availability of alternative fibres like **Mesta**.
7. **Frequent strikes and labour issues**, especially in West Bengal.
8. **Infrastructure issues** like power supply and transportation hinder sustainability.

### Existing Initiatives:

1. **National Jute Board (NJB)** and **National Jute Development Programme** for Jute Development.
2. **Production Linked Incentive (PLI) scheme** and Jute Corporation of India (JCI) for jute promotion.
3. **Jute Packaging Materials Act** for mandatory jute use.
4. Additional initiatives include the **Jute Mark Logo and Jute ICARE Scheme.**
5. Drafting **Jute Technology Mission 2.0**
6. **Golden Fibre Revolution and Technology Mission:** It aims to enhance jute production in India.
7. **Jute Packaging Materials Act, 1987:** Despite

competition from synthetic fibres, the Jute Packaging Materials Act, 1987, mandates the use of jute packaging material to support workers and farm families.

8. Jute Geo-Textiles (JGT) is promoted under the Technical Textiles Mission, offering diverse applications in civil engineering and erosion control.
9. Jute SMART, an e-government initiative, enhances transparency in the jute sector by providing a platform for government procurement of sacking.
10. Jute Mark Logo was launched (2022) for branding and positioning of Indian Jute globally.

#### Measures Needed:

1. **Upgrade machinery urgently** to benefit both mill owners and consumers.
2. **Facilitate easy loan availability** for industry upgrades and address sick mills.
3. **Ensure a consistent supply of raw materials**, power, and labour; improve labour laws and skills.
4. **Promote foreign investment** to boost competitiveness.
5. **Implement automation** to enhance productivity and reduce costs.
6. **Encourage large-scale production** for economies of scale and lower costs.
7. Support research and development.
8. **Reassess fibre neutrality** and explore trade agreement opportunities.

#### Conclusion

Atmanirbharta' will not be possible if the government fails those sectors that are already self-sufficient and capable of dominating the global market. With focused interventions in this sector, we might enhance its performance in terms of more investment, employment generation and export earnings.

Initiatives of government like the Amended Technology Upgradation Fund Scheme (ATUFS), Scheme for Integrated Textile Parks (SITP) etc. are timely interventions in this sense.

#### Insta Links:

- Report on the Development and Promotion of Jute Industry

## 6. CABINET APPROVES THE CONTINUATION OF THE PRADHAN MANTRI ANNADATA AAY SANRAKSHAN ABHIYAN (PM-AASHA)

#### Context:

The Union Cabinet has approved the continuation of the **Pradhan Mantri Annadata Aay SanraksHan Abhiyan (PM-AASHA) schemes** to ensure farmers get fair prices and stabilize consumer prices of essential goods.

The initiative, **with a financial outlay of Rs. 35,000 crore until 2025-26**, integrates schemes like the **Price Support Scheme (PSS) and Price Stabilization Fund (PSF)**. It includes **100% procurement of certain crops**, increased state procurement limits, and support for pulses, oilseeds, and perishable crops, aiming to reduce imports and protect consumers from price volatility.

#### About PM AASHA:

Scheme Component	Description
<b>Objective</b>	Ensure remunerative prices for farmers through Minimum Support Price (MSP) assurance. Announced in 2018 budget.
<b>Aim</b>	Strengthen the procurement mechanism to improve farmers' income.
<b>Components</b>	1. Price Support Scheme (PSS) 2. Price Deficiency Payment Scheme (PDPS) 3. Private Procurement & Stockist Scheme (PPPS)
<b>Price Support Scheme (PSS)</b>	Central nodal agencies (NAFED, FCI) will procure pulses, oilseeds, and copra. 25% of marketable surplus will be procured. Government covers procurement costs and losses.
<b>Price Deficiency Payment Scheme (PDPS)</b>	State pays the difference between mandi prices and MSP for oilseeds. No physical procurement involved. Modeled on schemes from Madhya Pradesh and Haryana.
<b>Private Procurement &amp; Stockist Scheme (PPPS)</b>	Piloted in select districts. Private agencies procure oilseeds at MSP in coordination with the government when prices fall below MSP.

#### Issues with the Scheme:

1. **Limited procurement infrastructure** benefits mainly wheat and rice.
2. **Only 6% of farmers** sell produce at MSP (NSSO, 2013).
3. **Low MSP awareness**: 24% of households aware of MSP for their crops (2017 study).
4. **MSP operations focus on a few states**, leaving

most crops under-procured.

5. **79% of farmers dissatisfied with MSP** due to payment delays, lack of infrastructure, long distances to centres, and delayed MSP announcements (NITI Aayog, 2016).

**What is MSP?**

The **Minimum Support Price (MSP)** is a minimum price for any crop at which the government purchases it from farmers, and is based on a calculation of at least one-and-a-half times the cost of production incurred by the farmers.

CROPS COVERED UNDER MSP		
KHARIF CROPS (14)	RABI CROPS (7)	CALENDAR YEAR CROPS (4)
1. Paddy	1. Wheat	
2. Jawar	2. Barley	1. Copra
3. Bajara	3. Gram	2. De-husked Coconut
4. Ragi	4. Masur	3. Jute
5. Maize	5. Rapeseed & Mustard	4. Sugar Cane (FRP)
6. Arhar	6. Safflower	
7. Moong	7. Torai	
8. Urad		
9. Cotton		
10. Ground Nuts		
11. Sunflower		
12. Soyabean		
13. Sesamum		
14. Nigarseed		

• CACP recommends MSP for 22 crops before the sowing period each year  
 • MSP derived for Toria based on MSP for Rapeseeds and Mustard and for De-husked Coconut on the Basis of MSP of Copra.  
 • Fair and Remunerative prices for Sugar is also declared

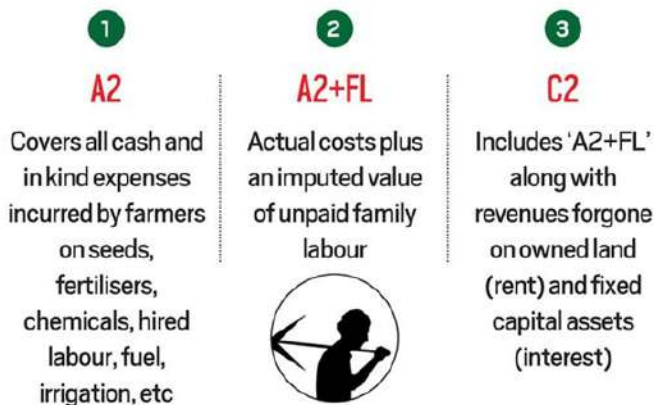
- Surety of minimum prices: The MSP is announced before the sowing season so that farmers can make an informed decision. Hence, supporting farmers from distress sales.
- Control crops short in supply: by offering more price support for these crops so that more and more farmers are tempted to grow these crops.
- Crop Diversification: MSP for crops promotes their diversification and curbs import-dependence and food inflation (e.g., there was a notable increase in the MSP of pulses and oilseeds in 2021 in order to incentivise its domestic production)
- Food security: The government can use these crops to be sold at government fair price shops at a price lower than the market rate to the below poverty line people at a lower price.
  - o Developmental schemes like **PM-POSH-AN**, ICDS, Anganwadi Services Scheme, and TPDS rely on grains procured by FCI at MSP.



**HOW ARE MSPs DETERMINED?**

The Centre fixes MSPs for every kharif and rabi cropping season based on recommendations of the Commission for Agricultural Costs and Prices (CACP)

- When a farmer grows a crop, he incurs costs, some of it explicit and some implicit or unpaid. The CACP considers the following costs:



MSP does not have any legal basis but has been implemented since the 1960s with the following objectives:

1. Ensuring food security in the country.
2. Protection from price drop for farmers
3. Incentivise desirable crop production

**Importance of MSP:**

- Safeguard against Price volatility: The system of MSP acts as a tool for the government to control sharp falls and rises in the prices of

**Mains Links:**

Q. What do you mean by Minimum Support Price (MSP)? How will MSP rescue the farmers from the low-income trap? (UPSC 2019)

**Prelims Links:**

Consider the following statements: (UPSC 2020)

1. In the case of all cereals, pulses and oil seeds, the procurement at Minimum Support Price (MSP) is unlimited in any State/UT of India.
2. In the case of cereals and pulses, the MSP is fixed in any State/UT at a level to which the market price will never rise.

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

Ans: D

Topics: Awareness in space.

**7. CABINET HAS APPROVED THE CHANDRAYAAN-4 MISSION**

**Context:**

The Union Cabinet has **approved the Chandrayaan-4 mission**, aimed at demonstrating technologies for **returning to Earth after landing on the Moon** and collecting lunar samples for analysis.

This **mission follows** Chandrayaan-3 and will **help de-**

**velop key technologies** for a future Indian lunar landing by 2040. The project will be led by ISRO, with strong involvement from industry and academia, and is expected to be **completed within 36 months**. The mission supports **India's broader space vision**, including plans for an **Indian Space Station by 2035**.

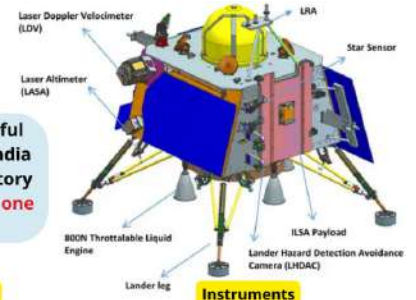
Historical overview of ISRO's major programs – **satellites, launch vehicles, and planetary exploration:**

Program	Key Achievements
<b>Satellite Programs</b>	
<b>Aryabhata (1975)</b>	Marked India's entry into space era; conducted experiments in X-ray astronomy, aeronomics, and solar physics.
<b>Bhaskar-1 &amp; Bhaskar-2</b>	Experimental remote-sensing satellites laying the groundwork for Indian Remote Sensing (IRS) Satellite system.
<b>IRS-1A (1988)</b>	Launched Earth Observation spacecraft aiding land-based applications like agriculture, forestry, etc.
<b>INSAT Series</b>	Initiated communication revolution, providing nationwide connectivity, broadcasting, meteorological info, etc.
<b>IRNSS (NavIC) (2013)</b>	Started for terrestrial, aerial, marine navigation, location-based services, etc.
<b>Launch Vehicle Programs</b>	
<b>1963 Nike Apache</b>	Initial rocket launch; 'sounding rocket' experiment.
<b>SLV-3 (1980)</b>	India's first launch vehicle; entry into space-faring nations.
<b>PSLV</b>	Reliable and versatile workhorse; enabled critical space missions.
<b>GSLV</b>	Addressed PSLV's limitations; introduced cryogenic engines.
<b>GSLV Mk-III</b>	Heaviest launch vehicle; used for Chandrayaan-2 and Chandrayaan-3 missions.
<b>Planetary Exploration</b>	
<b>Chandrayaan-1 (2008)</b>	Detected water on the Moon; the fifth country to reach the lunar surface.
<b>Mangalyaan (2013)</b>	First interplanetary mission; reached Mars orbit, showcasing interplanetary technology.
<b>Chandrayaan-2 (2019)</b>	Aimed for lunar exploration but faced a setback with the lander's soft landing.
<b>Chandrayaan-3 (2023)</b>	Achieved a successful soft landing on the Moon, contributing to India's lunar capabilities.

**Chandrayaan-3 mission**



Chandrayaan-3 mission's successful soft landing on the Moon marks India becoming the **fourth nation** in history to reach the lunar surface and **1st one to land on Moon's South Pole**



**Comparison of Chandrayaan-1, 2 and 3**

Aspect	Chandrayaan-1	Chandrayaan-2	Chandrayaan-3
Launch Year	2008	2019	2023
Objectives	Study lunar surface	Study lunar surface and land rover on lunar South Pole	Demonstrate <b>landing capabilities for Lunar Polar Exploration Mission</b>
Components	Orbiter, Moon Impact Probe	Orbiter, Lander (Vikram), Rover (Pragyan)	Propulsion module, Lander, Rover
Findings	Confirmed lunar water, caves, activity	Built upon Chandrayaan-1's <b>water evidence</b>	—
Communication	Communication issues after 312 days	Lander crash-landed, rover unable to operate	<b>Successfully landed on moon and will operate for 1 lunar day (14 Earth days)</b>
Launch Vehicle	PSLV	GSLV-Mk 3	LVM3
Landing Site	—	Lunar South Pole	Lunar South Pole
Major Partners	—	—	<b>Japan</b> (for Lunar Polar Exploration Mission); support from NASA and ESA (European Space Agencies)

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**Significance of the Chandrayaan-4 mission for India:**

- 1. Technological Advancement:** Demonstrates India's capability to return safely from the Moon after landing.
- 2. Lunar Sample Collection:** First mission to bring back samples from the Moon for scientific analysis.
- 3. Foundation for Manned Missions:** Lays groundwork for a future manned lunar mission by 2040.
- 4. Indigenous Development:** Enhances self-reliance in critical space technologies.
- 5. Boost to Space Industry:** Involves Indian industries, generating employment and technology spin-offs.
- 6. Global Space Leadership:** Strengthens India's position among elite spacefaring nations.

**Insta Links:**  
[Chandrayaan-3](#)

**Mains Links:**  
 What is India's plan to have its own space station and how will it benefit our space programme? (UPSC 2019)

**Prelims Links:**  
**Q Consider the following statements: (UPSC 2016)**  
**The Mangalyaan launched by ISRO**

- is also called the Mars Orbiter Mission
- made India the second country to have a spacecraft orbit the Mars after USA
- made India the only country to be successful in making its spacecraft orbit Mars in its very first attempt.

**Which of the statements given above is/are correct?**  
 (a) 1 only

- (b) 2 and 3 only  
 (c) 1 and 3 only  
 (d) 1, 2 and 3  
 Ans: C

Topics: Disaster and management.

## 8. CLIMATE CHANGE IS EXACERBATING GLOBAL FLOODING

### Context:

Climate change is **exacerbating global flooding** by increasing the frequency and intensity of heavy rainfall.

### How does Climate change affect Global flooding?

Rising temperatures enhance the atmosphere's capacity to hold moisture, leading to more intense downpours. For instance, a **1.5°C** increase in global temperatures could make heavy rainfall events **1.5 times** more frequent and 10% wetter. Recent floods in Europe, the UAE, and Brazil highlight this trend. If global temperatures rise by 2°C, such floods could **occur 1.7 times per decade**, with 14% more rainfall.

### Implications:

- Increased Rainfall Intensity:** Example: Heavy rainfall in Germany in 2021 was intensified by climate change, leading to severe floods in western regions.
- Higher Atmospheric Moisture:** Example: The UAE and Oman experienced record-breaking rainfall in 2023 due to warmer air holding more moisture.
- More Frequent Extreme Rainfall Events:** Example: In Europe, floods this summer were more intense due to the increased frequency of extreme rainfall events linked to climate change.
- Transition from Snow to Rain:** Example: Increased rainfall in high-altitude regions, such as the Alps, has led to more frequent flooding and landslides as snow transitions to rain.
- Increased Flood Risk in Urban Areas:** Example: Rapid urbanization in cities like Dhaka, Bangladesh, has led to higher flood risk as cities expand into flood-prone areas.
- Greater Impact on Low-Income Countries:** Example: Floods in India and China have displaced millions due to increased flooding risk from climate change, affecting mostly low-income populations.
- Rising Sea Levels:** Example: Coastal flooding in cities like Miami, USA, has been exacerbated by rising sea levels linked to global warming.

### Other factors leading to flooding:

- Deforestation and Land Use Changes:** Unsustain-

able deforestation in the upper catchments increases soil erosion and sediment load in rivers, reducing their carrying capacity and causing overflows.

- Eg: Sundarbans flooding attributed to these.
- Encroachment on Floodplains:** Building settlements and infrastructure on floodplains obstructs natural drainage and reduces buffer zones, amplifying flood impacts.
  - Eg: Bihar floods are particularly severe due to the encroachment of floodplains.
- Inadequate Drainage and Infrastructure:** Insufficient drainage systems, choked rivers, and dilapidated embankments cannot handle excessive water, leading to widespread inundation.
  - Eg: Inadequate and weak embankments are annually breached in Bihar-West Bengal floods.
- Poor Urban Planning:** Urbanization without proper water management and flood zoning increases runoff and exposes more people to risks.

### Strategies can be implemented to mitigate the risks associated with these floods:

- Early Warning Systems:** Implement advanced early warning systems to provide timely alerts to communities, enabling them to evacuate and take preventive measures.
  - E.g.: Flood Early Warning System (FLEWS) in Assam by its state disaster management authority.
- Eco-Restoration:** Undertake comprehensive eco-restoration initiatives, including reforestation and wetland conservation, to enhance natural drainage systems and reduce vulnerability.
  - Eg: the Red River Delta Rehabilitation Project restored over 100,000 hectares of mangroves and wetlands which can be replicated here.
- Infrastructure Development:** Invest in resilient infrastructure, such as embankments, flood shelters, and drainage systems, to protect communities and vital assets.
  - Eg: Coastal Embankment Improvement Project (CEIP) in Bangladesh part of the delta.
- Community Engagement:** Foster community-based initiatives for flood preparedness, including training in disaster response, and involve local communities in planning and decision-making processes.

- E.g.: Community Preparedness and Adaptation of “Living with Floods” under Flood Risk Mitigation and Management.
5. Climate-Resilient Agriculture: Promote climate-resilient agricultural practices and crop varieties to minimize the impact of floods on the agrarian economy.
- E.g.: Integrated Rice-Fish Farming System (IRFFS) promoted by the World Food Programme.

(c) 1 and 3 only  
 (d) 1, 2 and 3  
 Ans: (d)

**NDMA Guidelines for Floods:**

NDMA Guidelines	Details
Preparing for Floods:	Avoid building in flood-prone areas unless you elevate and reinforce your home. Elevate the furnace, water heater, and electrical panel if susceptible to flooding. Install check valves in sewer traps to prevent flood water backup. Contact officials about flood barriers being constructed in your area. Seal basement walls with waterproofing compounds.
When a Flood is Likely:	Listen to radio/TV for information. Be aware of flash flooding – move to higher ground immediately if at risk. Be aware of areas known to flood suddenly.
If Evacuating:	Secure your home – bring in outdoor furniture, and move items upstairs. Turn off utilities if instructed. Do not walk or drive through moving floodwater.

**Conclusion:**

As seen above, many factors are natural and inevitable to a certain extent, thus, mitigating the risks associated with annual floods in the Ganges-Brahmaputra Delta requires a holistic and integrated approach that combines physical infrastructure, sustainable land-use practices, community engagement, and international cooperation.

**Insta Links:**

1. Assam Floods

**Prelims Link:**

Q. Which of the following is/are tributary/tributaries of Brahmaputra?

1. Dibang
2. Kameng
3. Lohit

Select the correct answer using the code given below:

- (a) 1 only  
 (b) 2 and 3 only

Q. With reference to river Teesta, consider the following statements:

1. The source of river Teesta is the same as that of Brahmaputra but it flows through Sikkim.
2. River Rangeet originates in Sikkim and it is a tributary of river Teesta.
3. River Teesta flows into Bay of Bengal on the border of India and Bangladesh.

Which of the statements given above is/are correct?

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

Topics: Challenges to internal security through communication networks, role of media and social networking sites in internal security challenges, basics of cyber security; money-laundering and its prevention.

## 9. FATF LAUNCHED THE MUTUAL EVALUATION REPORT (MER) FOR INDIA

**Context:**

India has made **significant progress in complying with FATF standards and tackling illicit finance**, but it needs to continue improving as its economy grows. The (Mutual Evaluation Report) MER on AML (Anti-money laundering) and CFT (Countering Terror Financing) measures placed India in the **“regular follow-up” category**, recognizing its effective compliance with **FATF standards**.

**Background:**

In June 2024, the FATF plenary **in Singapore recognized India for achieving a “high level of technical compliance”** with global **anti-money laundering standards**. India was placed in the **“regular follow-up” category**, the highest rating by FATF, making it the only major federal economy to achieve this status, alongside G-20 countries like the UK, France, and Italy.

**Key Highlights of the FATF Mutual Evaluation Report on India:**

Highlights	Description
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<b>Areas Requiring Improvement</b>	India was found partially compliant in three areas:
	<b>Non-Profit Organisations (NPOs):</b> NPOs enjoying tax exemptions could be vulnerable to terror funding. The system needs stronger measures to address risks.
	<b>Politically Exposed Persons (PEPs):</b> Ambiguities exist around the source of wealth, funds, and ownership for domestic PEPs. These need to be clarified.
	<b>Designated Non-Financial Businesses and Professions (DNFBPs):</b> Gaps in regulation and supervision, especially in sectors like precious metals, stones, and real estate, which are vulnerable to money laundering.
<b>Money Laundering Risks</b>	Key sources include fraud, cyber fraud, corruption, and drug trafficking.
<b>PMS Vulnerability</b>	<b>Precious metals and stones (PMS)</b> can be used to move funds without a trace, increasing ML/TF risks due to the size of India's PMS market.
	<b>Cross-Border Criminal Networks in PMS:</b> Criminal networks in PMS may be under-investigated. Gold and diamond smuggling requires deeper risk analysis.
<b>Terrorist Financing Threats</b>	India faces terrorism risks from <b>ISIL, Al-Qaeda-linked groups</b> , and regional insurgencies in the <b>Northeast and Left-Wing Extremism</b> .
<b>Financial Inclusion</b>	Significant progress with increased bank account holders, digital payments, and transparency measures like <b>GST and e-invoices</b> .
<b>Action Against Terror Financing</b>	Acknowledged the <b>effective role of NIA and Enforcement Directorate</b> in disrupting terror financing.

**Key Recommendations of FATF:**

- Expedite pending money laundering trials**, including human trafficking and drug crimes.
- Implement targeted financial sanctions** to freeze assets promptly.

- Define domestic PEPs under PMLA** and apply enhanced risk measures.
- Protect NPOs from terror abuse** with risk-based measures.

**About the Financial Action Task Force (FATF):**

- FATF is an inter-governmental policy-making and standard-setting body dedicated to combating money laundering and terrorist financing.
- Objective:** To establish international standards, and to develop and promote policies, both at national and international levels, to combat money laundering and the financing of terrorism.
- Origin:** It was established in 1989 during the G7 Summit in Paris to develop policies against money laundering. In 2001 its mandate expanded to include terrorism financing.
- Headquarters:** Paris, France.
- FATF members include 39 countries, including the United States, India, China, Saudi Arabia, Britain, Germany, France, and the EU as such. India became a member of FATF in 2010.

**Mutual Evaluation Report of FATF:**

- The mutual evaluation report is an assessment of a country's measures to combat money laundering, financing of terrorism and proliferation of weapons of mass destruction.
- The reports are peer reviews, where members from different countries assess another country.
- During a mutual evaluation, the assessed country must demonstrate that it has an effective framework to protect the financial system from abuse.
- The FATF conducts peer reviews of each member on an ongoing basis to assess levels of implementation of the FATF Recommendations, providing an in-depth description and analysis of each country's system for preventing criminal abuse of the financial system.

**Mutual Evaluations have two main components:**

- Effectiveness:** The most important part of a mutual evaluation is a country's effectiveness ratings. During this visit, the assessment team will require evidence that demonstrates that the assessed country's measures are working and delivering the right results.
- Compliance:** The assessed country must provide information on the laws, regulations and any other legal instruments it has in place to combat money laundering and the financing

of terrorism and proliferation.

#### **FATF has 2 types of lists:**

1. **Black List:** Countries known as Non-Cooperative Countries or Territories (NCCTs) are put on the blacklist. These countries support terror funding and money laundering activities. The FATF revises the blacklist regularly, adding or deleting entries. Three countries North Korea, Iran, and Myanmar are currently on FATF's blacklist.
2. **Grey List:** Countries that are considered a safe haven for supporting terror funding and money laundering are put on the FATF grey list. This inclusion serves as a warning to the country that it may enter the blacklist.

#### **Consequences of being on the FATF blacklist:**

1. No financial aid is given to them by the International Monetary Fund (IMF), the World Bank, the Asian Development Bank (ADB) and the European Union (EU).
2. They also face a number of international economic and financial restrictions and sanctions.
3. In addition to economic consequences, Black and Grey-Listing damages a country's reputation and reduces its international standing.

#### **Mains Links:**

Q. Discuss how emerging technologies and globalisation contribute to money laundering. Elaborate measures to tackle the problem of money laundering both at national and international levels. (2021)

[Topics: Security challenges and their management in border areas; linkages of organized crime with terrorism.](#)

## **10. BORDER MANAGEMENT: GOVERNMENT TO FENCE THE MYANMAR BORDER**

**Context:** The government has sanctioned **₹31,000 crore to fence the Myanmar border**, which spans **1,643 km across Arunachal Pradesh, Nagaland, Manipur, and Mizoram**.

The Home Minister cited **border issues as a root cause of Manipur's ethnic violence**. So far, 30 km of fencing has been completed, with ongoing work in Manipur. The **Free Movement Regime along the border has been scrapped**. Efforts to restore peace between the **Meitei and Kuki-Zo communities**, amid ongoing violence that has displaced over 60,000 people, are underway.

#### **What is FMR?**

FMR, implemented in 2018, the Free Movement Regime (FMR) **permits residents on both sides of the 1,643 km India-Myanmar border** to travel up to 16 km into each other's territory without a visa. This requires a border pass with one-year validity, allowing a two-week stay. The border spans four states: **Mizoram, Manipur, Nagaland, and Arunachal Pradesh**.

**The India-Myanmar border** is a **1,643-kilometer international boundary** running from the tripoint with China in the north to the tripoint with Bangladesh in the south. The trijunction between India, China, and Myanmar is yet to be agreed upon, with the de facto tripoint located **just north of the Diphu Pass**. The border traverses various geographical features, including the Mishmi Hills, Patkai, Kassam Ranges, Tiau River, and Chin Hills, before reaching the Bangladeshi tripoint through irregular lines.



#### **The Government of India follows the principle of “One Border, One Border Guarding Force”:**

1. **BSF** secures the borders with **Bangladesh and Pakistan**.
2. **ITBP** guards the **China border**.
3. **SSB** manages the **Nepal and Bhutan borders**.
4. **Assam Rifles** handles the **Myanmar border**.
5. The Indian Army **protects the LoC** (Indo-Pak) and **LAC** (Indo-China).
6. Coastal security is managed by the Indian Navy, **Coast Guard, and State Marine Police**.

India shares borders with seven countries (Bangladesh, China, Pakistan, Nepal, Myanmar, Bhutan, and Afghanistan) across diverse terrains, making it vulnerable to insurgency, illegal migration, and smuggling.

#### **What is Border management?**

It aims to **secure border areas and safeguard our nation** from the risks involved in the movement of goods and people from India to other countries and vice versa. The principle of **“One Border, One Border Guarding Force”** is followed by the Government of India to secure the border.

### Importance of Effective Border Management:

1. **Counterterrorism:** Effective border controls prevent the infiltration of terrorists and restrict the movement of arms and explosives.
2. **Limit Organised Crime:** Tight border security curtails illegal activities such as drug and human trafficking, smuggling, and illicit trade.
3. **Suppress Cross-border Insurgency:** A well-managed border deters insurgents from gaining a foothold, resources, or support from external sources.
4. **Preserve Sovereignty:** Maintaining clear and secure borders upholds national sovereignty and ensures territorial integrity.
5. **Regulate Migration:** Effective management facilitates legal migration while preventing illegal entries, thus ensuring demographic stability.

### How poor border management affects internal security:

1. **Infiltration and Illegal Activities: Example: In states like Jammu and Kashmir,** poor border management has led to the infiltration of militants and terrorists, contributing to ongoing **conflict and violence**. Increased cross-border **smuggling of arms and drugs** further destabilises these regions.
2. **Terrorism and Insurgency: Example: In the northeastern states such as Manipur and Mizoram,** inadequate border control allows insurgent groups to cross into India from neighbouring countries like Myanmar, **fuelling local insurgencies and violent activities**.
3. **Smuggling and Trafficking: Example: In Punjab, porous borders with Pakistan** facilitate the smuggling of drugs and contraband, leading to severe **drug abuse problems** and organized crime within the state.
4. **Cross-Border Crime: Example: In West Bengal, poor border management** has allowed criminal gangs to operate with relative impunity, leading to increased **cross-border trafficking of humans and goods**.
5. **Economic Disruption: Example: In Assam,** ineffective border controls contribute to illegal immigration and **land encroachments**, straining local resources and creating **socio-economic tensions**, which further exacerbate internal security issues.

### Current National Security Measures to Address Border Security Threats:

Category	Measures
<b>Institutional Mechanisms</b>	<ul style="list-style-type: none"> <li>• <b>Border Security Force (BSF):</b> Guards India's borders with Pakistan and Bangladesh.</li> <li>• <b>Assam Rifles:</b> Operates in the northeastern states, focusing on counter-insurgency and border management.</li> </ul>
<b>Legislative Measures</b>	<ul style="list-style-type: none"> <li>• <b>Border Security Force Act, 1968:</b> Legal framework for BSF's operations including border security and counter-insurgency.</li> <li>• <b>National Investigation Agency (NIA) Act, 2008:</b> Supports investigations into terrorism-related offences, including cross-border threats.</li> </ul>
<b>Schemes and Programs</b>	<ul style="list-style-type: none"> <li>• <b>Integrated Border Management System (IBMS):</b> Uses physical barriers, surveillance equipment, and communication networks.</li> <li>• <b>Smart Fencing:</b> High-tech fencing along critical borders.</li> <li>• <b>Border Area Development Programme (BADP):</b> Infrastructure development in border areas.</li> <li>• <b>NATGRID:</b> Central database for intelligence sharing.</li> </ul>
<b>Cooperation with Local Communities</b>	<ul style="list-style-type: none"> <li>• <b>Community Policing Programs:</b> Engages locals in reporting suspicious activities.</li> <li>• <b>Village Defense Committees (VDCs):</b> Local committees assist in surveillance and intelligence gathering, especially in Jammu and Kashmir.</li> </ul>
<b>Technological Advancements</b>	<ul style="list-style-type: none"> <li>• <b>Drones and Surveillance Systems:</b> Real-time monitoring using drones.</li> <li>• <b>Electronic Surveillance and Monitoring:</b> Includes thermal imaging and motion detectors for advanced border surveillance.</li> </ul>

### Conclusion:

**Madhukar Gupta Committee has given its recommendations** broadly on the issues of threats and border protection, assessment of force level, deployment on the border, infrastructure and technology issues for protection of border and administrative issues. **A strong collaborative initiative is required with the Ministry of Home Affairs and the Defense ministry as well as involving other defense ministries** from the neighboring states.

**Insta Links:**

- Free Movement Regime (FMR) with Myanmar

**GENERAL STUDIES – 4****11. 'FOOD VS FUEL', A LOOMING 'FOOD VS CARS' DILEMMA****Context:**

The diversion of **phosphoric acid**, a key ingredient in fertilizers, for electric vehicle (EV) battery production is creating a potential **"food vs cars" dilemma**.

**What is 'Food vs Fuel', a looming 'Food vs Cars' dilemma?**

**The "Food vs Fuel" dilemma** refers to the conflict between using crops like sugarcane, maize, and soybeans for producing biofuels (ethanol, biodiesel) instead of for food, which can impact food supply and prices.

**The "Food vs Cars" dilemma** is a similar issue where phosphoric acid, vital for fertilizers **like di-ammonium phosphate (DAP)**, is increasingly being used in **lithium-iron-phosphate (LFP) batteries**, which are gaining popularity in EVs). This shift could lead to shortages of fertilizers, affecting crop production and food security while supporting the growth of the EV industry.

**Here are the ethical dilemmas in the article:**

1. **Food vs. Cars:** The diversion of phosphoric acid for electric vehicle (EV) batteries, potentially compromising agricultural fertilizer supply, raises the ethical issue of prioritizing food security over technological advancements in EVs.
2. **Resource Allocation:** Deciding between using limited phosphoric acid for crop growth (essential for global food security) or for EV battery production (important for clean energy and reducing carbon emissions) creates a conflict between agricultural needs and environmental goals.
3. **Global Dependency:** India's heavy reliance on phosphate imports raises questions about fairness and equity in global resource distribution, especially if resources shift toward wealthier industries like EV production.
4. **Sustainability vs. Development:** Balancing environmental sustainability (EV batteries) with food security poses ethical challenges in deciding which should be prioritized for long-term global well-being.
5. **Economic Inequality:** As resources like phosphoric acid shift towards the growing EV market, small-scale farmers in countries like India may

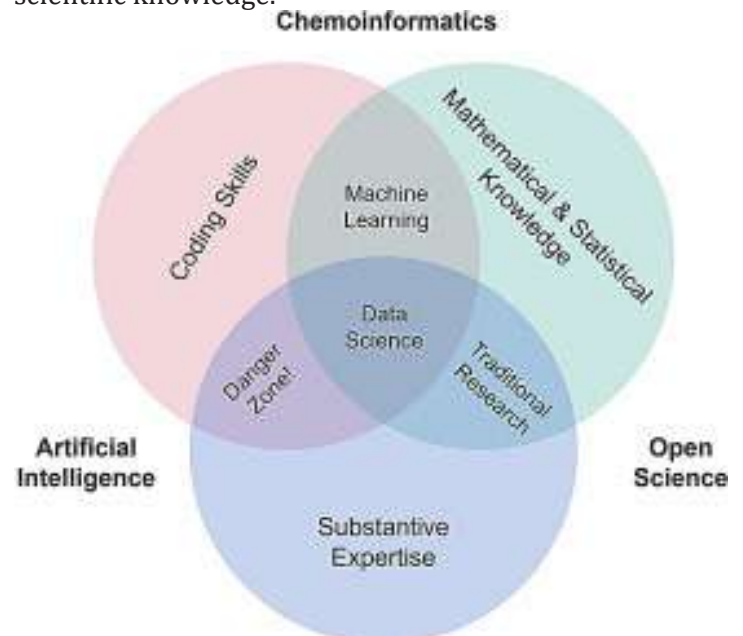
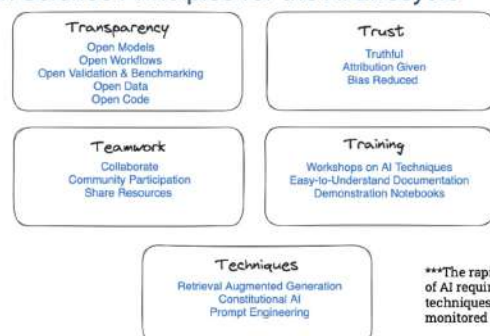
face economic difficulties due to rising fertilizer costs, deepening inequality.

**12. UNESCO CALLS FOR OPEN SCIENCE PRINCIPLES IN AI****Context:**

UNESCO urged the **application of open science principles to AI**, noting that AI's **"black-box" nature** and dominance by private companies limit open science.

**What is Open Science?**

Open Science is an inclusive approach that aims to make **scientific research and data openly available, accessible, and reusable for everyone**. It encompasses sharing research outputs, methodologies, software, and data to promote transparency, collaboration, and inclusivity in scientific knowledge.

**Open Science Principles for the AI Lifecycle****Benefits of Open Science in AI:**

1. **Reproducibility:** Enables validation and replication of AI experiments.
2. **Innovation:** Accelerates new developments through shared research.
3. **Transparency:** Makes AI systems more under-

standable by reducing “black-box” issues.

4. Bias Mitigation: Helps identify and address biases in AI models.
5. Inclusivity: Allows researchers from diverse backgrounds to contribute.
6. Data Quality: Promotes the creation of standardized, high-quality datasets.
7. Ethical Development: Encourages responsible and ethical AI practices.
8. Cost Efficiency: Reduces duplication of research efforts.

**Challenges AI Poses to Open Science:**

- Reproducibility Crisis: Difficulty in replicating AI-based experiments.
- Interdisciplinarity: Limited collaboration between AI and other fields.
- Data Issues: Challenges in data quality and potential biases.
- Changing Incentives: Pressure on researchers to prioritize AI over other scientific rigour.

UNESCO’s Call for Ethical AI Governance

UNESCO also emphasizes the need for ethical AI governance and the use of the “**Global AI Ethics and Governance Observatory.**” This observatory supports policymakers, academics, and the private sector in tackling AI’s challenges, promoting ethical and responsible AI adoption globally.

**UNESCO’s Ethics of AI Recommendation:**

In 2021, UNESCO introduced the first global standard on AI ethics, emphasizing transparency, human rights, and fairness. **It sets forth four core values for AI:**

1. Human Rights and Dignity: Respect and protection of fundamental rights.
2. Peaceful and Inclusive Societies: Ensuring AI fosters justice and interconnectivity.
3. Diversity and Inclusiveness: Promoting varied perspectives and inclusivity in AI.
4. Environmental Sustainability: AI should contribute to environmental well-being.

**Ten Core Principles:**

The recommendation outlines ten principles, including **proportionality, safety, privacy, transparency, human oversight, sustainability, and fairness.** It also suggests actionable policies in eleven key areas for ethical AI development.

Implementation Tools:

UNESCO developed the **Readiness Assessment Methodology (RAM)** and **Ethical Impact Assessment (EIA)** to help Member States implement these principles effectively.

Women4Ethical AI Platform:

UNESCO’s Women4Ethical AI platform **supports gender equality in AI design and deployment**, uniting female experts to advance ethical AI practices and non-discriminatory algorithms.

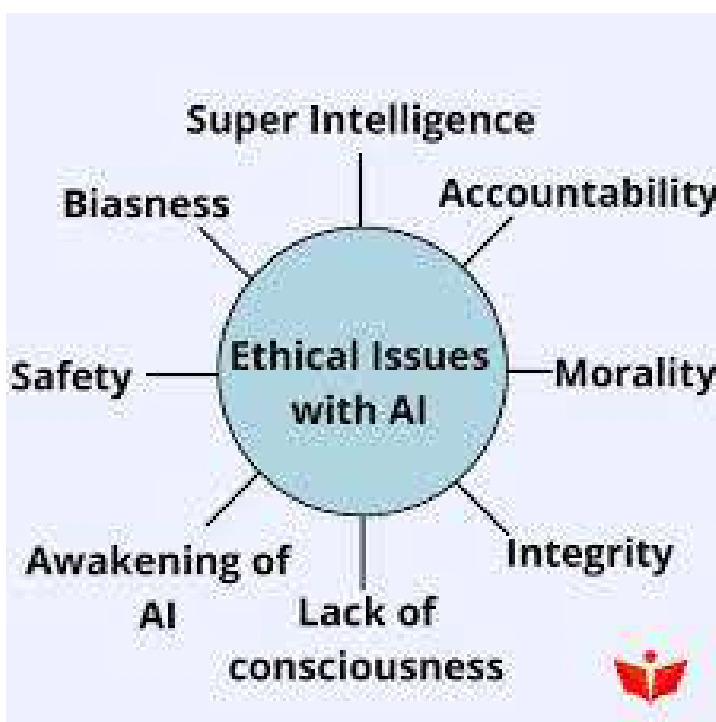
AI’s Potential for Ethical and Moral Behavior:

Aspect	AI’s Potential for Ethical and Moral Behavior
<b>Views</b>	
<b>Understanding Ethics and Morality</b>	For e.g., AI systems can be trained to identify hate speech and offensive content to maintain a respectful online environment.
<b>Bias Mitigation</b>	AI can be programmed to <b>mitigate biases and avoid unfair discrimination.</b>
<b>Decision-Making</b>	AI can make ethical decisions based on <b>predefined rules and data. (but lacks true moral understanding)</b>
<b>Counterview</b>	
<b>Learning from Data</b>	AI learns from data, which might include biased or unethical information, leading to unintended consequences.
<b>Ethics in AI: Kantian Perspective</b>	<b>Applying Kantian ethics to AI decision-making</b> within governance raises concerns. Delegating decisions to algorithms could <b>undermine human moral reasoning and responsibility.</b> <b>Isaac Asimov’s ‘Three Laws of Robotics’</b> also highlights the challenges in translating ethics into AI rules.
<b>Programming Ethics into AI: A Complex Task</b>	<b>Programming ethical AI is more challenging</b> than programming AI for tasks like chess due to the intricate nature of ethical considerations.

<b>Autonomy and Intent</b>	<b>AI lacks consciousness and intent</b> , making its actions neither inherently moral nor immoral. <b>E.g.</b> , A robot that assists the elderly with daily tasks completes them efficiently but without genuine care or compassion.
<b>Accountability and Liability</b>	<b>As AI assumes decision-making roles</b> , accountability questions arise. If AI-based decisions turn out to be unethical, who bears responsibility? Punishing AI is problematic as it lacks emotions. Deciding who is accountable—AI developer, AI user, or AI itself—poses a significant challenge.
<b>Unintended Consequences</b>	<b>E.g., Social media algorithms</b> , while aiming to show relevant content, might inadvertently create echo chambers and reinforce biases.
<b>Continuous Learning</b>	<b>AI's ability to learn and adapt</b> can lead to ethical shifts over time, requiring ongoing evaluation.
<b>Human Oversight</b>	The ethical behaviour of <b>AI often requires human oversight and intervention</b> . <b>E.g.</b> , Content moderation platforms use AI to flag potentially inappropriate content, but human moderators make final decisions.

**Steps Taken for Ethical AI:**

Steps	Description
<b>International</b>	<b>Global Alliance for Social Entrepreneurship</b> : Launched AI for Social Innovation initiative at WEF 2024 with Microsoft to promote positive AI impact and responsible guidelines. <b>Examples</b> : China, Canada, and Singapore have AI regulations
	<b>EU AI Act</b> : Comprehensive regulation for AI risk governance and citizen protection
	<b>California</b> : Bill for AI safety testing to prevent misuse.
	<b>UK AI Safety Summit</b> : The 2023 summit focused on AI safety and international cooperation.
	<b>Tech Giants</b> : Microsoft, Meta, Google, Amazon, and Twitter have responsible AI teams for ethical oversight
<b>National</b>	<b>Advisory on AI Models</b> : MeITY issued guidance on AI models and deepfakes in 2024.
	<b>India AI Mission</b> : Promotes AI innovation through public-private partnerships, improving data quality and ethical AI.
	<b>Responsible AI for Youth</b> : National program launched for youth.
	<b>National Strategy on AI</b> : NITI Aayog's 2018 strategy for safe, inclusive AI adoption across sectors with the "AI for All" mantra



**For Generative AI: What are the potential applications and ethical concerns?** [Click Here](#)

**Insta Links:**

- [A new global standard for AI ethics](#)

## CONTENT FOR MAINS ENRICHMENT

Topic in News	Usage in Answers
<h3>1. COMMONS AND THE NEED FOR COMMUNITY LEADERSHIP</h3>	<p><b>Commons are resources not owned by individuals, groups, or governments</b> but shared by the community, such as <b>forests, water bodies, and parks</b>. These resources provide ecological and social benefits but are often at risk of over-exploitation due to a lack of ownership.</p> <p>Historically, the <b>“Tragedy of the Commons”</b> suggested that only government or market control could prevent overuse. However, <b>Elinor Ostrom’s research</b> showed that community-led governance is more effective in managing <b>Commons sustainably</b>.</p> <p>In India, the <b>2006 Forest Rights Act</b> gives forest dwellers legal ownership of forest resources, providing a successful example of community leadership. Expanding such frameworks to other Commons can improve governance, livelihoods, and ecological sustainability.</p> <p><b>Values:</b></p> <ol style="list-style-type: none"> <li>1. <b>Sustainability:</b> Promoting the long-term preservation of shared resources.</li> <li>2. <b>Community leadership:</b> Empowering local communities to manage Commons.</li> <li>3. <b>Inclusiveness:</b> Involving grassroots organizations in decision-making.</li> <li>4. <b>Equity:</b> Ensuring fair access to resources for all community members.</li> <li>5. <b>Responsibility:</b> Collective stewardship over common resources.</li> <li>6. <b>Legal recognition:</b> Acknowledging and formalizing community rights, as in the Forest Rights Act.</li> </ol>
<h3>2. PERIYAR EV RAMASAMY</h3>	<p><b>Context:</b> <b>Periyar EV Ramasamy</b>, remembered on his <b>146th birth anniversary</b>, was a rationalist and social reformer who led the <b>Self Respect Movement</b> to uplift Tamils and oppose caste dominance, especially by Brahmins.</p> <p><b>Contributions:</b></p> <ol style="list-style-type: none"> <li>1. <b>Congress Party:</b> Joined in 1919, disagreed with Gandhi on caste issues, resigned in 1925, and joined the Justice Party and Self Respect Movement.</li> <li>2. <b>Vaikom Satyagraha (1924-25):</b> Protested untouchability in Kerala, supported by Periyar, leading to the opening of temple roads.</li> <li>3. <b>Self Respect Movement (1925):</b> Focused on uplifting non-Brahmins, promoting equality and self-respect among backward castes.</li> <li>4. <b>Justice Party:</b> Periyar became its leader in 1938, opposing Brahmin dominance and advocating social justice for non-Brahmins.</li> </ol> <p><b>Ethical values derived from Periyar’s life:</b></p> <ol style="list-style-type: none"> <li>1. <b>Equality</b> – Advocated for social, caste, and gender equality.</li> <li>2. <b>Rationalism</b> – Promoted critical thinking and questioning of tradition.</li> <li>3. <b>Self-Respect</b> – Emphasized dignity and identity for marginalized groups.</li> <li>4. <b>Justice</b> – Opposed caste-based discrimination and inequality.</li> <li>5. <b>Gender Equality</b> – Fought for women’s rights, independence, and equal opportunities.</li> <li>6. <b>Secularism</b> – Challenged religious orthodoxy and caste-based practices.</li> <li>7. <b>Empowerment</b> – Encouraged marginalized communities to assert their rights.</li> </ol>

## FACTS FOR PRELIMS

### GS-1

#### Art & Culture

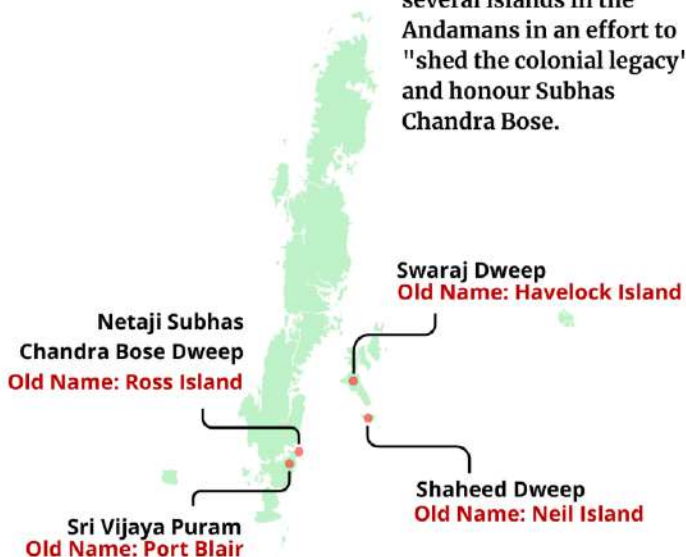
### 3. SRI VIJAYA PURAM (PORT BLAIR)

#### Context:

**Port Blair, the capital of the Andaman and Nicobar Islands**, has been renamed Sri Vijaya Puram, as part of the **Indian government's effort to remove colonial legacies**.

- Originally named after **Archibald Blair**, a **British naval officer**, the city was a strategic point for the **British East India Company** and later became infamous as a **penal colony during British rule, housing political prisoners in the Cellular Jail**.
- The new name, **Sri Vijaya Puram**, connects to the imperial Chola dynasty.
- Historical records suggest that the Chola emperor Rajendra I used the **Andaman Islands as a base in the 11th century** for his naval expeditions against the **Srivijaya Empire in present-day Indonesia**.

### Renaming Islands in Andaman



### 4. KARAM FESTIVAL

#### Context:

The **Karma or Karam festival is a significant tribal harvest celebration**, centered around the **worship of the Karam tree, symbolizing Karam Devta, the god of**

#### strength, youth, and vitality.

- Celebrated by tribes such as **the Munda, Oraon, Ho, and Santhal across states like Jharkhand, West Bengal, Bihar, and Odisha**, the festival marks the agricultural season.
- Rituals include planting a Karam tree branch in the courtyard**, dancing, singing, and offerings to ensure a good harvest.
- Myths around the festival often feature **stories of seven brothers who suffer hardships after neglecting the Karam tree**, underscoring the deep connection between the festival, mythology, and agricultural practices.

The Karam tree (scientifically known as *Adina cordifolia*) is a **deciduous tree native to the Indian subcontinent, found in countries like India, Nepal, and Bangladesh**. It plays a significant role in **both ecology and culture, particularly among tribal communities**.

#### History

### 5. SIR M VISVESVARAYA

#### Context:

On Engineers Day, Prime Minister Narendra Modi honoured **Sir M Visvesvaraya** for his contributions to engineering.



Mokshagundam Visvesvaraya

Details	
About	<b>Mokshagundam Visvesvaraya (1861-1962)</b> , a pioneering civil engineer and administrator in colonial India celebrates his birthday on September 15 <sup>th</sup> . This day is marked as <b>Engineer's Day</b> .
Education	Bachelor of Arts from the University of Madras; Diploma in civil engineering
Career	Assistant Engineer in the Government of Bombay; <b>19th Dewan of Mysore</b>
Contributions	Introduction of the <b>block system of irrigation</b> in the Deccan canals in 1899; Solved the problem of the "muddy and discoloured" water in the <b>city of Sukkur</b> (now in Pakistan) located on the banks of the <b>Indus River</b> ; <b>Inventing automatic gates</b> meant to regulate the flow of water in reservoirs; He was the architect of the <b>Krishnaraja Sagara dam in Mysore</b>
Emphasis on Education	Advocated for <b>quality education</b> in India; Played a role in establishing the <b>University of Mysore</b> ; Established <b>Bangalore Agricultural University, University Visvesvaraya College of Engineering</b> etc
Literary Works	" <b>Reconstructing India</b> " (1920); <b>Unemployment in India; Its Causes and cure</b> (1932); " <b>Planned Economy of India</b> " (1934); <b>Memories of my working life</b> (1951).
Legacy	Left a lasting impact on India's infrastructure and education; Emphasized modernization for material prosperity; Awards: <b>Bharat Ratna award, 1955</b>
Ethical Values	Dedication to Public Service, Integrity, Technological Innovation, and Perseverance

To know more Visit Insights IAS Daily Current Affairs

### 6. BATTLE OF SARAGARHI

#### Context:

Saragarhi Day, observed on September 12, **commemorates the 1897 Battle of Saragarhi**, one of the **most remarkable last stands in military history**.

- Saragarhi was a key communication post **between Fort Lockhart and Fort Gulistan** in the North-West Frontier Province (**now in Pakistan**).

### About Battle of Saragarhi:

- On this day, 21 soldiers of the 36th Sikhs regiment, led by Havildar Ishar Singh, defended the fort against over **8,000 Afridi and Orakzai tribal militants for seven hours**.
- The bravery of the soldiers was recognized with posthumous honors, including the Indian Order of Merit, awarded by Queen Victoria.
- In 2017, the Punjab government declared Saragarhi Day a holiday.
- The battle has since been immortalized in various ways, including memorials, a film (Kesari), and remembrance events in both India and Pakistan.

### Society

## 7. IRULA COMMUNITY

### Context:

The Irula tribe of Tamil Nadu, which **supplies nearly 80% of India's anti-snake venom, plays a vital role in public health**.

- However, despite selling snake venom, **the community continues to struggle with poverty**.
- A cooperative society of Irula tribals near Chennai, responsible for this critical work, faces an **uncertain future, highlighting the economic challenges** despite their contribution to health-care.

The Irula tribe, a Particularly Vulnerable Tribal Group (PVTG) in Tamil Nadu, primarily resides in the Nilgiris region, with communities also in Karnataka and Kerala.

They **place great importance on ancestor worship**.

According to anthropological studies, **the Irulas are one of India's oldest tribal communities, belonging to the Negrito race**, believed to have migrated from Africa.

They speak the Irula language, written in the Tamil script.

### Geography

## 8. COELACANTHS

### Context:

A new, **well-preserved coelacanth fossil** has prompted a re-evaluation of how Earth's geology drives evolution.

### What are Coelacanths?

They are ancient deep-sea fish, believed to be extinct **until rediscovered in 1938**. They have been around for over **410 million years** and are closely related to tetrapods.

**A newly discovered, well-preserved coelacanth fossil** has led scientists to re-evaluate evolution, revealing that tectonic plate activity, rather than ocean conditions, played a key role in driving the creation of new species. This **challenges previous assumptions** about how **Earth's geology influences evolutionary patterns**.

This discovery came from a **fossil in Australia's Gogo Formation**. The living coelacanth species, although similar to their ancient relatives, show **slight changes in DNA and body proportions**, challenging the idea that they are **"living fossils."**

## GS-2

### Judiciary

## 9. CONTEMPT PETITION

### Context:

Chief Justice of India (CJI) D Y Chandrachud informed the Attorney General that the Jharkhand government has filed a **contempt petition against the central government for delaying the appointment of a new Chief Justice to the Jharkhand High Court**, as recommended by the Supreme Court Collegium.

1. This was **stated during a hearing on a Public Interest Litigation (PIL)** seeking a "fixed time limit" for the Centre to notify judicial appointments.
2. The Jharkhand government emphasized that delays in appointing a Chief Justice hinder judicial efficiency.

A contempt petition is a legal action **filed in a court when someone disobeys or fails to comply with a court order or judgment**.

It is a way to **seek the enforcement of a court's decision and hold the violating party accountable**. There are two types of contempt under the law:

1. Civil Contempt: This occurs when a **person or entity willfully disobeys a court order or breaches a legal obligation**, such as **not following the terms of a court judgment**.
2. Criminal Contempt: This involves **actions that obstruct or undermine the authority, dignity, or functioning of the court**, such as showing disrespect in court or interfering with judicial proceedings.

A contempt petition is filed to **bring such disobedience or defiance to the court's attention, and if proven, the court may impose penalties**, which could include fines or imprisonment, to ensure compliance.

## Governance

### 10. BHASKAR

#### Context:

The **Department for Promotion of Industry and Internal Trade (DPIIT)** is set to launch **BHASKAR (Bharat Startup Knowledge Access Registry)**, a digital platform designed to support and **enhance India's startup ecosystem**.

- Under the **Startup India program**, BHASKAR will **centralize resources and streamline collaboration among startups, investors, mentors, service providers, and government bodies**.
- Key features include **personalized IDs for stakeholders, networking and collaboration opportunities, centralized access to resources, and improved discoverability of opportunities**.
- The **platform aims to position India as a global hub for innovation** by promoting cross-border collaborations and supporting the growth of the entrepreneurial ecosystem.

**BHASKAR is expected to drive innovation, job creation, and economic growth**, solidifying India's reputation as a leader in global entrepreneurship.

### 11. PRADHAN MANTRI JANJATIYA UNNAT GRAM ABHIYAN

#### Context:

The Union Cabinet approved the **Pradhan Mantri Janjatiya Unnat Gram Abhiyan** to uplift tribal communities in **63,000 tribal-majority villages and aspirational districts**.

- The mission targets **5 crore tribal people** by **addressing gaps in social infrastructure, education, health, and livelihoods**.
- Key goals include providing **pucca houses, enhancing road and mobile connectivity, improving education and healthcare access**, and promoting **economic empowerment** through **skills training, livelihood support, and tribal marketing centers**.
- Additionally, it includes innovative components like **tribal home stays** and support for **Forest Right Act** holders.

The mission builds on the success of **PM Janjati Adivasi Nyaya Maha Abhiyan (2023)**, aiming for **holistic tribal development** through a federal cooperative approach.

### 12. NATIONAL CENTRE OF EXCELLENCE FOR ANIMATION

#### Context:

The Union Cabinet approved the establishment of a Na-

tional Centre of Excellence (NCoE) for Animation, Visual Effects, Gaming, Comics, and Extended Reality (AVGC-XR), named the Indian Institute for Immersive Creators (IIIC).

- This institution, modeled after IITs and IIMs, will be located in Mumbai and **aims to position India as a global content hub**.
- It will offer **specialized training, foster research and development, and support startups in the AVGC-XR sector**, enhancing **India's soft power and attracting foreign investments**.
- The NCoE will focus **on India's IP creation, cultural content, and employment opportunities, contributing to the Atmanirbhar Bharat initiative**.

### 13. BIO-RIDE SCHEME

#### Context:

The Union Cabinet approved the **Biotechnology Research Innovation and Entrepreneurship Development (Bio-RIDE)** scheme, merging **two existing Department of Biotechnology schemes**.

- **Bio-RIDE aims to foster innovation, bio-entrepreneurship, and sustainable biomanufacturing**.

#### Key components of Bio-RIDE:

1. **Biotechnology Research & Development (R&D)** – Supports cutting-edge research in fields like synthetic biology and bioenergy.
2. **Industrial & Entrepreneurship Development (I&ED)** – Promotes bio-entrepreneurship through funding, incubation, and mentorship.
3. **Biomanufacturing and Biofoundry** – Focuses on sustainable practices and circular bioeconomy to address healthcare, agriculture, and climate challenges.

The scheme encourages **industry-academia collaboration**, supports **extramural funding** for research, and aims to make India a global leader in biotechnology, **contributing to the goal of a \$300 billion bioeconomy by 2030**.

### 14. FAST TRACK IMMIGRATION-TRUSTED TRAVELLER PROGRAMME

#### Context:

India has launched its **first Fast Track Immigration-Trusted Traveller Programme (FTI-TTP)** aimed at **providing quicker immigration processing for High-Net-Worth Individuals (HNWIs), CEOs, businessmen, and Overseas Citizens of India (OCI)**.

- The program, **operational at major airports such as Delhi and Mumbai**, offers faster immigration clearance through e-gates.

- **Enrollees must apply online, provide biometrics at airports or Foreigners Regional Registration Offices (FRRO), and can enjoy fast-track clearance for up to five years.**
- The program ensures **secure handling of personal data and is inspired by the US Global Entry system, tailored to Indian needs.**

## International Relations

### 15. OPERATION SADBHAV

#### Context:

**India has launched *Operation Sadbhav* to provide humanitarian assistance to Laos, Myanmar, and Vietnam, all severely affected by flooding from Typhoon Yagi.**

- Under this mission, **India has committed \$1 million in aid to Vietnam and \$100,000 to Laos.**
- **The Indian Navy and Air Force are actively deploying ships and aircraft to deliver relief, including food, clothing, medicines, and water purification items.**
- **India's Act East Policy supports its rapid response,** reinforcing solidarity with ASEAN nations.

**Typhoon Yagi, Asia's strongest cyclone in 2024,** has displaced millions and caused widespread devastation across Southeast Asia.

## GS-3

## Indian Economy

### 16. NIDHI COMPANIES

#### Context:

The Ministry of Corporate Affairs (MCA) has penalized over two dozen Nidhi companies **in a crackdown for violations of the Companies Act,** primarily concerning **delayed financial filings and issues with share allotment.**

- Most violations occurred in Tamil Nadu, with **companies failing to submit financial statements and annual returns on time.**
- **The Registrar of Companies (RoC) emphasized the importance of compliance to protect small investors,** as Nidhi companies hold money in trust for their members.

About Nidhi Companies:

Nidhi companies are **non-banking financial entities**

**in India,** primarily involved in **borrowing and lending money among their members.**

These companies are **governed by Section 406 of the Companies Act, 2013,** and are intended to **promote savings and financial inclusion within communities.**

Nidhi companies are relatively easy to form, requiring a minimum capital of ₹10 lakh and at least seven members, of which three must be directors.

### 17. ANTITRUST INVESTIGATIONS

#### Context:

Indian antitrust investigations **have uncovered that Amazon and Flipkart violated competition laws** by engaging in practices that **unfairly favored certain sellers and harmed competition.**

The Competition Commission of India (CCI) **detailed these findings in two reports,** which include:

- **Preferred Sellers:** Amazon and Flipkart **provided preferential treatment to selected sellers.** These sellers received **significant benefits such as marketing and warehousing services at minimal costs,** which created an unfair advantage over other sellers.
- **Preferential Listings:** The majority of top listings on Amazon and Flipkart were **dominated by these preferred sellers,** creating barriers for other sellers to compete effectively.
- **Exclusive Product Launches:** Both companies had **exclusive partnerships for launching technology products,** such as smartphones. This practice disadvantaged smaller retailers and delayed product availability for traditional stores.
- **Deep Discounting:** Amazon and Flipkart allowed their affiliated sellers to offer deep discounts, **often below cost, to drive out competition.**

## Agriculture

### 18. PHEROMONE DISPENSER

#### Context:

Scientists from **Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR) and ICAR-National Bureau of Agricultural Insect Resources (ICAR-NBAIR)** have developed a **sustainable pheromone dispenser to aid farmers in controlling pests.**

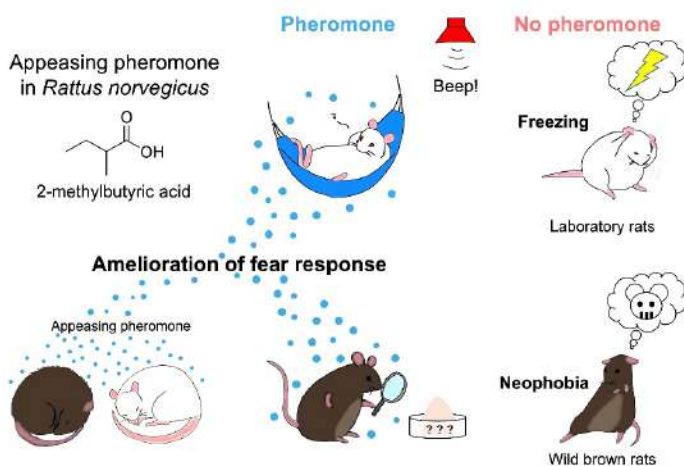
- This dispenser uses a **mesoporous silica matrix,** which ensures a **stable, controlled release of pheromones, making it more efficient than ex-**

### isting models.

- The **stable release rate reduces the need for frequent replacements, thereby lowering costs and labor.**
- The **dispenser's effectiveness in field tests was comparable to commercial options**, but with a **reduced pheromone load.**

Pheromones are **chemical substances produced and released by animals** (including insects and humans) that trigger a **social or behavioral response in members of the same species.**

They are often used for **communication, such as signaling danger, marking territory, attracting mates, or coordinating social behaviors.**



Science & Technology

## 19. NEUROMORPHIC COMPUTING

### Context:

Scientists at the Indian Institute of Science (IISc), Bengaluru have made a significant breakthrough in neuromorphic computing, which mimics the **human brain's structure and functioning.**

- They've developed an **analogue computing platform that can process and store data using 16,500 conductance states, a major advancement over traditional computers limited to two states.**
- This **platform improves efficiency and reduces energy consumption for complex AI tasks**, such as training models like ChatGPT.
- The team also demonstrated the system's capabilities by recreating NASA's "**Pillars of Creation**" image with much less energy.
- This innovation promises to revolutionize computing, impacting **industries like AI, finance, and tech** by **enabling faster data processing and more efficient machine learning systems.**

## 20. MVA-BN VACCINE

### Context:

The **World Health Organization (WHO)** has prequalified the **Danish MVA-BN vaccine**, making it the **first approved vaccine to combat mpox.**

- This **prequalification facilitates broader and faster access to the vaccine**, particularly for high-risk populations, **aiming to reduce transmission and contain outbreaks.**
- **The MVA-BN vaccine, developed by Bavarian Nordic A/S**, shows 76% effectiveness with a single dose and 82% with two doses.
- **The vaccine can be stored at 2-8°C** for up to eight weeks and is recommended for adults over 18.

## 21. SIGNAL MODULATION

### Context:

Signal modulation involves adjusting **wave properties—amplitude (AM), frequency (FM), or phase (PM)—to carry information.**

- **AM (Amplitude Modulation) changes the wave height to encode signals**, while **FM (Frequency Modulation) alters the wave's frequency.**
- **PM (Phase Modulation) shifts the wave's phase for clear digital transmissions like Wi-Fi**, being less affected by interference.
- FM offers better sound quality than AM, **but its range is shorter.**

However, as technology advances, **digital broadcasting is replacing analog due to its efficiency and resistance to interference.**

## 22. INTEGRATED OCEAN ENERGY ATLAS

### Context:

The **Indian National Centre for Ocean Information Services (INCOIS)** has launched the "**Integrated Ocean Energy Atlas**" for India's **Exclusive Economic Zone (EEZ)**, revealing the vast potential of marine energy resources.

- Unveiled by the Ministry of Earth Sciences, the **atlas identifies areas rich in renewable energy sources like solar, wind, waves, tides, ocean currents, and thermal gradients.**
- It provides **annual, monthly, and daily energy estimates via a WebGIS interface.**

## 23. CENTRE FOR RURAL ENTERPRISE ACCELERATION THROUGH TECHNOLOGY (CREATE)

### Context:

The **Centre for Rural Enterprise Acceleration through Technology (CREATE)** was inaugurated via virtual mode.

- The **centre aims to enhance rural industrialization and promote enterprise creation**, benefiting local communities in Ladakh.
- **CREATE will provide facilities for Pashmina wool processing, essential oil extraction from roses, and bio-processing of local fruits.**
- The **centre is expected to improve product quality, increase local productivity, and uplift the livelihoods of artisans** in the region.

The initiative seeks to **support traditional artisans, particularly in Ladakh's challenging geographical conditions.**

## 24. QUANTUM COMPUTING

### Context:

Quantum computing has the **potential to significantly enhance large language models (LLMs)** by addressing their key limitations, such as **high energy consumption, hallucinations (factually incorrect outputs), and struggles with syntax.**

- **LLMs, though powerful, are energy-intensive and can produce erroneous results due to limitations in pre-training.**
- **Quantum Natural Language Processing (QNLP)** offers a solution, as it **requires fewer parameters and consumes less energy** while improving understanding of both syntax and semantics.
- Additionally, **Quantum Generative AI (QGen-AI) models** can enhance **time-series forecasting, allowing for more accurate predictions with fewer computational resources.**

Quantum computing is an **advanced field of computing that uses the principles of quantum mechanics** to process information.

Unlike classical computers, **which use bits as the basic unit of information (represented as 0 or 1),** quantum computers use quantum bits or **qubits**, which can exist in a superposition of both 0 and 1 simultaneously.

This allows quantum computers to **solve certain complex problems much faster than classical computers.**



## Quantum Computing



**Context:** Union Cabinet has approved the National Quantum Mission (NQM)



Quantum computing uses quantum bits (qubits) that can be both 0 and 1 at the same time, allowing for multiple calculations to be performed simultaneously, making quantum computing exponentially faster than traditional computing for certain types of problems.

### About National Quantum Mission

	Description
Objective	Develop and promote Quantum Technology in India
Timeframe	2023 – 2031 (8 years)
Major themes	<ul style="list-style-type: none"> <li>• <b>Quantum Computing:</b> Develop physical qubit computers with a capacity ranging from 50-1000 qubits (to be completed within 3-8 years)</li> <li>• <b>Quantum Communication:</b> Develop secure satellite-based communication with a range of 3000 km and communication lines using Quantum Key Distribution over 2000 km (to be completed within 3-8 years)</li> <li>• <b>Quantum Sensing and Metrology:</b> Develop quantum sensors (magnetometers with high sensitivity in atomic clock systems) for Navigation, healthcare and diagnostics, defence, and energy sectors (to be completed within 8 years)</li> <li>• <b>Quantum Material and Devices:</b> Develop devices and materials (superconductors, novel semiconductor structures, and topological materials) for quantum technology (to be completed within 3-8 years)</li> </ul>
Key Agencies Involved	Department of Science & Technology, Department of Atomic Energy, Department of Telecommunications, DRDO, ISRO
Other Aim	The Mission also aims to establish four <b>thematic hubs (T-Hubs) at research institutes and R&amp;D centres (based on above themes)</b>
Significance	India will be <b>among the top six leading nations</b> (US, Canada, France, Finland, China and Austria.) involved in the research and development in quantum technologies.
Other programmes	National Mission for Quantum Technologies and Applications (NM-QTA); Quantum-Enabled Science & Technology (QuEST); C-DOT's Quantum Communication Lab and Quantum Key Distribution (QKD) solution. <a href="#">Visit Insights IAS Daily Current Affairs</a>

## 25. PAGER

### Context:

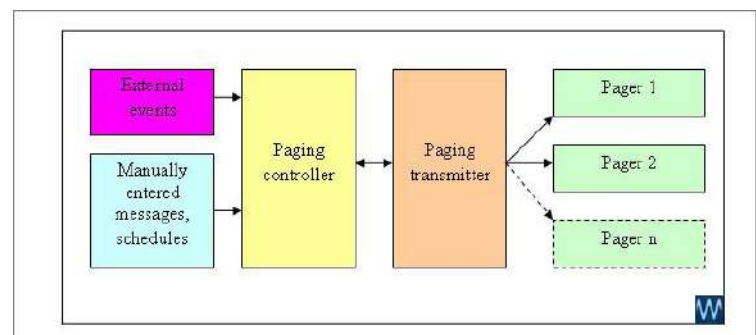
Recently, Israel's Mossad reportedly planted explosives in thousands of Pagers ordered by Hezbollah, leading to a deadly explosion in Lebanon.

### What is a Pager?

**A pager, or "beeper," is a portable communication device** used to receive short messages via radio frequency. While largely replaced by **mobile phones in the 1990s**, Hezbollah still uses pagers for low-tech communication to evade Israeli tracking.

### How does it work?

Pagers work by **receiving short messages sent via radio waves.** When a message is transmitted, the pager alerts the user, who can then respond using a nearby phone. Since pagers don't actively transmit signals like mobile phones, they are harder to track.



## 26. MINI-MOON

### Context:

Earth will **temporarily capture a small asteroid named 2024 PT5**, which will stay for two months **before moving back into space**.

- **This phenomenon, known as a “mini-moon,” occurs when asteroids get caught in Earth’s gravity and orbit the planet for a short time.**
- Although rare, **such occurrences provide scientists with valuable opportunities** to study near-Earth objects.
- **2024 PT5, discovered by NASA’s Asteroid Terrestrial-impact Last Alert System (ATLAS)**, is about 33 feet long and came from the Arjuna asteroid belt.
- However, it may not fully qualify as a **mini-moon since it won’t complete a full orbit around Earth but will follow a horseshoe-shaped path.**

This event is significant because **studying asteroids like 2024 PT5 helps researchers understand the nature of asteroids that pass close to Earth**, potentially informing future space exploration and resource extraction efforts.

## 27. BHARATIYA ANTARIKSH STATION

### Context:

The Union Cabinet has approved the development of the Bharatiya Antariksh Station (**BAS-1**) as part of an expanded **Gaganyaan programme**, marking a significant **leap in India’s space ambitions**.

- The plan involves **completing eight missions, including uncrewed ones**, by December 2028, with **BAS-1 expected to be operational by 2035**.
- Additionally, the decision sets the groundwork for a **crewed lunar mission by 2040**.

### Key highlights:

- **Gaganyaan programme** now includes eight missions.
- BAS-1 will focus on **microgravity-based scientific research and technology development**, generating opportunities in high-tech sectors.
- **ISRO will lead the efforts, collaborating with industry and academia**, to develop critical technologies for long-duration human space missions.
- The Cabinet also approved the **Chandrayaan-4 mission** and a **Venus Orbiter mission**.

## 28. NEURALINK’S BLINDSIGHT

### Context:

Elon Musk’s brain-chip company, Neuralink, **received the FDA’s “breakthrough device” designation for its Blindsight implant**, designed to **restore vision, even for individuals who have lost both eyes and their optic nerve**.

- This **designation accelerates the development and review process for medical devices that address life-threatening conditions**.
- The Blindsight implant is part of **Neuralink’s broader mission to restore neural functions**.
- Neuralink has already implanted the device in a second patient, **enabling them to play video games and design 3D objects**.

### Environment & Ecology

## 29. SEAWEED

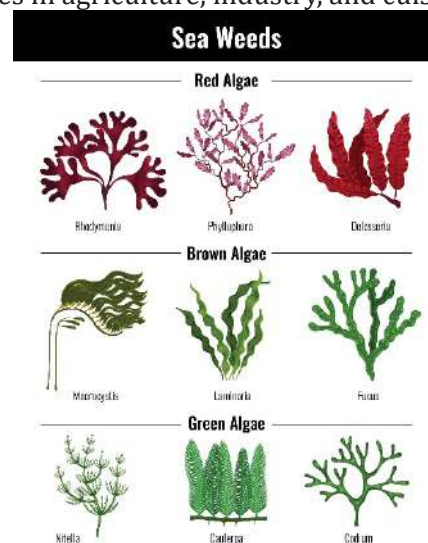
### Context:

The **ICAR-Central Marine Fisheries Research Institute (CMFRI)** has been designated as a **Centre of Excellence for seaweed cultivation** by the **Department of Fisheries under the Ministry of Fisheries, Animal Husbandry, and Dairying**.

- The centre will focus on **improving cultivation techniques, creating a seed bank to preserve indigenous species, and conducting environmental impact assessments**.

Seaweed refers to a **diverse group of marine plants and algae** that grow in the ocean and other water bodies.

They play a crucial role in marine ecosystems and have various uses in agriculture, industry, and cuisine.



## 30. BATTERY WASTE MANAGEMENT (BWM) RULES, 2022

### Context:

The **Ministry of Environment, Forest, and Climate Change (MoEFCC)** has introduced strict **environmental compensation (EC) guidelines** to enforce compliance with the **Battery Waste Management (BWM) Rules, 2022**.

- Issued by the **Central Pollution Control Board (CPCB)**, the guidelines penalize **battery producers for failing to meet recycling targets under extended producer responsibility (EPR) rules**, with differentiated costs based on **battery types** (e.g., Rs 2,400 per kg for lithium batteries).

The Battery Waste Management (BWM) Rules, 2022 were introduced by the **Ministry of Environment, Forest, and Climate Change (MoEFCC)** to regulate the handling, collection, and recycling of battery waste.

These rules emphasize Extended Producer Responsibility (EPR), making producers responsible for the lifecycle of batteries, including post-consumer waste.

## 31. CO<sub>2</sub>-TO-METHANOL PILOT PLANT

### Context:

India's first **CO<sub>2</sub>-to-methanol pilot plant** is set to be **established in Pune, Maharashtra**, as part of a **public-private partnership** between **IIT-Delhi and Thermax Limited**.

- It aims to **advance carbon capture and utilisation (CCU) technologies**, contributing to **India's climate goals and carbon reduction efforts**.
- The **initiative also ties into broader efforts by NITI Aayog and the Ministry of Petroleum to reduce crude oil imports by blending 15% methanol in diesel**.
- The **plant will serve as a "living lab" for CCU research**, fostering innovations in **carbon capture techniques and the conversion of CO<sub>2</sub> into chemicals**.

The **project also aims to assess the feasibility of scaling up these technologies for broader industrial use**, particularly in coal-based thermal power sectors, **which account for 30% of India's carbon emissions**.

## 32. KLEPTOPARASITISM

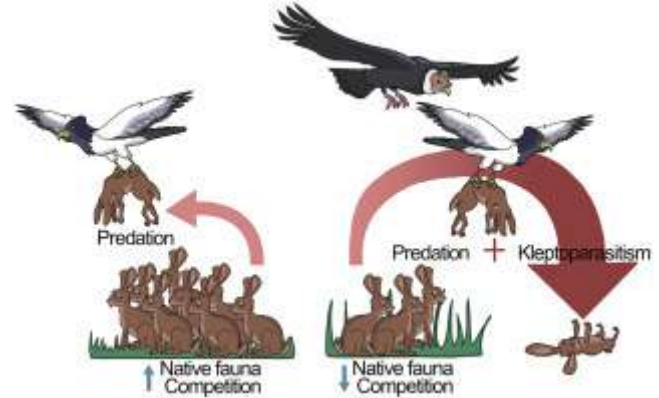
### Context:

A **recent study by UNSW Sydney highlights** the role of **food theft, or "kleptoparasitism,"** in the spread of the **deadly H5N1 avian influenza among seabirds**.

- This **behavior, practiced by species like frigate-**

**birds and skuas**, involves forcing other birds to **regurgitate prey, potentially transmitting the virus through saliva-coated food**.

- Researchers found that this form of transmission could spread the virus across populations and regions**, particularly during long migratory journeys.
- Seabirds are especially vulnerable** due to their **close contact in breeding colonies**.
- Early detection is critical for **preventing further spread, especially as the virus has not yet reached Australia**.



## 33. NAGA KING CHILLI

### Context:

**Seiyhama village in Nagaland** celebrated its **third annual Naga king chilli festival** on **showcasing the raja mircha**, one of the world's hottest chillies.

- This festival, **which combines agriculture, culture, and community spirit, highlights the significance of the king chilli**, known for its **extreme heat and cultural value**.
- Certified by Guinness World Records and granted a Geographical Indication tag, **the king chilli is central to Naga cuisine and cultural practices**.

The **Naga king chilli, also known as raja mircha**, is one of the **world's hottest chillies**, notable for its **extreme spiciness**, which exceeds **1 million Scoville Heat Units (SHU)**.

It is a key **feature of the Naga cuisine** and holds significant cultural and economic value in Nagaland, India.

## 34. GUIDELINES FOR ELECTRIC VEHICLE CHARGING STATIONS

### Context:

The Indian government has issued **revised guidelines for the installation and operation of electric vehicle (EV) charging stations**, aiming to boost EV adoption and expand charging infrastructure.

These **guidelines, released by the Ministry of Power**, introduce a **new revenue-sharing model between the**

**government and private operators** to make charging stations more financially viable.

**Key highlights include:**

- **Charging stations can be installed in various locations** such as office buildings, educational institutions, public spaces like shopping malls, airports, highways, and petrol stations.
- The guidelines **promote EV charging during solar hours (9 AM to 4 PM) by offering lower tariffs to encourage renewable energy usage.**
- A **minimum density of charging stations is specified**, with urban areas requiring **at least one station per 1 km<sup>2</sup> by 2030**, and stations placed every 20 km along highways.
- The **new policy also supports the government's PM E-DRIVE scheme**, which aims to install 74,300 chargers across the country, including fast chargers for different types of EVs.
- The government plans to **provide subsidized land to private operators for station installation, with revenue-sharing arrangements based on electricity consumption for up to 10 years.**

Defence

### 35. INDUS-X SUMMIT

**Context:**

The third edition of the INDUS-X Summit, highlighted growing **collaboration between India and the U.S. in defence innovation.**

- The event, organized by the **U.S.-India Strategic Partnership Forum (USISPF)** and Stanford University, saw the signing of a Memorandum of Understanding (MoU) between India's iDEX and the U.S. Defence Innovation Unit (DIU) to enhance cooperation in **defence technologies and foster industry and research partnerships.**
- Key announcements included a **new INDUS-X challenge**, the release of the **INDUS-X Impact Report**, and the **launch of an official INDUS-X webpage on iDEX and DIU websites.**
- The summit provided a platform for showcasing next-generation technologies by startups and MSMEs and facilitated discussions on **technology trends, funding, and strengthening defence supply chains.**

### 36. ZORAWAR

**Context:**

The DRDO has successfully completed the first phase of developmental field trials for the Zorawar Light Tank, designed for **high-altitude deployment, particularly in**

**areas like Ladakh.**

- Conducted in desert terrain, **the trials tested the tank's firing accuracy, with the tank meeting all performance goals.**
- Developed by the **Combat Vehicles Research & Development Establishment (CVRDE)** in collaboration with Larsen & Toubro (L&T), **Zorawar is a testament to India's growing indigenous manufacturing capabilities**, involving contributions from numerous Indian industries, including MSMEs.
- Weighing 25 tonnes, the tank is highly mobile and versatile, capable of being **transported by C-17 aircraft.** It integrates technologies like **unmanned systems and loitering munition, lessons drawn from the Russia-Ukraine conflict.**

### 37. PROJECT 200

**Context:**

**Bengaluru-based startup Bellatrix Aerospace unveiled "Project 200,"** an innovative satellite designed to **operate at Ultra-Low Earth Orbit (180-250 km)** during the **Bengaluru Space Expo 2024.**

1. This orbit could **revolutionize satellite capabilities**, enhancing applications like **high-resolution Earth observation and telecommunications.**
2. The **startup's breakthrough propulsion technology** will allow **satellites to operate at this low altitude for years, overcoming the challenges of atmospheric drag.**
3. This **new technology reduces communication latency by half**, improves image resolution by three times, and significantly lowers satellite costs, marking a major shift in satellite operations.

### 38. EXERCISE AIKYA

**Context:**

The National Disaster Management Authority (**NDMA**) and the **Southern Command of the Indian Army** launched a **two-day national symposium, "Exercise AIKYA,"** focusing on **disaster management.**

- The event **includes simulations, technology discussions, and expert insights on disaster preparedness.**
- It emphasized the **role of defence forces and the importance of technology in managing disasters**, particularly in **southern states prone to cyclones and floods.**

Reports in News

Reports	Description
<b>GCI 2024 Cybersecurity Assessment</b>	The <b>Global Cybersecurity Index (GCI) 2024</b> evaluates countries on five pillars: legal, technical, organizational, capacity development, and cooperation, using a five-tier system (Tier 1 to Tier 5).
Key Highlights:	<p>India's Position: India is among 46 countries in Tier 1, demonstrating strong cybersecurity commitment.</p> <p>Global Progress: All regions have improved since 2021, with Africa showing the most advancement.</p> <p>Digital Expansion: Many countries are in Tier 3 ("establishing") or Tier 4 ("evolving"), expanding digital services but needing better cybersecurity measures.</p>
Key Issues:	<b>Increased ransomware attacks</b> , breaches, and costly outages; shortages in skills, staffing, and resources; challenges in implementing cybersecurity agreements.
<b>Recommendations</b>	<b>Develop and update a national cybersecurity strategy</b> , build capacity for cybersecurity professionals and vulnerable groups, and enhance cooperation on information sharing and training.
<b>RBI on "Financing for Sustainable Agriculture"</b>	<p>The RBI highlights key issues in <b>financing sustainable agriculture</b>, including regional imbalances, with the Southern region receiving <b>over 47% of agro-finance</b> versus <b>0.76%</b> for the Northeast.</p> <p><b>What is Sustainable Agriculture?</b></p> <p><b>Sustainable agriculture focuses on farming practices</b> that maintain environmental health, ensure economic viability, and support social equity. It aims to produce food in ways that preserve resources, reduce pollution, and support local communities for the long term.</p> <p><b>Issues highlighted:</b> Access to credit is problematic, with <b>~23% coming from non-institutional sources</b>, and challenges such as fragmented land holdings and high finance costs persist.</p> <p><b>Suggested solutions</b> include enhancing the role of Farmer Producer Organizations (FPOs) and Farmer Producer Companies (FPCs), integrating value chain financing, and utilizing warehouse financing to stabilize prices. <b>Technology adoption for irrigation</b> and mechanization, capital formation through government schemes, and leveraging digital platforms for crop yield tracking are also recommended.</p>

## MAPPING

INTERNATIONAL

Place	Why in News?
<h3 style="color: red;">1. JORDAN</h3>	<p><b>Context:</b> <u>Jordan has become the first country in the world to receive World Health Organization (WHO) verification for eliminating leprosy.</u></p> <ul style="list-style-type: none"> <li>• <u>This achievement highlights the country's strong political commitment and effective public health strategies, with no locally transmitted cases reported for over two decades.</u></li> <li>• <u>Jordan's success serves as a global model, demonstrating the power of sustained efforts and collaboration in public health.</u></li> </ul> <p><b>About Jordan:</b>  <u>Jordan is a country in West Asia, located at the crossroads of Asia, Africa, and Europe in the Levant region.</u></p> <p>Bordered by <u>Saudi Arabia, Iraq, Syria, and the Palestinian</u> West Bank and Israel, <u>Jordan has a coastline on the Gulf of Aqaba's Red Sea.</u></p> <p><u>Amman is the capital.</u> Inhabited since the <u>Paleolithic period, Jordan saw the rise of kingdoms like Ammon, Moab, and Edom.</u></p> <p>It is a constitutional monarchy, a <u>founding member of the Arab League, and known for tourism and medical tourism.</u></p> <div style="text-align: center;"> </div>

Place	Why in News?
<p><b>2. GOPALPUR PORT</b></p>	<p><b>Context:</b> <b>Adani Ports and Special Economic Zone Limited (APSEZ)</b> has received approval from the <b>Odisha government to acquire a 95% stake in Gopalpur Port.</b></p> 