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MONTHLY CURRENT AFFAIRS APRIL 2025

Topics Covered

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- Supreme Court: A Symbol of Unity and Diversity on Its Bench
- International Women's Day
- India and UK Deepening Ties
- Digitization of Cultural Heritage in India
- India – New Zealand Joint Statement

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Foreword

Dear Aspirants,

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

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

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

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

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APRIL 2025
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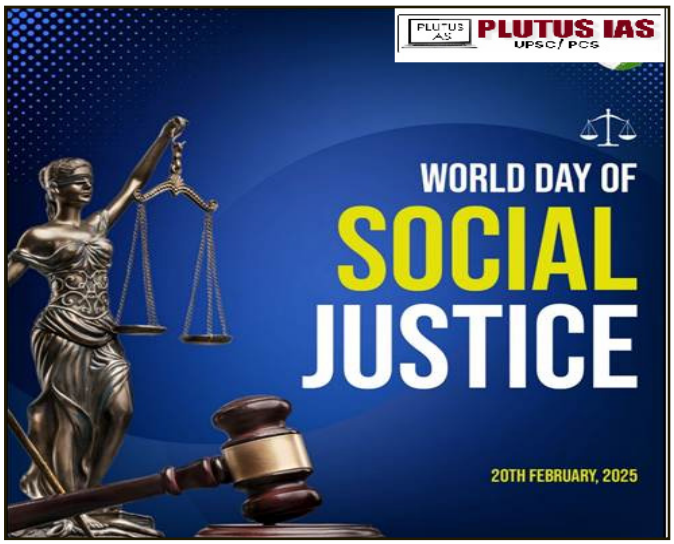
INDIA'S COMMITMENT TO EQUITY AND INCLUSION

WHY IN THE NEWS?

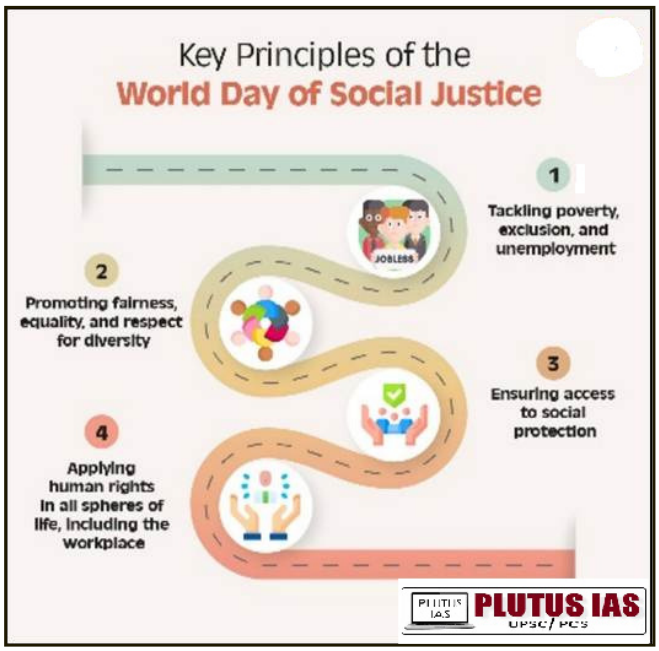
The Ministry of Social Justice and Empowerment (MoSJE) in India is making headlines for its commitment to equity and inclusion, particularly in alignment with the World Day of Social Justice observed on February 20th. On this occasion, the ministry highlighted its continued efforts to address pressing social issues like poverty, exclusion, and unemployment. The focus is on promoting equality of opportunity and fostering social harmony both within India and globally. Through legislative reforms, grassroots initiatives, and international collaborations, India is actively working toward bridging socio-economic gaps and advancing the well-being of marginalized communities. The article's publication emphasizes these ongoing efforts and India's role in the global movement for social justice.



BACKGROUND AND GLOBAL CONTEXT

The World Day of Social Justice, established by the United Nations General Assembly (UNGA) in 2007 and observed annually on February 20th since 2009, highlights the essential link between social justice and peace. It underscores that social justice cannot be achieved without peace, security, and human rights. The day focuses on global challenges like inequality, financial crises, and insecurity, urging action to create opportunities through trade, investment, and economic growth, particularly for developing countries. The International Labour Organization (ILO) plays a key role with its Declaration on Social Justice for a Fair Globalization (2008), placing the Decent Work Agenda at the heart of global policy. The UN's Social Protection Floor, launched in 2009, exemplifies the commitment to ensuring basic social guarantees for all.

KEY PRINCIPLES OF SOCIAL JUSTICE



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KEY CONSTITUTIONAL PROVISIONS ON SOCIAL JUSTICE AND EMPOWERMENT

1. **Preamble:** The Preamble ensures social, economic, and political justice, guarantees equality of status and opportunity, and promotes fraternity to uphold individual dignity and national unity. It establishes the foundation for a just and inclusive society free from discrimination.

2. **Fundamental Rights (Part III):** Article 23 prohibits human trafficking and forced labour, making such practices punishable by law. Article 24 bans child labour in hazardous occupations, protecting children's rights to safety and education. These rights safeguard vulnerable groups from exploitation.

3. **Directive Principles of State Policy (Part IV):** Article 37 states that DPSPs, though not legally enforceable, are essential for governance. Article 38 directs the State to reduce social and economic inequalities. Article 39 ensures equal livelihood, fair wages, and protection from exploitation. Article 39A guarantees free legal aid for the disadvantaged. Article 46 mandates special educational and economic promotion for SCs, STs, and weaker sections to prevent discrimination. In 1985-86, the Ministry of Welfare was split into the Department of Women & Child Development and the Department of Welfare. It became the Ministry of Social Justice & Empowerment in May 1998. The ministry aims to create an inclusive society, empowering marginalized groups through educational, economic, and social development programs, as well as rehabilitation initiatives for their growth and dignity.

EVOLUTIONS OF SOCIAL JUSTICE IN INDIA

India has observed the World Day of Social Justice since 2009. The evolution of social justice and empowerment in India has been a gradual but progressive process influenced by historical struggles, constitutional mandates, and policy developments. The vision of social justice and empowerment has been deeply rooted in India's independence movement and the vision laid down by the Constitution to ensure equality, dignity, and justice for all citizens, especially marginalized communities. The Constitution of India lays a strong foundation for social justice and empowerment through various provisions that aim to eliminate social inequalities and promote the welfare of disadvantaged groups.

KEY INITIATIVES BY THE GOVERNMENT OF INDIA

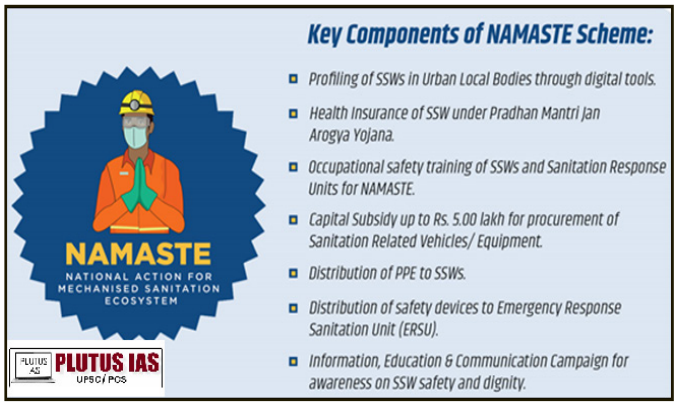
1. **Pradhan Mantri Anusuchit Jaati Abhyuday Yojana (PM-AJAY):** Launched in 2021-22, this scheme focuses on improving the socio-economic conditions of SC communities, including skill development, income generation, and infrastructure improvements in SC-dominated villages. It includes components like Adarsh Gram development, grants for socio-economic projects, and hostels for higher education.

2. **Scheme for Residential Education for Students in High Schools in Targeted Areas (SRESHTA):** The scheme supports high-quality education for SC students by funding residential schools and high schools affiliated with CBSE/State Boards. It also supports NGOs/VOs running schools and hostels with strong academic infrastructure for the socio-economic upliftment of SC communities.

3. **Purple Fests:** A movement for inclusion, Purple Fests are organized by the Department of Empowerment of Persons with Disabilities

(DEPwD) to promote accessibility, dignity, and equal opportunities for persons with disabilities. The festival also launched initiatives like the India Neurodiversity Platform and a series of job fairs to foster inclusion.

4. National Action for Mechanized Sanitation Ecosystem (NAMASTE): This scheme, launched in 2023-24, aims to protect the safety, dignity, and livelihoods of sanitation workers, including manual scavengers and waste pickers, through mechanization and better job opportunities.



5. **Support for Marginalized Individuals for Livelihood & Enterprise (SMILE):** Focuses on rehabilitating transgender individuals and people engaged in begging. The scheme provides shelter, vocational training, and alternative livelihood options, with the goal of making India free from begging. The scheme is active in multiple cities and towns across the country.

6. **PM-DAKSH Yojana:** Launched in 2021, this scheme aims to improve the skills of marginalized communities, providing free skill training to SCs, OBCs, EBCs, DNTs, and Safai Karamcharis for better employment opportunities. The scheme has a goal of 70% placement for trained individuals.

7. **Nasha Mukt Bharat Abhiyan (NMBA):** A campaign launched in 2020 with the goal of making India drug-free. It targets 272 high-risk districts and focuses on curbing the supply of drugs, raising awareness, and providing treatment. The campaign has reached millions of people across the country, with a particular focus on youth and women.

WHAT ARE THE CHALLENGES TO ACHIEVING SOCIAL JUSTICE IN INDIA?

1. **Caste-based discrimination:** The caste system continues to marginalize Dalits and Adivasis, leading to inequality in education, employment, and social interactions.
2. **Gender inequality:** Violence against women, unequal access to education and employment, and patriarchal norms hinder gender equality.
3. **Economic inequality:** A significant wealth gap leaves marginalized communities struggling to access basic necessities.
4. **Lack of access to quality education and healthcare:** Unequal distribution of resources in rural areas limits opportunities for marginalized groups.
5. **Religious discrimination:** Minorities often face social exclusion and discrimination based on their religious beliefs.
6. **Rural-urban divide:** Disparities in access to infrastructure, education, and healthcare between urban and rural areas persist.
7. **Corruption and poor governance:** Corruption in government systems hampers the effective implementation of social justice policies.
8. **Social norms and attitudes:** Societal prejudices based on caste, gender, and religion perpetuate discrimination.
9. **Lack of awareness and education:** Insufficient awareness about social justice issues impedes progress toward equality.

CONCLUSION

On the World Day of Social Justice, India reaffirms its commitment to equity and inclusion through initiatives led by the Ministry of Social Justice and Empowerment (MoSJE). Programs like PM-AJAY, NAMASTE, SMILE, PM-DAKSH Yojana, and Nasha Mukt Bharat Abhiyaan focus on empowering marginalized communities with education, skills, and economic opportunities. Through increased budget allocations, inclusive platforms like Purple Fests, and expanded social protection, the government strives to reduce socio-economic gaps, ensuring dignity and opportunity for all in line with global frameworks like the Decent Work Agenda and SDGs.

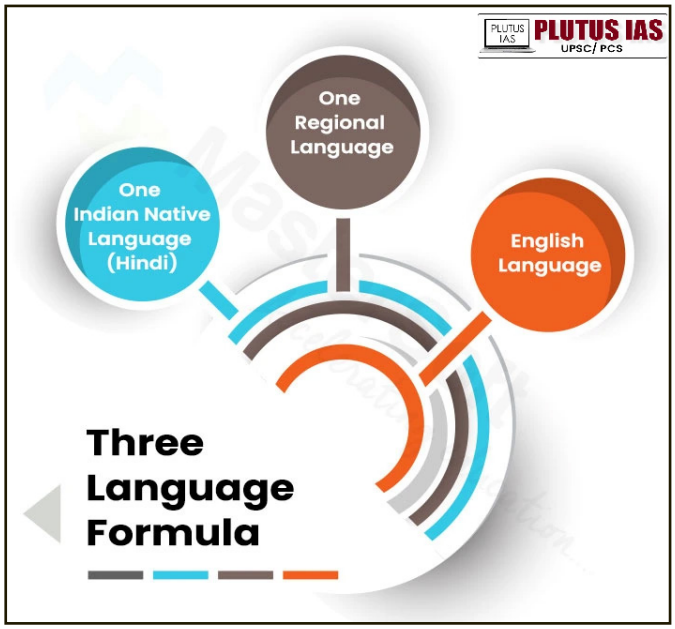
THREE LANGUAGE FORMULA: TIGHT ROPE WALK FOR UNION GOVERNMENT

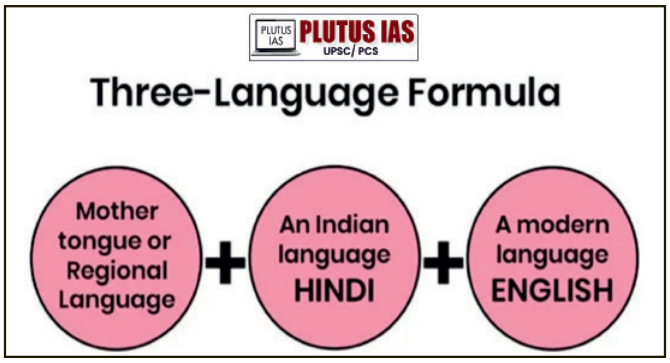
WHY IN THE NEWS?

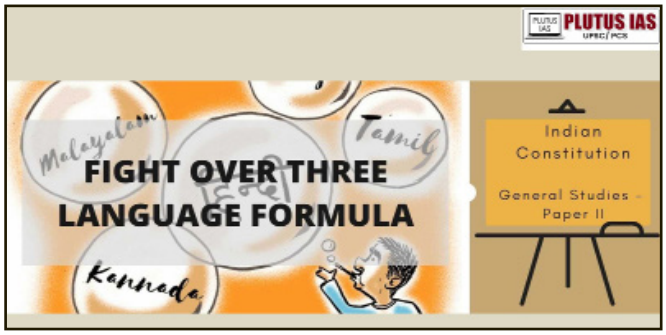
Tensions are rising between the Tamil Nadu government and the Centre over the alleged imposition of Hindi through the National Education Policy (NEP) 2020. The DMK, Tamil Nadu's ruling party, has strongly opposed the policy, vowing never to accept Hindi imposition. In contrast, the Congress, an ally of the DMK, has taken a measured stance, stating that Hindi should be learned by choice, not forced. Congress whip Manickam Tagore criticized the Centre for threatening to withhold funds unless Tamil Nadu accepts the NEP, calling it an "RSS project." He reiterated that Congress supports Tamil Nadu's two-language policy and opposes any language imposition.

WHAT IS THREE LANGUAGE FORMULA?

The Three-Language Formula is an educational policy introduced in the 1968 National Policy on Education (NEP) to promote multilingualism and national integration. It mandates that students in India learn three languages: their regional language (mother tongue), Hindi, and English. NEP 2020 retains this framework but allows states and students flexibility in choosing languages, ensuring at least two are Indian languages.







EVOLUTION OF THREE LANGUAGE FORMULA

Commission/Policy	Year	Key Recommendations Related to Language in Education	Other Language-Related Recommendations
Kothari Commission	1964-66	Recommended the Three-Language Formula: 1. Regional language/ mother tongue 2. Hindi (for non-Hindi states) or a modern Indian language (for Hindi-speaking states) 3. English	Emphasized the role of language in national integration. – Suggested improving language teaching methodologies.
National Policy on Education (NPE)	1968	Officially introduced the Three-Language Formula. – Stressed the importance of Hindi and English in national and international communication.	Recommended developing regional languages alongside Hindi and English. – Emphasized preserving linguistic diversity.
National Policy on Education (NPE)	1986	Retained the Three-Language Formula but acknowledged implementation challenges. – Suggested mother-tongue-based primary education.	Encouraged the use of modern Indian languages in education. – Recognized English as an important link language.

Ramamurti Committee	1990	Recommended improving the quality of language teaching. – Suggested using the mother tongue as a medium of instruction at all levels.	Advocated for linguistic inclusivity in educational institutions.
Acharya Ramamurti Review Committee	1991	Recommended strengthening the Three-Language Formula. – Stressed better training for language teachers.	Suggested measures to protect linguistic minorities.
National Curriculum Framework (NCF)	2005	Reaffirmed the importance of multilingualism in education. – Focused on bilingual teaching methods.	Highlighted the need for context-based language learning.
National Education Policy (NEP)	2020	Retained the Three-Language Formula with flexibility for states. – Ensured that at least two languages must be Indian languages. – Strong emphasis on mother-tongue-based education.	Encouraged Sanskrit as an optional subject. – No language imposition on any state.

SIGNIFICANCE OF THREE LANGUAGE FORMULA

1. **Enhances Multilingual Proficiency:** Boosts cognitive skills, memory, and communication while fostering cultural understanding.
2. **Promotes National Integration:** Bridges the north-south divide and strengthens unity through linguistic inclusivity.
3. **Expands Career & Mobility Opportunities:** Improves job prospects and facilitates education and migration across regions.
4. **Preserves Regional Languages:** Prevents language decline and safeguards linguistic heritage.
5. **Encourages Bilingual Education:** Supports mother-tongue learning while enhancing proficiency in other languages.
6. **Balances Global & Local Needs:** Prepares students for international opportunities while preserving cultural identity.

CONCERNS RELATED TO THE THREE-LANGUAGE FORMULA:

1. **Perceived Imposition of Hindi:** Non-Hindi-speaking states, especially Tamil Nadu, West Bengal, and Karnataka, view it as an attempt to impose Hindi.
2. **Implementation Challenges:** Many schools lack qualified teachers to effectively teach additional languages.
3. **Increased Academic Burden:** Learning an extra language adds to students' workload, especially those struggling with language acquisition.
4. **Neglect of Foreign Languages:** Emphasis on a third Indian language may limit opportunities to learn global languages like French, German, or Mandarin.

5. **Regional Resistance:** States with strong linguistic identities resist policies perceived as undermining their native language and culture. 6. Resource Constraints: State governments often lack funds and infrastructure to implement multilingual education effectively.

RECOMMENDATION TO ADDRESS THE CONCERN REGARDING THREE LANGUAGE FORMULA:

1. **Flexible Language Choice:** Allow states and students greater autonomy in selecting the three languages, ensuring regional preferences are respected.
2. **Strengthening Language Education:** Invest in teacher training and resources to improve multilingual education across states.
3. **Reducing Academic Burden:** Implement gradual language learning with innovative and interactive teaching methods to ease student workload.
4. **Balancing Global & Regional Needs:** Provide students the option to learn foreign languages alongside Indian languages to enhance global opportunities.
5. **Constructive Dialogue:** Encourage cooperation between the Centre and states to address regional concerns while upholding national integration goals.
6. A**dequate Funding & Infrastructure:** Ensure financial and institutional support to facilitate effective implementation, especially in resource-limited states.

CONCLUSION

The Three-Language Formula aims to balance linguistic diversity with national integration, promoting multilingualism without imposing any language. Constructive dialogue and cooperation between the Centre and states are crucial to addressing concerns and ensuring successful implementation. Strengthening language education and providing necessary resources will enhance language learning outcomes while preserving India's rich linguistic heritage.

SUPREME COURT: A SYMBOL OF UNITY AND DIVERSITY ON ITS BENCH

WHY IN THE NEWS?

The recent appointment of Justice Joymalya Bagchi from the Calcutta High Court to the Supreme Court has become a prominent news event due to several significant factors. Primarily, the possibility of Justice Bagchi ascending to the position of Chief Justice of India in 2031 has garnered widespread attention, generating considerable interest in his judicial career. Additionally, his appointment addresses the long-standing gap in representation for the Calcutta High Court within the Supreme Court. The collegium specifically noted that only one judge from the high court was serving in the Supreme Court and that it had been a considerable period since a Chief Justice of India had originated from this esteemed institution. By filling this gap, Justice Bagchi's appointment ensures a more equitable distribution of judicial representation and strengthens the presence of the Calcutta High Court within the nation's highest judicial body.

SUPREME COURT JUDGE APPOINTMENT

1. Constitutional Mandate

Governed by Article 124 of the Indian Constitution. The President of India appoints judges after consulting the Chief Justice of India (CJI) and senior judges. The Collegium System plays a crucial role in recommendations.

2. Criteria/Eligibility

A candidate must Be a citizen of India. Have served as a High Court judge for at least five years OR Have practised as a High Court advocate for at least ten years OR Be recognized as a distinguished jurist by the President.

3. Conventions Collegium Consultation:

The CJI consults four senior Supreme Court judges before recommending a candidate. Regional Representation: Efforts are made to ensure diverse High Court representation in the Supreme Court. Merit and Integrity: Selection considers judicial competence, ethical standards, and seniority. Seniority Principle for CJI: Traditionally, the senior-most Supreme Court judge is appointed as the Chief Justice of India.

SUPREME COURT APPOINTMENT PROCEDURE

1. Evaluations of the Appointment Procedure Collegium System Dominance:

The Supreme Court's Collegium System remains the primary method for appointing judges, and ensuring judicial independence, but facing transparency concerns. Lack of Executive Role: Unlike other democracies, the executive has minimal say, reducing political interference but limiting accountability. No Fixed Criteria for Selection: While merit and seniority are considered, there is no codified selection process, leading to inconsistencies. Opaque Decision-Making: Collegium deliberations are not public, raising concerns about favouritism and lack of public accountability. Judicial Supremacy in Appointments: The 2015 Supreme Court ruling striking down the NJAC reaffirmed the judiciary's exclusive control over appointments.

2. Current Status & Reforms Pending Vacancies:

The Supreme Court and High Courts continue to face judicial vacancies, affecting case backlogs. Transparency Efforts: Recent discussions have focused on publishing Collegium recommendations and reasons for selections. Proposed Reforms: Experts have suggested institutionalizing a structured appointment process with defined eligibility criteria and independent oversight. Ongoing Legal & Political Debate: The executive and legal experts continue to discuss alternatives to balance judicial independence with transparency and accountability.

APPOINTMENT AND INDEPENDENCE OF JUDICIARY

1. **Judicial Independence from Executive Control:** The separation of powers prevents political influence over judicial decisions. Judges cannot be easily removed, ensuring freedom from government pressure.
2. **Security of Tenure:** Supreme Court judges serve until the age of 65, and High Court judges until 62, preventing arbitrary removals. Removal is possible only through impeachment, requiring a majority in both Houses of Parliament.
3. **Financial Independence:** Judges' salaries and allowances are charged on the Consolidated Fund of India, meaning they cannot be altered to their disadvantage. This financial security helps in maintaining judicial integrity.
4. **Restrictions on Post-Retirement Appointments:** Judges are barred from practicing law in courts after retirement, ensuring they do not rule in favor of future benefits. However, post-retirement government appointments have raised concerns about neutrality.
5. **Power of Judicial Review:** The judiciary has the power to strike down unconstitutional laws, ensuring executive and legislative accountability. This strengthens democracy and protects fundamental rights.

ISSUE RELATED TO APPOINTMENT OF JUDGES

1. **Lack of Transparency in the Collegium System:** The Collegium System (where judges appoint judges) operates behind closed doors. No formal criteria for selection are publicly disclosed, leading to accusations of favoritism and nepotism.
2. **Executive vs. Judiciary Conflict:** The government has tried to assert influence over judicial appointments, challenging the independence of the judiciary. The National

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Judicial Appointments Commission (NJAC) was struck down by the Supreme Court in 2015, but debates on executive involvement continue.

3. **Delays in Appointment:** High judicial vacancies in Supreme Courts and High Courts due to prolonged appointment processes. These delays lead to case backlogs and slower justice delivery.

4. **Absence of Diversity in Judicial Appointments:** Underrepresentation of women, marginalized communities, and regional diversity in higher judiciary. No set policy to ensure inclusive representation.

5. **Political Influence and Post-Retirement Appointments:** Concerns over judges accepting government posts after retirement, raising doubts about judicial neutrality in politically sensitive cases. Instances where former judges were given Rajya Sabha seats or government commissions.

6. **Lack of a Proper Evaluation Mechanism:** No institutionalized process for evaluating judges before appointment. No performance reviews, making accountability difficult.

WAY FORWARD

1. **Enhancing Transparency:** Collegium decisions should be documented and made publicly available to ensure accountability. Establish a structured selection criterion based on merit, experience, and integrity.

2. **Timely Appointments:** A fixed timeline should be introduced to prevent judicial vacancies and backlog. Regular updates on pending appointments should be provided to maintain efficiency.

3. **Balanced Executive and Judiciary Roles:** A reformed appointment system that ensures judicial independence while allowing limited executive oversight. Consider revisiting the NJAC framework with necessary safeguards to maintain impartiality.

4. **Diversity and Inclusivity:** The appointment process should ensure adequate representation of women, regional backgrounds, and marginalized communities. A formal mechanism to track and promote inclusivity in judicial appointments.

5. **Post-Retirement Restrictions:** Implement stricter rules on judges accepting government posts immediately after retirement. A cooling-off period should be introduced to prevent any potential conflicts of interest.

6. **Performance Review Mechanism:** Establish an independent body to assess judges' work before appointments. Regular performance evaluations can help ensure higher judicial accountability.

CONCLUSION

The appointment of Supreme Court judges plays a crucial role in upholding judicial independence, strengthening democracy, and ensuring justice. However, concerns over transparency, political influence, and delays in appointments need urgent reform. A balanced approach, ensuring judicial autonomy while incorporating accountability, is necessary. Moving forward, a transparent, efficient, and inclusive system will be key to strengthening India's judicial framework and maintaining public trust in the judiciary.

ROLE OF ASSEMBLY SPEAKER

WHY IN THE NEWS

Tamil Nadu Assembly Speaker M Appavu was at the centre of a political storm after the AIADMK moved a no-confidence motion against him, accusing him of bias and favouring the ruling DMK. However, the motion was defeated in a voice vote, with 154 MLAs from DMK and its allies rejecting it. AIADMK's 63 MLAs supported the motion, while the BJP and PMK abstained. Leader of Opposition Edappadi K Palaniswami (EPS) alleged that the Speaker was obstructing opposition voices and suppressing protests. Chief Minister M K Stalin dismissed the claims, saying people would "laugh"

at the accusations. Adding to the political intrigue, expelled AIADMK leaders O Panneerselvam (OPS) and his associates backed the motion, highlighting ongoing factional tensions within the party. The controversy has intensified debates on legislative fairness in Tamil Nadu.

OFFICE OF STATE LEGISLATIVE ASSEMBLY SPEAKER

Constitutional Provisions

- **Article 178:** Provides for the appointment of the Speaker and Deputy Speaker of the Legislative Assembly.
- **Article 179:** Deals with vacation, resignation, and removal of the Speaker and Deputy Speaker.
- **Article 180:** Lays down provisions for the Deputy Speaker or any other member to act as the Speaker when required.
- **Article 181:** States that the Speaker or Deputy Speaker shall not preside while a resolution for their removal is under consideration.
- **Article 186:** Deals with the salaries and allowances of the Speaker and Deputy Speaker.

APPOINTMENT OF THE SPEAKER

The Speaker is elected by the members of the Legislative Assembly by a simple majority. Usually, a member from the ruling party is chosen for the position. The election takes place after the first meeting of the newly elected Assembly.

REMOVAL OF THE SPEAKER

The Speaker can be removed by the Assembly through a resolution passed by an effective majority (more than 50% of the total effective strength of the House).
The 14-day notice must be given before moving the resolution, as per Article 179(c) of the Constitution. The Speaker cannot preside over the House while their removal motion is under discussion (Article 181). The Speaker can also resign voluntarily by submitting their resignation to the Deputy Speaker.

POWERS AND RESPONSIBILITIES OF ASSEMBLY SPEAKER

Powers

1. **Presiding & Administrative:** Conducts sessions, regulates debates, and adjourns/suspends proceedings.
2. **Legislative & Procedural:** Decides agenda, allows motions, refers bills to committees.
3. **Disciplinary:** Enforces rules, suspends/disqualifies members, and ensures quorum.
4. **Anti-Defection (Tenth Schedule):** Decides MLA disqualification for defection.
5. **Financial:** Certifies Money Bills and manages budget discussions.
6. **Casting Vote:** Breaks ties in case of deadlock.

RESPONSIBILITIES

1. **Maintains Order & Neutrality:** Ensures disciplined debates and impartial proceedings.
2. **Safeguards Legislative Privileges:** Protects the rights of MLAs and the Assembly's autonomy.
3. **Manages Assembly Committees:** Oversees committee functioning and enforces decisions.
4. **Represents the Assembly:** Acts as the official spokesperson in external and inter-parliamentary affairs.
5. **Ensures Legislative Efficiency:** Sets the agenda, prioritizes discussions, and facilitates smooth lawmaking.
6. **Handles Disciplinary Actions:** Takes action against unruly behaviour and ensures adherence to rules.
7. **Decides on Anti-Defection Cases:** Determines disqualification of MLAs under the Tenth Schedule.

INDEPENDENCE OF OFFICE OF SPEAKER

1. **Security of Tenure:** Holds office until the first meeting of the new Lok Sabha, ensuring stability and continuity.
2. **Difficult Removal Process:** Can only be removed by a resolution with a majority of all members, preventing arbitrary dismissal.

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3. **Financial Independence:** Salaries and allowances are charged to the Consolidated Fund of India, shielding from political influence.
4. **Protection from Criticism:** Work and conduct cannot be discussed in Lok Sabha except through a substantive motion.
5. **Impartiality & Judicial Oversight:** Must remain neutral; decisions can be reviewed by courts (e.g., Kihoto Hollohan v. Zachilhu, 1992).
6. **Casting Vote Authority:** Can cast a vote in case of a tie, reinforcing impartial decision-making.
7. **Symbol of Authority:** Represents the dignity and power of the House, upholding parliamentary democracy.

WHAT IS THE ISSUE WITH THE OFFICE OF THE SPEAKER?

1. **Partisanship & Political Bias:** Often affiliated with the ruling party, leading to allegations of favouritism in decision-making.
2. **Misuse of Anti-Defection Powers:** Delay or selective action on disqualification petitions under the Tenth Schedule to benefit the ruling party.
3. **Lack of Fixed Timelines:** No strict deadline for ruling on important matters, causing delays in crucial decisions.
4. **Bypassing Parliamentary Committees:** Increasing trend of passing bills without adequate scrutiny, weakening legislative oversight.
5. **Disruptions & Loss of Authority:** Frequent protests and disorder reduce the Speaker's effectiveness in maintaining decorum.
6. **Influence of Executive:** Despite being a neutral authority, the Speaker often faces pressure from the ruling government.
7. A**bsence of Resignation Norms:** Unlike in the UK, where Speakers resign from their political party upon election, Indian Speakers continue party affiliations, raising doubts about neutrality.

WAYS TO REFORM THE OFFICE OF STATE SPEAKER

1. **Ensure Political Neutrality:** Like in the UK, mandate that the Speaker resign from their political party upon election to ensure impartiality.
2. **Time-Bound Decisions:** Set strict deadlines for rulings on anti-defection cases and disqualification petitions to prevent delays and manipulation.
3. **Independent Selection Process:** Introduce a consensus-based election process involving both ruling and opposition parties to ensure fairness.
4. **Limit Executive Influence:** Establish clear guidelines to prevent undue pressure from the ruling government, ensuring independent decision-making.
5. **Strengthen Committee Oversight:** Make it mandatory to refer key bills to legislative committees for proper scrutiny before passing them.
6. I**ncrease Judicial Accountability:** Allow judicial review of the Speaker's decisions, especially in disqualification cases, to prevent bias and misuse of power.
7. **Define Powers Clearly:** Amend rules to clearly define the Speaker's discretionary powers, reducing the scope for arbitrary decisions.
8. **Training & Code of Conduct:** Provide formal training to newly elected Speakers and enforce a code of conduct to uphold neutrality and discipline.

CONCLUSION

The Speaker of the State Legislative Assembly plays a crucial role in ensuring the smooth functioning of the legislature, upholding democratic principles, and maintaining neutrality. However, issues like political bias, misuse of anti-defection powers, and executive influence undermine the credibility of the office. Implementing reforms such as mandating political neutrality, ensuring time-bound decisions, strengthening committee oversight, and increasing judicial accountability can enhance the independence and effectiveness of the Speaker's office. These measures will help restore public confidence in legislative processes and reinforce the democratic framework.

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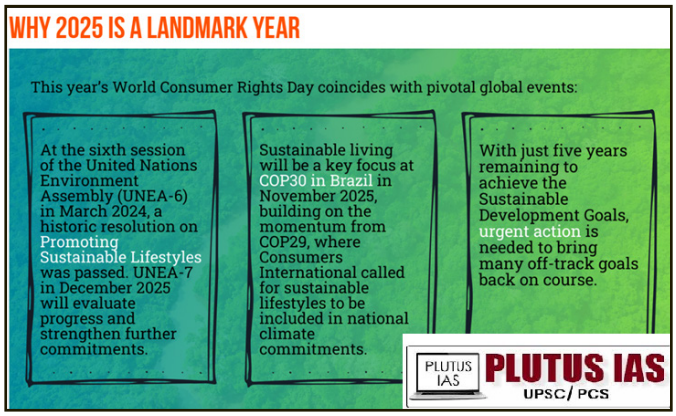
CONSUMER PROTECTION IN INDIA: THE ROLE OF CCPA

WHY IN THE NEWS?

World Consumer Rights Day 2025, observed on March 15, emphasises the theme "A Just Transition to Sustainable Lifestyles." This theme highlights the need for accessible, affordable, and sustainable lifestyle choices while safeguarding consumer rights. The Central Consumer Protection Authority (CCPA) plays a key role in protecting consumer interests by tackling unfair trade practices and ensuring consumer safety. On this day, the Ministry of Consumer Affairs advocates for stronger consumer protection policies and empowers consumers to make informed choices, aligning with global initiatives for consumer rights and sustainable living.



WHAT IS THE CENTRAL CONSUMER PROTECTION AUTHORITY?

The Central Consumer Protection Authority (CCPA) is a regulatory body established under the Consumer Protection Act of 2019, which was enacted to promote and protect consumer rights in India. The CCPA was created to ensure that consumers are protected from unfair trade practices, false advertisements, and exploitation in the marketplace. The authority is empowered to take proactive measures against unfair trade practices and fraudulent practices that exploit the common man. The CCPA acts as an enforcement agency for consumer protection laws in India. In addition to its enforcement role, the CCPA also serves as a guiding body to ensure that businesses and organisations align with fair practices and take measures to address consumer grievances. It functions to protect consumers in various sectors, including health, education, and online shopping, by addressing disputes and violations that impact consumer interests. The CCPA is crucial in a country like India, where consumer rights are often overlooked in the face of rapid industrial growth and technological advancements. The CCPA's role becomes especially important in a rapidly growing economy like India, where consumer interests need to be safeguarded from unscrupulous businesses, especially with the increasing online market presence and consumer digitalisation. The introduction of CCPA also helps in building consumer confidence in the market by providing a platform for complaints and claims to be addressed fairly.

COMPILATION OF CCPA

The establishment of the CCPA was a significant move in the direction of consumer protection in India. The body was officially created through the Consumer Protection Act of 2019. This act replaced the older Consumer Protection Act of 1986, which had become outdated due to changing market dynamics, new technology, and modern forms of consumer exploitation. The CCPA functions as a national body under the Ministry of Consumer Affairs, Food, and Public Distribution.

In the wake of its formation, the CCPA has set out various frameworks, policies, and regulations to handle cases of consumer grievances. Its primary objectives include ensuring fair trade practices and timely redressal of complaints, and it actively participates in the dissemination of consumer awareness across the country. By replacing outdated regulations, the Consumer Protection Act 2019 and the establishment of CCPA provide a modern approach to tackling emerging issues in consumer protection, especially in e-commerce and digital spaces.

The authority is headed by a chairperson who is typically a retired officer from the judicial or administrative sector, appointed by the government. Along with the chairperson, the CCPA

also has members with expertise in consumer affairs, legal matters, and trade regulations. The CCPA is empowered to handle cases related to unfair trade practices, misleading advertisements, counterfeit goods, and defective products, making it a comprehensive agency for consumer protection.

COMPOSITION OF CCPA (CENTRAL CONSUMER PROTECTION AUTHORITY)

The Central Consumer Protection Authority (CCPA) was established under the Consumer Protection Act of 2019 to address issues related to consumer rights and protect their interests. It acts as a national body for the enforcement of consumer rights across India.

KEY COMPONENTS OF CCPA:

1. **Chairperson:** The CCPA is headed by a Chairperson who is a senior bureaucrat, typically with experience in consumer affairs or related fields. The Chairperson plays a pivotal role in guiding the functions and operations of the authority.
2. **Members:** Along with the Chairperson, the CCPA includes a team of other members who are appointed by the government. These members have expertise in consumer protection, law, and relevant sectors. Their responsibility is to ensure effective functioning, decision-making, and oversight of consumer protection laws and issues.
3. **Director General (DG):** The Director General is the head of the investigative arm of the CCPA. The DG is responsible for overseeing investigations into violations of consumer rights and enforcing penalties against unfair trade practices and misleading advertisements. The DG also reports to the authority about any violations of consumer laws.
4. **Investigative Units:** The CCPA has several investigative units responsible for monitoring markets, collecting evidence of violations, and taking necessary actions, including recommending penalties and other remedies for consumers. These units help implement the authority's mandate effectively.
5. **Consumer Rights Group Collaboration:** The CCPA works in conjunction with various consumer rights organizations and stakeholders, including state consumer protection bodies, non-governmental organizations (NGOs), and industry bodies, to foster awareness and enforcement of consumer rights.

POWERS OF THE CCPA

1. **Investigating Unfair Trade Practices:** The CCPA has the authority to take suo motu action or act on consumer complaints to investigate unfair trade practices. The body can monitor and regulate misleading advertisements, deceptive sales tactics, or goods that fail to meet safety standards. It has the power to take immediate action against businesses found violating consumer rights and can impose penalties to deter malpractice.
2. **Issue Directions:** The CCPA can issue directions to various stakeholders, such as manufacturers, traders, or service providers, to cease any deceptive practices. It can direct them to modify misleading advertisements or stop selling unsafe products. This ensures that companies adhere to ethical business practices, contributing to a safer market for consumers.
3. **Take Legal Action:** The authority is empowered to initiate legal proceedings on behalf of consumers, particularly when large-scale exploitation is involved. CCPA can impose penalties or seek redressal in consumer courts if necessary. The body also collaborates with state agencies to enhance consumer protection efforts at local levels.
4. **Consumer Education:** One of the key functions of the CCPA is consumer education. It plays a critical role in spreading awareness regarding consumer rights and responsibilities and informs consumers about their rights under various laws. Through campaigns and outreach programs, the CCPA helps create an informed consumer base that can take action when they face exploitation.

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5. **Forming Regulatory Bodies:** The CCPA can set up regulatory bodies in various sectors to address grievances in specific industries. This is a measure to ensure sector-specific consumer protections, like in the telecom or e-commerce industries. By focusing on individual sectors, CCPA ensures that each industry adheres to the specific guidelines that safeguard consumer rights.

6. **Collecting Data and Reports:** The CCPA is authorised to collect data, conduct research, and prepare reports related to consumer issues and violations. These reports provide insight into ongoing trends of exploitation and highlight areas for improvement. CCPA's data collection also helps policymakers develop targeted strategies to address consumer-related issues.

7. **Power to Regulate E-Commerce:** As part of its efforts to regulate modern industries, the CCPA has been empowered to control e-commerce platforms. This is especially significant as e-commerce platforms have seen exponential growth, and many are not compliant with consumer protection norms. The CCPA ensures that e-commerce companies adhere to fair trade practices and do not mislead consumers through deceptive product listings or poor customer service.

RESPONSIBILITIES OF CCPA

1. **Prevention of Unfair Trade Practices:** CCPA's primary goal is to protect consumers from unfair trade practices, including false advertising, deceptive pricing, and unethical product safety standards. The body actively investigates cases and issues notices or orders to businesses found to be violating these laws. This helps to create a fairer marketplace for consumers and reduces the potential for exploitation.

2. **Consumer Grievance Redressal:** The CCPA plays a central role in ensuring that consumer complaints are addressed. It ensures that affected consumers receive prompt and fair redressal for their grievances. The authority acts as a central body to manage consumer complaints and often coordinates with state-level agencies for faster resolution. This results in a more effective and accessible consumer dispute resolution system.

3. **Regulating Misleading Advertisements:** One of the most critical functions of CCPA is the regulation of misleading advertisements. This includes taking action against companies and individuals involved in promoting products through false or exaggerated claims. The CCPA's intervention is crucial in preventing deceptive marketing tactics in India, particularly in the digital space, where advertising can easily mislead consumers.

4. **Consumer Awareness Programs:** CCPA runs various campaigns and initiatives to educate consumers about their rights and how they can assert them. This education also helps consumers differentiate between quality products and fraudulence in the market. The authority's outreach programs, especially in rural areas, ensure that more consumers are aware of their legal rights.

5. **Formulation of Guidelines and Policies:** CCPA is responsible for setting up guidelines for businesses to follow to ensure fair consumer practices. These guidelines include product labelling standards, advertisements, and guidelines for e-commerce operations. It also plays a vital role in drafting policies to improve consumer protection measures in India. This ensures that businesses maintain high standards of honesty and transparency in their operations.

6. **Supporting Consumer Advocacy Groups:** The CCPA collaborates with consumer advocacy groups and non-governmental organisations to build a stronger consumer protection ecosystem. These groups often have a better understanding of local issues, and through their collaboration with CCPA, they help promote consumer rights at the grassroots level.

POLICIES AND MEASURES OF CCPA TO PROTECT CONSUMERS

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1. **Consumer Protection from False Advertisements:** The Consumer Protection Act, 2019, under which CCPA functions, provides strict guidelines for advertisers. False or misleading advertisements can lead to heavy fines or even jail time for the perpetrators. The act also ensures that consumers are protected from products or services that do not meet the declared standards. CCPA enforces compliance with these provisions through penalties and awareness campaigns.
2. **Digital Consumer Protection:** Given the rise of e-commerce, digital consumer protection has become a major focus of CCPA. With the proliferation of online shopping platforms, consumers are often faced with issues like counterfeit products, delayed deliveries, or poor customer service. The CCPA works with e-commerce companies to ensure that they adhere to consumer protection standards, especially regarding refunds, returns, and product safety. The authority has issued guidelines for e-commerce companies to maintain transparency in product information, return policies, and pricing.
3. **Consumer Protection in the Food Industry:** The CCPA plays an important role in ensuring the safety of food products. It ensures that food items are correctly labelled, contain only safe ingredients, and do not mislead consumers in terms of quantity or quality. The CCPA has also intervened in cases of food adulteration, where manufacturers have been fined for selling products that do not meet the specified standards. This includes food products that are falsely labelled as organic or claiming to have health benefits that are not backed by evidence.
4. **Consumer Redressal Mechanisms:** One of the most significant aspects of CCPA's measures is its consumer redressal mechanisms. The Consumer Protection Act mandates the creation of consumer courts at various levels, including District Consumer Forums, State Commissions, and the National Commission. These courts help consumers settle disputes with businesses in a timely and cost-effective manner. The creation of an online complaint system further facilitates a smooth grievance redressal process, allowing consumers to file complaints from anywhere.
5. **Regulation of E-Commerce Platforms:** With the rise of online shopping in India, the CCPA has also focused on regulating e-commerce platforms to ensure that they adhere to proper consumer protection guidelines. This includes ensuring transparency in product listings, accurate descriptions, customer reviews, and fair return policies. The CCPA has also developed rules that mandate e-commerce platforms to ensure that sellers are compliant with consumer rights regulations.
6. **Product Safety Standards:** The CCPA has pushed for higher safety standards for consumer products, especially in sectors like electronics and toys. The authority works with other agencies, like the Bureau of Indian Standards (BIS), to ensure that products available in the market meet the necessary safety and quality standards. This includes taking action against products that pose a risk to consumer health and safety.

ISSUES FACED BY CCPA

1. **Enforcement of Regulations:** One of the main hurdles is the enforcement of consumer protection regulations. While the CCPA has the authority to take actions, it often faces delays in executing those actions due to bureaucratic processes or the involvement of multiple stakeholders. The slow pace of legal proceedings in some cases can delay justice for consumers.
2. **Awareness and Access to Redressal:** Many consumers, especially in rural areas, are not aware of the rights afforded to them under consumer protection laws. This lack of awareness makes it difficult for CCPA to ensure widespread compliance with its orders. Consumer education campaigns need to be more widespread, especially in rural and underserved areas.
3. **Increasing Complexity of E-Commerce:** With e-commerce growing at a rapid pace,

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the challenge of regulating online platforms effectively is becoming more complex. Issues like fake reviews, non-compliance with return policies, and product safety concerns remain rampant in online shopping. As a result, regulating the rapidly expanding digital economy presents new hurdles for the CCPA.

4. **Lack of Adequate Infrastructure:** The infrastructure for consumer grievance redressal mechanisms remains inadequate in many parts of the country. A lack of sufficient consumer courts and forums in remote areas makes it harder for consumers to resolve disputes efficiently. The lack of digital infrastructure in some regions further complicates the issue.

WAY FORWARD

1. **Increase Consumer Awareness:** The government and CCPA must launch awareness campaigns to educate consumers about their rights, grievance redressal mechanisms, and how they can report violations. Engaging with schools, universities, and local community groups can help spread awareness.
2. **Strengthening Redressal Mechanisms:** More consumer forums and courts should be established to handle the rising volume of complaints, especially in rural areas where access to such forums is limited. The development of a strong digital infrastructure can also aid in faster resolutions.
3. **Effective Monitoring of E-Commerce:** As e-commerce grows, stricter monitoring and regulation should be applied to online platforms to prevent deceptive practices, especially related to misleading product descriptions and fake reviews. Regular audits and collaboration with e-commerce giants will be essential in enforcing compliance.
4. **Empowering CCPA:** Empowering CCPA with more resources, both in terms of manpower and technological tools, will help ensure better enforcement of consumer protection laws. This will ensure that businesses adhere to standards while providing consumers with a fairer marketplace.

CONCLUSION

The Consumer Protection Act of 2019, along with the establishment of the CCPA, marks a significant step forward in consumer protection in India. By addressing issues related to false advertising, unfair trade practices, and exploitation, CCPA plays a critical role in ensuring that consumers are safeguarded in an ever-evolving marketplace. However, challenges such as enforcement, consumer awareness, and the rapid growth of digital platforms remain. A more robust infrastructure, alongside better monitoring and awareness campaigns, will be essential in helping CCPA fulfil its objectives and protect the interests of Indian consumers. As India continues to grow as a global economic player, the role of the CCPA will become increasingly crucial in safeguarding the rights of consumers.

PANCHAYATI RAJ INSTITUTIONS (PRI) AND WOMEN'S EMPOWERMENT

WHY IN THE NEWS?

The Ministry of Panchayati Raj's upcoming launch of the Model Women-Friendly Gram Panchayats (MWFGP) initiative has garnered significant attention, placing it squarely in the news. This initiative represents a pivotal step towards fostering gender-sensitive governance at the grassroots level, aiming to transform rural governance by prioritising safety, inclusivity, and gender equality. During the International Women's Day 2025 celebrations, underscores the government's commitment to this cause. The event's significance is amplified by the participation of key figures, including Union Ministers of State and high-ranking officials, alongside representatives from every district across the country and international organizations like UNFPA.

PRI & WOMEN - DATA AND STATISTICS

Women's participation in PRIs has seen remarkable growth over the years. As per the Ministry of Panchayati Raj:

1. Over 1.4 million women representatives currently serve in PRIs, constituting more than 46% of the total elected members.
2. Around 20 states in India have already implemented 50% reservation for women in PRIs.
3. Studies indicate that panchayats led by women are more likely to focus on healthcare, education, and sanitation.
4. However, despite high numerical participation, only 10% of women hold decision-making roles without external influence.
5. The Economic Survey of India reports that women-led PRIs have 30% higher fund utilization in social welfare schemes than male-led ones.
6. According to a UNDP study, PRIs with women leaders have significantly improved maternal and child health indicators.
7. A World Bank study highlighted that women-led panchayats are more likely to invest in drinking water facilities, sanitation, and public health infrastructure.
8. Women sarpanches have been found to increase village-level economic activities by promoting self-help groups and microfinance initiatives.

PROVISIONS OF PRI RELATED TO WOMEN

1. **73rd Constitutional Amendment Act, 1992:** Mandates one-third reservation for women, including SC/ST women, in PRIs.
2. **State Amendments:** Many states have increased the reservation to 50% for women in PRIs.
3. **PESA Act, 1996:** Recognizes tribal self-governance and ensures the representation of tribal women in local governance.
4. **National Policy for Empowerment of Women (2001):** Promotes capacity-building programs for elected women representatives.
5. **Training and Capacity Building Initiatives:** Programs like the Rashtriya Gram Swaraj Abhiyan (RGSA) aim to enhance leadership skills among women representatives in PRIs.
6. **Mandatory Women's Participation in Standing Committees:** Many states require that women must be part of key decision-making committees in PRIs, ensuring active involvement in policy formulation.
7. **Financial Assistance for Women Representatives:** Several government programs provide financial and logistical support to women leaders in PRIs to improve their governance efficiency.
8. **Digital Literacy and E-Governance Training:** Initiatives like e-Panchayat and digital literacy programs specifically target women representatives to enhance their governance capabilities.
9. **Legal Safeguards Against Gender Bias:** Some states have introduced legal provisions to prevent discrimination against women leaders in PRIs, ensuring their authority is not undermined by male counterparts.
10. **Women's Collectives and Networking Support:** Several NGOs and government bodies promote women's leadership through networking groups, allowing them to share experiences and challenges.

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ROLE OF PRI IN STRENGTHENING WOMEN'S EMPOWERMENT

1. **Enhancing Political Participation:** Reservation policies have enabled women to step into leadership roles, ensuring gender inclusivity in decision-making processes. For example, in Bihar, the 50% reservation for women in PRIs has led to an increased number of female sarpanches actively participating in governance.
2. **Improving Social Indicators:** Women-led panchayats have shown better implementation of welfare schemes related to maternal health, child nutrition, and education. In Rajasthan, women-led panchayats have significantly improved maternal healthcare by ensuring the proper distribution of prenatal supplements.
3. **Financial Independence:** Through self-help groups (SHGs) and government programs, PRIs facilitate economic opportunities for rural women. The Kudumbashree movement in Kerala, working in coordination with PRIs, has empowered over 4.3 million women financially.
4. **Grassroots Mobilization:** Women leaders in PRIs have successfully mobilised communities to fight against social evils such as child marriage, domestic violence, and dowry. In West Bengal, female panchayat members have played a crucial role in reducing instances of child marriage by enforcing stricter monitoring.
5. **Policy Implementation and Accountability:** Women-headed PRIs have been instrumental in implementing schemes like Swachh Bharat Abhiyan and Beti Bachao Beti Padhao, ensuring better accountability and community participation. For instance, a woman-led panchayat in Maharashtra successfully implemented a sanitation campaign, making their village open-defecation-free.
6. **Promoting Gender-Sensitive Governance:** Women leaders advocate for policies that address gender-specific issues, ensuring equitable resource allocation.
7. **Encouraging Leadership Development:** PRIs provide a platform for women to gain governance experience, many of whom progress to state and national politics.
8. **Strengthening Community Engagement:** Women-led PRIs actively engage with local communities to identify and address key developmental concerns.
9. **Incorporating Women-Centric Policies:** PRIs with strong female representation push for policies that prioritise women's health, education, and employment.
10. **Enhancing Women's Legal Awareness:** Women in PRIs play a crucial role in spreading awareness about legal rights, including domestic violence laws, inheritance rights, and gender discrimination laws.

CASE STUDIES

1. **Chhavi Rajawat, Rajasthan:** India's first woman MBA sarpanch, Chhavi Rajawat, transformed her village, Soda (Rajasthan), by implementing water conservation projects and enhancing rural infrastructure.
2. **Panchayati Raj in Bihar:** With 50% reservation, Bihar has witnessed a surge in women panchayat leaders who have been instrumental in improving education and healthcare facilities.
3. **Kerala's Kudumbashree Movement:** A women-centric self-help group model, integrated with PRIs, has empowered thousands of women through financial independence and skill development.
4. **West Bengal's Women-led Panchayats:** Women leaders in West Bengal have successfully implemented social welfare schemes, particularly in improving sanitation and child nutrition programs.
5. **Madhya Pradesh's Women Panchayat Heads:** In various districts of Madhya Pradesh, women sarpanches have led initiatives against domestic violence and promoted legal awareness among rural women.
6. **Odisha's Mission Shakti Initiative:** Linked with PRIs, this movement has significantly enhanced women's economic empowerment through self-help groups.

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ISSUES GRAPPLED BY PRI IN EMPOWERING WOMEN

1. **Proxy Leadership:** Many elected women representatives function as proxies for their male relatives, limiting their autonomy in decision-making.
2. **Patriarchal Constraints:** Societal norms and gender biases continue to hinder women's effective participation in PRIs.
3. **Lack of Training and Awareness:** Many women representatives lack the necessary administrative training and education to function effectively.
4. **Limited Financial and Administrative Autonomy:** Women-led PRIs often face bureaucratic hurdles and financial constraints, restricting their ability to implement development initiatives.
5. **Safety and Harassment Issues:** Women leaders in PRIs frequently face threats, harassment, and societal backlash for challenging traditional power structures.

RECOMMENDATIONS

1. **Enhancing Capacity Building:** Regular training programs should be conducted to improve the leadership and administrative skills of women representatives.
2. **Ensuring Financial Autonomy:** PRI funds should be directly accessible to women representatives to ensure independent decision-making.
3. **Strict Implementation of Reservation Laws:** Measures should be taken to prevent proxy leadership and ensure real empowerment of elected women.
4. **Encouraging Digital Literacy:** Digital tools and e-governance initiatives should be introduced to enable women to participate effectively in decision-making.
5. **Legal and Social Safeguards:** Strict laws against harassment of women leaders and community awareness programs to support women's leadership roles should be implemented.

CONCLUSION

Panchayati Raj Institutions have been instrumental in promoting women's empowerment by providing them with a platform for political and social participation. While reservation policies have improved numerical representation, addressing issues like proxy leadership, financial constraints, and social stigma is crucial for achieving true gender empowerment. Strengthening PRI through capacity-building initiatives, financial independence, and legal support will pave the way for a more inclusive, equitable, and democratic grassroots governance system in India.

UPHOLDING HUMAN RIGHTS: INDIA'S JOURNEY TOWARDS JUSTICE AND EQUALITY

WHY IN THE NEWS?

The NHRC, in collaboration with the MEA, is hosting a six-day ITEC Executive Capacity Building Programme on human rights in New Delhi for officials from 14 Global South countries. The programme, inaugurated by Justice V. Ramasubramanian, aims to enhance collaboration, share experiences, and strengthen human rights protection mechanisms. It includes lectures, interactive sessions, and field visits. This initiative underscores India's commitment to South-South cooperation and leadership in global human rights diplomacy.

WHAT ARE HUMAN RIGHTS?

Human rights are universal, inalienable, and indivisible rights that every individual is entitled to, regardless of nationality, ethnicity, gender, or socioeconomic status. These rights are outlined in the Universal Declaration of Human Rights (UDHR), 1948, adopted by the United Nations General Assembly.

The key features of human rights :

1. **Universality:** They apply to all individuals equally.

2. **Inalienability:** They cannot be taken away except in extreme situations.
3. **Indivisibility:** No right is superior to another.
4. **Interdependence:** All rights are interconnected.

EXAMPLES OF HUMAN RIGHTS:

1. Right to life, liberty, and security (Article 3 of UDHR)
2. Freedom of speech and expression (Article 19 of UDHR)
3. Right to education (Article 26 of UDHR)
4. Freedom from torture and degrading treatment (Article 5 of UDHR)

HUMAN RIGHTS VS. FUNDAMENTAL RIGHTS

DIRECTIVE PRINCIPLES OF STATE POLICY (PART IV)

1. **Article 39(a):** Equal Justice and Free Legal Aid
2. **Article 41:** Right to Work, Education, and Public Assistance
3. **Article 47:** Improvement of Public Health

OTHER LEGAL PROVISIONS SUPPORTING HUMAN RIGHTS

1. The Protection of Human Rights Act, 1993 – Establishes NHRC
2. Scheduled Castes and Tribes (Prevention of Atrocities) Act, 1989
3. Juvenile Justice Act, 2015 – Protection of children's rights

Aspect	Human Rights	Fundamental Rights (India)
Definition	Universal rights recognized internationally	Rights granted under the Indian Constitution
Source	UDHR, ICCPR, ICESCR, International Treaties	Part III of the Indian Constitution
Applicability	Global	Applicable to Indian citizens and, in some cases, non-citizens
Enforcement	Enforced by the UN, international bodies, NHRC	Enforceable by Indian courts (Article 32 and 226)
Nature	Broader in scope	Specific and legally binding in India
Example	Right to clean water, climate justice	Right to Equality (Article 14), Right to Freedom (Article 19)

CONSTITUTIONAL PROVISIONS RELATED TO HUMAN RIGHTS IN INDIA

The Indian Constitution incorporates several provisions to protect and promote human rights:

Fundamental Rights (Part III)

1. Article 14 – Right to Equality
2. Article 19 – Freedom of Speech and Expression
3. Article 21 – Right to Life and Personal Liberty
4. Article 23 & 24 – Protection against Human Trafficking and Child Labor

ROLE OF NHRC IN UPHOLDING HUMAN RIGHTS IN INDIA

The National Human Rights Commission (NHRC) was established in 1993 under the Protection of Human Rights Act. Its key functions include:

1. **Investigation of Human Rights Violations:** NHRC takes suo moto cognizance of cases involving police brutality, custodial deaths, and discrimination.
2. **Advisory Role:** NHRC provides recommendations to the government on policy reforms.

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3. **Judicial Interventions:** The NHRC has intervened in landmark cases such as Manoj Sinha v. State of UP, where it addressed custodial torture.
4. **Human Rights Awareness Programs:** Conducts training and awareness campaigns.
5. **Monitoring International Treaties:** Ensures India's compliance with global human rights conventions.
6. **Protecting Vulnerable Groups:** Focuses on the rights of women, children, and marginalised communities.
7. **Annual and Special Reports:** Submits findings to the government and Parliament.

KEY CASES HANDLED BY NHRC:

1. **2006 Salwa Judum Case:** NHRC intervened in addressing human rights violations by state-backed militia in Chhattisgarh.
2. **2004 Manipur Encounter Killings:** NHRC recommended action against extrajudicial killings by security forces.
3. **2019 Hyderabad Encounter Case:** Examined police accountability in extrajudicial killings.
4. **2021 Farmers' Protest Human Rights Concerns:** Took cognisance of complaints regarding protestor treatment.

CONTEMPORARY CHALLENGES TO HUMAN RIGHTS

1. **Custodial Violence & Extra-Judicial Killings:** Cases like the Hyderabad Encounter (2019) and Manipur Fake Encounter Case (2012) highlight police excesses. NHRC reported 1,731 custodial deaths in 2019-20. The lack of police accountability mechanisms exacerbates the issue.
2. **Freedom of Expression Restrictions:** Sedition Law (Section 124A IPC) and Unlawful Activities (Prevention) Act (UAPA) are misused to curb dissent. Arrests of journalists and activists raise concerns about press freedom.
3. **Discrimination Against Marginalized Communities:** Caste-based violence continues, as seen in Hathras Case (2020). Discriminatory practices against Dalits, Adivasis, and religious minorities remain prevalent.
4. **Violation of Women's Rights:** Nirbhaya Case (2012) exposed deep-rooted gender violence. Rising cases of domestic violence and workplace harassment.
5. **Digital Surveillance & Privacy Concerns:** The Pegasus spyware controversy raised concerns over digital privacy. Weak data protection laws put citizens' privacy at risk.
6. **Refugee Crisis & Statelessness:** The Rohingya refugee issue poses humanitarian concerns. Citizenship debates, such as those related to NRC and CAA, create uncertainty.
7. **Environmental and Indigenous Rights Violations:** Large-scale deforestation and displacement due to industrial projects. Weak enforcement of environmental protection laws affects vulnerable communities.

WAYS TO PROTECT & STRENGTHEN HUMAN RIGHTS

1. Strengthening Legal Framework: Reforms in sedition laws and UAPA to ensure fair trials. Implementation of police reforms to prevent custodial violence.
2. **Judicial & Institutional Strengthening:** Expanding NHRC's powers and ensuring its recommendations are binding.Strengthening State Human Rights Commissions (SHRCs).
3. **Awareness & Education:** Introducing human rights education in schools.Media role in high-lighting human rights violations.
4. **Technology for Transparency:** Use of CCTV in police stations to prevent custodial torture. Digital platforms for lodging human rights complaints.
5. **Global Cooperation:** Aligning India's human rights policies with UN Sustainable Development Goals (SDGs). Strengthening partnerships with international human rights organizations.

CONCLUSION

Human rights are the cornerstone of a just and democratic society. While India has made significant strides in upholding human rights through constitutional provisions and institutions

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like NHRC, challenges persist. Strengthening legal mechanisms, ensuring institutional accountability, and fostering a culture of human rights awareness are crucial steps toward a more just society. By promoting and safeguarding human rights, India can continue to uphold its democratic ethos and global commitments.

PRELIMS QUESTIONS:

1. With reference to the initiatives by the Ministry of Social Justice and Empowerment, consider the following statements:

1. PM-AJAY focuses on improving the socio-economic conditions of marginalized communities, including skill development and infrastructure improvements.
2. SMILE aims to rehabilitate marginalized individuals, including those involved in begging, by providing vocational training and alternative livelihood options.
3. The Nasha Mukt Bharat Abhiyan was launched to target the reduction of drug use in urban areas only.

How many of the above-given statements are correct?

A. Only one

B. Only two

C. All three

D. None

2. With reference to the Three-Language Formula, consider the following statements:

1. The policy was first introduced in the 1986 National Policy on Education.
2. It mandates the compulsory study of Hindi in all states.
3. NEP 2020 allows states flexibility in choosing the languages.

How many of the above-given statements are correct?

A. Only one

B. Only two

C. All three

D. None

3. Consider the following statements regarding the appointment of Supreme Court judges in India:

1. The President of India appoints Supreme Court judges based on the recommendation of the Chief Justice of India (CJI).
2. The Collegium system, comprising the CJI and four senior-most judges, plays a crucial role in the selection process.
3. The executive has the power to reject the Collegium's recommendation without seeking reconsideration.

How many of the statements given above are correct?

A. Only one

B. Only two

C. All three

D. None

4. With reference to the Speaker of the State Legislative Assembly, consider the following statements:

1. The Speaker is elected by a simple majority of the members of the Legislative Assembly.
2. The Speaker can be removed by a resolution passed by a special majority in the Assembly.
3. The Speaker's salary and allowances are subject to the annual vote of the Assembly.

How many of the above-given statements are correct?

A. Only one

B. Only two

C. All three

D. None

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5. Which of the following is/are the key functions of the Central Consumer Protection Authority (CCPA)?

1. Protecting consumers' rights against unfair trade practices.
2. Implementing and monitoring consumer protection laws at the grassroots level.
3. Conducting research and developing educational programs to enhance consumer awareness.

Select the correct answer using the code given below:

A. 1 only
B. 1 and 2 only
C. 1, 2, and 3
D. 2 and 3 only

6. Consider the following statements regarding Panchayati Raj Institutions (PRIs) and women's participation

1. The 73rd Constitutional Amendment Act mandates 50% reservation for women in all PRIs.
2. Women-led PRIs have shown better implementation of social welfare schemes than male-led PRIs.
3. PRIs with female leadership have contributed significantly to reducing maternal and child mortality rates.

Which of the above statements is/are correct?

A. 1 and 2 only
B. 2 and 3 only
C. 1 and 3 only
D. 1, 2, and 3.

7. Which of the following rights are considered as both Fundamental Rights under the Indian Constitution and Human Rights under international law?

1. Right to Equality
2. Right to Education
3. Right to a Healthy Environment
4. Right to Freedom of Expression

Select the correct answer using the code below:

A. 1 and 2 only
B. 1, 2, and 4 only
C. 1, 2, 3, and 4
D. 3 and 4 only

ANSWER

1. B	**2. A**	**3. B**	**4. B**	**5. C**	**6. B**	**7. B**

MAINS QUESTIONS:

1. Discuss the key challenges to achieving social justice in India, highlighting the impact of caste-based discrimination, gender inequality, and economic disparity on marginalized communities. How can government initiatives and social reforms address these issues?

(250 words, 15 marks)

2. Discuss the role of language policies in promoting national integration while preserving linguistic diversity. How can India strike a balance between the two?

(250 words, 15 marks)

3. Discuss the significance of judicial independence in a democracy. What constitutional provisions ensure the independence of the judiciary in India?

(250 words, 15 marks)

4. The office of the Speaker in State Legislative Assemblies has been criticised for lacking neutrality and being influenced by political considerations. Discuss the challenges associated with the role of the Speaker and suggest reforms to enhance the independence and impartiality of the office.

(250 words, 15 marks)

5. Evaluate the powers and responsibilities of the CCPA and suggest ways to enhance its effectiveness.

(250 words, 15 marks)

6. Discuss the role of PRI in promoting gender-sensitive governance at the grassroots level.

(250 words, 15 marks)

7. Discuss the constitutional and legal provisions that safeguard human rights in India. How do the Directive Principles of State Policy complement Fundamental Rights in ensuring human dignity?

(250 words, 15 marks)

G-20: CHANNEL FOR MULTI-LATERAL WORLD POLITICAL ORDER

WHY IN THE NEWS?

External Affairs Minister S. Jaishankar, speaking at the G20 session in South Africa, highlighted the strain on the global order due to ongoing conflicts. He called for greater plurilateralism and emphasised that global agendas should not be driven by a few interests, urging collective efforts for international law and multilateral cooperation. On the Middle East, Jaishankar welcomed the Gaza ceasefire and hostage release, reaffirming India's strong stance against terrorism and support for a two-state solution. He also stressed the importance of maintaining peace in Lebanon and finding a Syrian-led solution to the ongoing conflict, noting that stability in the region is crucial for global peace.

WHAT IS THE G-20 GROUP?

The G20 Group (Group of Twenty) is an international forum of major economies that brings together 19 countries and the European Union and African Union to discuss and coordinate policies on global economic issues. The G20 was established in 1999 to promote international financial stability and foster dialogue on economic cooperation. It includes both developed and developing countries, representing about 85% of global GDP and 75% of global trade.

Key Members: Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Russia, Saudi Arabia, South Africa, South Korea, Turkey, the UK, the US, the European Union, and the African Union.

EVOLUTIONS OF G-20 GROUP:

1. **Formation:**

- **1999:** The G20 was created as a forum for finance ministers and central bank governors to discuss the global economy after the Asian financial crisis.
- **2008:** The G20 was elevated to a summit of heads of state and government in response to the global financial crisis.
- **2009:** The G20 was designated the "premier forum for international economic cooperation."

2. **Expansion of Focus:**

The G20's agenda expanded to include trade, climate change, sustainable development, health, energy, environment, and anti-corruption. It has emphasised inclusive growth, women empowerment, and representation.

3. **Annual Summits:**

Since 2010, the G20 has held annual summits with the host country rotating each year. The presidency brings together the G20 agenda

4. Membership:

The G20 includes the world's major economies, the European Union and the African Union.

INDIA AND G-20 GROUP

1. India's Joining the G20:
India became a member of the G20 in 1999 when the group was formed as a forum for finance ministers and central bank governors to discuss the global economy, especially after the Asian financial crisis.

2. India's Leadership Role in the G20:
India has been an active participant and contributor to the G20 discussions, especially on issues like inclusive growth, sustainable development, climate change, and reform of international institutions. As a major emerging economy, India advocates for the interests of developing nations, pushing for reforms in global financial governance and ensuring that the voices of Global South countries are heard.

3. India's Presidency in 2023:
India is hosting the G20 Presidency in 2023, marking its first time as the host country. The theme for India's G20 Presidency in 2023 is "Vasudhaiva Kutumbakam" (The World is One Family), inspired by India's ancient philosophy that underscores the interconnectedness of all people and nations. During its presidency, India aims to focus on addressing global challenges, such as: Climate Change, Sustainable Development Goals (SDGs), Global Health, Inclusive Growth, Energy Security, Digital Transformation and Technological Innovation.

G-20 GROUP A PLATFORM FOR PLURILATERALISM

The G-20 has become a platform for plurilateralism, where specific groups of countries within the forum cooperate on targeted global issues. Unlike multilateralism, which involves broad agreements among most nations, plurilateralism allows for quicker, more focused action on issues like climate change, trade, and global health.

1. **Focused Action:** G-20 tackles urgent issues efficiently, like digital economy and sustainable development, with smaller groups of countries.
2. **Flexibility:** Plurilateral agreements within the G-20 bypass the gridlock of larger organisations, addressing challenges quickly.
3. **Strategic Alliances:** Initiatives like AUKUS and the Minerals Security Partnership reflect targeted collaboration within the group.
4. **Geopolitical Cooperation:** The G-20 helps resolve issues where countries with shared interests can form alliances (e.g., climate action, trade reform).
5. **Overcoming Deadlocks:** Plurilateralism within the G-20 enables progress when larger multilateral bodies like the UN or WTO stall.

WHAT ARE THE ISSUES HINDERING G-20 GROUPING?

1. **Differing Priorities:** Developed and developing nations within the G-20 often have conflicting economic priorities, making consensus difficult.
2. **Lack of Enforcement Power:** The G-20 has no authority to enforce summit decisions, leading to concerns about unfulfilled commitments.
3. **Climate Change Disagreement:** Differing national views on emissions reduction and financial responsibility make it hard to reach a climate action consensus.
4. **Inequality Concerns:** The economic gap between rich and poor countries within the G-20 poses challenges to addressing issues like poverty and sustainable development.
5. **Trade Disputes:** Protectionism and trade wars among member states can undermine global economic cooperation.
6. **Debt Crisis:** High debt levels in some developing countries limit their ability to engage effectively in discussions.
7. **Lack of Inclusivity:** Some argue the G-20 does not fully represent the interests of smaller and developing economies.

RECOMMENDATION TO STRENGTHEN G-20 GROUP

1. **Enhanced Cooperation Amid Geopolitical Rivalries:** Foster dialogue and trust-building initiatives between major powers like the US

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and China to resolve differences and promote collaboration on global issues.

2. **Clear Accountability Mechanisms:** Introduce mechanisms for monitoring and holding member states accountable for fulfilling commitments, ensuring that summit agreements are acted upon effectively.
3. **Addressing Economic Inequality:** Focus on policies that narrow the gap between rich and poor countries, including tailored solutions for poverty reduction, debt relief, and sustainable development.
4. **Promoting Trade Cooperation:** Strengthen international trade agreements and tackle protectionism by creating frameworks that encourage open markets and fair competition.
5. **Debt Relief Initiatives:** Enhance support for developing countries with high debt burdens through debt restructuring programs or low-interest financing options to facilitate better participation in global discussions.
6. **Strengthening Multilateralism:** Build stronger cooperation with international organisations such as the United Nations, World Bank, and IMF to align G-20 priorities with broader global goals, ensuring a more comprehensive and coordinated approach to challenges.
7. **Developing Actionable Solutions:** Shift focus from broad, aspirational goals to more concrete and actionable policies that can address immediate global issues like health crises, economic recovery, and sustainable energy transitions.
8. **Climate Change Consensus:** Establish a more unified approach to climate action, with clear emission reduction targets and shared financial responsibility to drive collective global progress.

CONCLUSION

The G-20 group plays a pivotal role in shaping global economic policies and addressing pressing issues like climate change, trade, and development. While it has made significant strides in fostering cooperation, challenges such as geopolitical rivalries, differing priorities, and the lack of enforcement power hinder its full potential. India, with its leadership role in 2023, has emphasised inclusivity and plurilateralism, reflecting the evolving dynamics of the global order. By addressing key concerns like economic inequality, trade disputes, and climate change, the G-20 can further strengthen its capacity to promote a more equitable and sustainable global future.

INDIA-EU RELATIONS: NAVIGATING A NEW ERA OF COLLABORATION

WHY IN THE NEWS?

The second meeting of the India-EU Trade and Technology Council (TTC) took place in New Delhi. It was co-chaired on the Indian side by India's External Affairs Minister, Dr S. Jaishankar; Commerce and Industry Minister Sh ri Piyush Goyal; and Minister for Electronics and Information Technology, Shri Ashwini Vaishnaw. Executive Vice-President for Tech Sovereignty, Security and Democracy Ms. Henna Virkkunen, Commissioner for Trade and Economic Security, Interinstitutional Relations and Transparency Mr. Maros Šefčovič and Commissioner for Startups, Research and Innovation Ms Ekaterina Zaharieva co-chaired on the EU side.

EVOLUTIONS OF BILETARAL TIES

1. **Early Engagement (1950s-1990s):** Diplomatic ties began in the 1960s, with an initial focus on development cooperation and trade. Relations were limited but gradually expanding.
2. **Formal Partnership (2000s):** The EU-India Strategic Partnership was established in 2004,

focusing on political, economic, and cultural cooperation. This period also saw the start of Free Trade Agreement (FTA) negotiations in 2007, deepening economic ties.

3. **Strategic Convergence (2010-2020):** Both sides recognised shared global challenges, leading to stronger cooperation in areas like climate change, security, and sustainable development. The India-EU Civil Nuclear Agreement (2008) and increased collaboration in sectors like counter-terrorism, trade, and environmental sustainability were notable achievements.
4. **TTC and Recent Developments (2022-Present):** The launch of the India-EU Trade and Technology Council (TTC) in 2022 marked a significant step in addressing emerging challenges in trade, technology, and security. Cooperation on AI, semiconductors, digital infrastructure, and clean technologies expanded. The relationship now includes joint efforts on sustainable growth, resilient supply chains, and multilateral diplomacy.

AREAS OF COOPERATION

1. **Trade and Investment:** Focus on reducing trade barriers, promoting investment, and negotiating a Free Trade Agreement (FTA).
2. **Technology and Innovation:** Cooperation on AI, 6G, semiconductors, and digital infrastructure, with a focus on ethical AI and technological innovation.
3. **Clean and Green Technologies:** Joint efforts on climate change, renewable energy, battery recycling, and waste-to-hydrogen technologies.
4. **Security and Geopolitics:** Collaboration on cybersecurity, counter-terrorism, and regional security, with a shared commitment to multilateral diplomacy.
5. **Agriculture and Food Security:** Research on climate-resilient agriculture and food security solutions.
6. **Health and Pharmaceuticals:** Enhancing API supply chains and promoting sustainable pharmaceutical practices.
7. **Education and Skills Development:** Talent exchange, bridging the digital skills gap, and fostering professional development.
8. **Multilateral Cooperation:** Strengthening the WTO, implementing the Global Digital Compact, and promoting international cooperation.
9. **Resilient Supply Chains:** Developing secure and diversified supply chains in technology, clean energy, and pharmaceuticals.

IMPORTANCE OF EU FOR INDIA

1. **Trade and Economic Relations:** The EU is India's largest trading partner after China, supporting exports and offering significant FDI. Ongoing FTA negotiations aim to enhance trade and economic ties.
2. **Technology and Innovation:** The EU collaborates with India in areas like AI, digital infrastructure, and clean energy, aiding technological advancement and R&D.
3. **Climate and Sustainability:** The EU is a key partner in promoting renewable energy, sustainable practices, and green technologies, helping India meet its climate goals.
4. **Security and Geopolitics:** The EU supports India's security interests, especially in the Indo-Pacific, and aids in counter-terrorism, cyber security, and global stability.
5. **Cultural and Educational Ties:** Shared democratic values strengthen people-to-people connections, while educational exchanges foster skills development and research collaboration.
6. **Multilateral Cooperation:** India and the EU work together on global issues, including trade reform, UN SDGs, and sustainable growth.
7. **Strategic Partnership:** Both sides share strategic interests in shaping global governance, trade, and security, reinforced by initiatives like the India-EU Trade and Technology Council (TTC).

SIGNIFICANCE OF INDIA FOR EU

1. **Enhancing Trade Relations:** Concluding the Free Trade Agreement (FTA) between India and the EU will help reduce trade barriers, improve market access, and foster stronger economic ties.

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2. **Deepening Technological Cooperation:** Expanding collaboration in high-tech areas like AI, digital infrastructure, and cybersecurity will help both sides benefit from technological advancements and foster innovation.
3. **Joint Initiatives on Climate Change:** Strengthening partnerships on renewable energy, sustainable development, and green technologies can help both India and the EU meet their climate goals and address environmental concerns.
4. **Promoting Investment and Business Partnerships:** Addressing issues like intellectual property rights, investment protection, and ease of doing business can increase EU investments in India, benefiting both economies.
5. **Collaboration on Global Governance:** Working together on multilateral issues, such as WTO reform, global digital governance, and UN Security Council reforms, will ensure a strong collective voice on global challenges.
6. **People-to-People Exchanges:** Expanding educational exchanges, cultural diplomacy, and tourism can foster deeper mutual understanding, strengthening long-term ties between India and the EU.

AREAS OF CONCERN

1. **Economic Partnership:** India is a major trade partner, offering a growing market for EU goods while benefiting from EU exports in machinery, chemicals, and automobiles.
2. **Geopolitical Role:** India plays a key role in regional stability, particularly in the Indo-Pacific, and is vital for the EU's security and global governance efforts.
3. **Shared Values:** Both share democratic values, strengthening cooperation on issues like human rights, climate change, and the rule of law.
4. **Climate Action:** India's role in global climate efforts makes it crucial for the EU's green transition and sustainability goals.
5. **Cultural Ties:** Growing cultural exchanges and educational partnerships deepen people-to-people connections.

WAY TO FURTHER COOPERATION

1. **Trade Barriers:** High tariffs and regulatory challenges still hinder smooth trade between India and the EU.
2. **Investment Climate:** Concerns over intellectual property rights and ease of doing business in India may deter EU investments.
3. **Regulatory Differences:** Divergence in standards and certifications complicates trade in sectors like pharmaceuticals and food safety.
4. **Geopolitical Differences:** India's geopolitical stance, especially regarding Russia and China, may sometimes conflict with EU policies.
5. **Environmental Standards:** India's development priorities might clash with the EU's environmental expectations.

CONCLUSION

India-EU relations are steadily evolving, with key areas of cooperation spanning trade, technology, climate action, and security. The India-EU Trade and Technology Council (TTC) has proven to be a vital platform for addressing emerging challenges and fostering collaboration in areas such as AI, clean energy, digital infrastructure, and resilient supply chains. By addressing concerns like trade barriers, regulatory differences, and geopolitical tensions, both sides can further enhance their strategic partnership, promoting mutual growth and global stability. Moreover, strengthening multilateral cooperation and aligning efforts on issues like climate change, digital governance, and global trade reforms will ensure that India and the EU can effectively navigate the evolving global geopolitical landscape.

INDIA AND UK DEEPENING TIES

WHY IN THE NEWS

At the invitation of the UK Foreign Secretary David Lammy, External Affairs Minister (EAM) Dr S. Jaishankar paid an official visit to the United Kingdom from March 4-9, 2025 (during this period,

he also visited Ireland on March 6-7, 2025). EAM called on the Prime Minister of the UK, Sir Keir Starmer and Deputy Prime Minister Angela Rayner. He held comprehensive talks with his counterpart Foreign Secretary David Lammy and met with Secretary of State for Business and Trade Jonathan Reynolds and Home Secretary Yvette Cooper. During the visit, EAM also engaged with key stakeholders across government, businesses, academia, and the Indian diaspora.

INDIA AND UK TIES

1. **Economic and Trade Relations:** Ongoing negotiations for a Free Trade Agreement (FTA) to boost trade and investment. Strong presence of Indian firms in the UK, especially in tech, pharma, and financial services. UK investments in India's digital economy and fintech sector.
2. **Strategic and Technological Cooperation:** The UK-India Technology Security Initiative (TSI) focuses on AI, semiconductors, quantum computing, and cybersecurity. Collaboration on green energy, climate action, and sustainable finance. Joint efforts in research and innovation to stay competitive in emerging technologies.
3. **Defense and Security Partnerships:** Maritime security, counterterrorism, and intelligence-sharing form the core of defence cooperation. Joint military exercises and naval collaboration in the Indo-Pacific region. Potential for defence technology partnerships while respecting India's strategic autonomy.
4. **People-to-People Connections:** 1.6 million Indian-origin people in the UK contribute to business, healthcare, and politics. The Young Professionals Scheme allows easier movement of skilled workers. Indian students form the largest group of international students in the UK.
5. **Geopolitical Challenges and Opportunities:** Issues like Khalistani extremism and historical tensions occasionally create friction. Differences in foreign policy approaches, but shared strategic interests in global security. India's rising global influence and the UK's Indo-Pacific tilt create avenues for deeper collaboration.
6. **Future of India-UK Relations:** Review of Roadmap 2030 to assess progress and set new goals. Finalisation of FTA to unlock economic potential. Strengthening technology, trade, and diplomatic engagement for a more robust partnership.

EVALUATIONS OF BILATERAL TIES:

1. **Strategic Partnership:** Strengthened by Roadmap 2030, outlining key areas of cooperation.
2. **Economic Engagement:** Trade negotiations for a Free Trade Agreement (FTA), significant UK investments in India, and India's growing business presence in the UK.
3. **Technological Collaboration:** Emerging Tech Exchange Programme and the UK-India Technology Security Initiative (TSI) focusing on AI, semiconductors, and quantum computing.
4. **Defense & Security:** Counterterrorism cooperation, intelligence sharing, cybersecurity initiatives, and maritime security collaboration.
5. **Climate & Energy:** Joint projects like the India-UK Green Hydrogen Hub and Climate Finance Leadership Initiative to support renewable energy and net-zero goals.
6. **Diaspora & Cultural Ties:** A strong Indian diaspora of 1.6 million in the UK, contributing significantly to business, politics, and academia.

AREAS OF COOPERATIONSSS

1. Trade & Economy: Negotiations for a Free Trade Agreement (FTA), growing UK investments in In-

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dia, and strong Indian business presence in the UK.

2. **Technology & Innovation:** The UK-India Technology Security Initiative (TSI) focuses on AI, semiconductors, and quantum computing.
3. **Defense & Security:** Maritime security, counterterrorism, cybersecurity, and intelligence-sharing.
4. **Climate & Energy:** Collaboration on green energy, India-UK Green Hydrogen Hub, and climate finance initiatives.
5. **Education & People-to-People Ties:** Large Indian diaspora, student exchange programs, and migration mobility partnerships.

SIGNIFICANCE OF UK FOR INDIA

1. **Strategic Partner:** A permanent member of the UN Security Council (P5) and G7, helping India in global diplomacy.
2. **Investment & Trade Hub:** The UK is a key destination for Indian exports, businesses, and financial sector expansion.
3. **Technology & Research:** Strong R&D collaboration, particularly in advanced tech and pharmaceuticals.
4. **Education & Workforce:** UK universities attract a large number of Indian students, strengthening human capital.
5. **Gateway to Europe:** Despite Brexit, the UK remains a crucial financial and trade gateway to European markets.

SIGNIFICANCE OF INDIA FOR THE UK

1. **Economic Growth Partner:** India is the world's fastest-growing major economy, offering business and investment opportunities.
2. **Strategic Indo-Pacific Partner:** India's role in counterbalancing China's influence aligns with the UK's Indo-Pacific strategy.
3. **Technology & Innovation Hub:** India's booming tech ecosystem and startup culture complement the UK's innovation-driven economy.
4. **Skilled Workforce:** Indian professionals fill crucial gaps in the UK's healthcare, IT, and financial sectors.
5. **Cultural & Diaspora Influence:** The 1.6 million-strong Indian diaspora contributes significantly to UK politics, business, and society.

AREAS OF CONCERN

1. **Trade Negotiations:** Delays in finalising the FTA due to disagreements on tariffs and market access.
2. **Diaspora & Political Tensions:** Khalistani extremism and political sensitivities sometimes strain ties.
3. **Geopolitical Differences:** India's stance on the Russia-Ukraine war contrasts with the UK's position.
4. **China Policy:** The UK's evolving approach to China could impact India's strategic alignment.
5. **Immigration Policies:** The UK's stricter visa regulations for Indian students and professionals create challenges.

WAY TO FURTHER THE BILATERAL RELATIONS

1. Fast-track the FTA to boost trade and investments.
2. Expand cooperation in emerging technologies like AI, space, and digital security.
3. Enhance defence collaboration through joint military projects and security dialogues.
4. Strengthen climate partnerships for green energy, hydrogen tech, and net-zero commitments.
5. Improve mobility and education ties by easing visa regulations and promoting student exchanges.
6. Address diaspora-related concerns through diplomatic engagement to prevent tensions.
7. Align Indo-Pacific strategies to enhance maritime security and regional stability.

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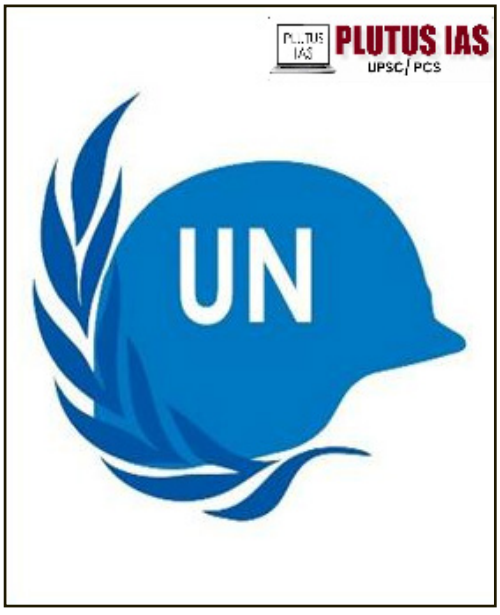
CONCLUSION

The India-UK relationship continues to evolve with strong economic, strategic, and people-to-people ties. While challenges remain, both countries have a shared vision for deeper collaboration in trade, technology, defence, and climate action. By addressing key concerns and leveraging mutual strengths, India and the UK can build a stronger and more comprehensive partnership in the years to come.

INDIA'S ROLE IN UN PEACEKEEPING

WHY IN THE NEWS?

India remains a key leader in UN peacekeeping, with over 2,90,000 personnel serving in 50+ missions, including 5,000 currently deployed. In 2023, India received the Dag Hammarskjöld Medal, honouring Shishupal Singh, Sanwala Ram Vishnoi, and Shaber Taher Ali for their sacrifice in Congo. Strengthening its commitment, India hosted the 'Conference on Women Peacekeepers from the Global South' (24th-25th Feb 2025) in New Delhi, bringing together 35 nations to enhance women's role in peacekeeping. Guided by "Vasudhaiva Kutumbakam", India continues to champion dialogue, diplomacy, and inclusive security.



WHAT IS UN PEACEKEEPING

UN Peacekeeping is a key mechanism used by the United Nations to maintain global peace and security. It operates alongside other UN efforts, including conflict prevention, peacemaking, peace enforcement, and peacebuilding.

WHAT IT INVOLVES?

UN peacekeeping missions are deployed to support ceasefires and peace agreements. However, modern peacekeeping has evolved into a multidimensional effort that goes beyond military presence. It involves:

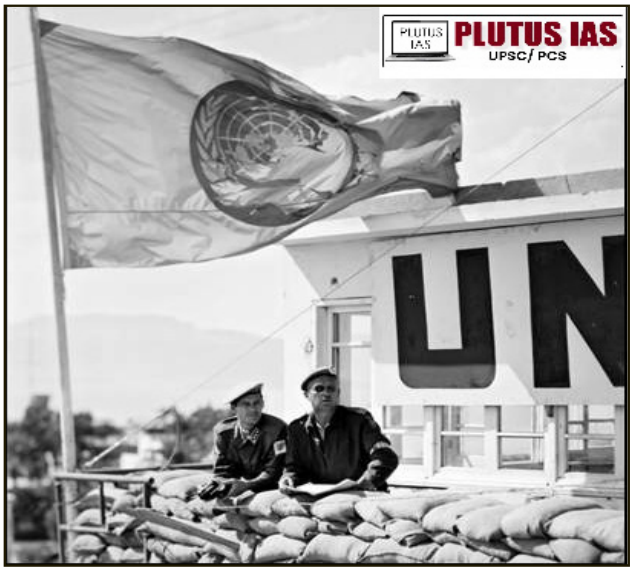
- **Facilitating Political Processes:** Supporting negotiations and governance structures.
- **Protecting Civilians:** Ensuring the safety of vulnerable populations in conflict zones. Disarmament, Demobilization, and
- **Reintegration (DDR):** Assisting former combatants in transitioning to civilian life.
- **Election Support:** Helping organise and oversee free and fair elections.
- **Human Rights and Rule of Law:** Promoting justice, accountability, and governance reforms.

ROLE OF PEACEKEEPING

Peacekeeping today often overlaps with peacemaking and peacebuilding, requiring flexibility in addressing conflicts. While primarily deployed to maintain peace, peacekeepers may also take on active roles in conflict resolution and early recovery efforts. In some cases, they are authorised to use force to protect civilians, enforce mandates, and maintain security where the host state is unable to do so.

HISTORY OF UN PEACEKEEPING

UN Peacekeeping began in 1948 with the establishment of the United Nations Truce Supervision Organization (UNTSO) in the Middle East to monitor ceasefires. Initially, peacekeeping missions were unarmed and focused on observation and mediation. During the Cold War, missions remained limited due to geopolitical tensions, but the end of the Cold War in the 1990s saw a significant expansion in both the number and scope of peacekeeping operations. The UN began deploying multidimensional missions that combined military, political, and humanitarian efforts, addressing civil conflicts, supporting governance, and protecting human rights.



SIndia's Contribution to UN Peacekeeping India has a long and distinguished history of serving in UN peacekeeping, dating back to its participation in the UN operation in Korea in 1953. India's commitment to non-violence, enshrined in its philosophy and championed by Mahatma Gandhi, aligns with the UN's approach to promoting global peace. This commitment stems from India's ancient principle of "Vasudhaiva Kutumbakam" (the whole world is my family), which emphasises the interconnectedness of humanity and the importance of peaceful coexistence. The nine UN peacekeeping missions where the Indian Armed Forces were involved as of May 29, 2024

Mission Name	Location	India's Contribution
UN Disengagement Observer Force (UNDOF)	Golan Heights	Logistics Battalion with 188 personnel for logistics security
UN Interim Force in Lebanon (UNIFIL)	Lebanon	Infantry battalion group with 762 personnel and 18 staff officers
UN Truce Supervision Organization (UNTSO)	Middle East	Military observers and support staff
UN Peacekeeping Force in Cyprus (UNFICYP)	Cyprus	Deployment of officers as staff and military observers
UN Organization Stabilization Mission in the Democratic Republic of the Congo (MONUSCO)	Democratic Republic of the Congo	Infantry battalions, medical units, and support staff

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UN Mission in South Sudan (UNMISS)	South Sudan	Infantry battalion, medical personnel, and engineering units
UN Interim Security Force for Abyei (UNIFSA)	Abyei	Military observers and staff officers
UN Multidimensional Integrated Stabilization Mission in the Central African Republic (MINUSCA)	Central African Republic	Formed Police Units (FPUs) and military observers
UN Mission for the Referendum in Western Sahara (MINURSO)	Western Sahara	Deployment of military observers

Paratroopers from India and the U.S. on the way to Korea in 1953 India is dedicated to helping Global South nations strengthen their peacekeeping capabilities. Through the Centre for UN Peacekeeping, India continues to provide training and capacity-building programs, including specialised courses for women peacekeepers, as carried out for ASEAN nations in 2023. Peacekeeping is at the core of India's foreign policy driven by dialogue, diplomacy, and global cooperation. This commitment reflects India's belief in the importance of South-South cooperation and its role as a leader in promoting peace and security in the developing world. Indian peacekeepers have served in diverse and challenging environments, making significant contributions to peace and security in various regions. The following table summarises some of the key UN peacekeeping missions in which India has been involved.

Mission Name	Location	Year	India's Contribution
UN Assistance Mission in the Central African Republic (MINUSCA)	Central African Republic	2014-Present	Formed Police Units (FPUs) and military observers
UN Mission in South Sudan (UNMISS)	South Sudan	2012-Present	Infantry battalion, medical personnel, and engineering units
UN Organization Stabilization Mission in the Democratic Republic of the Congo (MONUSCO)	DR Congo	2010-Present	Infantry battalions, medical units, and support staff
UN Mission in the Golan Heights (UNDOF)	Golan Heights	2006-Present	Logistics Battalion with 188 personnel for logistics security
UN Mission in Sudan (UNMIS/UNMISS)	Sudan/South Sudan	2005-Present	Battalion groups, engineer companies, Signal Companies, hospitals, military observers (MILOBs), and staff officers (SOs)

UN Organization Mission in the Democratic Republic of the Congo (MONUC/ MONUSCO)	DR Congo	2005-Present	Infantry Brigade Group (three battalions, including RDB), hospital, MILOBs, SOs, and two FPUs
UN Interim Force in Lebanon (UNIFIL)	Lebanon	1998-Present	Infantry battalion group with 762 personnel and 18 staff officers
UN Mission in Liberia (UNMIL)	Liberia	2007-2016	Deployed both male and female FPUs
UN Mission in Ethiopia and Eritrea (UNMEE)	Ethiopia-Eritrea	2006-2008	Contributed an infantry battalion group, an engineer company, and a force reserve company
UN Stabilization Mission in Haiti (MINUSTAH)	Haiti	2004-2017	Contributed Formed Police Units (FPUs) from various police forces
UN Mission in Sierra Leone (UNAMSIL)	Sierra Leone	1999-2001	Deployed infantry battalions, engineer companies, and other support elements
UN Angola Verification Mission (UNAVEM)	Angola	1989-1999	Provided military observers and staff officers
UN Assistance Mission for Rwanda (UNAMIR)	Rwanda	1994-1996	Contributed medical personnel and logistical support
UN Operation in Somalia (UNOSOM II)	Somalia	1993-1994	Deployed an Army Brigade Group and four Navy battleships
UN Operation in the Congo (ONUC)	Congo	1960-1964	Deployed two brigades to counter secession and re-integrate the country
UN Emergency Force (UNEF I)	Middle East	1956-1967	Contributed to an infantry battalion and other support elements
Control of Indo-China	Indo-China (Vietnam, Cambodia, Laos)	1954-1970	Provided an infantry battalion and supporting staff for monitoring ceasefire and repatriation of prisoners of war
UN Operation in Korea	Korea	1950-1954	Provided medical cover to UN forces and chaired the Neutral Nations Repatriation Commission.

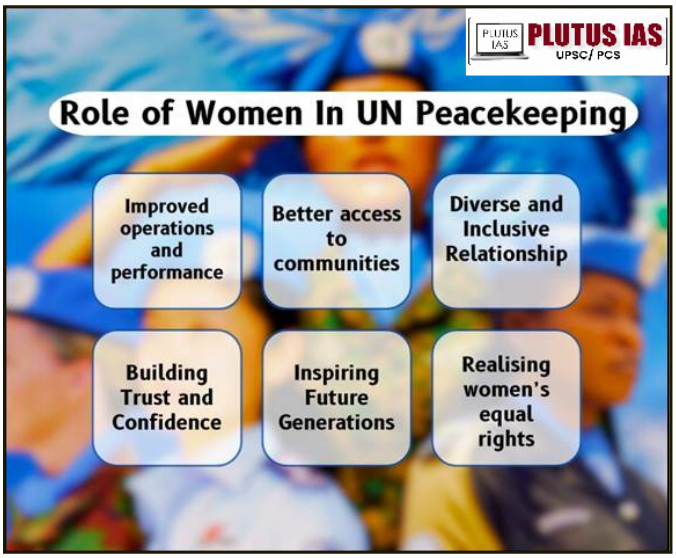
WOMEN IN PEACEKEEPING: A CATALYST FOR LASTING PEACE

Women play an indispensable role in peacekeeping, contributing to conflict resolution, community engagement, and sustainable peacebuilding. Their presence enhances trust, fosters inclusivity, and strengthens the effectiveness of peace operations, particularly in engaging with local populations, including women and children. Moreover, women peacekeepers help prevent sexual violence, improve civilian protection, and inspire greater gender equality. Despite these advantages, their representation in peacekeeping missions remains disproportionately low.

Progress and Challenges in Women's Participation Despite global efforts, women constitute less than 10% of the UN's 70,000 uniformed peacekeepers—including military personnel, police officers, and observers. Acknowledging this gap, the UN introduced the Uniformed Gender Parity Strategy, aiming to increase female participation to 15% in military contingents and 25% in police units by 2028. The push for greater inclusion began with UN Security Council Resolution 1325 (2000), which formally recognized women's essential role in conflict prevention, peace negotiations, and post-conflict rebuilding. This was reinforced by subsequent Women, Peace, and Security (WPS) Resolutions 1820, 1888, 1889, 2122, and 2242, which emphasized women's leadership in peace efforts and addressed conflict-related sexual violence. In 2022, women comprised 7.9% of uniformed personnel in field missions, a significant rise from just 1% in 1993. This included Peacekeeping personnel distribution varies widely: military (5.9%), police (14.4%), justice/corrections (43%), and civilian (30%, with gender parity in leadership).

WHY WOMEN PEACEKEEPERS MATTER?

Stronger Peacekeeping: Diverse and inclusive teams lead to more effective peace operations, improving civilian protection and peacebuilding. Better Access & Trust: Women peacekeepers enhance engagement with local communities, especially women, building trust and expanding outreach. Diverse Leadership & Decision-Making: Gender-balanced teams bring broader perspectives, strengthening decision-making and ensuring operations reflect the communities they serve. Role Models for Change: Women peacekeepers inspire future generations, challenging traditional norms and empowering women and girls to advocate for their rights. Advancing Gender Equality: Upholding equality and non-discrimination is central to UN Peacekeeping, aligning with the core principles of the UN Charter.



WHAT ARE THE CHALLENGES IN UN PEACE-KEEPING?

1. **Security Risks & Hostile Environments:** Peace-keepers often operate in conflict zones where they face direct threats from armed groups and insurgents.
2. **Logistical & Resource Constraints:** Missions are often underfunded, lacking proper equipment, transportation, and infrastructure to effectively carry out their mandates.
3. **Political & Bureaucratic Hurdles:** Decision-making within the UN can be slow due to political disagreements among member states, affecting mission efficiency.
4. **Gender Bias & Cultural Barriers:** Women peace-keepers face additional challenges, including cultural resistance, lack of career advancement opportunities, and security risks.
5. **Lack of Representation in Leadership Roles:** Despite efforts to promote inclusivity, women

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remain underrepresented in decision-making positions within peacekeeping operations.

6. **Accountability & Ethical Concerns:** Cases of misconduct, including sexual exploitation and abuse, have damaged the credibility of peacekeeping forces and demand stricter oversight.
7. **Asymmetrical Warfare & Non-State Actors:** The rise of non-state armed groups using guerrilla tactics makes traditional peacekeeping models less effective. 8. Host Country Challenges: Lack of cooperation from host governments, political instability, and local resistance can obstruct peacekeeping operations.

WAY TO MAKE PEACEKEEPING A REAL FORCE

1. **Enhanced Training & Capacity Building:** Specialized training programs focusing on modern warfare tactics, gender sensitivity, and cultural awareness are essential.
2. **Stronger Commitments from Nations:** Increased financial and personnel contributions are needed to strengthen peacekeeping missions.
3. **Improved Security Measures:** Providing advanced protective equipment, intelligence-sharing mechanisms, and rapid response capabilities can enhance peacekeeper safety.
4. **Policies Promoting Inclusivity:** Expanding leadership roles for women and ensuring gender-sensitive policies can make peacekeeping more effective.
5. **Robust Accountability Mechanisms:** Strengthening monitoring and disciplinary actions against misconduct to restore credibility and trust in peacekeeping forces.
6. **Technology & Innovation:** Utilizing drones, surveillance technology, and AI-driven data analysis can improve decision-making and operational effectiveness.

CONCLUSION

Women's participation in peacekeeping is crucial for fostering sustainable peace, enhancing trust with local communities, and promoting gender equality. Despite challenges, increasing women's representation can lead to more effective conflict resolution, inclusive decision-making, and greater mission success. By strengthening training, policies, and leadership opportunities for women, UN peacekeeping can evolve into a truly representative force that upholds global peace and security. Diversity in peacekeeping is not just an ethical imperative—it is a strategic necessity.

PRELIMS QUESTIONS:

1. With reference to the G-20 Group, consider the following statements:

1. The G-20 was established in 1999 as a forum for finance ministers and central bank governors to discuss global economic issues.
2. The G-20 includes only developed countries and excludes emerging economies.
3. The G-20 presidency rotates annually among its member countries.

How many of the above-given statements are correct?

A. Only one

B. Only two

C. All three

D. None

2. With reference to the India-EU Trade and Technology Council (TTC), consider the following statements:

1. The first meeting of the TTC was held in New Delhi in February 2025.
2. The TTC was established to address challenges at the intersection of trade, technology, and security.
3. The second meeting of the TTC took place in Brussels in November 2023.

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How many of the above-given statements are correct?

A. Only one

B. Only two

C. All three

D. None

3. With reference to India-UK relations, consider the following statements:

1. India and the UK are negotiating a Free Trade Agreement (FTA) to enhance bilateral trade.
2. The UK-India Technology Security Initiative (TSI) focuses on emerging technologies like AI, semiconductors, and quantum computing.
3. The Young Professionals Scheme between India and the UK allows the free movement of workers without restrictions.

How many of the above-given statements are correct?

A. Only one

B. Only two

C. All three

D. None

4. With reference to Women in UN Peacekeeping, consider the following statements:

1. Women peacekeepers contribute to conflict resolution and enhance trust with local communities.
2. The UN mandates equal representation of men and women in all peacekeeping missions.
3. India's first all-female Formed Police Unit was deployed in Liberia in 2007.

How many of the above-given statements are correct?

A. Only one

B. Only two

C. All three

D. None

ANSWER

1. B	**2. B**	**3. B**	**4. B**

MAINS QUESTIONS:

1. Discuss the evolution of the G-20 Group and its significance in global economic governance. What are the key challenges faced by the G-20, and how can the group be strengthened to address emerging global issues?

(250 words, 15 marks)

2. Discuss the significance of the India-EU Trade and Technology Council (TTC) in strengthening bilateral relations. How can it contribute to global economic stability?

(250 words, 15 marks)

3. Examine the significance of India-UK bilateral relations in the context of trade, strategic partnerships, and technological cooperation. What are the key challenges, and how can both countries strengthen their engagement?

(250 words, 15 marks)

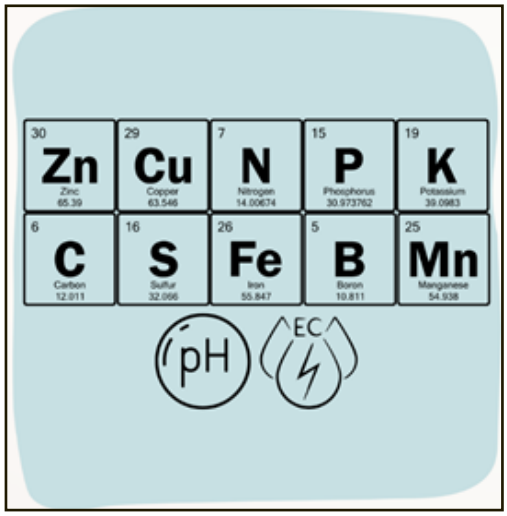
4. Analyze the role of women in UN peacekeeping and discuss the challenges they face. Suggest measures to enhance their particssipation and effectiveness in peacekeeping missions.

(250 words, 15 marks)

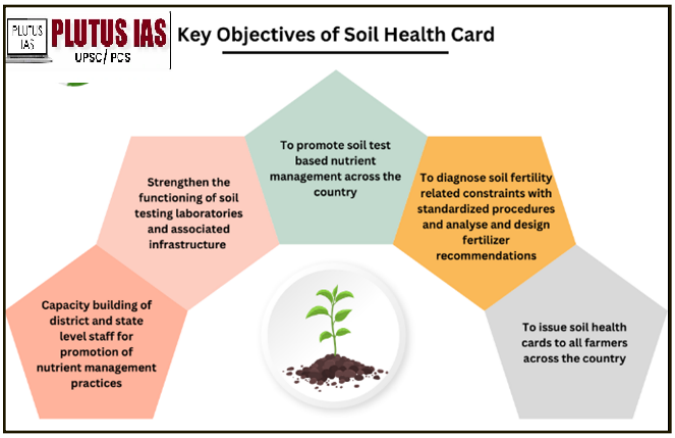
SWASTH DHARAA, KHET HARAA: CELEBRATING A DECADE OF SOIL HEALTH CARDS

WHY IN THE NEWS?

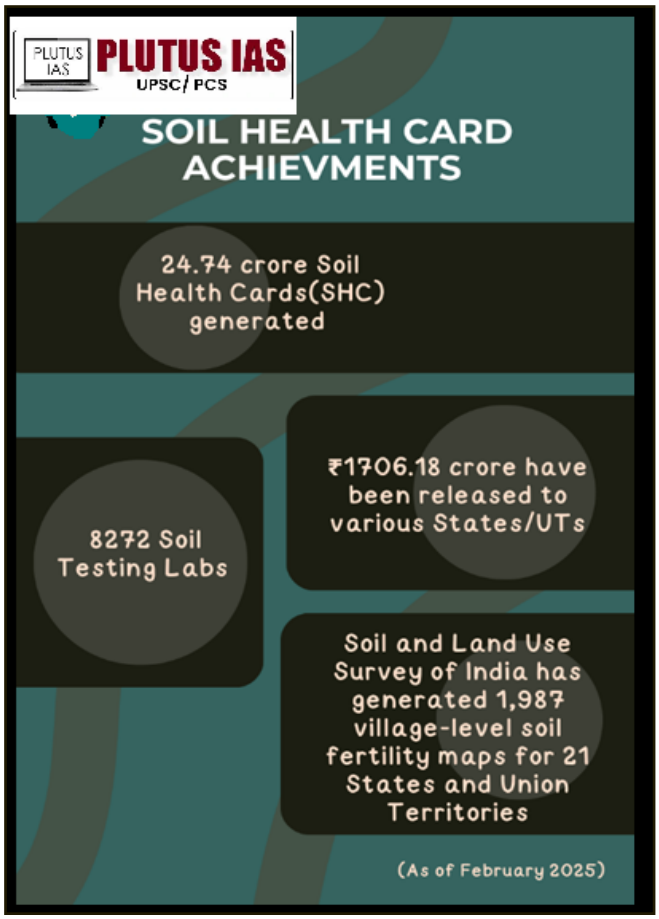
The Soil Health Card Scheme, launched by Prime Minister Narendra Modi, aims to assist farmers by providing information on soil health and recommending appropriate fertiliser use. The card includes data on 12 parameters, including macro and micro-nutrients, pH, EC, and organic carbon. The scheme helps farmers improve soil fertility and reduce over-fertilization, boosting agricultural sustainability. The Soil Health Card Portal www.soilhealth.dac.gov.in issues cards in a standardised format, available in multiple languages. The scheme's impact on sustainable farming practices and crop productivity has been widely recognised in the news.



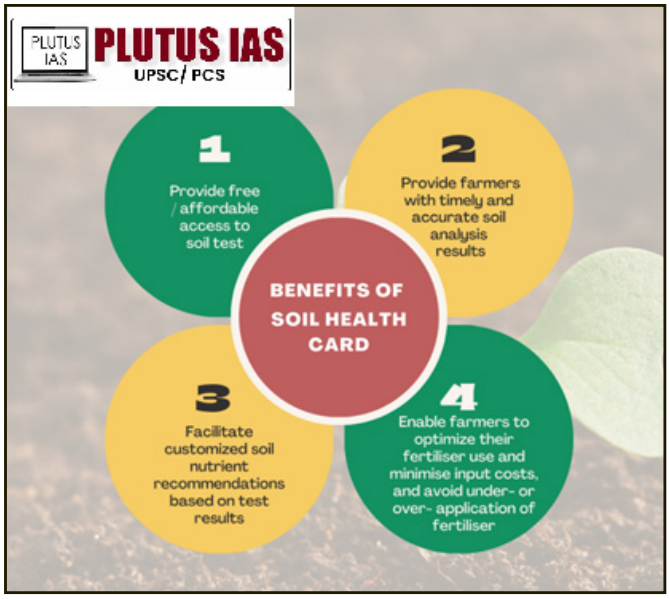
KEY OBJECTIVES OF SOIL HEALTH CARD



ACHIEVEMENT OF SOIL HEALTH CARD



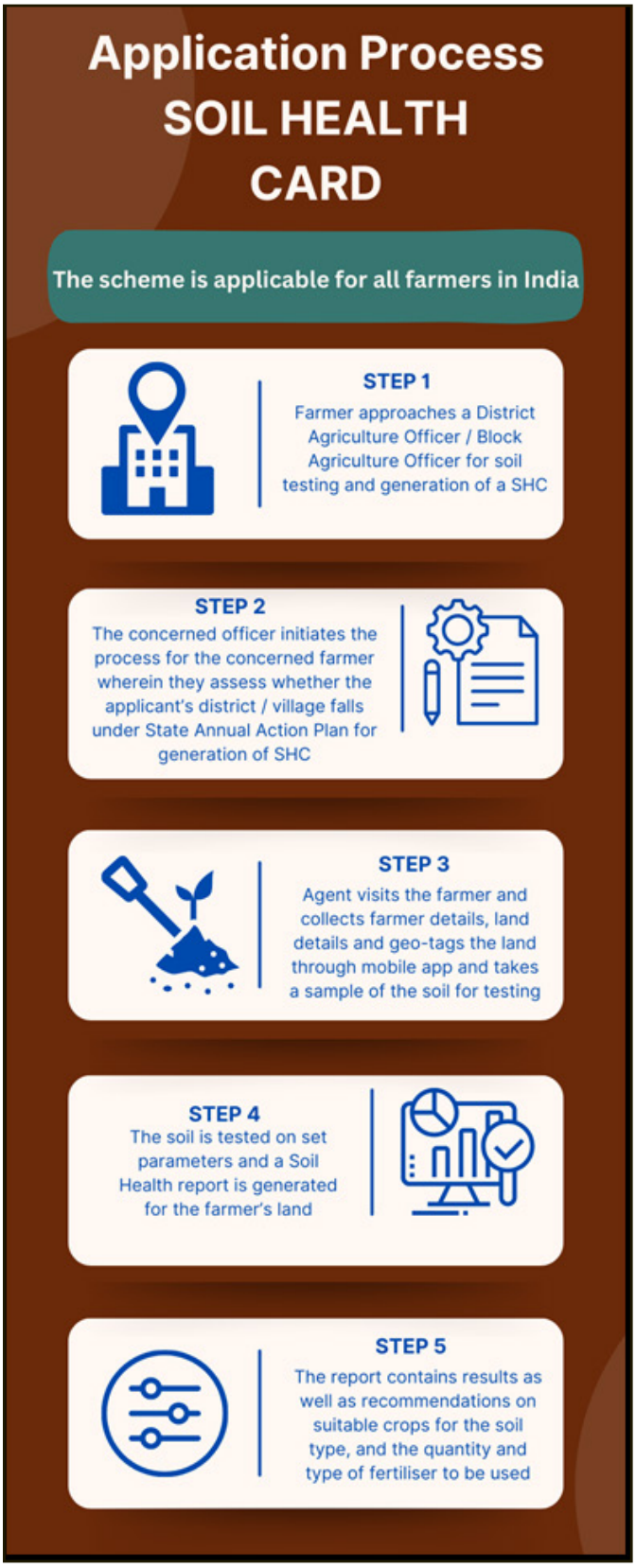
BENEFITS OF SOIL HEALTH CARD



TECHNOLOGICAL ADVANCEMENTS

Soil Health Card App: To further ease the process of obtaining easy access to the Soil Health Card, the Government of India in 2023 made technological interventions in the New Soil Health Card Scheme. The Soil Health Card portal was revamped and integrated with a Geographic Information System (GIS) system so that all the test results are captured and seen on a map. To make the implementation/monitoring of the scheme smooth and to facilitate farmers easy access to their soil health card, the mobile application has been made robust with additional features such as: Restrict the sample collection region for the Village Level Entrepreneur/Operator collecting the soil samples. Auto selection of the latitude and longitude of the location.

Generation of a QR code to link with the sample and test results of all samples directly on the portal from the geo-mapped labs, without any manual intervention. This application provides graphical information of all over India and also shows multiple layers: State Boundary, District Boundary, Taluka Boundary, Panchayat Boundary and Cadastral Boundary. The new system was rolled out in April 2023, and samples are now being collected through the mobile application. Soil Health Cards are now generated on this revamped portal.



ISSUES OF SOIL DEGRADATION INDIA

1. **Waterlogging:** Over-irrigation, especially in areas with poor drainage, leads to waterlogging,

which reduces soil aeration and harms root growth, affecting crop yields.

2. **Acidification:** The excessive use of chemical fertilisers and improper pH management can lead to soil acidification, reducing its fertility and harming plant growth.
3. **Loss of Organic Matter:** Unsustainable agricultural practices, like monocropping and the use of synthetic fertilisers, reduce the organic matter in the soil, which is essential for maintaining its structure and fertility.
4. **Soil Compaction:** Heavy machinery used in agriculture can compact the soil, restricting water movement, root penetration, and nutrient absorption, thus reducing soil productivity.
5. **Pollution from Chemicals:** The overuse of pesticides and chemical fertilisers leads to soil contamination, which affects soil organisms and can pollute groundwater resources.
6. **Land Misuse:** Unsustainable land practices, such as urbanisation, industrialisation, and construction, contribute to the degradation of agricultural land, reducing the area available for farming.
7. **Wind Erosion:** In areas with insufficient vegetation, strong winds can cause the topsoil to blow away, leading to loss of soil fertility and degradation of land.

CONCLUSION

The Soil Health Card Scheme has transformed agricultural practices in India over the past decade. Since 2015, it has empowered farmers with crucial information on soil nutrient status and optimal fertiliser use, promoting sustainable farming and improved crop productivity. Initiatives like the School Soil Health Programme have expanded soil health awareness among students and local communities. With a robust mobile app, the process of obtaining a Soil Health Card has enhanced accessibility, efficiency, and transparency. As the scheme evolves, it continues to play a vital role in fostering sustainable agricultural development and safeguarding India's soil health for future generations.

MSME BUILDING BLOCKS OF THE INDIAN ECONOMY

WHY IN THE NEWS?

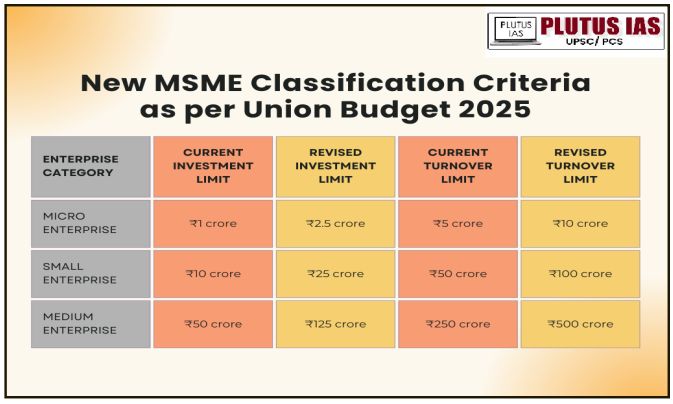
Prime Minister Narendra Modi has said that the MSME sector contributes significantly to the country's economy as a key driver of innovation and growth. He will participate in three Post-budget webinars. These webinars are being held on MSME as an Engine of Growth, Manufacturing, Exports and Nuclear Energy Missions, and Regulatory, Investment and Ease of doing business Reforms. The webinars will provide a collaborative platform for government officials, industry leaders, and trade experts to deliberate on India's industrial, trade, and energy strategies. The discussions will focus on policy execution, investment facilitation, and technology adoption, ensuring seamless implementation of the Budget's transformative measures. The webinars will engage private sector experts, industry representatives, and Subject matter specialists to align efforts and drive impactful implementation of Budget announcements.

REVISED DEFINITION OF MSME

Micro, Small, and Medium Enterprises (MSMEs) play a critical role in India's economic growth, contributing significantly to GDP, exports, and job creation. Recognising their importance, the government has periodically revised the MSME classification criteria to better reflect the changing business environment and help entrepreneurs access essential benefits such as loans, subsidies,

and tax incentives. In the Union Budget 2025, Finance Minister Nirmala Sitharaman announced a major update to the New MSME classification, increasing the investment limit by 2.5 times and doubling the turnover limits. This move is aimed at fostering growth, encouraging innovation, and creating a more enabling ecosystem for MSMEs to flourish. In this article, we will look into the new MSME definition.

Category	Old Investment Limit	Old Turnover Limit	New Investment Limit	New Turnover Limit	Impact
Micro Enterprises	Up to ₹1 crore	Up to ₹5 crore	Up to ₹2.5 crore	Up to ₹10 crore	More businesses qualify as micro-enterprises, better access to government schemes, encourages investment in technology.
Small Enterprises	Up to ₹10 crore	Up to ₹50 crore	Up to ₹25 crore	Up to ₹100 crore	It allows scaling up without immediate reclassification, supports expansion in production and market reach, and provides a longer growth runway.
Medium Enterprises	Up to ₹50 crore	Up to ₹250 crore	Up to ₹125 crore	Up to ₹500 crore	Encourages larger firms to remain in the MSME sector, enhances global competitiveness, and attracts greater investments.



MSME CONTRIBUTIONS IN THE ECONOMY

MSME CONTRIBUTION TO GDP & MANUFACTURING GVA

Year	MSME GVA as % of GDP	MSME Manufacturing GVA as % of All India Manufacturing GVA
2019-20	30.48%	40.67%
2020-21	27.24%	40.30%
2021-22	29.15%	40.83%

MSME SHARE IN INDIAN EXPORTS

Year	% Share of MSME Exports in Total Indian Exports
2019-20	49.77%
2020-21	49.35%
2021-22	45.03%
2022-23	43.59%
2023-24*	45.56% (up to September 2023)

GOVT SCHEME/INITIATIVES

1. **PM Employment Generation Programme (PMEGP):** Credit-linked subsidy scheme to promote self-employment.sss
2. **Pradhan Mantri Mudra Yojana (PMMY):** Provides loans up to ₹10 lakh for micro and small enterprises.
3. **Credit Guarantee Scheme:** Facilitates collateral-free loans up to ₹5 crore for MSMEs.
4. **Self-Reliant India (SRI) Fund:** ₹50,000 crore equity infusion to support MSME growth.
5. **Udyam Assist Platform (Launched on 11.01.2023):** Helps formalize Informal Micro Enterprises (IMEs) for priority sector lending benefits.
6. **Retail & Wholesale Traders as MSMEs (Since 02.07.2021):** Enables them to avail priority sector lending benefits.
7. **Non-Tax Benefits Extension:** MSMEs continue to receive non-tax benefits for 3 years after an upward classification.
8. **Trade Receivable Discounting System (TReDS):** A digital platform for financing MSME trade receivables.
9. **Emergency Credit Line Guarantee Scheme (ECLGS):** ₹5 lakh crore financial support for MSMEs during COVID-19 (valid till 31.03.2023).

MSME SIGNIFICANCE

1. **Employment:** MSMEs are a major source of jobs, especially in rural and economically weaker areas.

2. **Economic growth:** MSMEs help reduce regional imbalances and promote equitable distribution of wealth.
3. **Exports:** MSMEs contribute to a significant portion of India's exports.
4. **Innovation:** MSMEs promote innovation and create new products and services.
5. **Entrepreneurship:** MSMEs promote entrepreneurship and skills upgradation.
6. **Livelihoods:** MSMEs help sustain livelihoods, especially for women, youth, and groups in vulnerable situations.

MSME CHALLENGES

1. **Infrastructure Issues:**

Power: Unreliable power supply affects productivity.

Transportation: Poor transport networks hinder supply chain efficiency.

Technology: Limited access to technology and telecommunications slows growth.

2. **Regulatory Compliance:** Compliance becomes complex as MSMEs expand, increasing administrative burden.
3. **Access to Credit:** Slow credit disbursal and high interest rates make financing difficult.
4. **Technology Constraints:** Many MSMEs rely on outdated technology, making it hard to stay competitive.
5. **Marketing Challenges:** Poor cash flow, lack of expertise, and limited resources hinder marketing efforts.
6. **Cash Flow Issues:** Inconsistent revenue and delayed payments affect financial stability.
7. **Shortage of Skilled Labor:** Finding skilled workers for machinery, finance, and marketing remains a challenge.
8. **Lack of Innovation:** Limited skilled workforce and outdated technology reduce innovation capacity.

WAY TO IMPROVE MSME

1. **Financial Access:** Easier credit through government guarantees, microfinance, and alternative funding (crowdfunding, invoice discounting).
2. **Skill Development:** Vocational training, entrepreneurship programs, and sector-specific skill gap analysis.
3. **Regulatory Simplification:** Streamlined compliance, digitalized processes, and MSME feedback mechanisms.
4. **Market Access:** B2B platforms, export promotion, and MSME-priority in government procurement.
5. **Technology Adoption:** Digital tools (ERP, e-commerce), Industry 4.0 (automation, IoT), and digital literacy training.
6. **Innovation Support:** Incubators, R&D grants, and IP protection for MSME innovations.

CONCLUSION

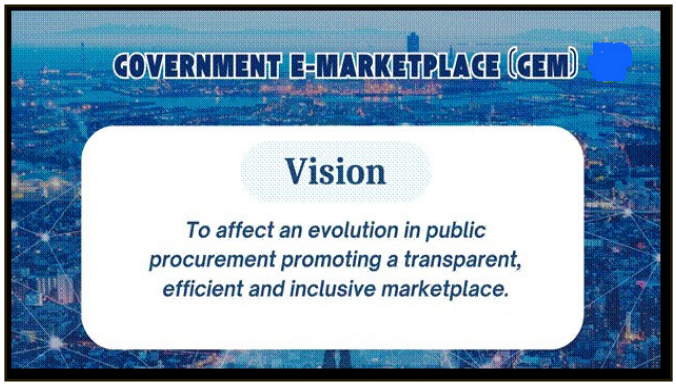
Micro, Small, and Medium Enterprises (MSMEs) play a pivotal role in India's economic development, contributing significantly to GDP, exports, and employment. The government's revised MSME classification and various support initiatives aim to enhance financial access, streamline regulations, and encourage technology adoption. Despite challenges like infrastructure bottlenecks, regulatory complexities, and credit constraints, targeted improvements in funding, skill development, and innovation can drive sustainable growth. Strengthening MSMEs will not only boost entrepreneurship but also enhance India's global competitiveness and economic resilience.

THE STRATEGIC IMPACT OF GEM ON INDIA'S ECONOMY

WHY IN THE NEWS?

Public procurement plays a vital role in a nation's economic growth, directly affecting citizens' lives. Efficient and transparent government purchasing ensures the optimal use of public funds while stimulating business opportunities, job creation, and innovation. In India, the Government e-marketplace (GeM) has revolutionised public procurement,

fostering an open and inclusive platform that benefits government buyers, startups, and small businesses alike. GeM has enabled startups to fulfil orders worth ₹35,950 crore, while women entrepreneurs make up 8% of the seller base, with 1,77,786 Udyam-verified women-led micro and small enterprises (MSEs) completing orders worth ₹46,615 crore.



WHAT IS GEM?

Government e-Marketplace (GeM) is an online platform for public procurement in India which was envisaged by Prime Minister Narendra Modi. The initiative was launched on August 09, 2016, by the Ministry of Commerce and Industry with the objective of creating an open and transparent procurement platform for government buyers.

CORE PRINCIPLES OF GEM

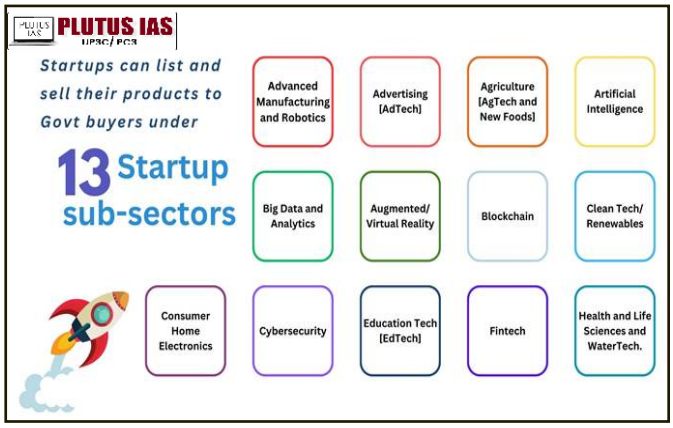
Openness: GeM shall be an open marketplace wherein it promotes access to information and transparency. Relevant information on sellers, goods, and services shall be easy to find and readily available for users. GeM shall provide databased insights to help users in decision-making and ascertaining price reasonability. Fairness: One of the platform's key objectives is to allow sellers, big and small, to gain direct access to Government buyers. In doing so, all sellers shall be treated fairly, and GeM shall not offer promotional treatment to one seller over the other. GeM shall support the intentions behind the preferential market access policies and ensure that all sellers are provided with a level playing field. This will ensure the health and competitiveness of the marketplace.

Inclusiveness: GeM shall promote inclusiveness, which means that all Government buyers and sellers shall be accepted on the platform. GeM shall aspire to create a robust seller base and all sellers interested in conducting business with the Government shall be welcomed on the platform. For buyers and sellers that do not have the know-how of using GeM, additional assistance in the form of focused training, onboarding sessions, and continued feedback and support shall be provided.

KEY FEATURES OF GEM

1. **SWAYATT:** Enhancing Business Access: SWAYATT fosters ease of doing business by connecting startups, women entrepreneurs, MSEs, SHGs, and marginalised communities with government procurement. It focuses on training last-mile sellers and boosting small-scale participation.

2. **Startup Runway 2.0:** Driving Innovation: This initiative enables startups to showcase their products and services to government buyers. A dedicated marketplace category ensures all startups, regardless of DPIIT certification, can access procurement opportunities, promoting "Make in India."



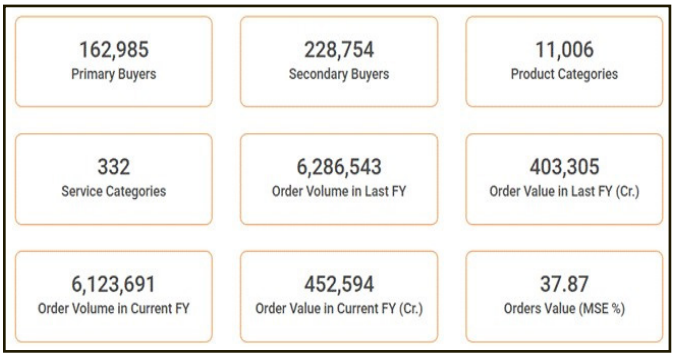
3. **Womaniya:** Empowering Women Entrepreneurs: Womaniya supports women entrepreneurs and SHGs by offering government procurement access for handicrafts, home décor, organic products, and more. It aligns with the 3% public procurement reservation for women-led MSMEs.

4. **MSME SC/ST Entrepreneurs on GeM:** GeM collaborates with MSMEs, focusing on SC/ST entrepreneurs, ensuring 25% procurement from MSMEs, including a 4% sub-target for SC/ ST businesses, fostering inclusivity in public procurement.

5. **The Saras Collection:** Showcasing Handcrafted Excellence: A curated selection of handcrafted textiles, décor, accessories, and personal care items from India's top SHGs, The Saras Collection promotes traditional craftsmanship through government procurement.

CONTRIBUTIONS OF GEM TO THE INDIAN ECONOMY

The latest statistics reveal significant activity in the marketplace, showcasing a robust ecosystem with 162,985 primary buyers, 228,754 secondary buyers, and a diverse range of 11,006 product categories and 332 service categories. In the last financial year, the order volume reached 62,86,543, with an order value of ₹4,03,305 Crore. Continuing its momentum, the current financial year has already recorded 61,23,691 orders worth ₹4,52,594 Crore. Notably, 37.87% of the total order value is attributed to Micro and Small Enterprises (MSEs), underscoring GeM's role in empowering local businesses and fostering inclusive economic growth.



ISSUES RELATED TO GEM

1. **Registration Hurdles:** New users struggle with understanding the process, gathering documents, and completing KYC verification.
2. **Technical Glitches:** System errors, slow loading, and document upload issues disrupt operations.
3. **Product Listing Complexities:** Categorizing products, detailing specifications, and ensuring compliance can be difficult.
4. **Vendor Verification Concerns:** Risk of fraudulent sellers and inconsistencies in the verification process.

5. **Payment Delays:** Government departments sometimes process payments slowly, affecting sellers' cash flow.
6. **Dispute Resolution Challenges:** Issues with resolving disputes related to deliveries, product quality, or contracts.
7. **Unfair Competition:** Larger companies may have an edge over small vendors due to better resources and networks.
8. **Lack of Awareness:** Some government buyers may not be fully familiar with GeM, leading to improper usage.
9. **Compliance Issues:** Sellers may face difficulties adhering to quality standards, delivery time-lines, and warranty obligations.

WAY FORWARD TO STRENGTHEN GEM NETWORK

1. **Enhanced Technical Support:** Dedicated helpdesk and AI-driven support for faster issue resolution.
2. **Stronger Vendor Verification**: Robust background checks to prevent fraudulent listings.
3. **Timely Payments:** Implementing automated payment tracking and faster fund transfers.
4. **Efficient Dispute Resolution:** A dedicated redressal mechanism with a structured grievance-handling system.
5. **Awareness & Training:** Regular workshops, webinars, and outreach programs for buyers and sellers.
6. **Improved User Interface:** Enhancing platform navigation for a seamless user experience.
7. **Better Product Categorization:** Streamlining categories to simplify listing and search functionalities.
8. **Data-Driven Insights:** Leveraging analytics to provide price benchmarking and demand forecasting.
9. **Integration with Financial & Regulatory Systems:** Linking GeM with taxation, banking, and compliance platforms for smoother operations.
10. **Boosting MSME & Startup Participation:** Special incentives, relaxed norms, and financial assistance for small businesses.

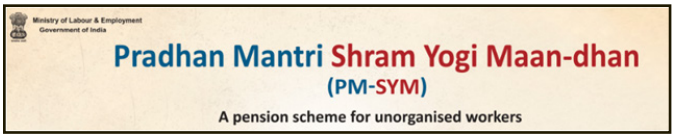
CONCLUSION

GeM has revolutionised public procurement in India by ensuring transparency, efficiency, and inclusivity. Strengthening the platform through streamlined processes, better technology, faster payments, and increased awareness will empower small businesses, boost MSME participation, and drive economic growth. Continuous innovation and policy support will further enhance GeM's role in transforming India's procurement landscape.

PM-SYM: ENSURING FINANCIAL SECURITY FOR INDIA'S UNORGANISED WORKFORCE

WHY IN THE NEWS?

The Pradhan Mantri Shram Yogi Maandhan (PM-SYM) is a voluntary pension scheme by the Government of India providing social security to unorganised workers. It guarantees a ₹3,000 monthly pension after 60 years for workers earning up to ₹15,000 per month. Acknowledging their significant role in contributing nearly 50% of India's GDP, the scheme covers various unorganised sector workers, including street vendors, domestic workers, construction labourers, and more. As of December 31, 2024, over 30.51 crore unorganised workers are registered on the e-Shram portal.



KEY FEATURES OF PM-SYM

1. **Minimum Assured Pension:** ₹3,000 per month after 60 years of age.
2. **Government Contribution:** The Government of India matches the worker's contribution on a 1:1 basis.

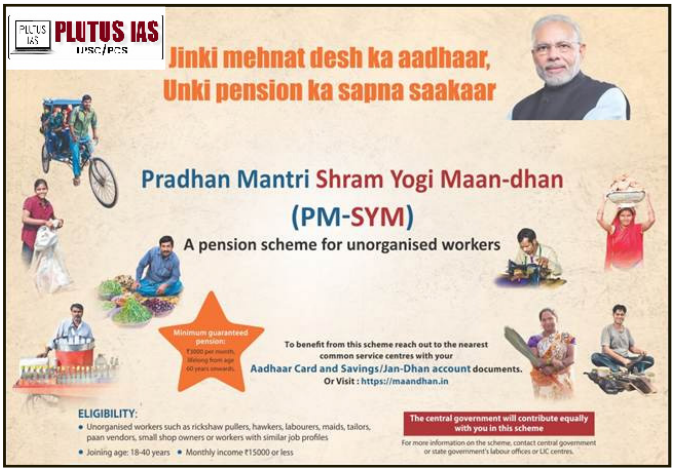
3. **Voluntary and Contributory:** The scheme is voluntary, allowing workers to contribute based on their affordability and requirements.

4. **Family Pension:** If the beneficiary passes away, the spouse receives 50% of the pension amount as a family pension. Family pension is applicable only to spouses.

5. **Exit Provisions:** Participants can exit the scheme under specified conditions (detailed in section 9).

6. **Easy Enrolment:** Eligible workers can register at Common Service Centres (CSCs) or through the Maandhan portal.

7. **Fund Management:** The scheme is administered by LIC, ensuring financial stability and credibility.



ELIGIBILITY CRITERIA

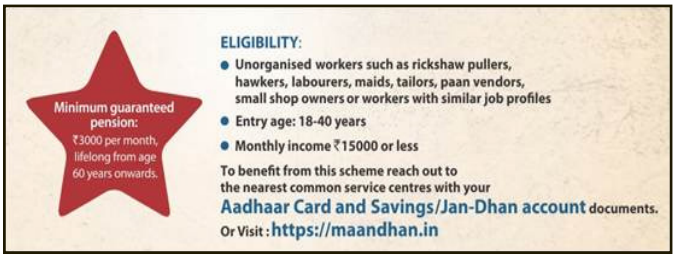
1. **Age Requirement:** 18 to 40 years.
2. **Income Limit:** Monthly income should be ₹15,000 or less.
3. **Unorganised Sector Employment:** Workers engaged in professions such as: Street vendors, rag pickers, rickshaw pullers Construction workers, daily wage labourers Agricultural workers, beedi workers Domestic workers, weavers, artisans, fishermen, leather workers, etc.
4. **Exclusion Criteria:** Should not be covered under the Employees' Provident Fund (EPF), Employees' State Insurance Corporation (ESIC), or National Pension Scheme (NPS). Should not be an income taxpayer. Should not be receiving benefits from any other government pension scheme.
5. **Documents Required:**

Aadhaar Card

Savings bank account or

JanDhan account details with IFSC

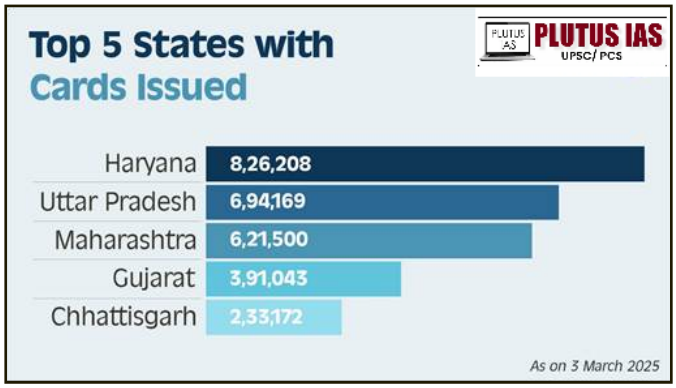
Mobile number



IMPLEMENTATIONS AND CURRENT STATUS OF PY-SYM

1. **Regular Monitoring:** Periodic review meetings with States/UTs and state-level Common Service Centre (CSC) heads.
2. **New Features & Enhancements:** Introduction of Voluntary Exit, Revival Module, Claim Status, and Account Statement.
3. **Extended Account Revival:** Dormant accounts can now be revived within three years instead of one.
4. **Integration with e-Shram:** Two-way linkage between PM-SYM and the e-Shram portal to streamline registrations.
5. **Awareness Campaigns:** SMS campaigns and direct communication with Chief Secretaries to boost enrolment.
6. **Donate-a-Pension Initiative:** Encourages employers to contribute towards their staff's pension under PM-SYM.

7. **Collaboration for Expansion:** Engagement with financial and policy institutions like the Pension Fund Regulatory and Development Authority (PFRDA) and National Institute of Public Finance and Policy (NIPFP) to increase outreach.



SIGNIFICANCE OF PM-SYM

1. **Target Audience:** The scheme aims to provide old-age protection and social security to unorganised workers, including those in home-based work, street vending, agriculture, and similar occupations.
2. **Financial Security:** PM-SYM provides a guaranteed monthly pension of ₹3,000 to subscribers upon reaching the age of 60.
3. **Contribution:** The scheme is a voluntary and contributory pension scheme, where the subscriber contributes a portion of the premium, and the Central Government provides an equal matching amount.
4. **Family Pension:** If a subscriber dies, their spouse is entitled to receive a 50% monthly family pension.
5. **Integration with eShram:** The scheme is linked to the e-Shram portal, which aims to create a national database of unorganised workers and facilitate the delivery of social security schemes.
6. **Coverage:** PM-SYM aims to provide universal pension coverage to unorganised workers, thus enhancing the social security framework in India

THE ISSUE IN PROTECTING THE UNORGANISED SECTOR IN INDIA

Category	Key Issues
1. Lack of Formal Structures and Security	Informal employment with no contracts. No access to pensions, gratuity, or health insurance. Vulnerable to exploitation with low wages, long hours, and poor conditions.
2. Challenges in Implementation and Enforcement	A dispersed workforce makes policy execution difficult. Low unionization limits collective bargaining. Weak enforcement of labour laws, especially in rural areas.
3. Economic and Social Challenges	Low and irregular incomes create financial instability. High indebtedness leads to a cycle of poverty. Unsafe and unhealthy working conditions.
4. Government Initiatives and Challenges	**e-Shram Portal:** Helps register unorganised workers but needs better outreach. **Social Security Schemes:** Programs like PM-SYM exist but face implementation hurdles. **Need for Targeted Interventions:** A single approach doesn't suit all types of unorganised workers.

WAYS TO PROTECT UNORGANISED SECTOR

Category	Key Strategies
1. Legal and Regulatory Framework	**Formalisation:** Relax restrictions to bring informal workers into the formal sector. **Minimum Wages & Working Hours:** Establish fair wages and working hours. **Social Security:** Expand schemes like **PM-SYM** for pensions, health insurance, and unemployment benefits. **Occupational Safety:** Strengthen regulations for safe working conditions, especially in high-risk sectors. **Enforcement & Grievance Redressal:** Develop effective labor law enforcement and complaint mechanisms.
2. Capacity Building & Skill Development	**Vocational Training:** Improve employability through skill enhancement programs. **Financial Literacy:** Educate workers on financial management and access to banking. **Awareness & Empowerment:** Inform workers about their rights and encourage collective bargaining.
3. Financial Inclusion & Access to Credit	**Microfinance:** Expand access to small loans for self-employed individuals and businesses. **Banking & Insurance:** Promote financial security through easier access to banking and insurance services.
4. Social Welfare & Health	**Basic Services:** Improve access to education, healthcare, and sanitation. **Health Insurance:** Extend schemes like **Ayushman Bharat** to unorganised workers.
5. Monitoring & Evaluation	**Data Collection:** Strengthen tracking systems for unorganised workers' conditions. **Regular Reviews:** Assess policies and make necessary improvements.
6. Key Government Initiatives	**MGNREGA:** Guarantees wage employment for rural workers. **PM-SYM:** Provides pensions for unorganised workers. **E-Shram Portal:** Creates a national database for workers to access welfare benefits. **Unorganised Workers Social Security Act, 2008:** Framework for social security schemes.

CONCLUSION

PM-SYM is a landmark initiative that provides financial security to millions of unorganised workers. By ensuring a monthly pension of ₹3,000, it helps workers lead a dignified life post-retirement. With a large number of enrolments and ongoing promotional efforts, PM-SYM aims

to provide universal pension coverage, creating a more inclusive social security framework in India.

NON-PERFORMING ASSETS (NPA): IMPLICATIONS FOR THE BANKING SECTOR

WHY IN THE NEWS?

Banks in India have written off non-performing assets (NPAs) worth ₹16.35 trillion over the past 10 financial years, raising concerns over bad loans and financial stability. In FY 2023-24, banks wrote off ₹1.70 trillion, a decline from ₹2.16 trillion in FY 2022-23. The highest write-off in the last decade was recorded in 2018-19 at ₹2.36 trillion, while the lowest was in 2014-15 at ₹58,786 crore. Finance Minister Nirmala Sitharaman, in a reply to the Lok Sabha, stated that NPAs are written off as per RBI guidelines and bank policies, especially after four years of full provisioning. This development highlights ongoing challenges in India's banking sector, with concerns over loan recoveries, financial health, and potential impacts on public sector banks.

WHAT IS NPA?

A Non-Performing Asset (NPA) is a loan or advance where the borrower has failed to make scheduled principal and interest payments for a specified period, typically 90 days. When a loan becomes non-performing, it indicates that the bank's asset is not generating the expected income, impacting the financial health of the institution. Recent NPA Trends in India.

1. **India's banking:** sector has witnessed a significant improvement in asset quality in recent years:
2. **Gross NPA Ratio:** As of September 2024, the Gross NPA ratio of Scheduled Commercial Banks (SCBs) declined to a 13-year low of 2.5%, down from 2.7% in March 2024.
3. **Public Sector Banks (PSBs):** The Gross NPA ratio for PSBs dropped to 3.12% in September 2024 from a peak of 14.58% in March 2018, reflecting enhanced resilience and effective management strategies.
4. **Net NPA Ratio:** The Net NPA ratio improved to 0.57% at the end of September 2024, indicating better provisioning and recovery efforts by banks.

NON-PERFORMING ASSET TYPES AND EXAMPLES

1. **Sub-Standard Assets:** A loan is classified as a Sub-Standard Asset when it remains overdue for less than or equal to 12 months. At this stage, there is still a possibility that the borrower may resume payments or the bank may recover the loan through extra efforts. Example: If you took a personal loan and missed your EMIs for the last six months, the bank would classify your loan as a Sub-Standard Asset since it hasn't been unpaid for more than 12 months.
2. **Doubtful Assets:** A loan becomes a Doubtful Asset if it remains unpaid for more than 12 months. At this stage, the chances of loan recovery are significantly lower, and banks are uncertain whether they will get their money back. Example: If you took a business loan and failed to make payments for 18 months, the bank would classify your loan as a Doubtful Asset due to the prolonged overdue period.
3. **Loss Assets:** An asset is classified as a Loss Asset when the bank determines that it is almost impossible to recover the loan. This classification occurs after the loan has remained unpaid for a long period and is considered "uncollectible". However, the bank may still retain some residual value in the asset before writing it off entirely. Example: If a bank provides a loan to a company that later files for bankruptcy, and the dues remain unpaid for several years, the bank may classify the loan as a Loss Asset due to the extremely low chances of recovery.

CAUSE OF NON-PERFORMING ASSET

Category	Causes	Description
Economic Factors	**Slowdowns & Recessions**	Reduced demand impacts businesses, leading to loan defaults.
	Business Failures	Economic downturns force businesses into insolvency.
	Rising Costs	Increasing interest rates or falling commodity prices make repayments difficult.
Borrower-Related Issues	**Financial Hardships**	Job loss, medical emergencies, or business losses hinder repayments.
	Fraud & Willful Defaults	Some borrowers intentionally avoid repayment despite having funds.
	Mismanagement	Poor financial planning and decision-making within businesses lead to instability.
Poor Lending Practices	**Weak Credit Assessment**	Lending to high-risk borrowers increases default rates.
	Lax Monitoring	Inadequate tracking of repayments results in unnoticed defaults.
	Defective Lending Process	Poor borrower selection and lack of credit reviews worsen NPAs.
Industry & Regulatory Issues	**Industrial Sickness**	Ineffective management or outdated technology weakens industries, causing defaults.
	Regulatory Non-Compliance	Failure to follow banking guidelines results in risky lending.

IMPACT ON BANK

1. **Reduced Profitability:** Banks must provision for NPAs, reducing their overall profit.
2. **Lower Capital Adequacy:** High NPAs impact a bank's capital reserves, limiting its ability to lend.
3. **Operational Burden**: Banks spend resources on recovery and legal proceedings rather than growth.
4. **Increased Risk Aversion:** Higher NPAs make banks cautious in lending, leading to stricter loan approval processes.

IMPACT ON ECONOMY

1. **Slower Credit Growth:** High NPAs reduce lending capacity, impacting economic activity and business expansion.
2. **Higher Interest Rates:** Banks compensate for NPA losses by increasing loan interest rates.

3. **Lower Investor Confidence:** A banking crisis due to NPAs can deter domestic and foreign investment.
4. **Reduced Economic Growth:** Limited credit availability slows down industries, affecting employment and GDP growth.

GOVT MEASURES

1. **Recapitalization of Banks:** Infusion of capital into PSBs to strengthen their balance sheets.
2. **Indradhanush Plan:** Aimed at improving governance, accountability, and risk management in PSBs.
3. **SARFAESI Act (2002):** Enables banks to recover NPAs without court intervention.
4. **IBC (2016):** Streamlined process for resolving insolvency cases in a time-bound manner.
5. **Bad Bank (NARCL):** Helps in offloading large NPAs from bank books to specialized recovery institutions.

ADDITIONAL MEASURES

1. **Strengthening Credit Appraisal:** Improved risk assessment before approving loans.
2. **Enhancing Governance:** Reducing political interference in PSBs to ensure professional management.
3. **AI & Data Analytics:** Using technology for early detection of stressed assets and fraud prevention.
4. **Faster Legal Proceedings:** Strengthening insolvency and debt recovery tribunals.
5. **Asset Reconstruction Companies (ARCs):** Expanding the role of ARCs for better NPA resolution.
6. **Encouraging Private Sector Participation:** Involving private investors in stressed asset recovery.

CONCLUSION

Addressing the NPA issue is crucial for India's economic stability. The RBI and government initiatives have made progress, but sustained efforts are necessary to prevent recurrence and ensure a resilient banking sector. Strengthening risk assessment, enhancing credit monitoring, and leveraging technology-driven solutions will be key to preventing future NPAs. Moreover, fostering a robust legal framework and ensuring transparency in the lending process will further enhance financial stability.

PRELIMS QUESTIONS:

1. With reference to the Soil Health Card Scheme, which of the following statements is/are correct?

1. The Soil Health Card provides data on 12 soil parameters, including macro and micro-nutrients, pH, and organic carbon.
2. The Soil Health Card scheme is primarily aimed at providing direct financial aid to farmers for purchasing fertilizers.

Select the correct answer using the code given below:

A. 1 only

B. 2 only

C. Both 1 and 2

D. Neither 1 nor 2

2. With reference to the MSME sector in India, consider the following statements:

1. The revised MSME classification in the Union Budget 2025 has increased both the investment and turnover limits for all categories of MSMEs.
2. MSMEs contribute to more than 50% of India's total exports.
3. The Udyam Assist Platform, launched in 2023, aims to formalize Informal Micro Enterprises (IMEs) for priority sector lending benefits.

How many of the above-given statements are correct?

A. Only one

B. Only two

C. All three

D. None

3. With reference to the Government e-Marketplace (GeM), consider the following statements:

1. GeM was launched by the Ministry of Finance to enhance transparency in public procurement.
2. The platform allows only DPIIT-certified startups to list their products and services.

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

4. With reference to the Pradhan Mantri Shram Yogi Maandhan (PM-SYM) scheme, which of the following statements is/are correct?

1. The scheme provides a minimum assured pension of ₹3,000 per month after the age of 60.
2. It is mandatory for all unorganised workers earning less than ₹15,000 per month to enrol in the scheme.

Select the correct answer using the code given below:

A. 1 only

B. 2 only

C. Both 1 and 2

D. Neither 1 nor 2

5. With reference to Non-Performing Assets (NPAs), consider the following statements:

1. NPAs are loans or advances where the principal or interest payment remains overdue for a period of 120 days or more.
2. Public Sector Banks (PSBs) in India have a lower Gross NPA ratio compared to Private Sector Banks.
3. The Insolvency and Bankruptcy Code (IBC), 2016, was introduced to provide a time-bound mechanism for resolving NPAs.

How many of the above-given statements are correct?

A. Only one

B. Only two

C. All three

D. None

ANSWER

1. A	**2. B**	**3. C**	**4. A**	**5. A**

MAINS QUESTIONS:

1. Discuss the significance of promoting sustainable agricultural practices through initiatives like the Soil Health Card Scheme in the context of India's agricultural policies.

(250 words, 15 marks)

2. Discuss the significance of MSMEs in India's economic growth and employment generation. Highlight key challenges faced by MSMEs and suggest measures to overcome them.

(250 words, 15 marks)

3. Discuss the role of GeM in India's public procurement system. What challenges does it face, and how can it be strengthened?

(250 words, 15 marks)

4. Discuss the significance of the Pradhan Mantri Shram Yogi Maandhan (PM-SYM) scheme in providing social security to unorganised workers in India. What challenges does it face in implementation, and how can they be addressed?

(250 words, 15 marks)

5. Discuss the importance of Asset Reconstruction Companies (ARCs) and the concept of Bad Banks in managing NPAs in India. Evaluate their effectiveness.

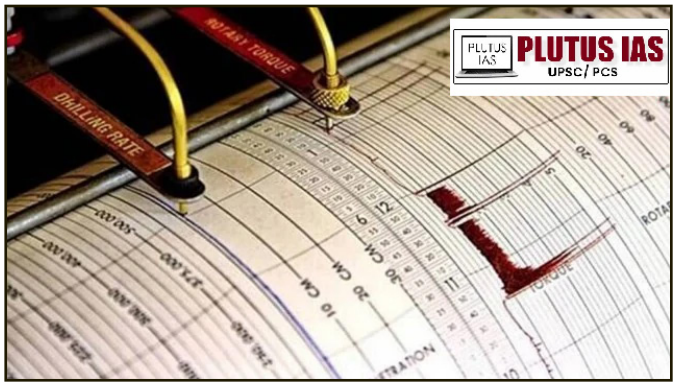
(250 words, 15 marks)

PLUTUS IAS UPSC/ PCS

EARTHQUAKE RISK REDUCTION: CHALLENGES AND STRATEGIES

WHY IN THE NEWS?

Delhi was shaken by an earthquake of magnitude 4.0, originating near Dhaula Kuan, making it the strongest quake to strike the city in at least five years. Unlike most tremors that originate far from the capital, such as those from Afghanistan, this one had local origins, raising concerns about seismic activity closer to home. While no significant damage or injuries were reported, experts are asking why such tremors are occurring and what risks they pose to Delhi in the future. The rare event has sparked questions about the region's seismic vulnerability as experts analyse the potential for stronger quakes and the city's preparedness for future seismic events.



WHAT IS AN EARTHQUAKE?

An earthquake is the sudden shaking or movement of the Earth's surface caused by the release of energy from within the Earth's crust. This energy is typically stored when masses of rock are strained against one another, and when the rocks fracture or "slip," the stored energy is released in the form of seismic waves. These waves travel through the Earth, causing the ground to shake, sometimes violently. Earthquakes usually occur along fault lines, which are fractures in the Earth's crust where rocks on either side have moved relative to one another. The movement and release of energy at these fault lines can cause significant ground shaking, damage to structures, and sometimes even tsunamis if the quake occurs underwater.

TYPE OF EARTHQUAKE

1. Shallow Earthquakes:

Depth: Occurs at depths of less than 70 kilometres (km).

Commonality: The most frequent type of earthquake.

Energy Release: Release about 75% of the total energy produced by earthquakes.

Damage: These are typically the most destructive to buildings and infrastructure because of their proximity to the Earth's surface.

2. Intermediate Earthquakes:

Depth: Occurs at depths between 70–300 km.

Alternate Name: Also known as mid-focus earthquakes.

Impact: While not as destructive as shallow earthquakes, they can still cause significant shaking, depending on the location.

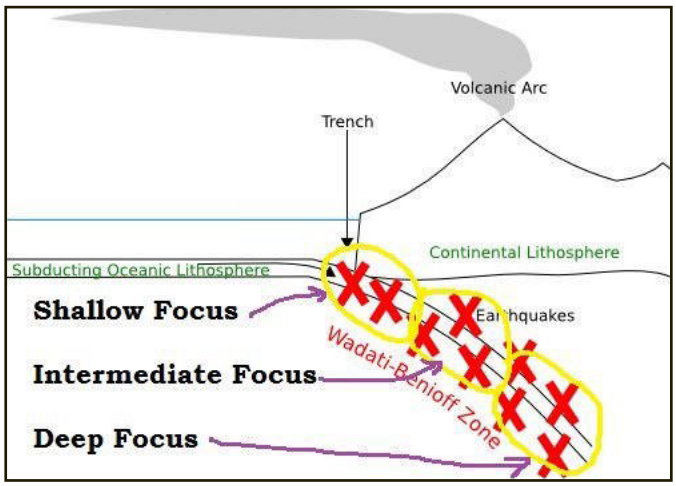
3. Deep Earthquakes:

Depth: Occurs at depths of 300–700 km.

Alternate Name: Also called deep-focus earthquakes.

Destructive Nature: These are rarely destructive due to their depth, as the seismic waves lose energy by the time they reach the surface.

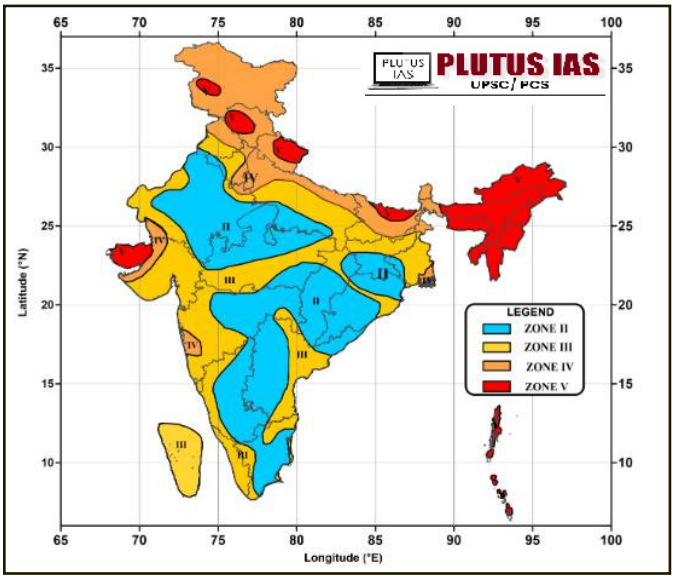
Location: Typically happens in subduction zones where one tectonic plate is being forced beneath another.



EARTHQUAKES ZONE: MAPPING

The National Center for Seismology (NCS) monitors seismic activities in India, focusing on earthquake detection, early warning systems, and maintaining national seismological networks. It also conducts seismic hazard studies and post-earthquake field studies.

- **Zone 5:** Highest risk (MSK IX+), with a zone factor of 0.36. Includes regions like Kashmir, the Himalayas, andthe Andaman Islands.
- **Zone 4:** High risk (MSK VIII), with a zone factor of 0.24. Includes Delhi, Jammu & Kashmir, and parts of Uttar Pradesh.
- **Zone 3:** Moderate risk (MSK VII), with a zone factor of 0.16. Covers cities like Mumbai, Chennai, and Kolkata.
- **Zone 2:** Low risk (MSK VI), with a zone factor of 0.10. Includes cities like Bangalore and Hyderabad.
- **Zone 1:** No current areas classified, representing very low seismic risk, potentially covering stable regions like the Deccan Plateau.



WHAT ARE THE REASONS FOR THE RECENT DELHI EARTHQUAKE?

The recent earthquake in Delhi, with a magnitude of 4.0, was not caused by the collision of tectonic plates, according to the National Center for Seismology (NCS). While Delhi lies in Seismic Zone IV, which is prone to earthquakes, the specific cause of this event wasn't linked to a plate collision but rather to the local geological conditions. Several factors contribute to the seismic activity in Delhi:

1. **Tectonic Plate Movements:** The Indian plate is colliding with the Eurasian plate, causing the region to experience seismic activity. This collision occurs along the Himalayan region and influences the seismicity in surrounding areas, including Delhi.
2. **Delhi-Hardwar Ridge:** The earthquake is thought to be associated with the Delhi-Hardwar Ridge, a major geological structure that extends beneath the alluvial plains of the Ganga Basin, coinciding with the Aravali Mountain belt. This ridge contributes to seismic activity around Delhi.
3. **Local Faults and Geological Features:** The region around Delhi has faults and geological structures that can cause smaller earthquakes due to the release of built-up energy. These localised movements do not necessarily involve major tectonic shifts but can still generate tremors.

NDMA GUIDELINE ON EARTHQUAKES:

1. **Preventive Measures**

- **Seismic Risk Assessment:** Assess and identify vulnerable areas in earthquake-prone regions. Earthquake-Resistant Construction: Ensure new buildings follow seismic safety codes (IS 1893:2002) and retrofit older buildings.
- **Zoning and Land Use:** Avoid construction in high-risk zones and enforce stricter building codes.
- **Public Awareness:** Educate the public about earthquake risks and safety protocols.
- **Emergency Plans:** Develop preparedness and evacuation plans for communities and institutions.
- **Infrastructure Retrofit:** Strengthen existing infrastructure to meet earthquake-resistant standards.

2. **During the Earthquake**

- **Drop, Cover, and Hold On:** Drop to the ground, take cover under furniture, and hold on until the shaking stops.
- **Stay Indoors:** Remain inside, away from windows and heavy objects.
- **Move to Open Areas:** If outside, move to open areas away from buildings and power lines. Use Stairs, Not Elevators: Evacuate using stairs, not elevators.
- **Stay Calm:** Remain calm and avoid panic to ensure safety.

3. **Post-Earthquake Measures**

- **First Aid:** Provide first aid to the injured and call for medical help.
- **Inspect Damage:** Check for structural damage before re-entering buildings.
- **Prepare for Aftershocks:** Be ready for possible aftershocks.
- **Follow Official Instructions:** Listen to authorities for updates and instructions.
- **Coordinate Relief:** Organize rescue and relief operations, provide shelter, and restore services. Mental Health Support: Offer psychological support to survivors.

CONCLUSION

The recent 4.0 magnitude earthquake in Delhi has raised concerns about the region's seismic vulnerability. Although no significant damage or injuries were reported, the quake, originating locally near Dhaula Kuan, highlights the potential risks in an area that lies within Seismic Zone IV. Delhi's geological setting, including factors like the Delhi-Hardwar Ridge and local fault lines, can contribute to seismic activity. The National Center for Seismology (NCS) has assured that this event was not caused by a plate collision but was likely due to local geological conditions.

MISSION AMRIT SAROVAR

WHY IN THE NEWS?

Mission Amrit Sarovar, launched in April 2022, aims to construct or rejuvenate 75 ponds in each district, totalling 50,000 across India. By January 2025, over 68,000 Sarovars have been completed, improving water availability and promoting long-term environmental sustainability. Phase II will focus on water availability, community participation, and strengthening climate resilience. The mission is supported by various government schemes and public contributions, emphasizing collaboration for lasting ecological benefits.

WHAT IS MISSION AMRIT SAROVAR?

Mission Amrit Sarovar is a government initiative launched on April 24, 2022, as part of India's Azadi Ka Amrit Mahotsav celebrations, marking the 75th year of independence. The mission aims to rejuvenate and construct Amrit Sarovars (water bodies) across rural India to address water scarcity, promote water sustainability, and improve ecological balance.

OBJECTIVES OF MISSION:

1. **Rejuvenate and Construct Water Bodies:** The mission focuses on constructing and rejuvenating at least 75 Amrit Sarovars (ponds or water bodies) in each district across India, targeting 50,000 Amrit Sarovars nationwide.
2. **Ensure Water Availability:** To overcome water scarcity and improve water availability in rural areas, providing a sustainable source of water for drinking, agriculture, and other local needs.
3. **Promote Ecological Sustainability:** Improve the ecological health of water bodies by restoring their productive utility and promoting biodiversity.
4. **Empower Local Communities:** Encourage community participation and engagement in water conservation and management through local bodies like Gram Sabhas and Panchayats, ensuring that development is community-driven.
5. **Leverage Technology and Collaboration:** Utilize geospatial data and technology (with technical support from BISAG-N) for site identification, planning, and monitoring of the water bodies. The mission works through collaboration among multiple government departments, technical partners, and local communities.
6. **Improve Livelihoods:** By enhancing water availability, the mission aims to support agricultural productivity, enhance livelihoods, and contribute to rural development.
7. **Achieve Long-term Water Security:** Strengthen the resilience of rural areas against water-related challenges and foster sustainable water management practices that will benefit future generations.

KEY ACHIEVEMENTS OF MISSION

1. **Exceeding Targets:** The initial target of constructing or rejuvenating 50,000 Amrit Sarovars was successfully achieved. As of January 2025, over 68,000 Amrit Sarovars have been completed, surpassing the original goal.
2. **Wide Geographical Coverage:** 81,000 Amrit Sarovars have been identified across the country, and work has started in over 81,000 locations, leading to a significant impact on rural water security.
3. **Community Engagement:** The initiative has emphasized community participation through Gram Sabhas and Panchayats, enabling local people to directly contribute to the planning and execution of water body projects.
4. **Resource Mobilization:** The mission has leveraged existing financial resources from schemes like Mahatma Gandhi NREGS, PMKSY, 15th Finance Commission grants, and other state-specific initiatives, enabling cost-effective and broad-based implementation.
5. **Technological Integration:** The use of geospatial data and technology through technical partner BISAG-N has enhanced the identification, planning, and monitoring of water bodies, ensuring accuracy and efficiency in the mission's execution.
6. **Environmental and Ecological Benefits:** Over 66,000 Amrit Sarovars constructed or rejuvenated have contributed to restoring the ecological balance of water bodies, improving biodiversity, and enhancing groundwater recharge.

SIGNIFICANCE OF MISSION AMRIT SAROVAR

1. **Addressing Water Scarcity:** India faces a severe water crisis, especially in rural areas. Mission Amrit Sarovar directly targets this challenge by creating sustainable water sources ensuring availability for drinking, irrigation, and other essential needs.
2. **Long-Term Water Security:** The mission ensures the sustainability of water resources by focusing on both the creation and rejuvenation of water bodies, fostering long-term water security and resilience against climate change.

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3. **Improved Agricultural Productivity:** Access to water helps improve agricultural productivity in rural areas, benefiting farmers and their livelihoods, especially in water-scarce regions.
4. **Promoting Ecological Restoration:** By restoring water bodies, the mission contributes to biodiversity conservation, helps maintain the natural habitat, and supports wildlife ecosystems.
5. **Empowering Communities:** The involvement of local communities in the mission fosters ownership and empowerment, ensuring that the water bodies are effectively maintained and managed in the long run.

FACTORS CONTRIBUTING TO WATER SCARCITY IN INDIA

1. **Climate Change:** Erratic rainfall patterns due to climate change result in droughts, floods, and uneven water distribution across regions, exacerbating water shortages in many areas.
2. **Over-extraction of Groundwater:** Excessive groundwater extraction for agriculture, drinking, and industrial use has led to falling groundwater levels, particularly in regions reliant on wells and borewells.
3. **Rapid Urbanization:** Urban expansion has resulted in reduced water catchment areas, contamination of water sources, and increased pressure on existing water resources.
4. **Pollution of Water Sources:** Industrial waste, sewage, and agricultural runoff containing harmful chemicals and pesticides pollute rivers, lakes, and groundwater, reducing the availability of clean water.
5. **Inefficient Water Management:** Lack of proper water conservation techniques, inefficient irrigation practices, and poor maintenance of existing water bodies contribute significantly to water scarcity.
6. **Population Growth:** Increased population puts pressure on available water resources, leading to overconsumption and competition for water across domestic, agricultural, and industrial sectors.
7. **Water-Intensive Agriculture:** Traditional farming practices in India are often highly water-intensive, using inefficient irrigation methods like flood irrigation, which depletes available water resources.

CONCLUSION

Mission Amrit Sarovar has emerged as a vital initiative in addressing India's growing water scarcity and ecological challenges. Launched in April 2022, the mission aimed to rejuvenate and construct Amrit Sarovars (water bodies) across rural India, targeting a nationwide network of 50,000 water bodies. By January 2025, the mission has surpassed expectations, with over 68,000 Amrit Sarovars already completed, showing a remarkable impact on water availability and community participation.

AVALANCHES: A THREAT IN SNOW-COVERED MOUNTAINS

WHY IN THE NEWS?

A massive avalanche in Mana village, located in Uttarakhand's Chamoli district near the Indo-Tibetan border, trapped 57 workers engaged in a Border Roads Organisation (BRO) project. So far, 32 workers have been rescued, while efforts continue to save the remaining. Rescue operations have been hampered by a snowstorm in the region, making it difficult for teams, including the State Disaster Relief Force (SDRF), Garhwal 9 Brigade, and BRO, to carry out their work. Poor visibility has also prevented the use of helicopters. Authorities, including Chief Minister Pushkar Singh Dhami, have assured that all necessary resources, including medical support at ITBP Hospital, Srinagar Medical College, and AIIMS Rishikesh, are being mobilized. High-altitude rescue teams are on alert, and the government is in contact with Defence and Home Ministries for assistance.

WHAT IS AN AVALANCHE DISASTER?

An avalanche is a rapid downward movement of material triggered when loose material on a slope breaks away. It can carry additional debris, increasing its impact. Avalanches come in various forms, including rock, ice, and debris avalanches, but snow avalanches are the most common in mountainous regions. Snow avalanches range from small shifts (sluffing) to massive slab avalanches, which can reach speeds of 130 km/h, destroying forests and villages. They claim around 150 lives annually in North America and Europe, mostly affecting skiers, climbers, and snowmobilers. Fatalities have increased with the rise in winter sports.

SEVERITY OF AVALANCHE DISASTER IN INDIA

1. **High-Risk Zones:** The Western Himalayas, especially Uttarakhand, have avalanche-prone Red Zones, causing severe damage and casualties.
2. **Infrastructure Impact:** Avalanches block roads, railways, and highways, isolating communities and delaying rescues.
3. **Loss of Life:** Rapid burial under snow results in high mortality if rescues are not immediate.
4. **Economic Impact:** Avalanches disrupt winter tourism and damage infrastructure, leading to major economic losses.

Example: The 2021 Uttarakhand glacier collapse triggered an avalanche and flash flood, killing nearly 100 people.

REASON OF AVALANCHE

1. **High-Risk Zones:** The Western Himalayas, especially Uttarakhand, have Red Zones prone to avalanches, causing severe damage and casualties.
2. **Infrastructure Impact:** Avalanches block roads, railways, and highways, isolating communities and delaying rescue efforts.
3. **Loss of Life:** Rapid snow burial leads to high mortality if immediate rescue is not possible.
4. **Economic Impact:** Avalanches disrupt winter tourism and damage infrastructure, causing major economic losses.
5. **Impact on Defense Forces:** Frequent avalanches pose a significant threat to soldiers stationed in high-altitude border areas.
6. **Climate Change Factor:** Rising temperatures and erratic snowfall patterns due to climate change are increasing avalanche occurrences.
7. **Rescue Challenges:** Extreme weather conditions and difficult terrain make rescue operations complex and time-consuming.

CONSEQUENCE OF AVALANCHE DISASTER

1. **Environmental Consequences**

- Ecosystem Damage: Destruction of forests, plants, and wildlife.
- Landslides & Flash Floods: Melting snow can trigger secondary disasters.

2. **Infrastructure Damage**

- **Road & Structural Damage:** Avalanches block roads, destroy bridges, and damage buildings.
- **Construction Disruptions:** Unsafe conditions halt development projects.

3. **Economic Impact**

- Tourism Losses: Disrupts winter tourism and damages resorts.
- High Recovery Costs: Repairs to infrastructure and services demand huge funds.

4. **Human Consequences**

- **Fatalities:** Suffocation, trauma, or hypothermia can lead to death.
- **Displacement:** Avalanches force communities to relocate.

NDMA GUIDELINE PREVENT AVALANCHE

1. **Be Alert:** Stay updated with weather warnings and watch for signs like falling rocks, cracking trees, or moving debris.
2. **Move to Safety:** If your home is near a debris-prone area, relocate to a safer place.
3. **Be Prepared:** Keep emergency essentials like a battery-operated radio, drinking water, first aid kit, and medicines.
4. **Call for Help:** Contact rescue teams if needed.
5. **Report Damage:** Inform authorities about damaged roads, power lines, and communication networks.
6. **Help Others:** Assist elderly people, children, and those in need during emergencies.

MAJOR TO REDUCE AVALANCHE DISASTER

1. **Avalanche control structures**

- **Avalanche detention walls:** Stop, deflect, or retard avalanches
- **Avalanche dams:** Protect roads, power lines, and other areas from avalanches
- **Fences:** Hold snow in place
- **Explosives:** Clear snow from avalanche-prone areas

2. **Avalanche zoning**

Create avalanche hazard maps to identify areas at risk Restrict land use in high-risk areas

3. **Forest protection**

Preserve and protect forests in areas where avalanches are likely to start

4. Other avalanche mitigation methods Use rakes or diversion structures Forecast avalanches and evacuate people from endangered areas Use avalanche victim detectors to identify avalanche-prone locations

CONCLUSION

Avalanches pose a severe threat to life, infrastructure, and the environment, especially in the Western Himalayas, where frequent disasters impact communities, defence forces, and the economy. The recent avalanche in Uttarakhand highlights the urgency of implementing effective mitigation strategies, including early warning systems, avalanche control structures, and proper zoning. Strengthening disaster preparedness and rescue capabilities is crucial to minimizing casualties and economic losses. With climate change contributing to increasing avalanche risks, a proactive approach, including sustainable development and environmental conservation, is essential to reducing future disasters and ensuring the safety of vulnerable regions.

INDIA'S WILDLIFE CONSERVATION MILESTONES

WHY IN THE NEWS?

Prime Minister Shri Narendra Modi visited Gir National Park in Gujarat to chair the 7th meeting of the National Board for Wildlife, reviewing key conservation efforts. The meeting focused on the expansion of protected areas, updates on Project Tiger, Project Elephant, and Project Snow Leopard, and new initiatives for the conservation of Asiatic lions, dolphins, and other endangered species. It also highlighted the establishment of the International Big Cats Alliance (IBCA) to strengthen global big cat conservation. Aligning with the WWD 2025 theme, "Wildlife Conservation Finance: Investing in People and Planet," the discussions emphasized sustainable financial strategies for conservation, reaffirming India's commitment to protecting biodiversity at both national and global levels.

WILDLIFE CONSERVATION CONSTITUTIONAL MANDATE

1. **Article 48A:** Directs the state to protect and improve the environment and safeguard forests and wildlife.
2. **Article 51A(g):** Imposes a fundamental duty on citizens to protect and improve the natural environment, including wildlife.
3. **Wildlife Protection Act, 1972:** Provides legal protection to wildlife species and establishes protected areas.
4. **Forest Conservation Act, 1980:** Regulates deforestation and ensures the protection of forests.
5. **Biodiversity Act, 2002:** Promotes sustainable use of biodiversity and conservation of biological resources.
6. **Supreme Court Judgments:** Various rulings reinforce the need for wildlife protection as part of constitutional rights.
7. **State Laws & Policies:** Different states have their own regulations to complement national wildlife conservation efforts.

NEED FOR WILDLIFE CONSERVATION

1. **Biodiversity Protection:** Ensures ecological balance and prevents species extinction.
2. **Environmental Stability:** Wildlife plays a crucial role in maintaining climate, air, and water cycles.
3. **Livelihood and Economy:** Many communities depend on forests and wildlife tourism for their income.
4. **Cultural and Ethical Significance:** Many species hold religious and cultural importance in India.
5. **Food Chain Balance:** Protecting wildlife helps maintain predator-prey dynamics and ecosystem stability.
6. **Scientific Research and Medicine:** Many plants and animals contribute to medical discoveries and genetic research.
7. **Disaster Prevention:** Forests and wildlife help prevent soil erosion, landslides, and floods.
8. **Climate Change Mitigation:** Forests absorb carbon dioxide, reducing global warming impacts.

GOVT. OF INDIA POLICIES TOWARD WILDLIFE CONSERVATION

Policy/Act	Year	Key Features	Achievements
Wildlife Protection Act	1972	Legal framework for wildlife conservation, protection of endangered species, and establishment of protected areas.	Increased number of national parks & sanctuaries; revival of species like tigers and rhinos.
Forest Conservation Act	1980	Restricting deforestation ensures sustainable use of forest land.	Reduced large-scale deforestation; improved afforestation efforts.
Biodiversity Act	2002	Conservation of biodiversity, sustainable use, and fair sharing of biological resources.	Protection of traditional knowledge; establishment of Biodiversity Management Committees.
Project Tiger	1973	Focuses on tiger conservation through protected reserves and anti-poaching measures.	The tiger population increased from 1,411 (2006) to 3,167 (2022).

Project Elephant	1992	Addresses elephant conservation, habitat protection, and mitigation of human-elephant conflict.	A decline in poaching cases and elephant corridors were established.
National Wildlife Action Plan	1983, updated 2017-2031	Framework for wildlife conservation integrating climate change resilience and sustainable development.	Expansion of protected areas and stronger conservation policies.
Eco-Sensitive Zones (SEZs)	2002	Buffer zones around protected areas to minimize human impact on wildlife habitats.	Reduced illegal activities and controlled deforestation near protected areas.
Integrated Development of Wildlife Habitats (IDWH)	2008	Provides financial and technical support for wildlife conservation.	Strengthened conservation programs for endangered species.
CAMPA (Compensatory Afforestation Fund Management & Planning Authority)	2016	Utilization of funds collected for forest diversion projects for afforestation.	Improved afforestation efforts and ecosystem restoration.
Green India Mission	2014	Part of the National Action Plan on Climate Change (NAPCC) focuses on ecosystem restoration and afforestation.	Increased forest cover and biodiversity conservation efforts.

WHAT ARE THE CHALLENGES TO CONSERVE WILDLIFE IN INDIA

1. **Deforestation & Habitat Loss:** Urbanization, agriculture, and infrastructure projects lead to loss of wildlife habitats.
2. **Human-Wildlife Conflict:** Increasing encroachments lead to conflicts between animals and humans, causing casualties.
3. **Poaching & Illegal Wildlife Trade**: Endangered species are targeted for body parts, skins, and exotic pet trade.
4. **Climate Change:** Rising temperatures and changing rainfall patterns affect species migration and survival.
5. **Weak Law Enforcement:** Despite strong laws, implementation remains weak due to a lack of resources and corruption.
6. **Pollution & Plastic Waste:** Rivers, forests, and air pollution affect wildlife health and breeding.
7. **Lack of Public Awareness:** Many people are unaware of wildlife conservation laws and their importance.
8. **Invasive Species:** The introduction of non-native species disrupts local ecosystems and threatens native wildlife.

WAY FORWARD SUSTAINABLE WILDLIFE CONSERVATION

1. **Strengthening Protected Areas:** Expanding and effectively managing national parks, sanctuaries, and biosphere reserves.
2. **Community Participation:** Encouraging local communities to participate in conservation efforts and eco-tourism.

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3. **Strict Law Enforcement:** Strengthening anti-poaching laws and increasing penalties for wildlife crimes.
4. **Use of Technology:** Implementing AI, satellite monitoring, and drones for tracking wildlife and preventing poaching.
5. **Habitat Restoration:** Afforestation, wetland conservation, and reducing deforestation to restore wildlife habitats.
6. **Reducing Human-Wildlife Conflict**: Developing corridors, compensation programs, and early warning systems.
7. **Education & Awareness:** Running campaigns, school programs, and media initiatives for wildlife conservation.
8. **International Cooperation:** Collaborating with global organizations and neighbouring countries for species protection.

CONCLUSION

Wildlife conservation is critical for maintaining ecological balance, ensuring sustainable livelihoods, and combating climate change. India has made significant progress through legal frameworks, conservation programs, and international collaborations. However, challenges such as habitat destruction, human-wildlife conflicts, and illegal wildlife trade persist. Strengthening laws, increasing public awareness, using technology, and involving local communities will be key to ensuring long-term wildlife conservation and sustainability.

"NAMAMI GANGE: TRANSFORMATIVE MILESTONES IN GANGA REJUVENATION"

WHY IN THE NEWS?

The Namami Gange Programme (NGP), a flagship initiative by the Government of India, has made significant progress in conserving and rejuvenating the Ganga River. With an investment of Rs. 40,000 crore, over 300 projects have been successfully completed. Initially allocated Rs. 20,000 crore, the budget was later extended to Rs. 22,500 crore to ensure long-term sustainability. The program focuses on reducing pollution, enhancing biodiversity, and strengthening people's connection with the river, as highlighted in a recent statement by the Ministry of Jal Shakti.

THE NATIONAL MISSION FOR CLEAN GANGA (NMCG):

Category	Details
Formation	Registered: 12th August 2011 under Societies Registration Act, 1860. Originally implemented under the National Ganga River Basin Authority (NGRBA). NGRBA dissolved on 7th October 2016, replaced by the National Ganga Council under EPA, 1986.
Composition	Two-tier management structure: 1. Governing Council 2. Executive Committee Director General (DG) of NMCG: Additional Secretary, Government of India.

Constituents of NMCG	Five-tier governance structure: 1. National Ganga Council (Chairman: Prime Minister of India). 2. Empowered Task Force (ETF) on River Ganga (Chairman: Union Minister of Jal Shakti). 3. National Mission for Clean Ganga (NMCG) (Implementation arm). 4. State Ganga Committees (State-level coordination). 5. District Ganga Committees (Local-level implementation).
Responsibilities	Approval of projects up to Rs. 1000 crore by the Executive Committee. Coordination with State Programme Management Groups (SPMGs) for effective implementation. Ensuring pollution abatement & rejuvenation of River Ganga. – Bringing all stakeholders together for a holistic approach.
Main Functions	Prevention, control & abatement of pollution in the Ganga. Ensuring continuous & adequate water flow for rejuvenation. Implementation of Namami Gange Programme. Biodiversity conservation & ecological restoration. Public engagement & awareness campaigns. Monitoring and enforcement of environmental laws related to Ganga.

KEY ACHIEVEMENTS UNDER THE NAMAMI GANGE PROGRAMME

1. **Project Implementation & Investment:** A total of 492 projects were initiated across various sectors, with an investment of Rs. 40,121.48 crore. 307 projects completed and operational, significantly enhancing the river's health.
2. **Sewage Infrastructure & Pollution Control:** 206 sewage infrastructure projects were sanctioned at Rs. 33,003.63 crore, and 127 projects were completed. A sewage treatment capacity of 6,255 MLD was targeted, and 3,446 MLD capacity is operational.
3. **Industrial Pollution Abatement:** Jajmau CETP (20 MLD) and Mathura CETP (6.25 MLD) completed. Banther CETP (4.5 MLD) in progress plants. 4. Ecological & Biodiversity Conservation: 56 projects for biodiversity and afforestation, with 39 completed at Rs. 905.62 crore. Seven biodiversity parks were developed in Uttar Pradesh. 33,024 hectares afforested with an expenditure of Rs. 398 crore, enhancing the river's green cover. 143.8 lakh Indian Major Carp (IMC) fingerlings released to support fish biodiversity and local livelihoods.
4. **Sustainable Water Management & Treated Water Reuse:** The National Framework for Safe Reuse of Treated Water was introduced to promote wastewater recycling and reduce freshwater dependence

KEY INITIATIVES AND BODIES FOR GANGA RE-JUVENATION

Ganga Action Plan (GAP) – 1986: The first major initiative launched to reduce pollution by intercepting, diverting, and treating sewage and industrial waste. Covered 25 cities along the Ganga, setting up 35 sewage treatment plants (STPs) with a total capacity of 865 MLD.

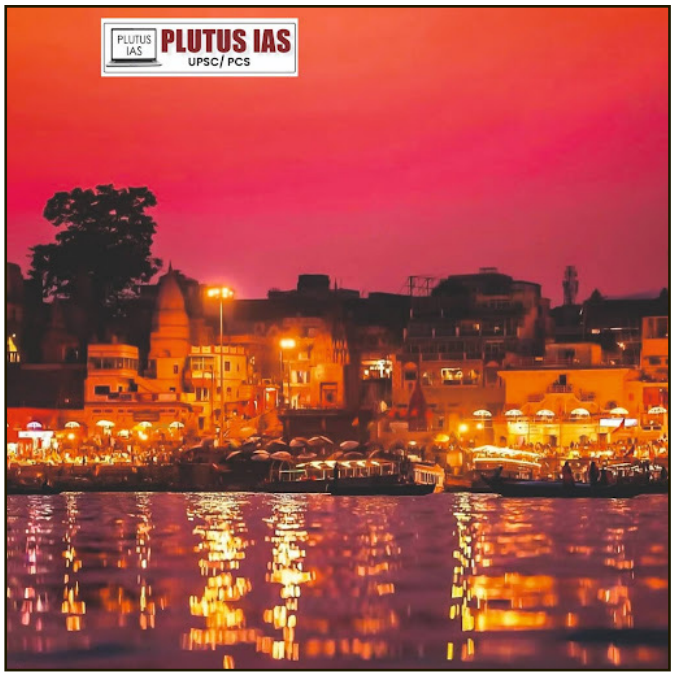
National Ganga River Basin Authority (NGRBA) –

- **2009:** Established as an empowered authority to take a holistic approach to Ganga conservation. Declared the Ganga as India's "National River." Introduced river basin management strategies instead of isolated pollution control measures. Replaced in 2016 by the National Ganga Council (NGC) for better implementation. National Mission for Clean Ganga (NMCG)

- **2011:** Functions as the implementation arm of the National Ganga Council. Oversees the Namami Gange Programme, the Indian government's flagship river-cleaning initiative.

- **Focuses on:** Sewage treatment infrastructure (Over 200 STPs sanctioned, 127 completed). River-surface cleaning (Introduced bioremediation, trash skimmers).

Biodiversity conservation (Gangetic dolphin population increased from 3,330 to 3,936).
Public awareness campaigns and stakeholder engagement.



CHALLENGES IN GANGA CLEAN-UP EFFORTS (WITH DATA & FACTS)

1. **Inadequate Sewage Treatment Capacity:** The Ganga receives 12,000 MLD of sewage daily, but the treatment capacity is only 5,000 MLD, leading to massive pollution.
2. **Industrial Pollution:** Over 1,100 industrial units along the river discharge untreated effluents, significantly deteriorating water quality.
3. **Agricultural Runoff Contamination:** Agricultural runoff contributes over 10,000 tonnes of fertilisers and pesticides annually, increasing nitrate and phosphate levels, which cause algal blooms and reduce oxygen levels.
4. **Religious and Cultural Pollution:** Every year, over 1 lakh (100,000) human and animal remains are immersed in the river, along with 80 lakh idols and 50,000 tonnes of religious waste, especially during festivals like Kumbh Mela.
5. **Solid Waste Dumping:** More than 3,000 tonnes of solid waste, including plastics, polythene, and other non-biodegradable materials, is dumped daily into the Ganga from major cities.
6. **Delayed Infrastructure Development:** Out of 206 sewage treatment plants (STPs) sanctioned under the Namami Gange Programme, only 127 have been completed as of 2025, leaving many towns with no treatment facilities.
7. **Excessive Water Extraction:** The Ganga's natural flow has been reduced by 40% due to excessive water withdrawal for irrigation and drinking purposes, decreasing its ability to self-cleanse.
8. **Disruptions Caused by Dams and Barrages :** Over 900 dams and barrages, including the Farakka Barrage, have altered the river's flow, caused sediment buildup, and disrupted aquatic biodiversity.
9. **Illegal Sand Mining and Industrial Violations :** Sand mining worth ₹10,000 crore annually depletes riverbanks and endangers species like the Gangetic dolphin, while 90% of the 764 industries along the Ganga fail to meet pollution control norms.
10. **Insufficient Funding and Low Public Participation:** Only ₹16,648.49 crore (82%) of the ₹42,500 crore allocated for the Namami Gange Programme has been disbursed, and community participation remains low, with just 20% of local populations actively engaged in clean-up efforts.

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KEY RECOMMENDATIONS AND FOCUS AREAS

1. **Sewage Treatment & Infrastructure Development:** Ganga receives 12,000 MLD of sewage, while its treatment capacity is only 5,000 MLD. The Hybrid Annuity Model (HAM) ensures the sustainable funding and operation of STPs.
2. **Industrial Effluent Control & Monitoring:** Over 1,100 industries discharge pollutants into the river. Common Effluent Treatment Plants (CETPs) are established in key industrial zones (e.g., Jajmau, Mathura, Banther). 90% of monitored STPs & CETPs are now compliant with environmental norms.
3. **Addressing Non-Point Source Pollution:** Agricultural runoff contributes 10,000+ tonnes of chemical waste annually. To reduce pesticide runoff, organic farming and bio-fertilizers are promoted. Solid waste management projects have been implemented in 100+ riverbank towns.
4. **Riverfront Development & Beautification:** Over 200 ghats and crematoriums were renovated to improve sanitation. Eco-friendly crematoriums reduce wood usage by 60%, helping curb pollution.
5. **Biodiversity Conservation & Ecological Restoration:** Over 143.8 lakh Indian Major Carp (IMC) fish fingerlings were released to boost aquatic biodiversity. 33,024 hectares were afforested with indigenous plant species to improve ecological balance.
6. **Maintaining 'Aviral Dhara' (Continuous Flow of Water):** Ensuring environmental flow (E-flow) norms are followed to maintain natural river levels. Stricter dam regulations to prevent excessive water extraction. Ganga Barrage projects were redesigned to ensure a minimum ecological flow.

CONCLUSION

The Namami Gange Programme has made significant progress in tackling pollution, increasing sewage treatment capacity, and restoring the ecological balance of the Ganga. However, challenges such as funding gaps, industrial compliance, and public awareness remain critical. Strengthening state cooperation, enforcement mechanisms, and community participation is essential for ensuring long-term sustainability. With continued government focus and public involvement, a clean and rejuvenated Ganga is achievable.

NATIONAL BOARD FOR WILDLIFE (NBWL): A CRITICAL INSTITUTION FOR WILDLIFE CONSERVATION IN INDIA

WHY IN THE NEWS?

The National Board for Wildlife (NBWL) has recently been in the spotlight as Prime Minister Narendra Modi chaired its latest meeting to discuss critical decisions regarding wildlife conservation and habitat protection. During this meeting, key policies were deliberated upon, including new proposals for protected areas, mitigation measures for developmental projects affecting wildlife corridors, and strategies for enhancing biodiversity conservation. The board's decisions have far-reaching implications for India's environmental policies, especially in the context of balancing development with ecological sustainability.

WHAT IS NBWL?

The National Board for Wildlife (NBWL) is the apex advisory body in India responsible for wildlife conservation and protection. It is formed under

the Wildlife (Protection) Act, 1972, and plays a crucial role in shaping policies related to wildlife conservation, approving developmental projects in eco-sensitive zones, and recommending necessary measures to protect biodiversity.

FORMATION OF NBWL

NBWL was established in accordance with Section 5A of the Wildlife (Protection) Act, 1972. It was created to replace the Indian Board for Wildlife, which was earlier responsible for advising the government on matters related to wildlife preservation.

The board has a statutory status, and its recommendations are significant for ensuring that developmental activities do not negatively impact India's rich wildlife heritage. Over the years, NBWL has played a decisive role in shaping India's conservation policies and implementing measures to safeguard the country's diverse flora and fauna.

COMPOSITION OF NBWL

NBWL is chaired by the Prime Minister of India and includes various members, such as:

1. Union Minister for Environment, Forest and Climate Change (Vice-Chairperson)
2. Members of Parliament
3. Secretaries of Various Ministries (such as Power, Tribal Affairs, and Agriculture)
4. Chiefs of State Forest Departments
5. Representatives from NGOs and Conservationists
6. Experts in Wildlife Conservation The board also includes official and non-official members who contribute their expertise in conservation, policymaking, and governance.

RESPONSIBILITIES OF NBWL

NBWL is tasked with multiple responsibilities aimed at strengthening wildlife conservation efforts in India:

1. **Approval of Projects Affecting Protected Areas:** Any developmental project impacting wildlife sanctuaries, national parks, or eco-sensitive zones must receive NBWL's approval before proceeding.
2. **Formulating Conservation Policies:** The board advises the central government on framing policies and laws to protect endangered species and habitats.
3. **Reviewing Conservation Measures:** It assesses the effectiveness of conservation projects and suggests improvements where necessary.
4. **Monitoring Wildlife Protection Efforts:** The board evaluates compliance with wildlife laws and ensures that conservation strategies are effectively implemented.
5. **Promoting Sustainable Development:** NBWL works on balancing ecological preservation with infrastructure development by recommending mitigation measures.

MAJOR DECISIONS BY NBWL

Over the years, NBWL has made several landmark decisions that have significantly impacted India's conservation landscape:

1. **Expansion of Protected Areas:** The board has approved new protected areas, including wildlife sanctuaries and national parks, to enhance biodiversity conservation.
2. **Mitigation Measures for Infrastructure Projects:** NBWL has recommended eco-sensitive measures such as constructing wildlife corridors and underpasses to reduce human-animal conflicts.
3. **Stricter Regulations for Mining and Industrial Activities:** The board has scrutinised projects that could lead to deforestation and habitat destruction, ensuring compliance with environmental norms.
4. **Approval of Tiger Reserves and Conservation Plans:** The board has played a crucial role in approving and implementing tiger conservation projects under the Project Tiger initiative.

ISSUES RELATED TO WILDLIFE CONSERVATION IN INDIA

Despite NBWL's efforts, wildlife conservation in India faces several challenges:

1. **Habitat Destruction:** Rapid urbanisation, deforestation, and encroachment have led

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to significant habitat loss for many species. The expansion of infrastructure projects like highways and railways has fragmented wildlife corridors, affecting animal migration patterns.

2. **Human-Wildlife Conflict:** As human settlements expand into forested areas, incidents of human-wildlife conflict have risen. Cases of elephant and leopard attacks on villages and retaliatory killings of animals highlight the urgent need for better mitigation strategies.
3. **Illegal Wildlife Trade:** Poaching and illegal wildlife trade continue to threaten species like tigers, rhinos, and pangolins. Despite stringent laws, organised wildlife crime remains a challenge.
4. **Climate Change:** Changing climate patterns are affecting wildlife habitats, leading to alterations in food availability and migration routes. Rising temperatures and unpredictable monsoon patterns are impacting species' survival.
5. **Weak Implementation of Laws:** Although India has robust wildlife protection laws, enforcement remains weak in many areas due to a lack of resources, corruption, and political interference.

WAY FORWARD FOR WILDLIFE CONSERVATION

To strengthen wildlife conservation efforts in India, the following steps must be undertaken:

1. **Strengthening Conservation Laws:** Amendments to the Wildlife Protection Act should focus on stricter penalties for illegal activities and improved monitoring mechanisms.
2. **Community Involvement in Conservation:** Local communities should be empowered through eco-tourism and sustainable livelihood programs to encourage them to protect wildlife.
3. **Enhancing Wildlife Corridors:** Infrastructure projects must integrate wildlife corridors and safe passageways to reduce habitat fragmentation.
4. **Use of Technology:** Advanced tracking systems, camera traps, and artificial intelligence can help monitor wildlife populations and prevent poaching.
5. Stronger International Cooperation: India should collaborate with global conservation organisations to tackle issues like illegal wildlife trade and habitat destruction.

CONCLUSION

The National Board for Wildlife (NBWL) plays a crucial role in shaping India's wildlife conservation policies. While it has taken significant steps to balance development with ecological sustainability, challenges like habitat loss, human-wildlife conflict, and climate change continue to pose serious threats. Strengthening conservation laws, involving communities, and using technology effectively can go a long way in ensuring a sustainable future for India's wildlife. With proactive measures and strong political will, NBWL can continue to be a guiding force in preserving India's rich biodiversity for future generations.

LOSS AND DAMAGE

WHY IN THE NEWS?

The issue of "Loss and Damage" has gained global attention, especially after the operationalisation of the Loss and Damage Fund at COP28 in Dubai (2023). With rising climate disasters such as extreme heatwaves, floods, and droughts, vulnerable nations are demanding financial and technical support from wealthier countries responsible for historical emissions. However, current climate finance remains insufficient, making this a key topic in international climate negotiations as countries debate equity, responsibility, and urgent action to address irreversible climate impacts.

WHAT IS LOSS AND DAMAGE?

"Loss and damage" is a general term used in UN climate negotiations to refer to the consequences of climate change that go beyond what people can adapt to; for example, the loss of coastal heritage sites due to rising sea levels or the loss of homes and lives during extreme floods. This also includes situations where adaptation options exist, but a community doesn't have the resources to access or utilize them. To date, there is no official definition of loss and damage under the UN. Loss and damage are harming and will continue to harm vulnerable communities the most, meaning that addressing the issue is an urgent matter of climate justice. But the Subject has historically been fraught with contention both inside and outside of UN climate negotiations. In particular, countries have struggled to reach an agreement on how much money developed countries should supply to address loss and damage in developing nations, which have contributed the least to the climate crisis but are often hit hardest by its impacts.

However, no funding mechanism was established.

KEY MILESTONES:

- **Paris Agreement (2015):** Article 8 included loss and damage but excluded financial liability.
- **COP26 (2021):** A proposed finance facility was rejected, leading to the Glasgow Dialogue and funding for the Santiago Network on Loss and Damage (SNLD).
- **COP27 (2022):** A breakthrough agreement established a loss and damage fund.
- **COP28 (2023):** The fund was officially launched as the Fund for Responding to Loss and Damage (FRLD), hosted by the World Bank. Countries pledged $700 million, and the SNLD was operationalized.
- **Next Steps for COP29 (2024):** Mobilising more finance for FRLD & SNLD. Including loss and damage in the new climate finance goal.

DIFFERENCE BETWEEN MITIGATION, ADAPTATION AND ADDRESSING LOSS AND DAMAGE

Aspect	Mitigation	Adaptation	Loss & Damage
Goal	Reduce greenhouse gas emissions	Protect against climate impacts	Support recovery after impacts
Focus	Prevention	Preparedness	Response
Examples	Switching to clean energy, reducing deforestation	Building resilient infrastructure, adjusting farming practices	Disaster relief, compensation for climate-related losses
When It Applies	Before climate impacts occur	Before and during climate impacts	After climate impacts have happened

HISTORY OF LOSS AND DAMAGE IN UN CLIMATE NEGOTIATIONS

The issue of loss and damage has been debated for over three decades in UN climate negotiations. In 1991, Vanuatu proposed an insurance scheme for climate-impacted nations, but it was rejected, and the final UNFCCC (1992) did not mention loss and damage. The Concept formally emerged in the Bali Action Plan (2007) and gained traction in 2013 with the creation of the Warsaw International Mechanism (WIM) to enhance knowledge-sharing and coordination. Ensuring the fund delivers aid quickly and effectively to vulnerable nations.

IMPORTANCE OF LOSS AND DAMAGE FUND

The Fund for Responding to Loss and Damage (FRLD) is essential for climate-vulnerable nations facing irreversible impacts. While mitigation and adaptation help reduce risks, some losses—like sea level rise, extreme weather, and biodiversity loss—are unavoidable, requiring financial support for recovery.

KEY BENEFITS:

1. **Supports Vulnerable Nations:** Helps developing countries recover and rebuild after climate disasters.
2. **Addresses Unavoidable Losses:** Provides aid where adaptation is no longer possible.
3. Delivers Timely Relief: Funds emergency response, reconstruction, and displaced communities.
4. **Ensures Climate Justice:** Developed nations contribute to those most affected by climate change.
5. **Strengthens Climate Action:** Makes loss and damage a core climate priority, alongside mitigation and adaptation. Established at COP28, the FRLD is a major step forward, but funding must scale to meet growing climate challenges. COP29 will be critical in ensuring swift, sufficient, and equitable financial support.

ISSUES IN CLIMATE FINANCING

1. **Funding Shortfall:** Current climate finance is far below what's needed, with loss and damage alone projected to cost $580B annually by 2030.
2. **Unequal Access:** Small island states and least developed countries (LDCs) struggle with complex processes to access funds, while middle-income nations receive most financing.
3. **Debt Burden:** Most funds are loans, not grants, forcing climate-vulnerable nations into deeper debt.
4. **Lack of Transparency:** No clear tracking of how much money is delivered or used, and some nations over-report contributions.
5. **Low Private Investment:** Businesses hesitate to fund adaptation projects due to uncertain profits, leaving public finance to fill the gap.
6. **Fragmented System:** Multiple climate funds exist (GCF, Adaptation Fund, FRLD, etc.) but lack coordination, making access difficult for developing nations.

WAY TO ADDRESS CLIMATE FINANCING

1. **Increase & Fulfill Commitments:** Developed nations must meet and exceed climate finance pledges, ensuring new and additional funding.
2. **Implify Access:** Streamline fund applications, ensuring direct, fast access for vulnerable nations.
3. **Shift from Loans to Grants:** Prioritize grants over loans to prevent debt burdens and explore climate debt relief options.
4. **Enhance Transparency:** Establish robust tracking to monitor fund allocation and prevent overreporting.
5. **Boost Private Investment:** Use blended finance, green bonds, and risk-sharing mechanisms to attract private capital.
6. **Diversify Funding Sources:** Explore fossil fuel levies, carbon pricing, financial transaction taxes, and climate insurance.
7. **Improve Coordination:** Align funds like GCF, Adaptation Fund, and FRLD for efficiency and impact.

CONCLUSION

The establishment of the Loss and Damage Fund (FRLD) is a significant milestone in global climate action, recognizing the irreversible impacts of climate change on vulnerable nations. While progress has been made, climate finance remains insufficient, with funding gaps, accessibility issues, and reliance on loans instead of grants. To effectively address loss and damage, wealthy nations must fulfil commitments, streamline access to funds, increase transparency, and leverage private sector investment. At COP29, ensuring the fund's rapid, equitable, and scalable implementation will be critical in achieving climate justice and resilience for frontline communities.

MAKING INDIA MORE DISASTER-RESILIENT

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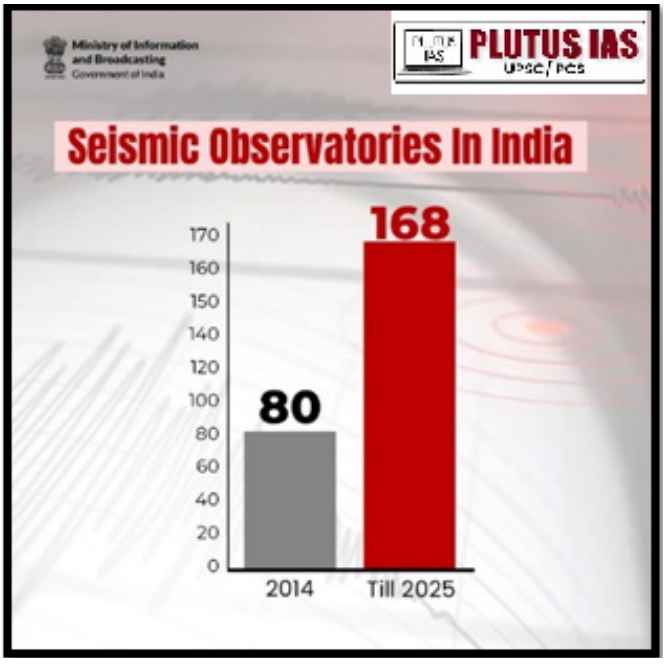
WHY IN THE NEWS?

India has experienced several earthquake tremors this past year, highlighting the need for better

disaster preparedness. Earthquakes occur when stress builds up in the Earth's crust. The crust is made of large plates that slowly move and these movements cause earthquakes. When an earthquake hits a populated area, it can cause significant damage. Approximately 59% of India is vulnerable to earthquakes, and the Bureau of Indian Standards (BIS) has classified the country into four seismic zones based on earthquake risk. Zone V is the most active, including regions like the Himalayas, while Zone II is the least affected. Over the years, India has experienced several devastating earthquakes.



WHAT IS AN EARTHQUAKE?

An earthquake is a sudden shaking of the ground caused by the movement of tectonic plates beneath the Earth's surface. This seismic activity occurs due to the release of energy stored in the Earth's crust. The energy is generated by the movement along faults, which are fractures in the Earth's crust where two blocks of land have moved past each other. Earthquakes vary in intensity and magnitude and are measured using the Richter scale or the more modern Moment Magnitude Scale (Mw). The epicenter is the point on the Earth's surface directly above where the quake originates, while the focus is the point within the Earth where the seismic energy is released.

EARTHQUAKE STATISTICS

India is one of the most seismically active countries in the world due to its geographical location on the Indian tectonic plate. Earthquakes are frequent, ranging from low to high intensity, and have been a cause of considerable destruction in the past. According to the National Center for Seismology (NCS), several key statistics highlight the seismic nature of India:

1. **Seismic Zones:** India is divided into four seismic zones – Zone II, III, IV, and V – based on the intensity and frequency of earthquakes. Zone V is the most seismically active region and includes areas like northeastern India, parts of the Himalayas, and Gujarat, while Zone II represents regions with relatively low seismic activity.
2. **Vulnerability of Landmass:** Approximately 59% of India's total land area is prone to moderate to severe seismic activity, placing millions of people at risk.
3. **Urban Vulnerability:** Urban centers in India, particularly those experiencing rapid, unplanned urbanization, are highly vulnerable due to a lack of earthquake-resistant infrastructure and adherence to building codes. Cities like Delhi, Guwahati, and Srinagar face high seismic risks due to their location in or near high-risk zones. These statistics emphasize the urgent need for preparedness, strict enforcement of seismic building codes, retrofitting of older structures, and community-level awareness to mitigate the risks associated with earthquakes.

MAJOR EARTHQUAKES IN INDIA

India has experienced several devastating earthquakes over the years, which have caused significant loss of life, damage to infrastructure, and displacement. seismic activity has continued to be a major concern. These disasters emphasize the urgent need for stronger earthquake resilience and preparedness, particularly in high-risk zones. Below are some of the most notable earthquakes:

1. **Bihar-Nepal Earthquake (1934): Magnitude 8.0 :** One of the deadliest earthquakes, it caused

extensive damage in northern Bihar and parts of Nepal, killing over 10,000 people. Entire towns and villages were reduced to rubble, and thousands were left homeless. It highlighted the seismic vulnerability of the Himalayan region.

2. **Latur Earthquake (1993):** Magnitude 6.4 – This earthquake struck Maharashtra's Latur and Osmanabad districts, resulting in over 9,000 deaths and widespread destruction. The damage was exacerbated by poorly constructed houses and buildings. The event raised awareness about the need for earthquake-resistant infrastructure in rural India.

3. **Bhuj Earthquake (2001):** Magnitude 7.7 – One of the most devastating quakes in recent history, it claimed over 20,000 lives, left more than 150,000 people injured, and destroyed homes, schools, hospitals, and roads in Gujarat. The Bhuj earthquake brought to light the seismic vulnerability of western India and led to significant policy changes in disaster management.

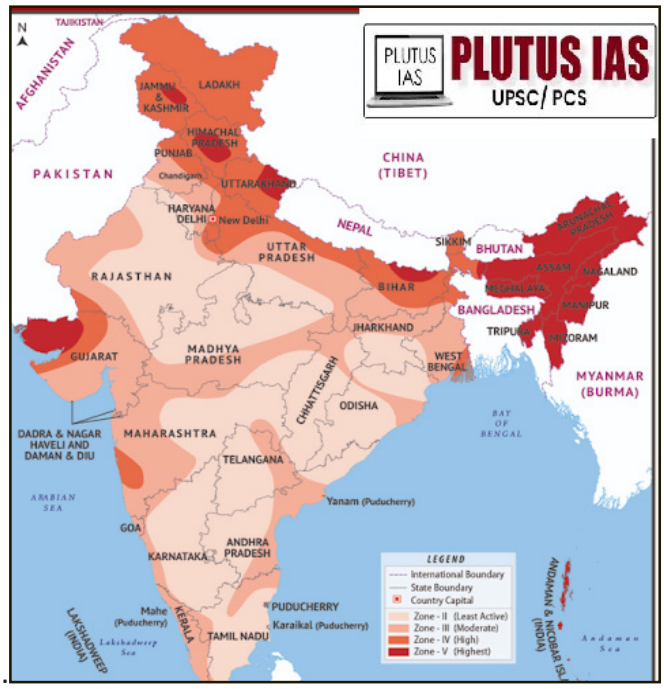
4. **Kashmir Earthquake (2005):** Magnitude 7.6 – This earthquake affected northern India and Pakistan-administered Kashmir, causing widespread destruction and claiming over 80,000 lives. The aftermath saw international relief efforts, but the challenging mountainous terrain made rescue and rehabilitation difficult.

5. **Sikkim Earthquake (2011):** Magnitude 6.9 – This earthquake impacted northeastern India, causing landslides, damage to buildings, and disruption to infrastructure. The region's rugged terrain further complicated rescue operations. Several bridges and roads were damaged, isolating remote villages.

INDIA'S EARTHQUAKE VULNERABILITY

India's vulnerability to earthquakes stems from its location at the junction of several tectonic plates. The Indian plate is continuously colliding with the Eurasian plate, leading to seismic activities. The country is divided into four seismic zones based on earthquake risk:

1. **Zone V:** Includes areas with the highest seismic risk, such as northeastern states, parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, and the Rann of Kutch in Gujarat.
2. **Zone IV:** Covers areas like Delhi, parts of Haryana, Punjab, western Uttar Pradesh, and parts of Bihar.
3. **Zone III:** Includes regions with moderate risk, such as the rest of Uttar Pradesh, Maharashtra, Odisha, and parts of southern India.
4. Zone II: Includes areas with the least seismic risk, mainly in central and southern India



CAUSING FACTORS FOR EARTHQUAKE VULNERABILITY:

1. **Tectonic Plate Movements:** The collision between the Indian and Eurasian plates creates immense pressure, leading to frequent seismic activity.
2. **Fault Lines:** India's geography includes several active fault lines, such as the Himalayan Thrust Fault, the Kutch Fault, and the Narmada Fault.
3. **Unplanned Urbanization:** Rapid urban growth without adherence to building codes increases vulnerability.
4. **Soft Soil Conditions:** In certain areas, soft soil can amplify seismic waves, increasing the intensity of earthquakes.

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GOVERNMENT MEASURES FOR EARTHQUAKE SAFETY:

The Indian government has taken comprehensive measures to enhance earthquake preparedness and mitigate seismic risks. These efforts aim to reduce damage, save lives, and improve public safety. Key actions include updating seismic building codes to ensure earthquake-resistant construction and retrofitting vulnerable structures like hospitals, bridges, and older buildings. Advanced early warning systems, especially in high-risk zones, offer critical seconds to evacuate or shut down essential services, minimizing casualties. Public awareness campaigns educate citizens on safety protocols, such as "Drop, Cover, and Hold."

1. **Seismic Zoning and Building Codes:** The Bureau of Indian Standards (BIS) has developed Indian Seismic Codes to ensure that buildings and infrastructure are designed to withstand seismic forces. IS 1893, IS 4326, and IS 13920 are some key codes related to earthquake-resistant construction.
2. **National Disaster Management Authority (NDMA):** The NDMA has developed guidelines for earthquake preparedness and response. It conducts regular mock drills, awareness campaigns, and training programs.
3. **Earthquake Early Warning Systems (EEWS):** These advanced systems aim to provide timely alerts before seismic waves hit, helping minimize the impact of earthquakes. EEWS uses seismic sensors placed near fault lines to detect the initial low-intensity tremors (P-waves) and issue alerts before the more damaging S-waves arrive. This warning can give precious seconds or minutes to evacuate buildings, stop trains, or shut down machinery, thereby reducing casualties and infrastructure damage.
4. **Urban Planning and Retrofitting:** Effective urban planning plays a crucial role in reducing earthquake risks by avoiding construction in high-risk seismic zones and regulating land use. This includes promoting sustainable development practices that minimize exposure to seismic hazards. Additionally, retrofitting older buildings with earthquake-resistant technology, such as base isolators and reinforced concrete, can significantly improve their ability to withstand seismic forces. Encouraging public participation in planning and awareness programs further enhances resilience at the community level, fostering a shared responsibility for earthquake safety.
5. **Public Awareness and Education:** Public awareness plays a crucial role in disaster preparedness, as it empowers communities with the knowledge and skills to protect themselves during earthquakes. Educational programs focused on teaching earthquake safety measures, such as the "Drop, Cover, and Hold" technique, evacuation drills, and emergency preparedness, are vital. Increased awareness helps people respond calmly and effectively during seismic events, potentially reducing casualties and property damage. Government campaigns, NGOs, and community-based organizations must collaborate to ensure the wide dissemination of safety protocols, especially in high-risk areas, to foster a culture of resilience and preparedness across all sections of society

LIMITATIONS ON EARTHQUAKE PREVENTABILITY

Despite extensive efforts to improve earthquake preparedness, certain inherent limitations make it challenging to completely prevent the impact of seismic events. Understanding these limitations is essential to developing more effective mitigation strategies:

1. **Unpredictability of Earthquakes:** One of the most significant challenges is the inability to predict the exact timing, location, and magnitude of an earthquake. While seismic monitoring can identify regions prone to earthquakes, providing real-time forecasts remains a complex task beyond current scientific capabilities.
2. **Gaps in Building Code Implementation:** Although seismic building codes have been established in India, their enforcement remains inconsistent, particularly in rural areas and rapidly expanding urban centres. Many

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structures continue to be built without adhering to safety standards, making them vulnerable to seismic shocks.

3. **Resource and Financial Constraints:** Retrofitting older buildings, upgrading critical infrastructure, and implementing early warning systems require substantial financial investments, which can be a constraint for resource-limited regions. Additionally, technical expertise and skilled labour may not always be readily available.
4. **Challenges of Rapid Urbanization:** India's rapid urbanisation has led to unplanned construction, increasing the population's exposure to seismic hazards. High population density, particularly in cities located in seismic zones, complicates evacuation and rescue operations during earthquakes.
5. **Geographical Vulnerability:** India's tectonic positioning, with active fault lines such as the Himalayan thrust zones and regions near the Indo-Eurasian plate boundary, makes the country inherently susceptible to seismic activity. This geographical reality limits the extent to which seismic risks can be entirely mitigated through human interventions.

PROACTIVE ACTIONS TO REDUCE EARTHQUAKE IMPACTS

1. Strengthening Seismic Building Codes and Compliance

(a). Reinforcing Existing Structures: Focus on retrofitting schools, hospitals, and public buildings in seismic zones to meet updated earthquake-resistant standards

(b). Enforcing Strict Building Regulations: Regular monitoring and inspections should be conducted to ensure compliance with seismic building codes, especially in urban areas.

2. Promoting Land-Use Planning and Risk Mapping

(a). Zoning Regulations: Develop land-use plans that avoid construction in high-risk areas, such as fault lines and soft soil regions.

(b). Seismic Hazard Maps: Utilize updated seismic hazard maps to identify and prioritise vulnerable areas for focused interventions.

3. Developing Advanced Early Warning Systems

(a). Real-Time Monitoring: Invest in advanced seismic monitoring stations and sensor networks to detect early tremors and provide timely warnings.

(b). Public Alert Systems: Establish mass alert systems (SMS, sirens, radio alerts) to warn communities in real time and facilitate evacuation.

4. Building Community Awareness and Preparedness

(a). Public Awareness Campaigns: Conduct earthquake safety drills in schools, offices, and residential neighborhoods to educate people on evacuation protocols.

(b). Training First Responders: Train local volunteers, civil defence personnel, and emergency workers in search-and-rescue operations and first aid.

5. Enhancing Disaster Response and Recovery Capacity

(a). Strengthening NDRF and SDRF: Equip National and State Disaster Response Forces with specialized tools, modern equipment, and rapid deployment capabilities for earthquake emergencies.

(b). Emergency Shelters and Relief Centers: Establish well-equipped shelters in high-risk areas to provide immediate relief and temporary housing to affected populations.

6. Promoting Research and Development (R&D):

(a). Seismic Research: Encourage research on earthquake-resistant materials, innovative construction techniques, and advanced seismic sensors.

(b). Global Collaboration: Foster partnerships with international research institutions to learn from best practices in earthquake resilience and preparedness.

PREVENTION STRATEGIES

While earthquakes cannot be prevented, their impact can be minimized through prevention strategies such as:

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1. **Earthquake-Resistant Design:** Encourage the construction of earthquake-resistant buildings using flexible materials that can absorb seismic energy.
2. **Hazard Mapping:** Conduct detailed seismic hazard mapping to identify high-risk areas and guide land use planning.
3. **Public Awareness Campaigns:** Educate people on earthquake safety measures, including evacuation routes, emergency kits, and safe behavior during quakes.
4. **Strengthening Emergency Services:** Enhance the capacity of emergency services, such as fire brigades, paramedics, and search-and-rescue teams, to respond quickly and effectively after an earthquake.

CONCLUSION

Building a disaster-resilient India requires a multi-pronged approach involving strict enforcement of building codes, retrofitting vulnerable infrastructure, developing early warning systems, and enhancing community awareness and preparedness. While earthquakes cannot be prevented, proactive measures can significantly reduce their impact, saving lives and minimizing economic losses. By fostering a culture of disaster preparedness and resilience, India can better withstand the challenges posed by future earthquakes and ensure the safety and well-being of its citizens.

Prelims Questions:

1. Which of the following statements are correct about Delhi's seismic activity?

1. Delhi is located in Seismic Zone IV, which indicates a high risk of earthquakes.
2. The recent earthquake in Delhi was caused by the collision of tectonic plates.
3. The Delhi-Hardwar Ridge contributes to seismic activity in the region.

Select the correct answer using the code given below:

A. 1 and 2 only
B. 2 and 3 only
C. 1 and 3 only
D. 1, 2 and 3

2. With reference to Mission Amrit Sarovar, consider the following statements:

1. The mission aims to construct or rejuvenate at least 75 Amrit Sarovars in each district across India
2. The mission was launched on August 15, 2022, as part of the Azadi Ka Amrit Mahotsav celebrations.
3. This mission is implemented by Earth sciences

How many of the above-given statements are correct?

A. Only one
B. Only two
C. All three
D. None

3. Which of the following statements is correct about Avalanches?

1. Avalanches are caused only by natural factors such as snowfall and temperature variations.
2. Human activities like deforestation and infrastructure development can increase the risk of avalanches.
3. Avalanches can trigger secondary disasters like landslides and flash floods.

Select the correct answer using the code given below:

A. 1 and 2 only
B. 2 and 3 only
C. 1 and 3 only
D. 1, 2 and 3

4. With reference to the Wildlife Protection Act of 1972, consider the following statements:

1. It provides legal protection to wildlife species and establishes protected areas.

2. It regulates deforestation and ensures the protection of forests.
3. It promotes the sustainable use of biodiversity and the conservation of biological resources.

How many of the above-given statements are correct?

A. Only one

B. Only two

C. All three

D. None

5. With reference to the National Ganga Council, consider the following statements:

1. It was established under the Environment (Protection) Act of 1986.
2. The Prime Minister of India is the chairperson of the National Ganga Council.
3. The National Mission for Clean Ganga (NMCG) acts as the implementing arm of the Council.

How many of the above-given statements are correct?

A. Only one

B. Only two

C. All three

D. None

6. Which of the following statements about the National Board for Wildlife (NBWL) is correct?

A. NBWL is a statutory body formed under the Environment Protection Act, of 1986.

B. The Prime Minister of India serves as the Chairperson of NBWL.

C. NBWL does not have any role in approving infrastructure projects affecting wildlife.

D. The board primarily focuses on marine biodiversity conservation.

7. Consider the following statements:

1. The Paris Agreement recognizes the need to avert, minimise, and address loss and damage caused by climate change.
2. Loss and damage can only be addressed through mitigation efforts such as reducing greenhouse gas emissions.
3. Adaptation limits can be classified into "soft limits" (where adaptation is possible but lacks resources) and "hard limits" (where adaptation is impossible).

How many of the statements given above are correct?

A. Only one

B. Only two

C. All three

D. None

8. With reference to India's seismic vulnerability, which of the following statements is/are correct?

1. India is divided into five seismic zones based on earthquake intensity and frequency.
2. Zone V is the most seismically active and includes parts of Gujarat, the northeastern states, and the Himalayan region.
3. Soft soil conditions in certain areas can amplify seismic waves, increasing earthquake damage.

Select the correct answer using the code given below:

A. 1 and 2 only

B. 2 and 3 only

C. 1 and 3 only

D. 1, 2, and 3

ANSWER

1. C	**2. B**	**3. B**	**4. B**
5. C	**6. B**	**7. B**	**8. B**

MAINS QUESTIONS:

1. Discuss the seismic risks faced by Delhi in light of the recent earthquake. What preventive

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measures should be taken to mitigate earthquake hazards in the region?

(250 words, 15 marks)

2. Discuss the significance of Mission Amrit Sarovar in addressing India's water scarcity challenges. How does it contribute to long-term water sustainability

(250 words, 15 marks)

3. Avalanches pose a significant threat to mountainous regions, impacting lives, infrastructure, and the economy. Discuss the causes, consequences, and mitigation strategies for avalanche disasters in India

(250 words, 15 marks)

4. Discuss the significance of wildlife conservation in India and the challenges associated with it. Suggest measures to ensure sustainable conservation efforts.

(250 words, 15 marks)

5. Discuss the major challenges in the Ganga clean-up efforts despite various initiatives like the Namami Gange Programme. Suggest long-term strategies to ensure sustainable rejuvenation of the river.

(250 words, 15 marks)

6. India has a robust legal framework for wildlife conservation, yet challenges like habitat destruction and poaching persist. Critically examine the role of NBWL in addressing these issues and suggest ways to improve its efficiency.

(250 words, 15 marks)

7. Discuss the significance of the Loss and Damage Fund (FRLD) in global climate finance and the challenges associated with its implementation.

(250 words, 15 marks)

8. Examine the role of tectonic activity in shaping India's earthquake risk. How can seismic safety be improved?

(250 words, 15 marks)

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EV BATTERIES: REVOLUTIONS TO ACHIEVE NET ZERO EMISSION BY 2070

WHY IN THE NEWS?

The Ministry of Heavy Industries (MHI) signed a Programme Agreement with Reliance New Energy Battery Limited under the ₹18,100 crore PLI scheme for Advanced Chemistry Cells (ACC). This grants Reliance a 10 GWh manufacturing capacity, bringing the total allocated capacity to 40 GWh out of the 50 GWh target. The PLI scheme, aimed at boosting India's battery manufacturing for electric vehicles and renewable energy, strengthens domestic production, reduces imports, and supports India's green energy goals.ss

WHAT ARE BATTERIES?

A battery is an electrochemical device that stores and releases electrical energy through chemical reactions. It typically consists of one or more electrochemical cells, where each cell has two electrodes (an anode and a cathode) separated by an electrolyte. When the battery is discharging, chemical reactions occur at the electrodes, releasing electrons and generating an electric current. The battery can be recharged (in the case of rechargeable batteries) by reversing these chemical reactions. Batteries are categorised into two main types:

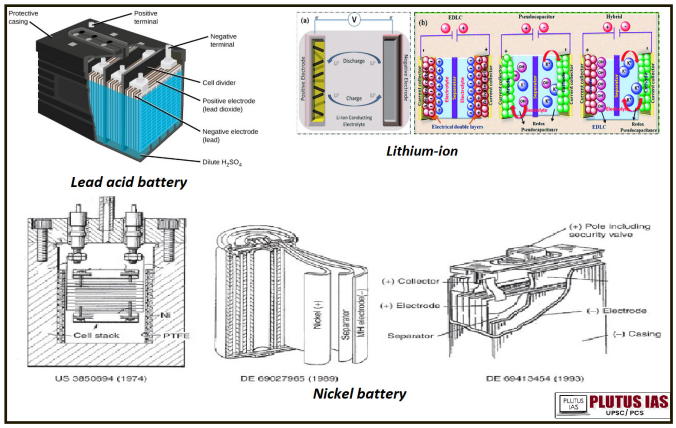
1. **Primary Batteries:** These can only be used once. After they are discharged, they cannot be recharged and are discarded. The reactions inside these batteries are irreversible, making them "use-and-throw" devices.

2. **Secondary Batteries:** These are rechargeable and can be used for many cycles of charging and discharging. The chemical reactions in secondary batteries are reversible, allowing the battery to be recharged by applying an electric current to reverse the discharge reaction.

VARIOUS TYPES OF BATTERIES AND THEIR FEATURE:

Battery Type	Inventor/Origin	Key Characteristics	Common Applications
Lead-Acid Battery	Gaston Planté (1859)	- High energy-to-volume ratio, low energy-to-weight ratio - Strong surge currents - Inexpensive - Holds charge for up to 3 years	- Automotive (car batteries) - Emergency power backup

Nickel-Cadmium (NiCad) Battery	-	- Fast and even discharge - Varying discharge rates - Inexpensive - Used in small electronics and toys	- Toys - TV remotes - Small electronic devices
Lithium-Ion (LIB) Battery	-	- High energy capacity - No memory effect (except LFP cells) - Low self-discharge - Reversible lithium-ion flow	- Mobile phones - Laptops - Electric vehicles



WHAT ARE THE INITIATIVES LAUNCHED BY THE GOVT OF INDIA?

1. Subsidies:

PM E-DRIVE Scheme: ₹10,900 crore for subsidizing charging stations for two- and three-wheelers. FAME-II & Advanced Chemistry Cell PLI Schemes: Incentives for EVs, batteries, and storage systems manufacturers.

2. Charging Infrastructure:

Revised guidelines from the Ministry of Power to expand public charging infrastructure. Oil Marketing Companies to set up EV stations in cities and on highways.

3. Manufacturing Incentives:

PLI Scheme: Financial incentives for EV and battery manufacturers.

SPMEPCI (March 2024): Promotes manufacturing of electric passenger cars.

4. Other Initiatives:

Battery Swapping Policy: This policy encourages battery swapping as a viable alternative to charging, helping reduce downtime for EVs and promoting more sustainable usage of batteries.

Green Hydrogen Mission: This initiative supports the development and manufacturing of fuel cells and green hydrogen technology, which are expected to decarbonize the transportation sector. EV-Mission: Aimed at fostering research and development in EV adoption, this mission supports the innovation of new technologies and solutions to advance the EV ecosystem in India.

5. **Tax Incentives:** The Indian government has reduced the Goods and Services Tax (GST) on electric vehicles and chargers, making EVs more affordable and attractive to buyers.

WHY INDIA IS FOCUSING ON EV- BATTERIES

1. **Environmental Impact:** EVs are central to reducing carbon emissions, and batteries are the heart of these vehicles.
2. **Energy Security:** Developing domestic battery production reduces reliance on foreign imports, ensuring a stable supply and minimizing risks from supply chain disruptions.
3. **Economic Growth:** A robust EV battery manufacturing industry can generate jobs, stimulate growth, and support India's green economy.

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4. **Government Initiatives:** Policies like the Production Linked Incentive (PLI) scheme are encouraging domestic EV battery manufacturing.
5. **Technological Advancement:** India aims to advance in battery technology to produce high-performance, cost-effective batteries.
6. **Market Potential:** With a large and growing population, India's EV market is expected to expand, making battery production a promising sector.

CHALLENGES TO BECOME SELF-RELIANT IN EV BATTERIES

1. **Raw Material Dependency:** India depends heavily on imports of essential materials like lithium, cobalt, and nickel needed for batteries.
2. **Supply Chain Complexity:** Developing a local supply chain, including recycling facilities, is crucial for sustainable battery production.
3. **High Initial Costs:** The high upfront costs of EVs remain a barrier to adoption for many consumers.
4. **Charging Infrastructure:** Widespread and accessible charging infrastructure is essential to ease range anxiety and drive EV usage.
5. **Technological Gaps:** Lack of advanced research and development in battery technology.
6. **Skilled Workforce Shortage:** Insufficient expertise in battery manufacturing and engineering.
7. **Regulatory Uncertainty:** Inconsistent policies around battery production and recycling hinder long-term investment.

CONCLUSION

India is focusing on EV batteries to reduce carbon emissions, enhance energy security, and promote economic growth. Government initiatives like the PLI scheme for battery manufacturing and subsidies for charging infrastructure are key to boosting domestic production and reducing import dependency. Challenges such as raw material dependency, supply chain issues, and high initial costs remain. Overcoming technological gaps, workforce shortages, and regulatory uncertainty is vital for achieving self-reliance in EV battery production. With strong market potential and supportive policies, India is well-positioned to become a leader in the EV sector.

NATIONAL GEOSPATIAL POLICY: POWERING INDIA'S VISION FOR VIKSIT BHARAT

WHY IN THE NEWS?

The National Geospatial Policy, 2022, launched by the Government of India, is in the news for its transformative approach to making India a global leader in geospatial technology. The policy focuses on liberalizing access to geospatial data, ensuring publicly funded datasets are openly available, and fostering innovation across governance, businesses, and academia. Key goals include developing a high-resolution mapping system and a Digital Elevation Model (DEM) by 2030. The policy aims to strengthen institutional frameworks, enhance national coordination, and promote the reuse of geospatial data, paving the way for economic growth and technological advancement.

WHAT IS GEOSPATIAL DATA?

Geospatial data refers to information that describes objects, events, or features with a specific location on or near the Earth's surface. It combines location (coordinates), attributes (characteristics of the object), and temporal information (time or lifespan). Geospatial data can be static (e.g., a piece of equipment's location) or dynamic (e.g., the movement of a vehicle or the spread of disease). This data is gathered from diverse sources like satellite imagery, weather data, census data, social media, and more. It's most valuable when shared, analyzed, and combined with traditional data. Geospatial analytics enhances data by adding location and time, creating visualizations such as maps and graphs that reveal patterns and insights for better predictions. Geospatial Information Systems (GIS) visualize and map this data, enabling applications like overlaying hurricane data with lightning strike risk areas.

WHAT IS NATIONAL GEOSPATIAL POLICY?

The National Geospatial Policy 2022 is a strategic framework introduced by the Government of India on December 28, 2022, aimed at leveraging geospatial technologies to promote national development, economic growth, and global leadership in the geospatial sector. This policy envisions India as a global leader in geospatial data usage and technology by creating an enabling environment for its widespread adoption across various sectors such as governance, business, academia, and citizen services.

GOALS OF THE NATIONAL GEOSPATIAL POLICY(NGP)

1. BY 2025

Establish an enabling policy and legal framework to support the liberalization of the geospatial sector and democratization of data. Enhance availability and accessibility of high-quality location data across sectors to drive innovation and enterprise. Develop a unified digital interface for accessing geospatial data collected through public funds. Redefine the National Geodetic Framework using modern positioning technologies with online accessibility. Create a high-accuracy geoid model for the entire country.

Strengthen national and sub-national geospatial-governance by fostering collaboration between the government, private sector, academia, and civil society.

2. By 2030

Conduct high-resolution topographical surveys (5–10 cm for urban/rural areas and 50–100 cm for forests/wastelands). Develop a high-accuracy Digital Elevation Model (DEM) (25 cm for plains, 1–3 m for hilly/mountainous areas). Establish a Geospatial Knowledge Infrastructure (GKI) underpinned by an Integrated Data and Information Framework. Enhance geospatial skills, capabilities, and awareness to meet future technological and economic demands.

3. By 2035

Generate high-resolution bathymetric geospatial data for inland waters and deep-sea topography to support the Blue Economy. Survey and map sub-surface infrastructure in major cities and towns. Develop a National Digital Twin for major urban centres, creating digital replicas to improve urban planning and management.

KEY FOCUS AREAS OF THE NATIONAL GEOSPATIAL POLICY

1. **Geospatial for Transformation & SDGs:** The policy positions geospatial technology and data as key drivers for achieving Sustainable Development Goals (SDGs), enhancing efficiency across sectors, and ensuring transparency in governance.

2. **Atmanirbhar Bharat & Self-Reliance:** Recognizing the need for locally relevant geospatial data, the policy aims to foster a self-reliant geospatial ecosystem, empowering Indian companies to compete globally and reduce dependency on foreign providers.

3. **Global Best Practices & IGIF:** Adopting international frameworks like the Integrated Geospatial Information Framework (IGIF) under UN-GGIM, the policy strengthens India's national spatial information management.

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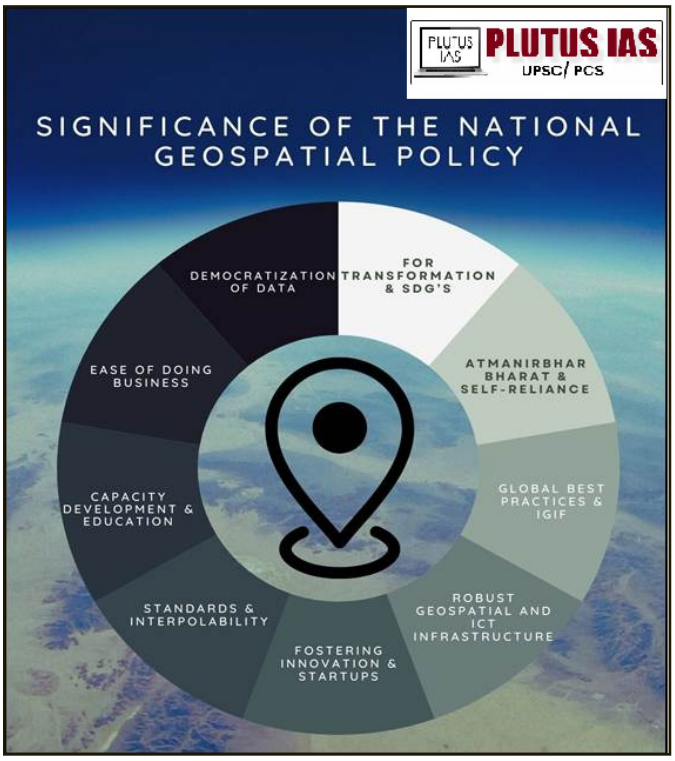
4. **Robust Geospatial & ICT Infrastructure:** Establishing a well-defined data custodianship model to ensure the collection, management, and real-time accessibility of high-quality geospatial data for cross-sector collaboration.
5. **Fostering Innovation & Startups:** Encouraging startups, R&D, and emerging technologies, the policy promotes regulatory modernization and bridges the geospatial digital divide.
6. **Standards & Interoperability:** Advocating open standards, open data, and compliance frameworks, the policy ensures seamless integration and interoperability of geospatial information.
7. **Capacity Development & Education:** Promoting geospatial education from school levels alongside standardized certifications and skill development programs to sustain long-term industry growth.
8. **Ease of Doing Business:** Continued policy liberalization to attract investment, facilitate business-friendly regulations, and support geospatial enterprises.
9. **Democratization of Data:** Survey of India (SoI) and other publicly funded geospatial data will be treated as a public good, ensuring easy access and utilization for all stakeholders.

NATIONAL GEOSPATIAL POLICY IN ACTION:

1. **PM Gati Shakti:** Integrates geospatial data for efficient infrastructure development across multiple sectors, enhancing coordination between ministries and improving project planning.
2. **National Geospatial Data Repository:** A centralized platform for seamless sharing and access to high-quality geospatial data across sectors, supporting better governance and business decisions.
3. **Operation Dronagiri:** A pilot project that demonstrates the practical use of geospatial technologies in urban planning, disaster management, and governance. It includes an Integrated Geospatial Data Sharing Interface for better cross-sector collaboration.
4. **Survey of India (SoI):** The establishment of the CORS network for high-accuracy location data and the SVAMITVA Scheme, which uses drone technology to map villages and streamline land records.
5. **Innovation and Startups:** Encourages the development of geospatial technology parks, incubation centres, and partnerships with academia and the private sector for research and product development.
6. **Education and Capacity Building:** Promotes geospatial training programs and skill development to support the growing industry.
7. **Private Sector Engagement:** Promotes open data access and business-friendly regulations to drive innovation and private sector growth in the geospatial sector.
8. **Sustainable Development Goals (SDGs):** Leverages geospatial data for efficient planning in sectors like agriculture, urban development, and environmental conservation, contributing to India's SDGs.

SIGINIFNACE OF NATIONAL GEOSPATIAL POLICY



CHALLENGES IN NATIONAL GEOSPATIAL POLICY IMPLEMENTATION:

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1. **Data Privacy and Security:** Open access to geospatial data raises concerns about national security and citizen privacy.
2. **Data Quality and Standardization:** Ensuring consistent, high-quality, and standardized geospatial data across sectors is challenging.
3. **Infrastructure and Technology Gaps:** Lack of infrastructure and technological limitations, especially in remote areas, hinder data collection and sharing.
4. **Skill Shortages:** There's a shortage of trained professionals in geospatial technologies and insufficient educational integration.
5. **Financial Constraints:** Limited funding for infrastructure development, surveys, and long-term projects.
6. **Regulatory and Policy Hurdles:** Regulatory resistance and unclear policies may slow liberalization and private sector involvement.
7. **PPP Challenges:** Private sector reluctance due to data security concerns and unclear profit models.
8. **Inclusion and Equity:** Unequal access to technology, especially in remote areas, may hinder inclusive development.
9. **Environmental and Social Concerns:** Large-scale data collection raises environmental and social issues, including land rights and surveillance concerns.

WAY FORWARD

1. **Enhance Data Quality and Standardization:** Ensure consistent, accurate, and high-quality geospatial data across all sectors through standardized protocols and frameworks.
2. **Strengthen Infrastructure:** Develop robust technological infrastructure, especially in remote and rural areas, to enable better data collection, sharing, and access.
3. **Build a Skilled Workforce:** Invest in education and training programs to develop a workforce proficient in geospatial technologies, supporting industry growth and innovation.
4. **Promote Public-Private Partnerships (PPP):** Encourage private sector involvement through clear regulatory frameworks, incentives, and collaboration to drive innovation and investment in geospatial technologies.
5. **Ensure Data Privacy and Security:** Address concerns over data privacy by implementing secure systems for data sharing and access, balancing transparency with national security.
6. **Foster Inclusive Development:** Ensure equitable access to geospatial technologies and data, bridging the digital divide and empowering remote and underserved regions.

CONCLUSION

The National Geospatial Policy 2022 is a transformative step towards unlocking the potential of geospatial data for national development. By addressing challenges in data access, quality, and infrastructure, India can leverage geospatial technology to drive growth, innovation, and sustainable development across various sectors. The policy's focus on liberalizing data access, fostering public-private partnerships, and enhancing skill development will play a crucial role in accelerating the adoption of geospatial technologies across governance, businesses, and academia.

INDIA'S AI REVOLUTION : A ROADMAP TO VIKSIT BHARAT

WHY IN THE NEWS?

India is rapidly emerging as a global AI leader, with the government actively shaping an inclusive AI ecosystem. For the first time, AI resources like computing power, GPUs, and research opportunities are becoming widely accessible and affordable. Through initiatives like the IndiaAI Mission and Centres of Excellence for AI, the government is empowering students, startups, and innovators, ensuring a level playing field. These efforts align with the vision of Viksit Bharat 2047, leveraging AI for economic growth, governance, and societal progress.

AI COMPUTE AND SEMICONDUCTOR INFRASTRUCTURE

Advancing AI with Open Data and Centres of Excellence (CoE)

Data is the fuel for AI, and ensuring open and accessible data is key to fostering innovation. India's Open Data Initiative: The National Data Governance Framework Policy (NDGFP) promotes open government data, enabling startups and researchers to leverage public datasets for AI model training. AI Centres of Excellence (CoE): The government is setting up AI CoEs under MeitY (Ministry of Electronics and IT) in collaboration with academic institutions like IITs and IISc to drive AI research and innovation. Example: NASSCOM's AI CoEs are working on projects related to healthcare, agriculture, and smart governance, enabling AI adoption across multiple sectors.

INDIA'S AI MODELS & LANGUAGE TECHNOLOGIES

India's linguistic diversity necessitates AI models that cater to multiple languages, making Natural Language Processing (NLP) a key focus area. Bhashini Initiative: The Bhashini project, launched under Digital India, focuses on creating AI-powered language models that support Indic languages, ensuring digital inclusivity. Indian Large Language Models (LLMs): Startups like Sarvam AI, Krutrim AI, and AI4Bharat are building LLMs trained on Indic datasets to facilitate AI-driven applications in local languages. Example: AI models like GPT-4 and Llama 2 are being adapted for Indian languages through initiatives by IIT Madras and AI4Bharat, improving accessibility in education, governance, and customer services.

AI INTEGRATION WITH DIGITAL PUBLIC INFRASTRUCTURE

India's Digital Public Infrastructure (DPI), including Aadhaar, UPI, and CoWIN, is a model for global digital transformation. AI integration is set to enhance these platforms significantly.

AI-driven Aadhaar & e-Governance: AI is being used for fraud detection in Aadhaar authentication, improving service delivery.

AI in Healthcare & CoWIN Expansion: AI models helped optimize vaccine distribution via CoWIN, and similar technologies are now aiding Ayushman Bharat Digital Mission. AI in Financial Inclusion: AI-powered chatbots and voice assistants are making financial services accessible to rural populations through platforms like Jan Dhan Yojana and DigiLocker.

AI-powered UPI & Fintech Growth: AI is improving fraud detection, transaction security, and personalized financial services in platforms like PhonePe, Paytm, and Google Pay. AI for Governance & Public Services: AI-enabled chatbots are enhancing citizen engagement on

platforms like MyGov and AI-driven analytics are optimizing government decision-making. Example: ONDC (Open Network for Digital Commerce) is using AI to democratize e-commerce by enabling small retailers to compete with large players like Amazon and Flipkart. AI in Smart Cities & Urban Planning: AI-driven traffic management systems, waste management solutions, and predictive policing models are improving urban governance in cities like Bangalore and Pune. AI in Agriculture & Rural Development: AI-powered weather prediction models and crop advisory systems like Krishi 24x7 and Kisan AI Chatbots are supporting farmers with real-time insights. India's Digital Public Infrastructure (DPI), including Aadhaar, UPI, and CoWIN, is a model for global digital transformation. AI integration is set to enhance these platforms significantly.

AI TALENT & WORKFORCE DEVELOPMENT

Building a skilled AI workforce is essential for sustaining long-term AI innovation. AI in Education: Institutions like IITs, IIITs, and NITs are integrating AI courses into their curriculum. NASSCOM's FutureSkills Prime is training professionals in AI and ML. AI for Rural & MSME Workforce: Initiatives like the Skill India Mission are offering AI upskilling programs for small businesses and rural workers. Government-Led AI Skilling Programs: The Pradhan Mantri Kaushal Vikas Yojana (PMKVY) now includes AI and data science courses to boost employability. Corporate AI Training Initiatives: Tech giants like Google, Microsoft, and IBM are partnering with Indian universities to offer AI certifications. AI Research & Fellowships: SERB (Science and Engineering Research Board) and MeitY are funding AI Ph.D. fellowships and research grants to encourage deep AI expertise. Example: Google and Microsoft have launched AI skilling programs targeting 2 million Indians, ensuring AI literacy at multiple levels.AI in Schools: The CBSE AI Curriculum is introducing AI literacy atthe school level, ensuring early exposure to AI concepts among students. Women in AI: Initiatives like WiDS (Women in Data Science) India and NASSCOM's Women in AI Program aim to bridge the gender gap in AI careers. Building a skilled AI workforce is essential for sustaining long-term AI innovation.

AI ADOPTION & INDUSTRY GROWTH

The AI-driven industrial revolution is reshaping multiple sectors in India.

AIinManufacturing:AI-poweredpredictivemaintenance and automation solutions, such as those by TCS and Bosch, are enhancing operational efficiency in factories.

AI in Smart Cities: AI-driven traffic management systems in cities like Bangalore and Delhi are improving urban mobility and reducing congestion.

AI in Retail: Companies like Reliance Jio and Flipkart leverage AI for personalized recommendations, supply chain optimization, and fraud detection.

AI in Governance: The government is using AI in tax compliance (GSTN AI analytics) and AI-driven legal case management to enhance efficiency.

AI in Defence: The Indian armed forces are integrating AI-powered surveillance, autonomous drones, and cybersecurity solutions for national security. AI in **Logistics:** AI-driven route optimization and automated warehousing solutions by firms like Delhivery and Blue Dart are revolutionizing supply chain management

AI in Healthcare: AI-driven diagnostics (e.g., Wadhwani AI's tuberculosis detection models) are improving public health outcomes.

AI in Agriculture: AI-based precision farming solutions like AgNext and Gramophone are optimizing crop yields and reducing resource wastage.

AI in Finance: Fintech firms like Razorpay and Paytm leverage AI for fraud detection and personalized financial services.

Example: The AI-powered SATYABHAMA platform in the mining sector is automating compliance and exploration processes.

A PRAGMATIC AI REGULATION APPROACH

Balancing AI innovation with ethical and security concerns is crucial for responsible AI deployment.

Draft National AI Policy: The Indian government is developing a comprehensive AI framework focusing on safety, ethics, and accountability.

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Sector-Specific AI Guidelines: RBI's AI guidelines for fintech and MeitY's AI framework for public services ensure responsible AI use.

AI & Cybersecurity Measures: Strengthening AI-driven cybersecurity frameworks to counter threats from deepfakes, data breaches, and algorithmic biases.

AI & Privacy Laws: Integrating AI regulations with the Digital Personal Data Protection Act (DPDP Act, 2023) to protect user rights.

AI Ethics Committees: Establishing AI ethics boards in major institutions to assess and mitigate risks associated with AI applications.

Example: India has rejected overly restrictive AI regulations like EU's AI Act, opting for a balanced, innovation-friendly approach that protects users while fostering growth.

CONCLUSION

India's AI revolution is paving the way for 'Viksit Bharat', with advancements in semiconductor infrastructure, AI compute power, and digital public infrastructure. The government's push for open data, AI skilling programs, and responsible AI regulation ensures sustainable AI-driven economic growth. By fostering a thriving AI ecosystem, India is poised to become a global AI powerhouse, driving innovation and inclusive development towards a prosperous digital future.

EMPOWERING YOUNG MINDS THROUGH SCIENCE: THE LEGACY OF C.V. RAMAN

WHY IN THE NEWS?

National Science Day celebrated annually on February 28 commemorates the anniversary of Sir C.V. Raman's groundbreaking discovery of the Raman Effect. National Science Day 2025 is in the spotlight due to its theme, "Empowering Indian Youth for Global Leadership in Science & Innovation for VIKSIT BHARAT." This theme highlights the essential role of scientific research, technological advancement, and youth-driven innovation in India's roadmap for development, aligning with the Viksit Bharat 2047 vision.

NATIONAL SCIENCE DAY & WHEN WAS IT STARTED?

National Science Day was first observed in 1987 following the recommendation of the National Council for Science and Technology Communication (NCSTC) to commemorate the discovery of the Raman Effect on February 28, 1928. The day serves to inspire scientific temperament among students and the public, promoting awareness about the role of science in everyday life. A 2021 survey by the Department of Science and Technology (DST), India, found that over 60% of Indian students credited National Science Day activities with increasing their interest in scientific research.

THEME OF NATIONAL SCIENCE DAY 2025

Every year, National Science Day is celebrated with a unique theme that highlights a particular aspect of scientific development. The theme for 2025 is yet to be officially announced, but it is expected to focus on emerging technologies and their role in sustainable development. The themes of previous years have ranged from "Science and Technology for a Sustainable Future" to "Global Science for Global Well-being", emphasizing the significance of science in addressing global challenges.

C.V. RAMAN: A BRIEF ABOUT HIS PERSONALITY

Sir Chandrasekhara Venkata Raman was born on November 7, 1888, in Tiruchirapalli, Tamil Nadu, India. From an early age, he exhibited an exceptional aptitude for science and mathematics. He pursued his higher education at Presidency College, Madras, where he topped his university and earned a gold medal in physics. Raman's passion for research led him to work at the Indian Association for the Cultivation of Science (IACS), Kolkata, where he made his historic discovery. His charismatic personality, deep curiosity, and relentless pursuit of knowledge made him an inspiration for countless aspiring scientists. Throughout his life, he emphasized the importance of indigenous scientific research and encouraged young minds to explore the mysteries of nature. In recognition of his immense contribution, he was awarded the Bharat Ratna, India's highest civilian award, in 1954.

DISCOVERIES OF C.V. RAMAN

While C.V. Raman is best known for his discovery of the Raman Effect, he made significant contributions in various fields of physics, including: Scattering of Light: His extensive research on light scattering led to the discovery of the Raman Effect. Acoustics: He studied the physics of musical instruments, explaining the unique sound quality of Indian string instruments such as the veena and violin. Optics and Crystallography: Raman investigated the optical properties of several crystals, contributing to the understanding of their molecular structures. Physiology of Vision: He conducted research on the human eye, particularly the physics of light perception. According to a report published in Nature (1931), Raman's studies on diamond's light-scattering properties were instrumental in the development of early diamond synthesis techniques.

WHAT IS THE RAMAN EFFECT?

The Raman Effect is a phenomenon in which light, when passing through a transparent substance, is scattered, and some of the scattered light undergoes a shift in wavelength. This change in wavelength is due to the interaction of photons with the molecular vibrations of the medium.

MECHANISM OF THE RAMAN EFFECT

- **Incident Light:** A beam of monochromatic light (usually from a laser) is directed at a sample.
- **Interaction with Molecules:** The light photons interact with the molecules in the substance, transferring energy to or from them.
- **Scattered Light:** Most scattered photons have the same energy as the incident photons (Rayleigh Scattering), but a small fraction gains or loses energy due to molecular vibrations.
- **Frequency Shift:** The energy change corresponds to a shift in frequency, which provides unique insights into the molecular composition of the substance. A 2018 study by MIT demonstrated how Raman spectroscopy can accurately identify the chemical composition of unknown substances in under 10 milliseconds, making it invaluable in rapid diagnostic applications.

APPLICATIONS OF RAMAN EFFECT IN DIVERSE FIELDS

The Raman Effect has found extensive applications in various scientific and industrial domains:

Chemistry and Material Science: Identification of molecular structures. Detection of chemical compositions in unknown substances

Medical Science and Pharmaceuticals: Non-invasive diagnosis of diseases such as cancer. Drug analysis and quality control. A 2020 report by Harvard Medical School showed that Raman spectroscopy could detect early-stage cancer with 97% accuracy.

Forensic Science: Identification of drugs, explosives, and counterfeit products Crime scene investigations through chemical analysis

Nanotechnology: Characterization of nanomaterials and graphene structures

A 2021 IEEE research paper highlighted the use of Raman spectroscopy in semiconductor manufacturing for precise quality control. Environmental Science: Detection of pollutants and toxic chemicals in air and water Monitoring climate changes through atmospheric studies Astrophysics and Space Science: Analysis of the composition of distant planets and celestial bodies NASA's Perseverance Rover used Raman spectroscopy to detect potential bio-signatures on Mars in 2021. Raman spectroscopy has become an indispensable tool in modern scientific research, showcasing the brilliance of Raman's discovery.

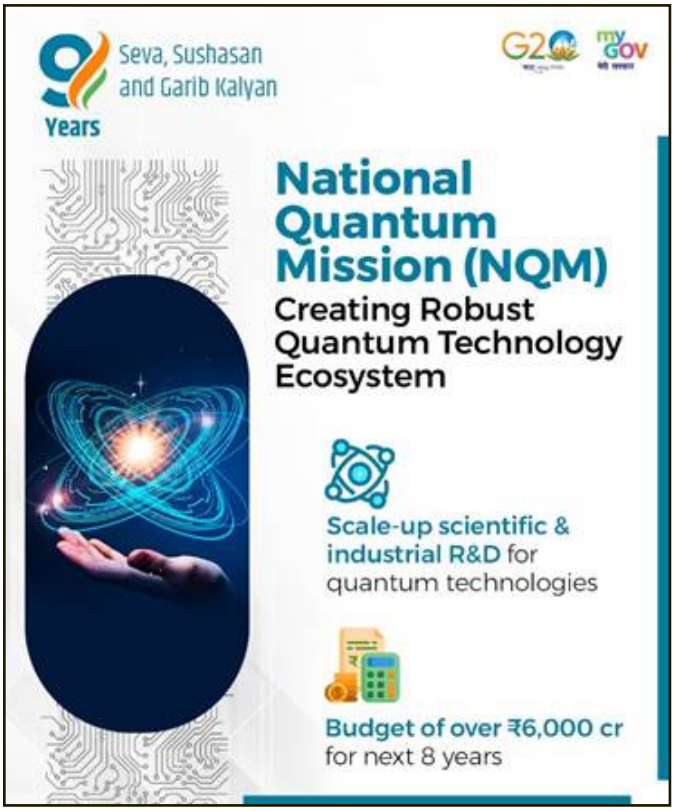
CONCLUSION

Sir C.V. Raman was a visionary scientist whose contributions to physics revolutionized our understanding of light and matter. His discovery of the Raman Effect not only won him the Nobel Prize in Physics in 1930 but also paved the way for numerous technological advancements across various fields. The celebration of National Science Day on February 28th each year serves as a tribute to his legacy and an inspiration for future generations to pursue scientific endeavors. With Raman's pioneering work continuing to influence modern science, his contributions remain immortal in the annals of history. His life and achievements remind us of the power of curiosity, perseverance, and the quest for knowledge in shaping the world of tomorrow.

NATIONAL QUANTUM MISSION: INDIA'S QUANTUM LEAP

WHY IN THE NEWS?

The National Quantum Mission (NQM) has been making headlines as a groundbreaking initiative by the Government of India to advance quantum technology research and development. Approved by the Union Cabinet on April 19, 2023, the mission is set to run from 2023–24 to 2030–31, with a substantial budget of ₹6,003.65 crore. This mission aims to position India as a global leader in quantum technologies, driving innovations in computing, communication, and cryptography. With the potential to revolutionize industries like healthcare, clean energy, cybersecurity, and climate research, the NQM is seen as a strategic step toward technological self-reliance and economic growth, making it a significant topic of discussion worldwide.



WHAT IS QUANTUM COMPUTING?

Quantum computing is an advanced field of computing that leverages the principles of quantum mechanics to perform calculations much faster than classical computers. Unlike traditional computers, which use bits (0s and 1s) to process data, quantum computers use qubits (quantum bits), which can exist in multiple states at once due to superposition.

KEY PRINCIPLES OF QUANTUM COMPUTING:

1. **Superposition:** A qubit can be both 0 and 1 simultaneously, allowing quantum computers to process vast amounts of information in parallel.
2. **Entanglement:** Qubits can be strongly correlated, meaning a change in one qubit instantly affects another, regardless of distance. This property enables faster and more secure

computations.

3. **Quantum Interference:** Quantum states can interfere with each other, helping optimize and refine computations.

OBJECTIVES OF THE NATIONAL QUANTUM MISSION

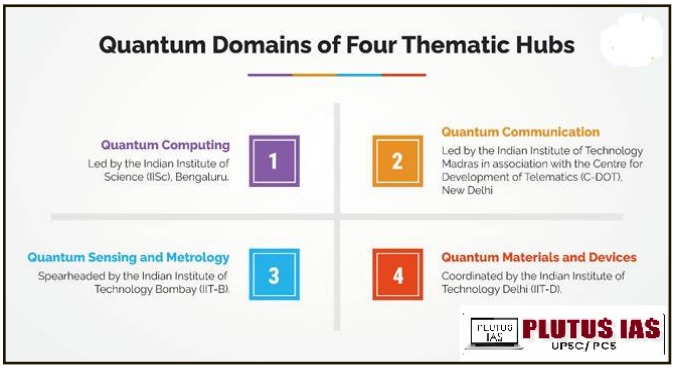
1. **Quantum Computing Evolution:** Develop intermediate-scale quantum computers with 20-50 physical qubits (3 years), 50-100 physical qubits (5 years), and 50-1000 physical qubits (8 years) across platforms like superconducting and photonic technologies to advance computational capabilities.
2. **Satellite-Based Quantum Communication:** Establish satellite-enabled quantum-secured communication between two ground stations over 2000 km within India and extend this technology for long-distance secure quantum communication with other countries.
3. **Inter-City Quantum Key Distribution (QKD):** Implement quantum-secured communication spanning 2000 km using trusted nodes and wavelength division multiplexing (WDM) on existing optical fibre infrastructure, enhancing secure data transmission.
4. **Multi-Node Quantum Networks:** Develop a multi-node quantum network incorporating quantum memories, entanglement swapping, and synchronized quantum repeaters at each node, enabling scalable and robust quantum communication (2-3 nodes).
5. **Advanced Quantum Sensing & Clocks:** Design highly sensitive quantum devices, including magnetometers with 1 femto-Tesla/sqrt(Hz) sensitivity in atomic systems and better than 1 pico-Tesla/sqrt(Hz) in Nitrogen-Vacancy centres, gravity sensors with better than 100 nano-meter/second^2 sensitivity, and atomic clocks with 10^{-19} fractional instability for precision timing, navigation, and secure communication.
6. **Quantum Materials & Devices:** Develop and synthesize next-generation quantum materials such as superconductors, novel semiconductor structures, and topological materials for the fabrication of qubits, single-photon sources/detectors, entangled photon sources, and quantum sensing/metrological devices for applications in computing and communication.

IMPLEMENTATION STRATEGY AND INITIATIVES

The National Quantum Mission is a nationwide initiative driving cutting-edge advancements in quantum technology. As part of this mission, four Thematic Hubs (T-Hubs) have been set up, bringing together 14 Technical Groups across 17 states and 2 Union Territories. These hubs focus on technology innovation, skill development, entrepreneurship, industry partnerships, and global collaborations, ensuring a truly national impact. Women scientists from every corner of the country are actively encouraged to participate and benefit from the mission's exciting programs. The four T-Hubs have been established across leading institutions in India:

1. **Indian Institute of Science (IISc) Bengaluru**
2. **Indian Institute of Technology (IIT), Madras, in association with the Centre for Development of Telematics, New Delhi**
3. **Indian Institute of Technology (IIT), Bombay Indian Institute of Technology (IIT), Delhi.**

These hubs were selected through a rigorous competitive process,s and each hub focuses on a specific quantum domain, driving advancements in Quantum Computing, Quantum Communication, Quantum Sensing & Metrology, and Quantum Materials & Devices.



Hub-Spoke-Spike Model: Each T-Hub will follow the Hub-Spoke-Spike model, fostering a cluster-based network where research projects (Spokes) and individual research groups (Spikes) operate alongside

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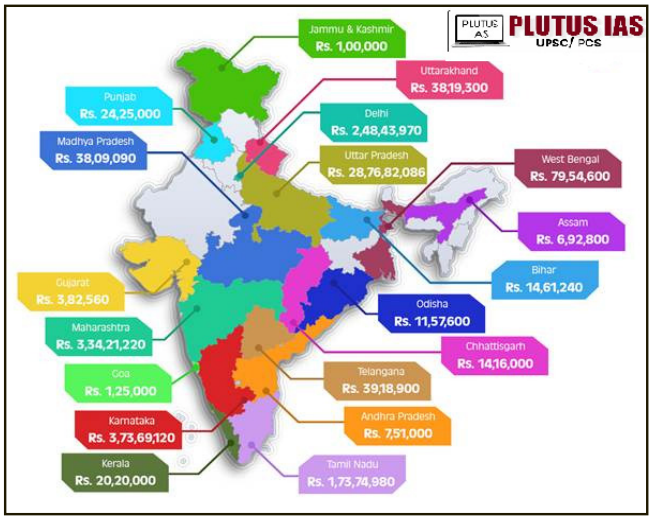
central hubs. This structure enhances collaboration among research institutions, allowing them to share resources and expertise more effectively.

State-wise Funds Allocation: The four T-Hubs selected under NQM collectively involve 152 researchers from 43 institutions nationwide, fostering a collaborative ecosystem to drive research and innovation in quantum technologies. The activities carried out by these hubs include Technology Development, Human Resource Development, Entrepreneurship Development, Industry Collaboration, and International Collaboration.



SIGNIFICANCE OF NATIONAL QUANTUM MISSION

1. **Technological Advancement:** The NQM propels India into the global race for quantum supremacy, fostering innovation in computing, communication, and security.
2. **Economic Growth:** With a budget of ₹6,003.65 crore, the mission can drive investments, create jobs, and boost the tech sector.
3. **Cybersecurity & National Security:** Quantum encryption can significantly enhance data security, making cyber communication unbreakable.
4. **Scientific Innovation:** Encourages indigenous research, fostering advancements in quantum computing, materials science, and precision sensing.
5. **Industry & Start-up Ecosystem:** Strengthens partnerships between academia, industry, and startups, driving the commercialization of quantum technologies.
6. **Global Competitiveness:** Positions India as a key player in the quantum revolution, fostering international collaborations and technology exports.
7. **Interdisciplinary Impact:** Advances in quantum science benefit healthcare, clean energy, finance, and logistics through enhanced computational and analytical capabilities.
8. **Human Resource Development:** Establishes a skilled workforce in quantum technology, promoting education and research across premier institutions.

CHALLENGES OF NATIONAL QUANTUM MISSION

1. **Technological Barriers:** Developing stable qubits and error correction mechanisms remains a significant challenge.
2. **High Cost of Implementation:** Quantum technology requires substantial investment in infrastructure, research, and skilled professionals.
3. **Limited Skilled Workforce:** A shortage of trained quantum scientists and engineers could slow progress.

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4. **International Competition:** Leading nations like the US, China, and the EU are investing heavily in quantum research, creating intense competition.
5. **Scalability Issues:** Building quantum computers with more qubits while maintaining stability and coherence is complex.
6. **Data Security Risks:** While quantum encryption enhances security, adversaries may also develop quantum capabilities to break existing cryptographic protocols.
7. **Industry Readiness:** Indian industries need awareness and investment to integrate quantum solutions into real-world applications.
8. **Infrastructure Constraints:** Establishing quantum labs, computing centers, and network systems across the country requires significant infrastructural development.

WAYS TO MAKE INDIA SELF RELIANT

1. **Strengthening Research & Development:** Increase funding for quantum research, establish dedicated R&D centres, and promote academic-industry collaborations.
2. **Skill Development Programs:** Launch specialized quantum computing courses, fellowships, and training programs to build a strong talent pool.
3. **Encouraging Startups & Entrepreneurship:** Provide grants, tax incentives, and incubation support to quantum technology startups.
4. **Public-Private Partnerships:** Facilitate collaborations between government, academia, and private enterprises to accelerate innovation.
5. **Building Quantum Infrastructure:** Invest in quantum labs, high-performance computing facilities, and secure communication networks.
6. **Enhancing Global Collaborations:** Partner with leading quantum research nations to exchange knowledge, technology, and best practices.
7. **Regulatory & Policy Support:** Develop national policies for quantum technology adoption, ethical AI, and cybersecurity frameworks.
8. **Commercialization of Quantum Technologies:** Focus on developing market-ready quantum solutions for industries such as finance, healthcare, defence, and logistics.

CONCLUSION

The National Quantum Mission (NQM) is more than just a technological initiative—it is a strategic step towards securing India's future in the quantum era. With significant investments, world-class research collaborations, and dedicated innovation hubs, the mission is set to propel India to the forefront of the global quantum revolution. This initiative underscores India's commitment to scientific excellence, economic resilience, and national security in a world where quantum technologies are poised to reshape industries and societies.

PRELIMS QUESTIONS:

1. Which of the following statements are correct about India's Electric Vehicle (EV) initiatives?

1. The government has launched the PM E-DRIVE scheme to subsidize charging stations for two- and three-wheelers.
2. The Production Linked Incentive (PLI) scheme aims to promote the manufacturing of electric passenger cars only.
3. India's government is actively working on a Battery Swapping Policy to reduce downtime for electric vehicles.

Select the correct answer using the code given below:

A. 1 and 2 only

B. 2 and 3 only

C. 1 and 3 only

D. 1, 2 and 3

2. With reference to the National Geospatial Policy 2022, which of the following statements is/are correct?

1. The policy aims to make all geospatial data generated with public funds freely accessible to citizens.
2. The policy envisions the creation of a National Digital Twin for major urban centres by 2035.

Select the correct answer using the code given below:

A. 1 only

B. 2 only

C. Both 1 and 2

D. Neither 1 nor 2

3. With reference to India's semiconductor manufacturing initiatives, consider the following statements:

1. The Semicon India Programme was launched to promote domestic semiconductor manufacturing.
2. Micron Technology and Vedanta are among the key players collaborating with India in this sector.
3. The initiative is part of the broader National Supercomputing Mission (NSM).

WHICH OF THE STATEMENTS GIVEN ABOVE IS/ ARE CORRECT?

A. 1 and 2 only

B. 2 and 3 only

C. 1 and 3 only

D. 1, 2, and 3

4. The theme for National Science Day 2025 is:

A. "Advancing AI for a Sustainable Future"

B. "Science for Society and Sustainable Development"

C. "Empowering Indian Youth for Global Leadership in Science & Innovation for VIKSIT BHARAT"

D. "Harnessing Biotechnology for a Better Tomorrow"

5. With reference to the National Quantum Mission (NQM), consider the following statements:

1. The mission was approved by the Union Cabinet in 2022.
2. It aims to establish satellite-enabled quantum-secured communication over 2000 km within India.
3. The mission focuses only on quantum computing and does not include quantum communication or sensing.

How many of the above-given statements are correct?

A. Only one

B. Only two

C. All three

D. None

ANSWER

1. C	2. C	3. A	4. C	5. A

MAINS QUESTIONS:

1. Discuss the various government initiatives aimed at promoting electric vehicle (EV) adoption and battery manufacturing in India. How do these initiatives support India's green energy goals?

(250 words, 15 marks)

2. Discuss the role of public-private partnerships (PPP) in the implementation of the National Geospatial Policy 2022. What are the potential challenges and solutions in fostering effective collaboration?

(250 words, 15 marks)

3. Discuss the role of Artificial Intelligence (AI) in India's vision for Viksit Bharat 2047. Highlight key initiatives taken by the government to promote AI-driven economic and social development.

(250 words, 15 marks)

4. Explain the mechanism of the Raman Effect and discuss its applications in diverse fields such as medicine, space exploration, and environmental science.

(250 words, 15 marks)

5. Discuss the significance of the National Quantum Mission (NQM) in the context of India's technological and economic growth. Highlight the challenges and suggest measures to make India self-reliant in quantum technology.

(250 words, 15 marks)

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SECURITY IN BORDER AREAS

WHY IN THE NEWS?

Home Minister Amit Shah has directed authorities to dismantle networks facilitating the illegal entry, documentation, and settlement of Bangladeshi and Rohingya intruders, citing national security concerns. In a high-level meeting with Delhi's newly elected Chief Minister Rekha Gupta, Shah emphasized strict action against these networks and underperforming police stations. He also called for a crackdown on interstate gangs and narcotics, the appointment of special prosecutors for the 2020 Delhi riots cases, and an expedited police recruitment process. Additionally, he urged DCP-level officers to engage with the public to address grievances. These directives aim to strengthen law enforcement and national security in Delhi.

INDIA AND LAND BORDER:

India shares a 15,106.7 km land border and a 7,516.6 km coastline, including island territories. The land borders with neighbouring countries are as follows:

- **Bangladesh:** 4,096.7 km
- **China:** 3,488 km
- **Pakistan:** 3,323 km
- **Nepal:** 1,751 km
- **Myanmar:** 1,643 km
- **Bhutan:** 699 km
- **Afghanistan:** 106 km

In January 2004, the Ministry of Home Affairs created the Department of Border Management to focus on securing international land and coastal borders. Its responsibilities include strengthening border policing, infrastructure creation like roads and fencing, and implementing the Border Area Development Programme. The department also oversees the construction of 13 Integrated Check Posts (ICPs) and the establishment of the Land Ports Authority of India (LPAI).

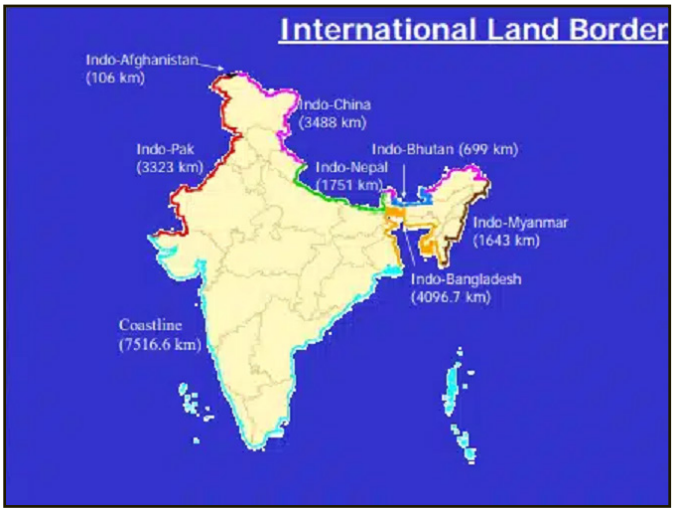
Key initiatives by the Department of Border Management include:

Expedited construction of fencing, floodlighting, and roads along the Indo-Bangladesh, Indo-Pakistan, and Indo-Myanmar borders.

Strategic roads along the India-China, Indo-Nepal, and Indo-Bhutan borders.

Deployment of high-tech surveillance equipment along international borders.

Construction of 509 Border Out Posts (BOPs) for the BSF. Implementation of Coastal Security Schemes. Development of Integrated Check Posts (ICPs) and management through LPAI.



THREAT TO NATIONAL SECURITY IN LAND BORDER AREAS

1. **Cross-border terrorism:** Militant groups operating across borders pose a significant threat, infiltrating and conducting attacks, often with the support or tolerance of neighbouring countries.
2. **Illegal immigration:** Porous borders allow large-scale illegal entry, potentially changing demographics, straining public services, and fueling social tensions.
3. **Smuggling activities:** Poorly monitored borders facilitate the trafficking of drugs, arms, and other illicit goods, empowering criminal networks and threatening national security.
4. **Espionage and intelligence gathering:** Border regions can be exploited by hostile actors to gather sensitive information, threatening national security by compromising military and political secrets.
5. **Border disputes:** Unresolved territorial claims lead to diplomatic tensions, sometimes escalating into military confrontations, especially in contested border regions.
6. **Terrain challenges:** Geographical features like mountains, forests, and rivers make border surveillance and patrolling difficult, creating gaps in security coverage.
7. **Lack of infrastructure:** Insufficient infrastructure-such as roads, surveillance technology, and border posts—leaves bordersvulnerable to breaches, delays in response, and difficulties in monitoring.

GOVT. INITIATIVES TO PROTECT LAND BORDERS

1. **Infrastructure Development: Fencing & Flood-lighting:** Implemented on critical borders like India-Pakistan and India-Bangladesh.

Border Roads & Posts: Construction of roads and Border Outposts (BOPs) for better surveillance and troop mobility, e.g., the Trans-Arunachal Highway. Vibrant Villages Programme: Development of villag-es along the LAC to prevent insurgent support.

2. **Technology Integration:** CIBMS: Integration of sensors, surveillance, and command systems for real-time border monitoring.
3. **UAVs/Drones:** Deployed for surveillance and infiltration monitoring, especially on sensitive borders.
4. **Development Programs:** Border Area Development Programme (BADP): Focus on infrastructure, healthcare, education, and skill development for border populations. Coastal Security Scheme (CSS): Enhances maritime security with vessel tracking biometric IDs for fishermen.
5. **Bilateral Cooperation:** Strengthening coopera-tion with neighbouring countries through joint working groups and national-level meetings to manage border-related issues.

CHALLENGES IN THE HANDLING OF LAND BORDER SECURITY

1. **Porous Borders:** Particularly with Nepal, Bhutan, Myanmar, and Bangladesh, allowing illegal immigration, infiltration, and smuggling.
2. **Difficult Terrain:** Mountainous, forested, and riverine areas complicate monitoring and security operations.
3. **Shortage of Manpower:** Over 83,000 vacancies in border guarding forces make it difficult to secure borders effectively.
4. **Inadequate Infrastructure:** Limited mobility and logistics, especially in forward areas.
5. **Cross-border Terrorism & Insurgency:** Terrorist infiltration and insurgent sanctuaries in

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neighbouring countries pose security threats.

6. Coordination Issues: Multiple agencies are involved, leading to command and control challenges.

RECOMMENDATION BY COMMITTEES

1. **GoM (2001):** Creation of the Department of Border Management, better coordination, and integrated check posts (ICPs).
2. **Kargil Review Committee (1999):** Improved infrastructure and coordination between military and paramilitary forces.
3. **BSF Reports:** Focus on enhanced fencing, floodlighting, and modern surveillance.
4. **Nirmal Committee (2015):** Expedited border road and surveillance infrastructure development.
5. **NSAB Recommendations:** Creation of a National Border Security Agency (NBSA) and improved intelligence sharing.
6. **Standing Committee on Home Affairs (2018):** Recommended manpower increase and improved surveillance along Indo-China borders.

CONCLUSION

India's land border security is crucial due to challenges like cross-border terrorism, illegal immigration, smuggling, espionage, and unresolved territorial disputes. The Department of Border Management has initiated key measures, such as fencing, road construction, and advanced surveillance systems (CIBMS, UAVs). However, issues like porous borders, difficult terrain, manpower shortages, and inadequate infrastructure persist. Committees like the GoM (2001) and Kargil Review Committee (1999) have recommended better coordination, enhanced infrastructure, and manpower. Home Minister Amit Shah's recent directives focus on addressing illegal immigration and strengthening law enforcement. Ongoing infrastructure development, technological integration, and cooperation with neighbouring countries are vital for securing India's borders and national security.

COUNTER-TERRORISM: STRENGTH, STRATEGY, AND SECURITY

WHY IN THE NEWS?

Home Minister Amit Shah reaffirmed the government's zero-tolerance policy towards terrorism and asserted that Naxalism in India will be eradicated by March 2026. Speaking in the Rajya Sabha during a debate on the functioning of the Home Ministry, he highlighted the Narendra Modi government's achievement in abrogating Article 370, fulfilling the vision of the Constitution's architects. He emphasised that Article 370 was the root of separatism in Jammu & Kashmir and that its removal ensured national unity under one constitution and one flag. Shah also criticised past governments for prolonging Article 370 due to vote-bank politics despite its temporary provision in the Constitution.

WHAT IS TERRORISM IN INDIA?

Terrorism in India refers to violent acts committed by individuals or groups to create fear, disrupt peace, and achieve political, religious, or ideological objectives. India has faced terrorism from various groups, including separatist movements, insurgent organizations, religious extremists, and foreign-sponsored terrorist networks.

IN THE CONTEXT OF INDIA'S PAST INCIDENTS OF TERRORISM

Date	Incident	Location	Terror Group	Casualties	Remarks
March 12, 1993	Mumbai Blasts	Mumbai, Maharashtra	Dawood Ibrahim's D-Company	257 killed, 1,400+ injured	Series of 13 bomb blasts across the city.

December 13, 2001	Indian Parliament Attack	New Delhi	Jaish-e-Mohammed (JeM), Lashkar-e-Taiba (LeT)	9 security personnel, 1 civilian killed	5 terrorists were killed; the attack led to Indo-Pak tensions.
July 11, 2006	Mumbai Train Blasts	Mumbai, Maharashtra	Indian Mujahideen (IM), Lashkar-e-Taiba (LeT)	209 killed, 700+ injured	7 bomb blasts targeted Mumbai's local trains.
November 26-29, 2008	Mumbai Attacks (26/11)	Mumbai, Maharashtra	Lashkar-e-Taiba (LeT)	166 killed, 300+ injured	10 terrorists attacked key locations; Ajmal Kasab was captured.
January 2, 2016	Pathankot Attack	Pathankot, Punjab	Jaish-e-Mohammed (JeM)	7 security personnel killed	Attack on Indian Air Force base.
February 14, 2019	Pulwama Attack	Pulwama, Jammu & Kashmir	Jaish-e-Mohammed (JeM)	40 CRPF personnel killed	A suicide bombing on a CRPF convoy led to a Balakot airstrike.

COUNTER-TERRORISM MEASURES BY GOV OF INDIA.

1. **Unlawful Activities (Prevention) Act (UAPA):** Originally enacted in 1967 and amended multiple times (2008, 2019), this law strengthens India's legal framework against terrorism. It allows the government to ban terrorist organizations and designate individuals as terrorists.
2. **National Investigation Agency (NIA):** Established in 2008 after the Mumbai 26/11 attacks, the NIA is India's central agency for investigating and prosecuting terror-related cases across the country.
3. **Multi-Agency Centre (MAC):** A platform for intelligence-sharing among security agencies, operational since 2001, helping real-time coordination to prevent terrorist activities.
4. **National Security Guard (NSG):** Formed in 1984, the NSG is an elite counter-terrorism force that handles major terrorist incidents, such as the 26/11 Mumbai attacks.
5. **Operation All-Out:** Launched in 2017, this military operation targets terrorists and insurgents in Jammu & Kashmir, with joint efforts from the Indian Army, CRPF, and J&K Police.
6. **Counter-Terrorism Grid (CT Grid):** A national database integrating intelligence and law enforcement data to track and prevent terror-related activities.
7. **Border Security Measures:** India has strengthened its borders with fencing, advanced surveillance systems, drones, and increased patrolling, particularly along the India-Pakistan and India-Bangladesh borders.
8. **Demonetization (2016):** One of its objectives was to curb terror financing by eliminating fake currency, which was used to fund terrorist activities.
9. **Cybersecurity & Anti-Radicalization Efforts:** The government actively monitors social media and online platforms to prevent radicalization and recruitment by terrorist organizations.

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CHALLENGES IN COUNTERING TERRORISM IN INDIA

1. **Cross-Border Terrorism:** Terrorist groups infiltrate India from neighboring countries, especially Pakistan, making security efforts challenging.
2. **Radicalization & Online Extremism:** Extremist ideologies spread through social media and encrypted apps, making detection and prevention difficult.
3. **Intelligence & Coordination Gaps:** Inefficiencies in intelligence-sharing between central and state agencies can delay timely countermeasures.
4. **Terror Financing:** Hawala networks, fake currency, and international funding continue to support terrorist activities despite strict financial monitoring.
5. **Porous Borders:** Long, difficult-to-monitor borders with Pakistan, Bangladesh, and Nepal enable the movement of terrorists and illegal arms.
6. **Judicial & Legal Challenges:** Slow trials, difficulty in securing convictions, and human rights concerns complicate counter-terrorism efforts.
7. **Urban & Lone-Wolf Attacks:** Self-radicalized individuals and urban terrorism pose unpredictable threats, making prevention more difficult.

WAY FORWARD

1. **Strengthening Intelligence Networks:** Enhancing real-time coordination between intelligence agencies and security forces to prevent terrorist activities.
2. **Modernizing Law Enforcement:** Equipping security agencies with advanced technology, AI-based surveillance, and forensic capabilities for efficient counter-terrorism operations.
3. **International Cooperation:** Strengthening diplomatic ties and security partnerships with other countries for intelligence sharing and counter-terrorism efforts.
4. **Counter-Radicalization Programs:** Implementing education and awareness campaigns to prevent youth from being influenced by extremist ideologies.
5. **Securing Borders:** Further improving border fencing, surveillance, and cross-border counter-terrorism operations to curb infiltration.
6. **Tackling Terror Financing:** Strengthening financial monitoring and strict implementation of anti-money laundering laws to disrupt terror funding networks.
7. **Expediting Judicial Processes:** Establishing fast-track courts for terrorism-related cases to ensure swift trials and strict punishments.

CONCLUSION

India has made significant progress in counter-terrorism efforts through legislative measures, intelligence reforms, and military operations. However, emerging threats like cyber terrorism and lone-wolf attacks require adaptive strategies. A multi-pronged approach, including legal, military, intelligence, and diplomatic efforts, will be crucial in ensuring long-term national security.

LEFT-WING EXTREMISM IN INDIA

WHY IN THE NEWS?

Recently, at least 30 Maoists and a policeman were killed in twin encounters in the Bijapur and Kanker districts of Chhattisgarh. These operations, involving nearly 2,200 security personnel from the District Reserve Guard (DRG), Special Task Force (STF), Central Reserve Police Force (CRPF), CoBRA, and Border Security Force (BSF), mark a significant escalation in anti-LWE efforts. This incident pushes the total Maoist casualties in Chhattisgarh beyond 100 for the year, highlighting the intensification of counter-insurgency measures. Security forces recovered a large cache of AK-47 rifles, automatic and semi-automatic weapons during the operation. The increasing success of such operations underscores the impact of coordinated intelligence-

based strikes and the government's commitment to eradicating LWE.

DATA ON LWE AND THE RED CORRIDOR

The 'Red Corridor' refers to regions in India where LWE has a strong presence. This corridor primarily includes parts of states such as Chhattisgarh, Jharkhand, Odisha, Maharashtra, Andhra Pradesh, Bihar, and West Bengal. The Ministry of Home Affairs (MHA) has identified LWE-affected districts, categorizing them based on the intensity of violence and Maoist influence.

1. In 2010, around 223 districts were affected by LWE. However, by 2023, the number had reduced to approximately 70, with only 25 districts witnessing significant activity.
2. According to MHA reports, LWE-related violence has declined by nearly 77% since 2010, and civilian and security force casualties have also dropped substantially.
3. The states most affected remain Chhattisgarh, Jharkhand, and Odisha, with Bastar in Chhattisgarh being a key Maoist stronghold.
4. As per the latest data from the Press Information Bureau (PIB), as of December 2024, there are now only 38 LWE-affected districts in the country, marking a significant reduction.
5. Over the past five years, 60 districts have been freed from LWE influence, reflecting the success of government interventions.
6. Between 2014 and 2023, LWE-related incidents declined by over 52%, while overall deaths decreased by 69%. Security forces' casualties reduced by 72%, and civilian deaths dropped by 68% compared to the period from 2005 to 2014.
7. For the first time in three decades, LWE-related casualties fell below 100 in 2022, underscoring a notable improvement in counter-insurgency operat

CAUSES OF LEFT-WING EXTREMISM

The persistence of LWE can be attributed to a mix of socio-economic, political, and administrative factors:

1. **Economic Disparities:** Poverty, landlessness, and lack of employment opportunities in tribal and rural areas have fueled discontent. Exploitation of natural resources without adequate compensation or rehabilitation has further alienated local communities.
2. **Political Alienation:** Tribal and marginalized communities often feel ignored by mainstream political parties and institutions. The failure of local governance in providing basic services has pushed people towards extremist ideologies.
3. **Administrative Lapses:** Weak law enforcement and lack of adequate security infrastructure have allowed Maoists to operate with impunity in remote areas. Corruption in government schemes has deprived locals of essential benefits.
4. **Social Injustice and Human Rights Violations:** Police excesses and displacement due to infrastructure and mining projects have intensified grievances. The absence of proper rehabilitation measures for displaced communities has made them susceptible to Maoist propaganda.
5. **Failure of Land Reforms:** Land ownership disputes and the absence of effective land redistribution policies have fueled discontent among landless farmers and tribal communities. Illegal land acquisition by corporations and influential individuals has further deepened grievances.
6. **Exploitation by Middlemen and Contractors:** Tribals and rural poor often fall prey to exploitative middlemen in agricultural, forest,

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and labor markets. The lack of institutional financial support makes them dependent on moneylenders, leading to cycles of debt and exploitation.

7. **Weak Law Enforcement and Security Gaps:** The remoteness and difficult terrain of affected areas make law enforcement ineffective. Lack of sufficient police presence and slow response times allow Maoist groups to operate with relative impunity.

GOVERNMENT POLICIES TO ADDRESS LWE

The Indian government has adopted a multi-pronged approach to counter LWE, focusing on security measures, developmental initiatives, and rehabilitation programs.

1. **Security Measures:** Operation SAMADHAN: Launched by the MHA, this strategy involves aggressive anti-Maoist operations, intelligence gathering, and coordination between central and state police forces. Deployment of Central Armed Police Forces (CAPF) such as CRPF and special battalions like the CoBRA (Commando Battalion for Resolute Action) to combat Maoists. Establishment of fortified police stations in vulnerable regions.
2. **Developmental Initiatives:** Special Infrastructure Scheme (SIS): Focuses on enhancing road connectivity, mobile towers, and essential services in affected regions. Aspirational Districts Programme: Aims at improving education, healthcare, and livelihood opportunities in backward districts. Skill Development and Employment Generation: Schemes such as MGNREGA and various state-led programs target job creation.
3. **Surrender and Rehabilitation Policies:** Incentives are provided for surrendered Maoists, including financial aid, vocational training, and reintegration into society. States like Chhattisgarh and Jharkhand have specific policies offering attractive rehabilitation packages.
4. **National Policy and Action Plan (2015):** Approved in 2015, this comprehensive strategy addresses LWE through security measures, development interventions, and ensuring the rights and entitlements of local communities.
5. **Expansion of Road Networks:** To improve connectivity in LWE-affected areas, the government has constructed 13,620 km of roads, facilitating better access and economic development.
6. **Enhancement of Telecommunication Connectivity:** A total of 13,823 mobile towers have been sanctioned, with over 3,700 already commissioned, to improve communication in affected regions.
7. **Financial Inclusion Initiatives:** To integrate local populations into the financial system, 4,903 new post offices, 955 bank branches, and 839 ATMs have been established in 30 most LWE-affected districts since April 2015.
8. **Establishment of Security Camps:** Since 2019, security forces have established 175 new camps in LWE-affected areas, reducing security vacuums and weakening extremist influence.
9. **Choking of Funds:** Efforts have been intensified to disrupt financial networks supporting LWE activities, targeting illegal funding sources to weaken their operations.

CHALLENGES IN LWE ELIMINATION

Despite significant progress, several challenges hinder the complete eradication of LWE:

1. **Geographical and Terrain Challenges:** Maoists operate in dense forests and hilly terrains, which provide natural cover and make security operations difficult. The absence of proper roads and communication networks in these areas hampers counter-insurgency efforts.
2. **Local Support and Ideological Appeal:** Maoists continue to find support among marginalized and tribal communities who feel alienated from mainstream governance. Socio-economic grievances such as land displacement, unemployment, and lack of basic amenities fuel Maoist recruitment.
3. **Security Personnel Casualties and Resource Constraints:** According to MHA data, over 12,000 people, including civilians and security personnel,

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RECENT TRENDS IN LWE

1. **Declining Influence:** A significant reduction in Maoist violence and territorial control has been observed over the past decade. Several top Maoist leaders have been arrested or neutralized, weakening their operational capabilities.

2. **Shift in Strategy:** Maoists have increasingly relied on IEDs (Improvised Explosive Devices) to target security forces instead of direct confrontations. There has been an effort to radicalize youth and use digital platforms for propaganda and recruitment.

3. **State Success Stories:** Andhra Pradesh and Telangana have largely curbed Maoist influence through effective governance and security strategies. Jharkhand and Odisha have significantly weakened insurgent networks with sustained operations and development work.

4. **Targeting Infrastructure and Government Projects:** Increased attacks on road construction projects, mobile towers, and railway networks indicate an effort to prevent government penetration into strongholds. Destruction of schools and health centers in some affected districts shows resistance to developmental activities aimed at winning over local communities. Extortion from contractors and businesses continues to be a major source of funding for LWE groups.

5. **Growing Surrender and Rehabilitation Numbers:** More Maoist cadres are surrendering due to government amnesty policies and an improved security presence. State governments have successfully rehabilitated surrendered extremists with livelihood opportunities and social integration measures. The internal divisions within Maoist factions have also led to desertions, further weakening their operational strength.

FURTHER COURSE OF ACTION

1. Strengthening Security Measures: Enhancing inter-state coordination for intelligence sharing and joint operations.Investing in modern have lost their lives in LWE-related violence since 2000. Improvised Explosive Devices (IEDs) remain a significant threat, with a majority of security personnel casualties attributed to such attacks. The need for better coordination between state and central forces remains a challenge, as jurisdictional conflicts sometimes hinder operations.

4. **Financial and Logistical Support to Maoists:** Maoists continue to fund their activities through extortion, illegal mining, and levies on contractors and businesses. Despite efforts to cut off their funding sources, Maoists have adapted by using covert channels and digital transactions.

5. **Slow Implementation of Developmental Projects:** Government initiatives aimed at uplifting affected regions often face delays due to corruption, bureaucratic inefficiency, and lack of accountability. The Aspirational Districts Programme and other schemes need to be implemented more effectively to win the confidence of local communities.

6. **Use of Advanced Warfare Techniques by Maoists:** The adoption of modern guerilla warfare tactics, including drones, encrypted communication, and cyber-propaganda, poses new challenges for security agencies. There is an increasing need for intelligence-based operations and technology-driven counter-insurgency strategies.

7. **Human Rights Concerns and Excessive Use of Force:** Reports of civilian casualties, wrongful detentions, and police excesses have led to criticism and sometimes even strengthened Maoist propaganda. A balanced approach that ensures security operations do not alienate the local population is crucial to maintaining legitimac

technology such as drones, satellite imagery, and AI-driven surveillance for better tracking of insurgent movements. Expanding the presence of special counter-insurgency forces in key Maoist strongholds while ensuring minimal collateral damage.

2. **Accelerating Development Initiatives:** Ensuring effective implementation of government schemes with transparency and local participation. Promoting local governance and empowering Panchayati Raj institutions to address grievances at the grassroots level. Establishing more residential schools, healthcare centers, and vocational training institutes to bridge developmental gaps.

3. **Winning Hearts and Minds:** Engaging with local communities to build trust and reduce Maoist influence. Expanding educational opportunities and skill training programs tailored to the needs of affected populations. Strengthening civil society participation in governance and decision-making processes to ensure inclusion and representation.

4. **Reinforcing Rehabilitation Programs:** Improving incentives for Maoists willing to surrender. Providing long-term employment opportunities to prevent recidivism. Creating specialized support groups for rehabilitated individuals to ensure their smooth reintegration into society.

5. **Addressing Root Causes of Radicalization:** Establishing independent monitoring bodies to ensure the protection of human rights in counter-insurgency operations. Providing alternative leadership opportunities for youth in affected regions to divert them from extremist ideologies. Strengthening laws and policies to prevent exploitation of local resources by corporations without fair compensation to the affected communities.

CONCLUSION

Left-Wing Extremism remains one of India's most persistent internal security challenges, but significant progress has been made in its containment. A combination of strong security action, targeted developmental programs, and community engagement has yielded positive results. However, to achieve complete eradication, the government must continue its efforts to address the root causes while maintaining a balance between force and welfare. The future course must involve holistic development, inclusive governance, and technological advancements in counter-insurgency operations to ensure lasting peace and prosperity in affected regions.

PRELIMS QUESTIONS:

1. With reference to the Department of Border Management and its initiatives to secure India's land borders, which of the following statements is/are correct?

1. The Department of Border Management was created by the Ministry of Home Affairs in 2004.
2. The Department is responsible for constructing Integrated Check Posts (ICPs) along international borders.

Select the correct answer using the code given below:

A. 1 only

B. 2 only

C. Both 1 and 2

D. Neither 1 nor 2

2. With reference to the National Investigation Agency (NIA), which of the following statements is/are correct?

1. The NIA was established in 2008 after the Mumbai 26/11 attacks to investigate and prosecute terror-related cases.
2. The NIA has the authority to investigate cases only within Indian territory and does not have jurisdiction outside India.

Select the correct answer using the code given below:

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A. 1 only

B. 2 only

C. Both 1 and 2

D. Neither 1 nor 2

3. Consider the following statements regarding Left-Wing Extremism (LWE) in India:

1. The term "Red Corridor" refers to regions with a high presence of Maoist activities.
2. LWE is primarily concentrated in northeastern states of India.
3. The number of LWE-affected districts has decreased over the years due to government interventions.

Which of the statements given above is/are correct?

A. 1 and 2 only

B. 1 and 3 only

C. 2 and 3 only

D. 1, 2, and 3

ANSWER

1. C	2. A	3. B

MAINS QUESTIONS:

1. Discuss the key challenges faced by India in securing its land borders and the government initiatives to address them.

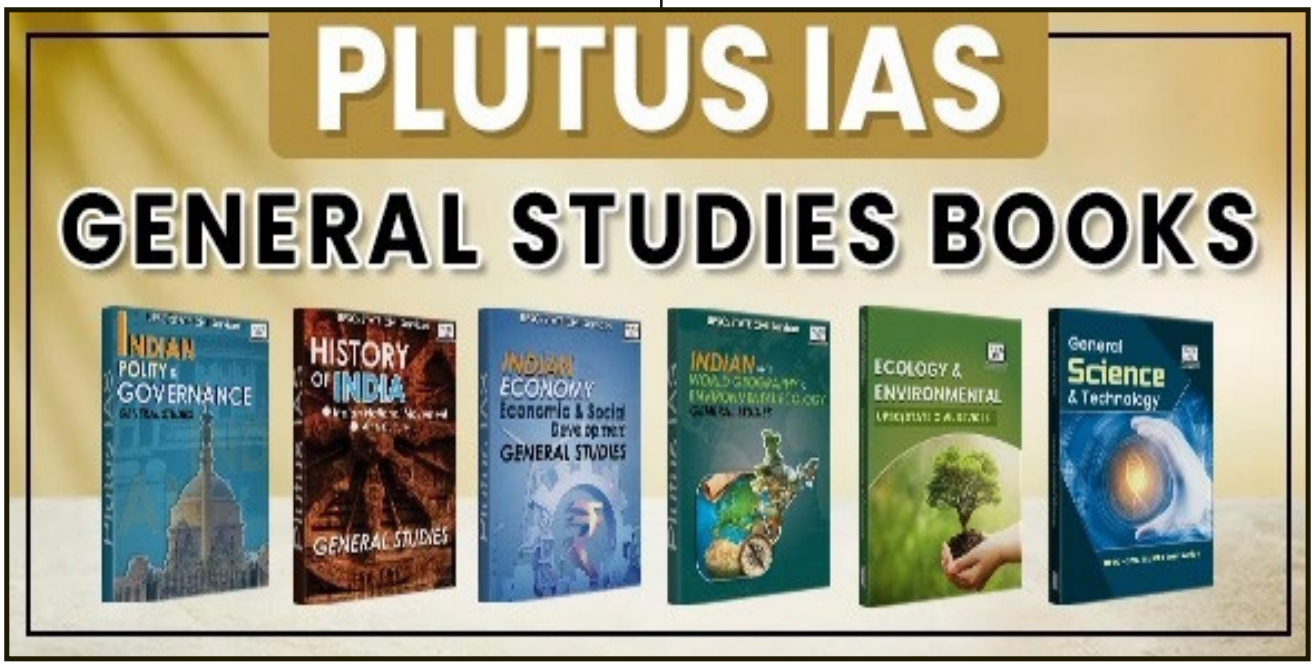
(250 words, 15 marks)

2. Discuss the major challenges faced by India in countering terrorism and suggest effective measures to address them.

(250 words, 15 marks)

3. Discuss the role of security forces and community engagement in countering LWE. How can a balanced approach between force and development be achieved?

(250 words, 15 marks)



NATIONAL EDUCATION POLICY

WHY IN THE NEWS?

The news about Union Education Minister Dharmendra Pradhan's address at the 101st convocation of the University of Delhi is significant because it highlights India's strategic focus on education to drive national progress. His emphasis on the National Education Policy (NEP) 2020 shows the government's intent to elevate India's educational framework to a global standard. By addressing youth—the majority of India's population—Pradhan reiterated how crucial it is for students to contribute to the vision of a developed India by 2047. His acknowledgement of Delhi University's role in implementing NEP 2020 adds a layer of recognition to the university's efforts in shaping future leaders, making the story relevant both for educational reforms and for Delhi University's contribution to India's educational goals.

WHAT IS EDUCATION POLICY?

Education policy is a set of principles, guidelines, rules, and laws that govern the educational system within a country or region. It defines the goals, structure, methods, and practices for delivering education, aiming to shape and improve how education is provided to students. Education policy is designed to ensure that education is accessible, equitable, and of high quality, and it establishes frameworks for curriculum design, teaching standards, student assessment, and overall educational governance.

1. **Objectives:** These are the broad goals that the policy seeks to achieve, such as ensuring equitable access to education, improving quality, and fostering skills development.
2. **Curriculum and Instruction:** Policies often define what subjects or courses should be taught, how teachers should teach, and the standards of learning expected at different education levels.
3. **Governance and Administration:** This includes how education systems are organized, the roles of local, regional, and national authorities, and who is responsible for decision-making.
4. **Assessment and Accountability:** Education policies often set standards for assessing students' progress, as well as holding educational institutions accountable for meeting educational goals.
5. **Funding and Resources:** Policies may also outline how education is funded, how resources are allocated to schools, and how to address disparities in funding.

EVOLUTION OF EDUCATION POLICY

1. **National Policy on Education (1967):** Focused on expanding access to education and promoting national integration after independence. Emphasized quality, teacher training, and adult education. Aimed to address illiteracy and promote education as a tool for social and economic development.
2. **National Policy on Education (1986):** Introduced by Rajiv Gandhi, it emphasized universalizing elementary education, improving quality, and equity. Focused on science and technology education, vocational skills, and

a national education framework. Promoted multilingualism and integration of education with social development, especially for marginalized groups.

3. **National Education Policy (2020):** Introduced a 5+3+3+4 education structure and emphasized holistic and multidisciplinary education. Focused on foundational literacy and numeracy, early childhood education, and integration of vocational education. Pushed for mother tongue as the medium of instruction, digital learning, and improving teacher quality.

1. **Holistic, Multidisciplinary Education:** NEP encourages a flexible, interdisciplinary approach, fostering creativity, critical thinking, and global competencies.
2. **Focus on Research & Innovation:** The policy promotes research through the National Research Foundation (NRF) and strengthens global research collaborations.
3. **Integration of Technology:** NETF and digital tools enhance education accessibility and align India with global EdTech advancements.

KEY FEATURES OF NEP 2020

Feature	Description
Universal Access & Early Education	Ensures access to education from pre-primary to Grade 12 and quality early childhood care for children aged 3-6.
Curricular Reforms	Implements a **5+3+3+4** structure and removes barriers between arts, sciences, vocational, and academic streams.
Language & Literacy	Promotes multilingualism, with mother tongue as the medium of instruction till Grade 5, and ensures foundational literacy and numeracy for all children.
Assessment Reforms	Allows two board exams a year (main and improvement) and establishes **PARAKH** for holistic assessment.
Equity & Inclusion	Focus on **SEDGs**, Gender Inclusion Funds, and Special Education Zones for disadvantaged regions and groups.
Teacher Development	Merit-based recruitment, continuous performance reviews, and a 4-year integrated **B.Ed** program.
Higher Education	Aims to raise the **Gross Enrollment Ratio (GER)** to 50%, promotes **multidisciplinary education**, and introduces common entrance exams.
Research & Excellence	Establishes **MERUs** (Multidisciplinary Education and Research Universities) and a **National Research Foundation**.
Regulation	Establishes the **Higher Education Commission of India (HECI)** to oversee higher education and set standards.
Technology Integration	Establishes **NETF** for technology in education and aims for **100% adult literacy**.
Investment	Focuses on increasing public spending on education to 6% of GDP.

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4. **Internationalization of Higher Education:** NEP supports Indian universities in setting up campuses abroad and attracting global universities to India.
5. **Promotion of Language and Culture:** Emphasizes multilingual education and preserves Indian languages while preparing students for global engagement.
6. **Increased Access & Inclusivity:** Aim for 100% GER in education by 2030, ensuring a diverse, skilled workforce.
7. **Vocational Education:** Integrates practical skills and internships, making students globally competitive.
8. **Attracting Global Talent:** The policy's focus on quality education and research draws international talent to India.
9. **Sustainability & Global Citizenship:** Aligns with SDG 4 for quality education and promotes global citizenship.
10. **Public-Private Partnerships:** Encourages collaborations to improve educational infrastructure and global competitiveness.

ISSUES WITH THE EDUCATION SECTOR

1. **Quality Disparities:** Uneven education quality, especially in rural areas, due to lack of infrastructure, qualified teachers, and outdated curriculum.
2. **Access & Inclusivity:** Limited access to education in rural areas, with socioeconomic disparities hindering marginalized groups' educational opportunities.
3. **Teacher Training:** Shortage of trained teachers and lack of professional development impacting the quality of education.
4. **Infrastructure Deficiencies:** Inadequate school facilities, overcrowded classrooms, and lack of learning resources limit effective teaching and learning.
5. **Affordability & Privatization:** High costs of private education make it inaccessible for many, while privatization can lead to exclusion and inequality.
6. **Technology Divide:** Digital gap between urban and rural areas, hindering effective online learning due to lack of devices and internet access.
7. **Examination System:** Over-reliance on rote learning and traditional exams, causing stress and neglecting skills like creativity, problem-solving, and critical thinking.

WAYS FOR EFFECTIVE IMPLEMENTATION

1. **Teacher Training:** Invest in continuous professional development to improve teaching quality and adapt to digital tools.
2. **Improved Infrastructure:** Upgrade school facilities and ensure reliable internet access, especially in rural areas.
3. **Inclusive Education:** Provide equal opportunities for marginalized groups with scholarships and targeted programs.
4. **Curriculum & Assessment Reform:** Focus on critical thinking and vocational skills, with alternative assessment methods beyond rote memorization.
5. **Public-Private Partnerships:** Collaborate with private institutions to enhance resources and ensure affordability.
6. **Community Engagement:** Involve stakeholders (teachers, parents, students) in decision-making for relevant and inclusive reforms.
7. **Monitoring & Accountability:** Implement strong tracking systems to ensure reforms are on track and continuously improve based on feedback.

CONCLUSION

The National Education Policy (NEP) 2020 is a transformative step towards reshaping India's education system, focusing on inclusivity, quality, and global competitiveness. By emphasizing holistic education, research, vocational skills, and the integration of technology, NEP aims to elevate India's position globally. However, effective implementation will require addressing existing challenges such as quality disparities, teacher training, and infrastructure gaps. Through continuous reforms, strategic partnerships, and robust monitoring systems, India can move closer

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to achieving its educational goals and fostering a skilled, innovative, and globally competitive workforce.

INTERNATIONAL WOMEN'S DAY

WHY IN THE NEWS?

International Women's Day (IWD) is an annual global celebration that aims to educate society on the remarkable women's rights movement while celebrating the cultural, political, and socio-economical achievements of women and girls. It is annually celebrated on March 8 every year, and in 2025, it will be falling on a Saturday. This day marks a call to action for accelerating gender parity and highlighting the ongoing efforts for continued advocacy and action worldwide.

BACKGROUND OF INTERNATIONAL WOMEN'S DAY

Vladimir Lenin declared March 8 as International Women's Day in 1922 to honour the women's role in 1917 Russian Revolution; it was subsequently celebrated on that date by the socialist movement and communist countries. The holiday became a mainstream global holiday following its promotion by the United Nations in 1977.

ORIGINS & KEY MILESTONES

- **1908:** 15,000 women marched in New York for better rights.
- **1910:** Clara Zetkin proposed IWD at a socialist conference.
- **1911:** First IWD observed in Austria, Denmark, Germany, and Switzerland.
- **1913:** March 8 became the official date.
- **1917:** Russian women's protests led to voting rights.
- **1975:** UN officially recognized IWD.

EMPOWERING WOMEN IN INDIA

1. **Government Schemes for Women Empowerment Beti Bachao Beti Padhao (2015):** Promotes the survival, protection, and education of girls. Mahila Shakti Kendra (2017): Provides skill development and employment opportunities. One Stop Centre Scheme (2015): Supports women facing violence with legal and medical aid. Ujjwala Yojana (2016): Provides free LPG connections to women from poor households. Sukanya Samriddhi Yojana (2015): Savings scheme for girls' education and marriage. Working Women Hostel Scheme: Ensures safe accommodation for working women. Nari Shakti Puraskar: National award recognizing women achievers.
2. **Legal Acts for Women's Rights The Dowry Prohibition Act (1961):** Ban dowry in marriages. The Protection of Women from Domestic Violence Act (2005): Protects against domestic abuse. The Sexual Harassment of Women at Workplace Act (2013): Ensures a safe work environment. The Maternity Benefit Act (1961, amended in 2017): Provides paid maternity leave. The Hindu Succession Act (2005 Amendment): Grants equal property rights to daughters. The Prohibition of Child Marriage Act (2006): Prevents early marriages.
3. Policies for Women's Empowerment National Policy for the Empowerment of

- **Women (2001):** Focuses on education, health, and economic empowerment. Reservation for Women in Panchayati Raj
- **(1993):** 33% reservation in local governance. Women Entrepreneurship Platform
- **(WEP):** Supports women-led startups. Mission Shakti (2022): Merges various women's

welfare schemes for better implementation.

ISSUES HINDERING WOMEN'S EMPOWERMENT IN INDIA

1. **Cultural & Social Barriers:** Patriarchal Mindset Restricts women's choices and public participation.
2. **Education Disparity:** Rural girls face limited access to quality education, leading to lower literacy rates and fewer opportunities.
3. **Economic Dependence:** Restricted access to jobs, finance, and land ownership keeps women financially dependent on men.
4. **Child Marriage:** Early marriage deprives girls of education, increasing poverty and dependence.
5. **Domestic Violence:** Physical, emotional, and sexual abuse limits women's ability to assert their rights.
6. **Dowry System:** Dowry demands lead to financial strain and violence, including bride burning.
7. **Workplace Discrimination:** Women face unequal pay, limited promotions, and sexual harassment at work.
8. **Legal Awareness & Enforcement Issues:** Laws exist but are poorly implemented, and women struggle to access justice.
9. **Gender Bias in Healthcare:** Poor access to reproductive and general healthcare affects women's well-being.
10. **Rural-Urban Divide:** Rural women face greater challenges in education, healthcare, and employment than urban women.

WAY FORWARD

1. **Strengthening Education & Awareness:** Encourage STEM education for girls and integrate gender sensitization into school curricula.
2. **Economic Inclusion:** Promote women-led entrepreneurship and ensure equal pay for equal work.
3. **Strict Law Implementation:** Improve legal enforcement and create fast-track courts for gender-based crimes.
4. **Social Change Campaigns:** Run media campaigns to challenge patriarchal norms and promote gender equality.
5. **Enhancing Political Representation:** Advocate for women's participation in governance beyond 33% reservation.
6. **Better Healthcare Access:** Increase affordable healthcare services, especially in rural areas, focusing on maternal health and family planning.
7. **Technology & Digital Inclusion:** Bridge the digital divide by ensuring women's access to technology and financial literacy programs.

CONCLUSION

While significant progress has been made in women's empowerment, challenges persist due to deep-rooted societal norms and economic disparities. A multi-sectoral approach involving the government, private sector, and civil society is crucial to achieving true gender equality. International Women's Day serves as a powerful reminder to continue the fight for women's rights and create a more inclusive and equitable society for future generations.

"EMPOWERED WOMEN EMPOWER THE NATION!"

POSHAN ABHIYAN: A HOLISTIC APPROACH TO NUTRITION

WHY IN THE NEWS?

POSHAN Abhiyan remains a crucial national initiative as India continues its fight against malnutrition and anemia. Recently, the Ministry of Women and Child Development (MWCD) announced an expansion of the scheme, emphasizing data-driven nutrition monitoring, community engagement, and increased funding for Anganwadi services. Furthermore, recent NFHS-5 (2019-21) findings have highlighted both progress and areas that need urgent intervention, reinforcing the need for continued efforts.

POSHAN ABHIYAN – NATIONAL NUTRITION MISSION (NNM)

POSHAN (Prime Minister's Overarching Scheme for Holistic Nutrition) Abhiyan is the flagship program of the Ministry of Women and Child Development (MWCD), launched on March 8, 2018. It is designed to reduce malnutrition and stunting, address anemia, and promote overall nutritional well-being. The initiative adopts a convergent approach by integrating various ministries and leveraging technology for real-time monitoring.

OBJECTIVES OF POSHAN ABHIYAN

The primary objectives of the National Nutrition Mission (NNM) are:

1. Reduce stunting among children (0-6 years) to 25% by 2022, ensuring better physical and cognitive development.
2. Reduce undernutrition and low birth weight by 2% per annum, improving overall child and maternal health outcomes.
3. Reduce anemia among children (6–59 months), adolescent girls, and women by 3% per annum, thereby enhancing immunity and productivity.
4. Promote behavioral change through the Jan Andolan (People's Movement) initiative, encouraging healthier dietary and hygiene practices.
5. Strengthen the Anganwadi system, ensuring better monitoring and service delivery while improving the quality of supplementary nutrition.
6. Leverage technology and real-time data to track malnutrition and improve intervention strategies, facilitating evidence-based policy decisions.
7. Ensure proper sanitation, safe drinking water, and hygiene as key components of nutrition, reducing the prevalence of waterborne diseases that contribute to malnutrition.
8. Integrate nutrition-focused schemes and policies to create a multi-sectoral approach, improving efficiency and outreach.
9. Encourage community participation and awareness campaigns to involve local stakeholders in sustaining nutritional improvements.

OPERATIONAL PILLARS OF POSHAN ABHIYAN

1. **Technology-Based Monitoring:** Use of ICDS-CAS (Common Application Software) for real-time data collection and tracking. Digital dashboards for better decision-making and policy implementation. Enhanced tracking of beneficiaries for better nutritional interventions. AI and machine learning tools for predictive analysis to identify malnutrition hotspots. Strengthening the supply chain management system to ensure the availability of essential nutrition supplies.
2. **Convergence Across Ministries:** Collaboration between MWCD, Health Ministry, Rural Development Ministry, and Education Ministry. Unified implementation of health and nutrition programs. Strengthening SSinterdepartmental cooperation to avoid duplication of efforts. Integrating POSHAN Abhiyan with Ayushman Bharat, Mid-Day Meal Scheme, and Pradhan Mantri Matru Vandana Yojana for holistic coverage. Partnering with corporates and NGOs to mobilize resources and ensure effective service delivery.
3. **Behavioral Change through Jan Andolan:** Mass awareness campaigns, community engagement,

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and media outreach. Promoting dietary diversity, exclusive breastfeeding, and hygiene practices. Encouraging participation of local bodies and NGOs for better outreach. Involvement of self-help groups (SHGs) and Panchayati Raj Institutions to enhance community ownership. Use of school and community-based programs to promote healthy eating habits among children and adolescents.

4. **Capacity Building of Frontline Workers:** Training Anganwadi workers, ASHAs, and ANMs to enhance service delivery.Use of mobile applications to track children's growth and nutritional status.Regular workshops and refresher courses to upgrade skills.Providing performance-based incentives to frontline health workers for effective implementation. Strengthening research and innovation to develop better training materials and nutritional interventions.

KEY ACHIEVEMENTS OF POSHAN ABHIYAN

Since its inception, POSHAN Abhiyan has made significant progress in tackling malnutrition:

1. **Decline in Stunting and Wasting:** According to NFHS-5 (2019-21), stunting has reduced from 38.4% (NFHS-4) to 35.5%, and wasting declined from 21% to 19.3%. Improvement in the availability of nutrient-rich supplementary food for children. Increased community participation in nutrition awareness campaigns.

2. **Increase in Institutional Deliveries & Breastfeeding:** The rate of exclusive breastfeeding increased to 64.9%, leading to improved infant health. Higher percentage of institutional deliveries ensuring better maternal care. Greater availability of maternal nutrition supplements during pregnancy.

3. **Expansion of Nutrition Schemes:** Strengthened implementation of Saksham Anganwadi and ICDS programs. Integration of POSHAN Abhiyan with Mid-Day Meal (PM POSHAN) and PDS for food security. Increased funding to expand out-reach programs in rural and tribal areas.

4. **Mass Public Awareness & Behavioral Changes:** Campaigns like 'POSHAN Maah' and 'Rashtriya POSHAN Pakhwada' promoted community participation. Greater emphasis on nutritional literacy and food diversification. Enhanced participation of community health workers in nutrition counseling.

5. **Use of Technology:** Over 10 lakh Anganwadi workers trained on real-time growth monitoring through digital tools. AI-based predictive models being tested to identify malnutrition-prone areas.Digitalization of health records for better tracking and intervention.

WHY IS THERE A PERSISTENT HIGH LEVEL OF NUTRITIONAL DEFICIENCY IN INDIA?

Despite government interventions, nutritional deficiencies remain widespread due to:

1. **Poor Dietary Diversity:** Heavy dependence on staple foods like rice and wheat, limiting the intake of essential vitamins and minerals. Lack of protein-rich foods such as pulses, eggs, and dairy, contributing to deficiencies in essential amino acids. Seasonal variations in food availability impact the nutritional intake of vulnerable populations.

2. **Gender Inequality & Maternal Undernutrition:** Women suffer from higher rates of anemia (57%), impacting both maternal and child health. Lack of access to adequate healthcare and nutrition for adolescent girls exacerbates long-term deficiencies. Traditional dietary practices often prioritize male members of the family, limiting women's access to nutritious food.

3. **Food Insecurity & Poverty:** 38% of India's population faces food insecurity due to economic instability and unemployment. High food prices and inflation limit access to diverse and nutritious food options for low-income groups. Social disparities further exacerbate inequality in food distribution, affecting marginalized communities the most.

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4. **Inadequate Health Infrastructure:** Rural and tribal areas lack access to primary healthcare services, leading to delayed interventions for malnutrition. Limited availability of trained nutritionists and dietitians results in inadequate counseling for pregnant and lactating women. Shortages of essential micronutrient supplements, including iron and vitamin A, worsen malnutrition rates.

5. **Poor Sanitation & Hygiene:** High prevalence of open defecation and unsafe drinking water leads to recurrent infections, hampering nutrient absorption. Lack of proper sanitation in schools and public spaces contributes to the spread of waterborne diseases, affecting children's health. Poor menstrual hygiene management among adolescent girls affects their nutritional well-being and school attendance.

6. **Limited Awareness & Cultural Barriers:** Myths surrounding nutrition and traditional food habits hinder dietary improvements, preventing people from adopting healthier alternatives. Socio-cultural taboos regarding certain foods, such as eggs and meat, limit their inclusion in daily diets. Resistance to adopting fortified foods and supplements due to misinformation affects the success of nutrition programs.

WAYS TO ADDRESS NUTRITIONAL DEFICIENCY IN INDIA

To combat malnutrition effectively, a multi-dimensional approach is needed:

1. **Strengthening Food Fortification Programs:** Expand rice fortification, iron and folic acid supplementation, and milk fortification initiatives. Raise awareness about fortified foods through school programs and community workshops.

2. **Enhancing Mid-Day Meal (PM POSHAN) & ICDS Programs:** Introduce protein-rich meals, millets, and micro-nutrient supplementation.Ensure strict monitoring of food quality and caloric intake in schools and Anganwadi centers.

3. **Boosting Agriculture-Nutrition Linkages:** Promote nutrient-dense crops like millets, pulses, and bio-fortified cereals.Establish kitchen gardens in rural households to provide fresh vegetables and fruits.

4. **Expanding Social Security Schemes:** Strengthen PM Garib Kalyan Anna Yojana (PMGKAY) to ensure food access.Provide subsidized nutritious food items for low-income groups.

5. **Improving Health Infrastructure & WASH (Water, Sanitation & Hygiene) Facilities:** Scale-up Swachh Bharat Abhiyan and ensure clean drinking water supply.Increase the number of community health centers and nutrition rehabilitation centers.

6. **Women Empowerment & Education:** Promote girl child education, financial inclusion, and access to healthcare services.Conduct nutrition literacy programs targeting adolescent girls and new mothers.

7. **Leveraging Technology for Nutrition Monitoring:** Use of AI-driven nutrition tracking apps for better intervention.Strengthen real-time digital monitoring systems to track malnutrition trends.

CONCLUSION

POSHAN Abhiyan has laid a strong foundation for addressing malnutrition in India. While the initiative has yielded positive results, persistent challenges demand a holistic, intersectoral, and technology-driven approach. Strengthening public-private partnerships, integrating nutritional education into school curricula, and ensuring last-mile delivery of food security programs are critical for India to achieve SDG 2 (Zero Hunger). By prioritizing nutritional well-being, gender equity, and healthcare accessibility, India can transform its malnutrition crisis into an opportunity for sustainable growth, ultimately nourishing the nation and securing a healthier future.

PRELIMS QUESTIONS:

1. **Which of the following statements is correct about the National Education Policy (NEP) 2020?**

1. NEP 2020 aims to increase the Gross Enrollment Ratio (GER) to 50% by 2030.
2. NEP 2020 promotes the use of the mother tongue as the medium of instruction till grade 8.
3. NEP 2020 mandates the integration of artificial intelligence (AI) as a compulsory subject at the school level.

Select the correct answer using the code given below:

A. 1 and 2 only

B. 2 and 3 only

C. 1 and 3 only

D. 1, 2 and 3

2. Consider the following statements:

1. The Beti Bachao Beti Padhao scheme aims to improve child sex ratio and promote girls' education.
2. The Maternity Benefit Act, 2017, increased paid maternity leave to 26 weeks for all working women in India.
3. The Dowry Prohibition Act, 1961, makes the giving and receiving of dowry a punishable offense.

How many of the statements given above are correct?

A. Only one

B. Only two

C. All three

D. None

3. Consider the following statements regarding POSHAN Abhiyan:

1. It was launched by the Ministry of Health and Family Welfare in 2018.
2. It aims to reduce stunting, anemia, and low birth weight among children and women.
3. The program emphasizes technology-based monitoring and behavioral change through Jan Andolan.

Which of the statements given above is/are correct?

A. 1 and 2 only

B. 2 and 3 only

C. 1 and 3 only

D. 1, 2, and 3

ANSWER

1. A	**2. B**	**3. B**

MAINS QUESTIONS:

1. Analyze the role of the National Education Policy (NEP) 2020 in transforming India's educational landscape. How does NEP 2020 aim to elevate India's education system to global standards, and what challenges need to be addressed for its successful implementation?

(250 words, 15 marks)

2. Discuss the challenges and opportunities for women entrepreneurs in India. How can policies be strengthened to support them?

(250 words, 15 marks)

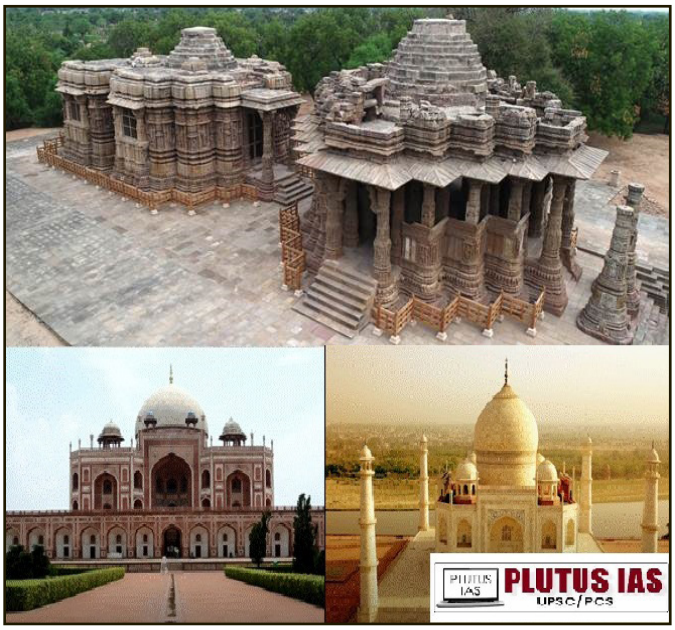
3. Discuss the objectives and key operational strategies of POSHAN Abhiyan. How has the scheme contributed to addressing malnutrition in India?

(250 words, 15 marks)

DIGITIZATION OF CULTURAL HERITAGE IN INDIA

WHY IN THE NEWS?

The NMMA has recently gained attention due to its renewed focus on large-scale digitization projects, new collaborations with technology firms, and increased government funding for heritage preservation. The initiative has also been highlighted in discussions about India's commitment to UNESCO's heritage conservation goals. Furthermore, with rising concerns over climate change, urbanization, and illegal artifact trafficking, NMMA's efforts to create a robust digital inventory have become more crucial than ever. Additionally, recent advancements in AI, blockchain, and 3D scanning have enabled NMMA to document and protect cultural assets more efficiently, making it a key player in modern heritage conservation efforts.



NATIONAL MISSION ON MONUMENTS & ANTIQUITIES (NMMA)

The National Mission on Monuments & Antiquities (NMMA) was launched in 2007 under the Ministry of Culture, Government of India, with the objective of documenting and preserving India's vast cultural and historical heritage. This mission was conceived to address the critical need for a well-maintained record of movable and immovable antiquities, which would help safeguard the nation's legacy for future generations.

OBJECTIVES OF NMMA

The NMMA was established with a set of clear objectives:

1. **Inventory Preparation:** To create a national-level database of antiquities and monuments, ensuring their proper documentation. This database helps track ownership and prevent illicit trade in antiquities, making it easier to recover lost or stolen artifacts.
2. **Protection & Conservation:** To facilitate conservation efforts by identifying and assessing the condition of historical sites and artifacts. This includes recommending necessary interventions to prevent further degradation due to environmental and human-induced factors.
3. **Regulation & Legal Framework:** To strengthen the Antiquities and Art Treasures Act, 1972, and ensure that heritage sites are legally protected. NMMA works towards enforcing stricter penalties for illegal possession and trafficking of antiquities.
4. **Awareness & Education:** To educate the public, scholars, and stakeholders about the importance of cultural heritage preservation.

Public awareness campaigns, exhibitions, and interactive sessions help foster a sense of pride and responsibility among citizens.

5. **Digital Archiving:** To use digital technology for the documentation and management of heritage sites, improving accessibility and reducing the risks of damage. Digital archives provide a valuable resource for researchers, enabling deeper insights into historical contexts.
6. **Capacity Building & Training:** NMMA organizes training programs and workshops for professionals in the heritage sector, equipping them with the necessary skills to document and conserve cultural assets efficiently.
7. **Community Involvement:** The mission promotes community participation by engaging local populations in conservation efforts. This approach helps protect heritage through grassroots initiatives and encourages a shared sense of ownership.
8. **Integration with Smart Cities and Urban Planning:** NMMA collaborates with urban planners to ensure that heritage conservation is considered in modern city planning. This integration helps in balancing development with heritage preservation.

ACHIEVEMENTS OF NMMA

Since its inception, NMMA has made significant progress in the documentation and preservation of India's cultural heritage:

1. **Database Development:** Over 2.1 lakh (210,000) antiquities have been documented and uploaded into the national database. This extensive collection is available for research, aiding scholars in their studies on India's rich historical past.
2. **Mapping and GIS Integration:** The integration of Geographic Information System (GIS) technology has helped in creating detailed maps of heritage sites. This allows authorities to monitor heritage sites remotely and plan conservation efforts more effectively.
3. **Public Awareness Programs:** Various workshops, seminars, and training programs have been conducted to involve local communities in heritage conservation. These programs emphasize the importance of community participation in preserving and protecting cultural heritage.
4. **Collaboration with Institutions:** NMMA has partnered with museums, research institutions, and universities to enhance the documentation and study of Indian antiquities. These collaborations provide expertise and resources for more extensive research and conservation projects.
5. **Online Accessibility:** Several digital platforms have been developed to provide public access to heritage-related data, promoting research and awareness. Online archives enable global scholars and historians to study and appreciate India's cultural wealth.
6. **Adoption of Emerging Technologies:** NMMA has begun incorporating Artificial Intelligence (AI), 3D scanning, and blockchain technology to improve documentation and authentication processes, ensuring greater transparency in cultural heritage management.
7. **International Recognition and Collaborations:** The NMMA has received appreciation from UNESCO and other international bodies for its efforts in digitization and heritage preservation. It has also collaborated with foreign universities and research institutions to share best practices in heritage conservation.
8. **Restoration Initiatives:** Several heritage sites have been identified and restored as part of NMMA's conservation efforts. This includes projects in historical cities such as Varanasi, Jaipur, and Hampi, where monuments have been restored to their original grandeur using scientific restoration techniques.

ROLE OF DIGITAL TECHNOLOGY IN HERITAGE PRESERVATION

Key Digital Technologies Used in Heritage Preservation:

1. **3D Scanning and Modeling:** This technology enables the creation of digital replicas of mon-

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uments and artifacts, preserving their intricate details. It allows conservationists to analyze structures without causing physical damage and provides a reference for restoration projects.

2. **Artificial Intelligence (AI) and Machine Learning (ML):** AI helps in the identification, classification, and restoration of antiquities through automated image recognition. AI-driven algorithms can also predict potential risks to heritage sites based on historical trends and current environmental conditions.
3. **Virtual Reality (VR) and Augmented Reality (AR):** These technologies allow people to experience historical sites and artifacts in a virtual environment, making heritage more accessible. Virtual reconstructions of ancient sites provide an immersive learning experience for students and history enthusiasts.
4. **Blockchain for Provenance Tracking:** Ensures the authenticity and ownership history of artifacts, preventing illegal trade and theft. This technology enhances transparency in the art market and helps governments reclaim stolen cultural assets.
5. **GIS Mapping and Remote Sensing:** Helps in the accurate documentation and monitoring of heritage sites, assessing environmental and human-induced threats. Authorities can use this data to develop better conservation strategies and disaster preparedness plans.
6. **Big Data and Cloud Storage:** Enables the secure storage and analysis of vast amounts of heritage-related data for research and policymaking. This ensures that valuable information remains accessible even in cases of physical loss or damage.

CHALLENGES IN HERITAGE PRESERVATION

Despite the advancements in digital technology, there are several challenges that hinder effective heritage preservation:

1. **Lack of Infrastructure:** Many heritage sites lack the necessary technological infrastructure for digital documentation and conservation. Rural and remote heritage sites require significant investments in digital connectivity and technical equipment.
2. **Financial Constraints:** Insufficient funding restricts the implementation of large-scale digitization projects. Limited government budgets often result in delayed or incomplete conservation efforts.
3. **Skilled Manpower Shortage:** A lack of trained professionals in heritage conservation and digital technologies poses a significant challenge. More training programs and academic courses are needed to build a skilled workforce.
4. **Legal and Policy Issues:** Inadequate enforcement of heritage protection laws leads to encroachments, illegal trade, and loss of artifacts. Strengthening regulations and ensuring accountability among stakeholders is crucial.
5. **Climate Change and Environmental Factors:** Rising pollution, natural disasters, and changing climate conditions threaten the structural integrity of monuments and artifacts. Advanced monitoring systems must be implemented to mitigate environmental risks.
6. **Limited Public Awareness and Participation:** Heritage conservation efforts require active participation from local communities, which is often lacking. More initiatives should be taken to involve people in protecting their cultural legacy.
7. **Cybersecurity Risks:** Digital databases containing sensitive heritage information are vulnerable to hacking and cyber threats. Robust cybersecurity measures must be implemented to safeguard valuable digital records.

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WAY FORWARD

To overcome these challenges and enhance heritage preservation efforts, India must adopt a multi-pronged approach:

1. **Strengthening Digital Infrastructure:** Investment in modern digital tools, cloud storage, and AI-driven applications will enhance preservation efforts. Expanding internet access to rural heritage sites will also help in efficient documentation.
2. **Public-Private Partnerships (PPP):** Collaboration between the government, private sector, and NGOs can help in securing funds and expertise for digitization projects. Private organizations can bring in technological innovations and financial support.
3. **Capacity Building & Training:** Developing training programs for historians, archaeologists, and tech professionals to bridge the skill gap. Universities should introduce specialized courses on digital heritage preservation.
4. **Policy Reforms & Strict Enforcement:** Strengthening laws related to heritage protection and ensuring their proper implementation. The government should impose stricter penalties for heritage-related crimes.
5. **International Collaboration:** Partnering with global institutions and leveraging best practices in digital heritage preservation. Cross-border partnerships can facilitate knowledge exchange and access to advanced technologies.
6. **Increased Community Engagement:** Raising awareness through educational programs and involving local communities in conservation initiatives. Encouraging heritage tourism can create economic incentives for local communities to protect cultural sites.
7. **Developing Sustainable Preservation Strategies:** Using eco-friendly materials and conservation methods to mitigate environmental risks. Green technologies should be incorporated in heritage site management.

CONCLUSION

The digitization of cultural heritage in India is not just a technological advancement but a necessity to preserve the country's rich history for future generations. The National Mission on Monuments & Antiquities (NMMA) has played a vital role in this endeavor by documenting and safeguarding valuable heritage assets. With the integration of cutting-edge technologies such as AI, 3D scanning, and blockchain, India is making significant strides in modernizing heritage conservation. However, continuous efforts are needed to enhance public engagement, improve data accessibility, and foster collaborations between governmental and non-governmental organizations. As India moves forward, a comprehensive and sustainable approach will be crucial to ensuring that its cultural wealth remains protected and accessible for generations to come. of cultural heritage in India is not just a technological advancement but a necessity to preserve the country's rich history for future generations. The National Mission on Monuments & Antiquities (NMMA) has played a vital role in this endeavor by documenting and safeguarding valuable heritage assets.

PRELIMS QUESTIONS:

1. Which act provides a legal framework for the protection of Indian antiquities?

A. The Indian Treasure Act, 1878

B. The Antiquities and Art Treasures Act, 1972

C. The Monuments Protection Act, 1958

D. The Cultural Heritage Conservation Act, 2005

ANSWER

1. B

MAINS Questions:

1. Discuss the significance of digitization in the preservation of India's cultural heritage. How has the National Mission on Monuments and Antiquities (NMMA) contributed to this effort?

(250 words, 15 marks)

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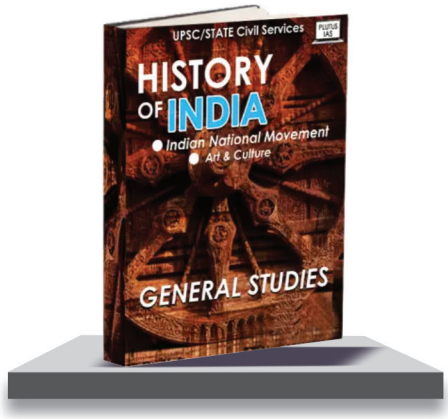

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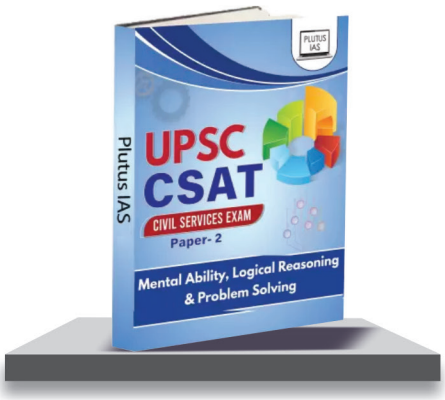

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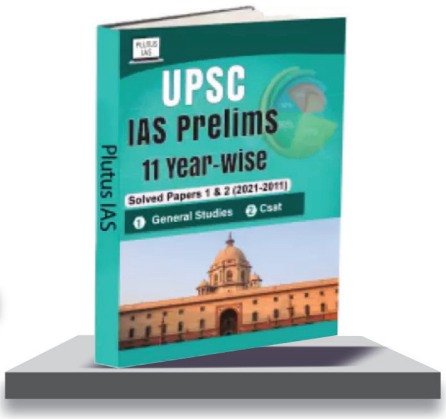

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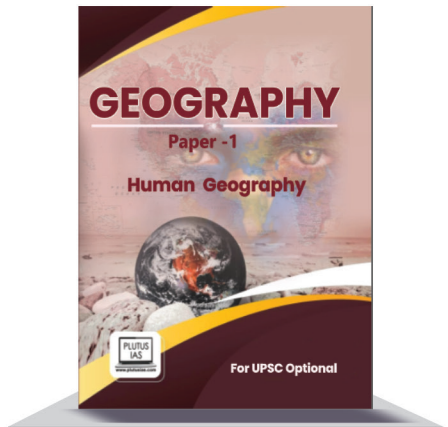

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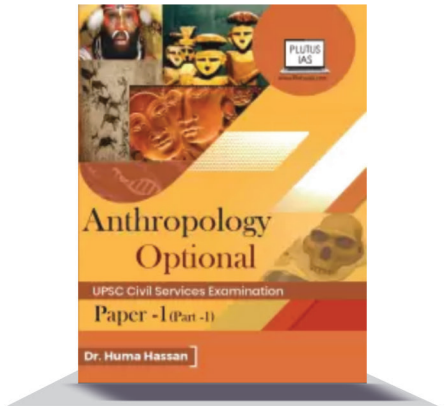

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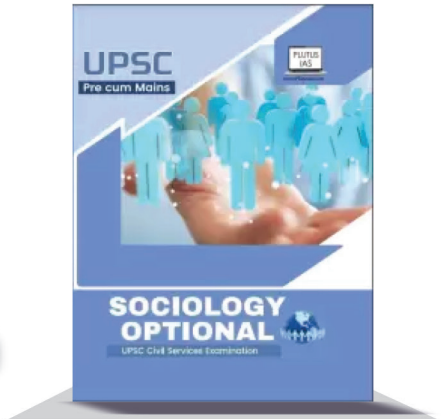

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