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Monthly Magazine



**Most Important
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PREFACE

Dear Students,

Understanding and organizing Civil Services Exam relevant Current affairs in a crisp and concise manner is essential for success in the Civil Services exam. Our exclusive CSE Mains current affairs magazine will fulfil that need in your preparation.

Features

- Crisp, Clear and insightful analysis on key Current Affairs issues.
- Important issues segregated according to CSE Main Exam syllabus.
- Content written in question and answer format for clarity, easy recollection and coherence while writing the main examination.
- Exam relevant topics curated from The Hindu and Indian Express.

All the best

R.C.Reddy IAS Study Circle

INDEX

GS I - INDIAN HERITAGE AND CULTURE, HISTORY AND GEOGRAPHY OF THE WORLD AND SOCIETY... 4

A. INDIAN SOCIETY	4
I. SALIENT FEATURES OF INDIAN SOCIETY, DIVERSITY OF INDIA	4
1. SHOULD RESERVATIONS EXCEED THE 50% CAP?	4
II. ROLE OF WOMEN AND WOMEN'S ORGANIZATION, POPULATION AND ASSOCIATED ISSUES, POVERTY AND DEVELOPMENTAL ISSUES, URBANIZATION, THEIR PROBLEMS AND THEIR REMEDIES	5
1. THE FIRST 1,000 DAYS: A CRITICAL WINDOW FOR EARLY CHILDHOOD DEVELOPMENT	5
2. INTERNAL DIASPORAS IN INDIA	6
3. LESSONS FOR INDIA: HOW KERALA IS TACKLING RAPID URBANISATION	7
4. ANAND MARRIAGE ACT, 1909	8
III. SOCIAL EMPOWERMENT, COMMUNALISM, REGIONALISM & SECULARISM.	9
1. CENSUS TO COUNT PARTICULARLY VULNERABLE TRIBAL GROUPS SEPARATELY	9
2. SECTION 18 OF THE SC/ST ACT	10
B. GEOGRAPHY	11
I. SALIENT FEATURES OF WORLD'S PHYSICAL GEOGRAPHY.	11
1. WHY SOME RIVERS SPLIT?	11
II. KEY NATURAL RESOURCES	12
1. STATUS OF RIVER POLLUTION IN INDIA: CPCB 2023 REPORT	12
III. IMPORTANT GEOPHYSICAL PHENOMENA	13
1. DEFORESTATION AND HEAT-RELATED MORTALITY IN TROPICAL REGIONS	13

GS 2 - GOVERNANCE, CONSTITUTION, POLITY, SOCIAL JUSTICE AND INTERNATIONAL RELATIONS..... 14

A. POLITY	14
I. FUNDAMENTAL RIGHTS, DPSPS AND FUNDAMENTAL DUTIES	14
1. COMMERCIAL & PROHIBITED SPEECHES NOT PART OF FUNDAMENTAL RIGHTS: SC	14
2. ARTICLE 21	15
3. PROTECTING PERSONALITY RIGHTS	16
4. SUPREME COURT ON ANTI-CONVERSION LAWS	17
II. FEDERAL STRUCTURE OF THE CONSTITUTION	18
1. SUPREME COURT PRESCRIBES TIME LIMITS FOR GOVERNORS TO ACT ON BILLS	18
III. PARLIAMENT AND STATE LEGISLATURE	19
1. ABOUT 30% OF MPS AND MLAS FACE SERIOUS CRIMINAL CASES	19
2. IMMIGRATION AND FOREIGNERS ACT, 2025	21
IV. THE JUDICIARY	21
1. WAQF (AMENDMENT) ACT, 2025	21
2. PENDENCY OF CASES IN THE SUPREME COURT	22
B. GOVERNANCE	24
I. GOVERNMENT POLICIES AND INTERVENTIONS	24
1. SUPREME COURT GUIDELINES ON DNA EVIDENCE IN CRIMINAL CASES	24
2. KARNATAKA HIGH COURT'S VERDICT ON THE 'SAHYOG' PORTAL	24
3. DEBATE ON DECRIMINALISING DEFAMATION	25
4. VISAKHAPATNAM DECLARATION ON INDIA'S DIGITAL TRANSFORMATION	26
II. IMPORTANT ASPECTS OF GOVERNANCE (RTI, CITIZEN CHARTER ETC)	28
1. DIGITAL PERSONAL DATA PROTECTION (DPDP) ACT AND RTI ACT	28
C. SOCIAL JUSTICE	29
I. ISSUES RELATING TO DEVELOPMENT AND MANAGEMENT OF SOCIAL SECTOR/SERVICES RELATING TO HEALTH, EDUCATION, HUMAN RESOURCES	29
1. INDIA'S PROCUREMENT REFORMS AND R&D ACCELERATION	29
2. THE GROWING RELEVANCE OF TRADITIONAL MEDICINE	30
3. LESSONS FROM INDIA'S VACCINATION DRIVE	30

D. INTERNATIONAL RELATIONS.....	32
I. INDIA AND ITS NEIGHBORHOOD- RELATIONS	32
1. KATCHATHEEVU DISPUTE.....	32
2. NEPAL'S YOUTH-LED PROTESTS	33
3. SHANGHAI COOPERATION ORGANIZATION (SCO).....	34
4. SAUDI-PAKISTAN STRATEGIC MUTUAL DEFENCE AGREEMENT (SMDA)	35
II. INDIA & WORLD	36
1. INDIA'S GREAT POWER AMBITIONS: CIVILISATIONAL FOUNDATIONS, STRATEGIC REALITIES, AND WESTERN PERCEPTIONS	36
2. USA'S 50% TARIFFS ON INDIAN EXPORTS AND ITS IMPLICATIONS.....	37
3. INDIA-SAUDI ARABIA DEFENCE COOPERATION (2025)	38
4. GLOBAL SOUTH MUST WORK TOGETHER: EAM.....	38
III. BILATERAL, REGIONAL AND GLOBAL GROUPINGS AND AGREEMENTS	40
1. EUROPE'S RECOGNITION OF PALESTINE.....	40
2. H-1B FEE THREATENS INDIA'S IT FIRMS AND BIG TECH BUSINESS MODELS.....	41
3. A NEW STRATEGIC EU-INDIA AGENDA	42
IV. IMPORTANT INTERNATIONAL INSTITUTIONS, AGENCIES AND FOR A	42
1. IS A SHIFT UNDERWAY IN INDIA'S FOREIGN POLICY?	42
2. SUSTAINABLE DEVELOPMENT GOALS (SDG) INDEX	44
GENERAL STUDIES - 3	45
A. INDIAN ECONOMY	45
I. INDIAN ECONOMY ISSUES RELATING TO PLANNING, MOBILIZATION OF RESOURCES	45
1. GST 2.0 - A LANDMARK IN INDIA'S TAX JOURNEY	45
2. IMPACT OF GST REFORMS ON THE COOPERATIVE SECTOR.....	47
3. CAG REPORT ON STATES FISCAL HEALTH	48
II. GROWTH AND DEVELOPMENT, EMPLOYMENT	49
1. WOMEN DRIVING INDIA'S ECONOMIC GROWTH	49
2. BANKING INDUSTRY, A KEY DRIVER OF INDIA'S ECONOMIC GROWTH.....	50
3. INDIA'S FDI LANDSCAPE	51
4. INDIA'S PHASE OF LOW INFLATION AND HIGH GROWTH	53
5. NATIONAL GLOBAL CAPABILITY CENTRES (GCC) POLICY	54
III. INCLUSIVE GROWTH AND ISSUES.....	55
1. THE GENDER ANGLE TO INDIA'S ECONOMIC VULNERABILITIES	55
2. FOOD DEPRIVATION IN INDIA	56
IV. AGRICULTURE AND ALLIED	57
1. INDIA'S ENDEAVOUR TO UNLOCK ITS MARINE FISHERIES POTENTIAL	57
2. FERTILISER SHORTAGES AMID MONSOON SURGE	58
3. NITI AAYOG'S STRATEGY FOR SELF-RELIANT PULSES SECTOR	60
4. FIVE YEARS OF BLUE REVOLUTION	61
V. FOOD PROCESSING AND RELATED INDUSTRIES	62
1. APEDA LAUNCHES BHARATI INITIATIVE TO BOOST AGRI-FOOD EXPORTS	62
VI. INDUSTRY AND INDUSTRIAL POLICIES.....	63
1. CALL FOR INDIA TO BECOME A 'PRODUCT NATION'	63
2. INDIA SETS EYES ON \$1-TRILLION SEMICONDUCTOR MARKET	65
3. INDIA'S RECENT MARITIME REFORMS NEED COURSE CORRECTION	67
4. SCHEME TO PROMOTE CRITICAL MINERAL RECYCLING IN INDIA.....	69
5. PM MITRA PARKS.....	70
6. INDIA'S MANUFACTURING SECTOR: PERFORMANCE AND POLICY	71
VII. SERVICES SECTOR.....	72
1. MEDICAL TOURISM & NON-RESIDENT INDIANS (NRIS)	72
VIII. INFRASTRUCTURE	73
1. ENERGY SOVEREIGNTY: INDIA'S NEW STRATEGIC IMPERATIVE	73
2. ROAD ACCIDENTS IN INDIA 2023.....	74
3. GOVERNMENT TO PUSH GEOTHERMAL ENERGY PILOTS UNDER NEW POLICY	76

IX. TRADE AND EXTERNAL SECTOR	77
1. USA'S TARIFFS ON INDIAN EXPORTS AND ITS IMPLICATIONS.....	77
2. INDIA'S ENERGY SOVEREIGNTY: THE NEW STRATEGIC PRIORITY.....	78
3. SURGING EXPORTS NARROW INDIA'S TRADE DEFICIT	79
B. ENVIRONMENT	80
I. BIODIVERSITY AND CONSERVATION	80
1. EXEMPTIONS FOR MINERAL EXPLORATION DRILLING ON FOREST LAND	80
2. THE MAKING OF AN ECOLOGICAL DISASTER IN GREAT NICOBAR.....	81
II. ENVIRONMENTAL POLLUTION	83
1. NATIONAL DESIGNATED AUTHORITY FOR CARBON MARKETS	83
2. NOISE POLLUTION IS RISING BUT POLICY IS FALLING SILENT.....	84
III. INDIAN INITIATIVES, EFFORTS AND COMMITMENTS	86
1. INDIA'S ELECTRIC LEAP FOR GREEN MOBILITY	86
2. DECARBONISATION OF INDIA'S EMISSION-INTENSIVE SECTORS	87
3. CORPORATE AVERAGE FUEL EFFICIENCY (CAFE) NORMS.....	89
4. INDIA NEEDS TO BUILD CLIMATE-RESILIENT CITIES.....	90
C. DISASTER MANAGEMENT.....	91
I. DISASTERS AND THEIR MANAGEMENT.....	91
1. CHALLENGES OF MONSOON VARIABILITY AND DISASTER PREPAREDNESS	91
2. TOPOGRAPHY, CLIMATE CHANGE, AND HEAVY RAINFALL IN THE HIMALAYAS.....	92
D. SCIENCE AND TECHNOLOGY.....	94
I. DEVELOPMENTS AND THEIR APPLICATIONS AND EFFECTS IN EVERYDAY LIFE	94
1. CLASSGPT, HOW AI IS TRANSFORMING INDIAN CAMPUSES	94
II. ACHIEVEMENTS OF INDIANS IN SCIENCE & TECHNOLOGY	95
1. THE LONG MARCH TOWARDS TECHNOLOGICAL INDEPENDENCE	95
2. INDIA PROJECTS FIVE-FOLD GROWTH IN SPACE ECONOMY.....	96
3. AI FOR VIKSIT BHARAT ROADMAP AND FRONTIER TECH REPOSITORY	98
III. AWARENESS IN THE FIELDS OF IT, SPACE,	100
1. UNSEEN LABOUR AND EXPLOITATION IN ARTIFICIAL INTELLIGENCE	100
E. SECURITY	101
I. LINKAGES BETWEEN DEVELOPMENT AND SPREAD OF EXTREMISM	101
1. BUILDING ROADS IN MAOIST-AFFECTED TRIBAL REGIONS.....	101
II. CHALLENGES TO INTERNAL SECURITY THROUGH COMMUNICATION NETWORKS.....	102
1. CONDUCT OF SOCIAL MEDIA COMPANIES DURING POLITICAL UNREST.....	102
III. SECURITY CHALLENGES AND THEIR MANAGEMENT IN BORDER AREAS.....	103
1. INDIAN ARMY'S DRONE INDUCTION	103
GENERAL STUDIES – 4	105
I. ETHICS AND HUMAN INTERFACE	105
1. WILDLIFE COMMODIFICATION AND ETHICAL CONCERNS	105
II. APTITUDE AND FOUNDATIONAL VALUES FOR CIVIL SERVICE.....	106
1. ETHICAL DIGITAL CONDUCT IN CIVIL SERVICE.....	106
III. ETHICS IN PUBLIC ADMINISTRATION.....	107
1. STRAY DOG MENACE IN INDIA: LEGAL AND ETHICAL DIMENSIONS.....	107

GS I - INDIAN HERITAGE AND CULTURE, HISTORY AND GEOGRAPHY OF THE WORLD AND SOCIETY

A. INDIAN SOCIETY

I. Salient features of Indian Society, Diversity of India

1. Should Reservations Exceed the 50% Cap?

Why in the news?

- Recent developments reopened the debate on whether reservations in India should cross the **50% judicial cap**:

Constitutional Provisions

- Article 15:** Prohibits discrimination by the State and allows special provisions for socially and educationally backward classes.
- Article 16:** Guarantees equality in public employment, with provisions for reservations to ensure representation for disadvantaged groups.
 - Example: Central reservation today — OBCs: 27%, SCs: 15%, STs: 7.5%, EWS: 10%.

Judicial Pronouncements

- Balaji v. State of Mysore (1962):** Introduced the principle of “reasonable limits” for reservations, capping them at 50%. Viewed reservations as an exception to equality.
- State of Kerala v. N.M. Thomas (1975):** Broached the idea that reservations are not exceptions but a continuation of equality (substantive equality). Did not settle the 50% question.
- Indra Sawhney (1992):** Reaffirmed the **50% cap**, upheld OBC reservations, and introduced the creamy layer exclusion. Allowed exceptions only in “extraordinary circumstances.”
- Janhit Abhiyan v. Union of India (2022):** Upheld EWS quota, ruling that the 50% cap applied to backward classes, not to EWS (a distinct category).

Competing Perspectives

- Formal Equality:** Views reservations as a deviation from equality, hence requiring a ceiling to prevent imbalance.
- Substantive Equality:** Recognises structural disadvantages; reservations are seen as essential tools to level the playing field.
 - Example: Dr. B.R. Ambedkar justified reservations as necessary but argued they should remain confined to a minority.

Issues in Implementation

- Demand for Caste Census:** Strong calls for data-driven quotas to reflect actual population proportions.
- Unfilled Vacancies:** Government data shows **40–50% of reserved seats remain vacant** in Central services.
- Concentration of Benefits:**
 - Rohini Commission findings:** ~25% of OBC sub-castes corner **97%** of benefits; ~1,000 of 2,600 OBC communities have zero representation.
 - Similar trends exist among SCs and STs.
- Creamy Layer Debate:**
 - Applied to OBCs since Indra Sawhney.

- Not applicable to SCs/STs; courts in **State of Punjab v. Davinder Singh (2024)** urged reconsideration, but the Centre rejected the idea.

Way Forward

- **Evidence-Based Policy:** Use **2027 Census data** with caste enumeration to recalibrate quotas.
- **Sub-Categorisation:** Implement Rohini Commission's recommendations to ensure equitable distribution within OBCs.
- **Two-Tier Reservation:** For SCs/STs, prioritise most marginalised groups before extending benefits to relatively advanced sections.
- **Beyond Reservations:** Expand skill development, private sector opportunities, and social infrastructure — since reservations alone cannot address employment aspirations.

II. Role of Women and Women's Organization, Population and Associated Issues, Poverty and Developmental issues, Urbanization, their problems and their remedies.

1. The First 1,000 Days: A Critical Window for Early Childhood Development

Why in the news?

- The first 1,000 days of a child's life are crucial for brain development and overall growth.

The Science Behind Early Childhood Development

Brain Development

- By age two, the brain reaches 80% of its adult weight.
- Synapse development peaks, with frontal lobes maturing, responsible for higher cognitive functions like planning and self-regulation.
- Flawed early development can limit later cognitive abilities.

Impact of Nutrition

- Early nutritional deficiencies can cause irreversible cognitive damage.
- The quality of early nutrition is directly linked to brain function, language skills, and learning abilities.

The Role of Early Learning

- The brain's neuroplasticity during early childhood allows children to learn languages and concepts quickly.
- Cognitive stimulation combined with good nutrition results in better developmental outcomes.

Government Initiatives and Programs in Early Childhood Care

Integrated Child Development Services (ICDS)

- One of the world's largest childcare programs, addressing both nutrition and education.
- Initiatives like "**Poshan Bhi Padhai Bhi**" combine nutrition and education for holistic child development.

Navchetana Framework

- Structured activities for cognitive and social stimulation.
- Provides a 36-month stimulation activity calendar, empowering caregivers and Anganwadi workers to engage children effectively.

Challenges and Areas for Improvement

- **Expansion of ICDS Coverage**
 - The ICDS program needs to expand to ensure high-quality services in both rural and urban areas.
 - There is a need to enhance pre-primary education and better access to health, nutrition, and developmental services.
- **Technological Integration:** Leverage advancements in technology to monitor children's progress and improve service delivery in urban areas.
- **Crèche Services for Women Empowerment**
 - Expanding crèche services will allow women to join the workforce while ensuring proper care and development for their children.
 - Public-private partnerships can play a key role in expanding access to childcare services.

Way Forward

- Strengthening early childhood programs will ensure that every child receives the necessary foundation to thrive.
- As India transitions to an increasingly automated and technological workforce, early childhood investment is essential for future economic resilience.
- Empowering children and women through improved health, education, and developmental support will drive India's growth.

2. Internal Diasporas in India

Why in the news?

- The concept of **diaspora** is usually associated with international migration. In India, a similar phenomenon exists **within national borders**, where communities migrate across states and retain distinct linguistic, cultural, and social identities.

Defining Internal Diasporas

- Internal diasporas consist of groups who **settle long-term** in culturally distinct regions but maintain their **language, traditions, and customs**.
- **Examples include:**
 - **Odia workers in Surat**, referring to the city as “videsha” due to cultural differences.
 - **Gujarati-speaking communities in Madurai**, showing persistence of language despite census undercount.
- Estimates suggest over **100 million Indians** live in culturally distinct zones internally, more than **three times** the size of the international diaspora.

Significance of Internal Diasporas

- **Cultural Preservation:** Maintains language, festivals, and social traditions across generations.
- **Community Building & Social Capital:** Associations (Bengali Samaj, Gujarati Mandal) foster solidarity, entrepreneurship, and civic engagement.
- **Economic Contributions:** Many internal diasporas engage in trade, business, and services; e.g., Odia workers in Surat's textile industry.
- **Policy Relevance:** Recognizing internal diasporas informs urban planning, welfare schemes, and language education policies.
- **Cultural Integration:** Enriches host regions with culinary, linguistic, and artistic diversity, fostering multicultural urban spaces.

Challenges Faced by Internal Diasporas

- **Cultural Alienation:** Linguistic and social differences can create a sense of exclusion.
- **Discrimination & Stereotypes:** Host communities may marginalize diasporic groups.
- **Policy Gaps:** Unlike international diaspora, internal diasporas are rarely formally recognized.
- **Data Limitations:** Long-settled communities are often missed in census and surveys.
- **Identity Struggles:** Younger generations face pressure to assimilate, risking loss of language and culture.
- **Urban Strain:** Concentrated diasporic populations can stress housing and infrastructure in cities.

Way Forward

- India's diaspora is **not limited to 30 million abroad**, but includes **100+ million internally**, playing a vital role in culture, economy, and society.
- **Policy must recognize internal diasporas**, supporting cultural preservation, welfare inclusion, and urban planning.
- A **borderless understanding of diaspora** enhances social cohesion and leverages the contributions of internal migrants, enriching national identity and diversity.
- Recognizing that being "videshi" can occur within India emphasizes **intra-national diversity** as a critical aspect of the country's social and economic landscape.

3. Lessons for India: How Kerala is Tackling Rapid Urbanisation

Why in the news?

- Kerala, with its unique "rurban" landscape of intermeshed villages and towns, faces one of the fastest rates of urbanisation in India. Projections suggest over **80% of Kerala's population will be urban by 2050**, intensifying the risks of floods, landslides, coastal erosion, and climate shocks.

Introduction

- To address this, the State established the **Kerala Urban Policy Commission (KUPC) in December 2023**, the first such State-level urban commission in India.
- The Commission's 25-year roadmap, submitted in March 2025, is a paradigm shift in India's urban planning discourse.

Kerala Urban Policy Commission: Rationale and Uniqueness

- **Need for systemic planning:** Kerala's urbanisation outpaced infrastructure and governance readiness, necessitating a departure from centralised, project-based approaches.
 - Example: Recurrent floods in Ernakulam and landslides in Idukki highlighted the gap between planning and crisis.
- **First State-level initiative:** Unlike national frameworks, the KUPC is tailored to Kerala's geography, socio-economic realities, and climate vulnerabilities.
- **Holistic scope:** Its 2,359-page report integrates **climate resilience, finance empowerment, data intelligence, and community narratives** into 10 thematic pillars.

Key Recommendations of the KUPC

- **Climate and Risk-Aware Zoning:** Hazard mapping for floods, landslides, and coastal inundation integrated into urban planning.
- **Digital Data Observatory:** Real-time data centre at Kerala Institute of Local Administration with LiDAR, tide gauges, and satellite inputs.

- **Green Fees and Climate Insurance:** Environmental levies on eco-sensitive projects and parametric insurance for disaster-prone regions.
- **Municipal and Pooled Bonds:** Larger cities like Kochi to issue municipal bonds; smaller towns to pool resources for financial empowerment.
- **Governance Overhaul:** Establishment of City Cabinets led by elected mayors, specialist municipal cadres, and youth-tech recruitment through the Jnanashree programme.
- **Place-Based Economic Revival:** Recognition of regional strengths: Thrissur-Kochi (FinTech), Thiruvananthapuram-Kollam (Knowledge corridor), Kozhikode (literature hub).
- **Commons, Culture, and Care:** Revival of wetlands, waterways, heritage zones, and city health councils for migrants and gig workers.

Why the Report is Distinct

- **Integration of local narratives into data systems:** Fishermen's experiences of coastal erosion or bazaar vendors' mobility concerns are embedded into dashboards and planning templates.
- **Shift from reactive to proactive governance:** Climate resilience is not an appendix but the core of urban strategy.
- **Fiscal empowerment of local bodies:** Municipal bonds and green levies decentralise financial agency.
- **Participatory and dialogic governance:** Citizen narratives fuel policy-making, closing the feedback loop.

Lessons for Other States

- **Mandate time-bound urban commissions** tailored to local contexts.
- **Blend data with lived experiences**, creating observatories for citizen inputs.
- **Empower local governments** through green levies, pooled bonds, and insurance.
- **Institutionalise youth and technocrats** in governance structures.
- **Embed climate resilience in every planning pillar**, not as an add-on.

4. Anand Marriage Act, 1909

Why in the news?

- **Supreme Court directed 17 States and eight Union Territories** to frame rules for registration of Sikh marriages under the **Anand Marriage Act, 1909** within four months. Until rules are notified, States must register Anand Karaj marriages under existing laws.

Anand Karaj and the Act

- **Anand Karaj:** Literally "blissful union"; the Sikh marriage ceremony conducted before the Guru Granth Sahib, with couples taking four laavan (circumambulations) as hymns composed by Guru Ram Das are recited.
- **Anand Marriage Act, 1909:** Passed to give **legal sanctity** to Anand Karaj, differentiating it from Hindu marriage rituals.
- **Limitation:** The Act originally lacked provisions for **marriage registration, divorce, or matrimonial disputes**.

The 2012 Amendment

- Introduced **Section 6**, mandating State governments to frame rules for registration of Anand Karaj marriages.
- **Aim:** To allow Sikh couples to register marriages under their own religious tradition without needing to rely on the **Hindu Marriage Act, 1955**.
- **Reality:** More than a decade later, most States/UTs had not framed rules, effectively denying Sikhs uniform access to this statutory facility.

Larger Concerns in the Sikh Community

- **Dependence on Hindu Marriage Act, 1955**
 - While registration is possible, Sikhs must turn to the Hindu Marriage Act for divorce, maintenance, and other matrimonial disputes.
 - This undermines the **distinct identity of Sikh law**, unlike Muslims (Muslim Personal Law) and Christians (Indian Christian Marriage Act).
- **Incomplete Nature of the Anand Act**
 - The Act is **extremely brief** (a page-long, ~10 provisions) compared to the detailed Hindu Marriage Act.
 - Lacks clarity on divorce, succession, inheritance, and maintenance.
- **Symbolic Recognition vs Substantive Rights**
 - Community leaders argue the Act is a **“half-hearted” measure** — more symbolic than practical.
 - Critics see it as legal recognition in form, but not in substance.

Way Forward

- **Comprehensive Legislation:** Draft a complete Sikh Marriage Act covering solemnisation, registration, divorce, maintenance, succession, and custody — similar to frameworks available for Hindus, Muslims, and Christians.
- **Uniform Implementation:** States/UTs must promptly frame registration rules, ensuring equal access across India.
- **Dialogue with Community:** Consultation with Sikh scholars, SGPC, and civil society to balance **religious identity and civic equality**.
- **Comparative Approach:** Study how personal laws of other religious communities are codified to build a robust, community-specific framework.

III. Social Empowerment, Communalism, Regionalism & Secularism.

1. Census To Count Particularly Vulnerable Tribal Groups Separately

Why in the news?

- The Ministry of Tribal Affairs (MoTA) has written to the Registrar General and Census Commissioner, urging that **particularly vulnerable tribal groups (PVTGs) be separately enumerated in the upcoming census**.

Who are Particularly Vulnerable Tribal Groups (PVTGs)?

- **Particularly Vulnerable Tribal Groups (PVTGs)** are a sub-category of Scheduled Tribes (STs) identified by the Government of India.
- They are considered the **most marginalized and socio-economically backward tribal communities**.
- The concept was introduced in **1973** based on recommendations of the **Expert Committee on Primitive Tribal Groups**, chaired by A.K. Rao.

Criteria for Classification

- **Pre-agricultural level of technology** – They largely rely on hunting, gathering, or primitive farming techniques.
- **Low literacy** – They generally have very low literacy and educational attainment.
- **Economic backwardness** – Poor access to resources, low income, and dependence on subsistence economy.
- **Declining or stagnant population** – Communities with low growth rate or declining population trends.

Challenges Faced by Particularly Vulnerable Tribal Groups (PVTGs)

- **Geographic Isolation:** Remote and inaccessible areas
- **Economic Backwardness:** Dependence on subsistence economy
- **Low Literacy & Education:** Limited schools and high dropout

- **Health & Nutrition:** Poor healthcare and malnutrition
- **Cultural Erosion:** Loss of traditional practices and language
- **Political & Social Marginalization:** Limited representation and exploitation
- **Environmental Vulnerability:** Dependence on forests and natural resources

Why the Census of PVTGs Matters

- **Identification & Recognition:** Determines which tribal communities qualify as PVTGs for special development support.
- **Resource Allocation:** Guides government schemes, funding, and infrastructure planning.
- **Policy Formulation:** Provides data for designing targeted interventions in health, education, and livelihood.
- **Monitoring & Evaluation:** Helps track progress of socio-economic development over time.
- **Protection of Rights:** Assists in safeguarding land, forest, and cultural rights.
- **Inclusion in Development:** Ensures marginalized PVTGs are not overlooked in national and state programs.

Government Initiatives

- **PM-JANMAN Scheme:** It was launched on the occasion of Janjatiya Gaurav Divas in 2023 in Jharkhand, targeting 75 PVTGs communities.
- **Particularly Vulnerable Tribal Groups (PVTGs) Development Program:** The PVTG program targets the most vulnerable tribal communities, focusing on improving access to healthcare, education, clean water, and electricity.

2. Section 18 of the SC/ST Act

Why in the news?

- The Supreme Court of India, in *Kiran vs Rajkumar Jivaraj Jain* (September 1, 2025), cancelled the anticipatory bail granted by the Bombay High Court to a caste-crime accused, reaffirming the constitutional validity of Section 18 of the Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Act, 1989 (SC/ST Act).

Background

- Section 18 of the SC/ST Act bars anticipatory bail for offences committed under the Act when a prima facie case is made out.
- In this case, the accused allegedly attacked a Dalit complainant and his family after he refused to vote as directed, committing assault, caste-based abuse, and looting. The Bombay High Court had granted anticipatory bail, citing political motivations.
- The Supreme Court overturned this, stating that courts cannot conduct a “mini-trial” at the pre-arrest stage and must assess only whether a prima facie case exists.

Legal and Constitutional Significance

- **Reinforcing Legislative Intent:** Section 18 was inserted by Parliament to prevent intimidation of Dalits and tribal communities.
- **Prima Facie Test vs Mini-Trial:** The judgment clarifies that courts must assess only the prima facie existence of an offence during bail hearings, without delving into detailed evidentiary analysis.
- **Electoral and Social Implications:** The ruling recognises that caste-based retaliation can undermine democratic participation, as in the case where the offence was linked to the complainant’s voting choice.

Key Judicial Observations

- Insults and assaults in public view are actionable under the SC/ST Act.
- Electoral coercion or retaliation against SC/ST voters attracts Sections 3(1)(o) and 3(1)(r) of the Act.

- Courts must respect the legislative bar on anticipatory bail and avoid evaluating evidence at the pre-arrest stage.
- The judgment strengthens the deterrent effect against caste-based offences while maintaining the rule of law.

Broader Implications

- **Protection of Vulnerable Communities:** The judgment safeguards Dalit and tribal complainants from intimidation, promoting equal access to justice.
- **Judicial Clarity on Procedure:** It delineates the role of courts at the bail stage, ensuring proper separation of powers between investigation, prosecution, and judicial assessment.
- **Strengthening Social Justice:** By upholding the SC/ST Act, the Court reinforces India's constitutional commitment to eliminating untouchability (Article 17) and promoting equality (Article 14).

Conclusion

By barring pre-trial mini-trials and emphasising the prima facie test, the judgment strengthens the rule of law, ensures accountability, and upholds the constitutional mandate of social justice.

B. GEOGRAPHY

I. Salient features of World's Physical Geography.

1. Why Some Rivers Split?

Why in the news?

- Researchers at the University of California, analysed 36 years of satellite data across 84 rivers worldwide to identify why some rivers maintain a single-thread channel, while others develop into braided or multi-thread systems.

Key Findings from Research

- **Erosion vs Deposition Balance**
 - **Single-thread rivers:** Erosion on one bank is balanced by deposition on the opposite bank, maintaining a stable channel.
 - **Multi-thread rivers:** Erosion exceeds deposition, causing channels to widen and split over time.
- **Vegetation Impact**
 - Vegetated river bends form **levees**, restricting lateral movement and controlling sinuosity.
 - Unvegetated bends migrate differently, leading to distinctive sediment deposits and channel patterns.
- **Indian River Examples**
 - **Ganga (Patna, Farakka, Paksey) and Brahmaputra (Pandua, Pasighat, upstream Himalaya)** show multi-threaded characteristics.
 - Braided rivers like the Brahmaputra experience **rapid bank erosion**, causing unstable sub-channels prone to splitting.

Implications

- **Flood and Erosion Management:** Traditional models assuming fixed channel width/depth are inaccurate for multi-thread rivers.
- **River Restoration:** Natural restoration is faster in braided sections; embankments confining rivers increase maintenance costs.

- **Nature-Based Solutions:**

- Removing artificial embankments
- Restoring floodplain connectivity
- Vegetated buffer zones
- Reactivating abandoned channels and wetlands

Significance of the Study

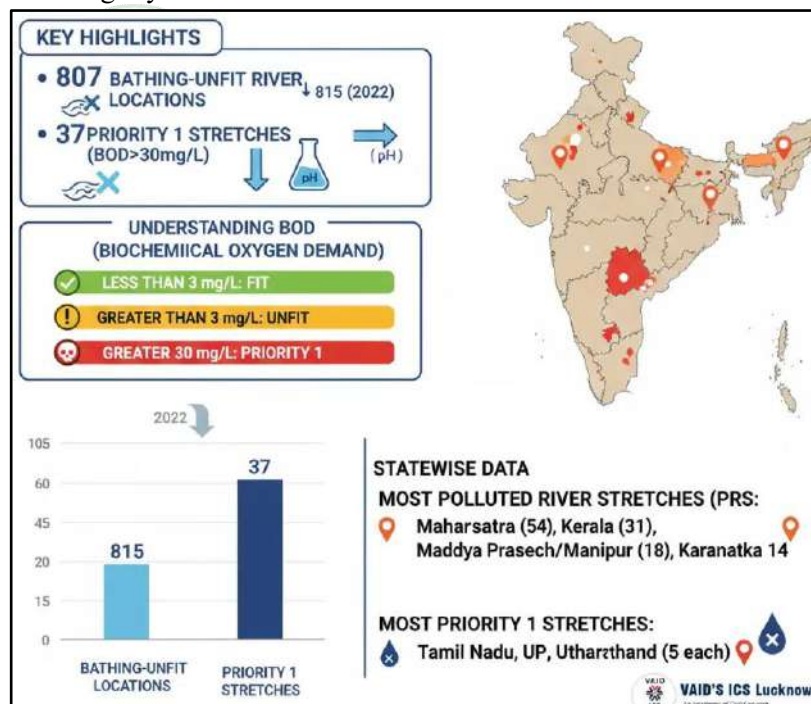
- The study helps **predict flood risks** in braided river regions, providing insights for disaster management, especially in flood-prone states like Assam and Bihar.
 - **Braided rivers** constantly **shuffle their channels**, changing course across the floodplain. This makes them **dynamic and unpredictable**.
 - It is useful in **river engineering projects** such as dams, barrages, and embankments.
- It assists in **environmental conservation**, since river splitting affects wetlands, fisheries, and livelihoods.

II. Key Natural Resources

1. Status of River Pollution in India: CPCB 2023 Report

Why in the news?

- According to the **Central Pollution Control Board (CPCB) 2023 report**, the **number of river locations unfit for bathing** decreased slightly to **807 in 2023** from **815 in 2022**.



Polluted River Stretches (PRS)

- **Definition:** Two consecutive locations exceeding BOD limits in a river are counted as a **polluted river stretch (PRS)**.
- The report tracks river health using **Biological Oxygen Demand (BOD)** as a key parameter.
- **BOD > 3 mg/L** indicates rising organic pollution and unfit conditions for bathing.
- **2023 Data:** 296 PRS/locations across 271 rivers.
- **2022 Data:** 311 PRS/locations across 279 rivers.

State-wise Distribution**1. Highest number of PRS locations:**

- a) Maharashtra – 54
- b) Kerala – 31
- c) Madhya Pradesh & Manipur – 18 each
- d) Karnataka – 14

2. Priority 1 stretches (BOD > 30 mg/L):

- a) Tamil Nadu, Uttar Pradesh, Uttarakhand – 5 each
- b) Overall reduction from **45 (2022) → 37 (2023)**

Other Observations

- Maharashtra had the **highest overall number of polluted stretches (55)** in 2022.
- CPCB monitors water quality at **4,736 locations** including rivers, lakes, creeks, drains, and canals.

Conclusion

- The slight reduction in polluted river stretches shows **modest improvement**, but **Priority 1 stretches still require urgent remediation**.
- Continuous monitoring, improved sewage treatment, and public awareness are critical to **enhance river water quality and achieve cleaner waterways in India**.

III. Important Geophysical Phenomena**1. Deforestation and Heat-Related Mortality in Tropical Regions****Why in the news?**

- A recent study published in Nature Climate Change revealed that deforestation-induced warming caused nearly 28,000 additional heat-related deaths annually in tropical regions between 2001 and 2020.

Deforestation in the Tropics

- According to the study, **1.6 million sq. km** of tropical forest cover was lost globally between **2001 and 2020**:
 - Central and South America: 7,60,000 sq. km
 - Southeast Asia: 4,90,000 sq. km
 - Tropical Africa: 3,40,000 sq. km
- **Tropical forests** are biodiversity-rich ecosystems found mainly in **South America, Africa, and Asia**.
- **Significance:** They act as significant carbon sinks, absorbing greenhouse gases through photosynthesis and regulating the hydrological cycle.

Causes of Deforestation

- **Agricultural expansion:** Commercial-scale farming for commodities like soy, palm oil etc is the largest driver of deforestation, especially in tropical regions.
- **Logging and timber extraction:** Both legal and illegal harvesting for wood and paper contributes significantly to forest loss and degradation.
- **Infrastructure development:** Expanding cities, building new roads and dams, and mining operations directly clear forested areas and fragment ecosystems.
- **Unsustainable subsistence activities:** For rural populations, the collection of fuelwood and the practice of shifting cultivation (slash-and-burn farming) contribute to forest degradation.

Impacts of Deforestation

- **Release of Stored Carbon Dioxide:** Tropical forests act as major carbon sinks, storing huge amounts of carbon in soils and woody biomass.
- **Loss of Local Cooling Effect of Trees:** Trees and plants absorb water from the soil and release it into the atmosphere as water vapour through transpiration.
- **Biodiversity Loss:** Deforestation destroys habitats for countless species, leading to a decline in biodiversity and potential loss of important ecosystem services like **pollination and soil fertility**.
- **Human Health and Mortality:** An estimated **28,300 deaths** are annually linked to deforestation-induced warming. Extreme heat, coupled with high humidity, increases risks of heat stroke and organ failure.
- **Socio-Economic Impacts:** Deforestation often leads to the loss of livelihoods for people dependent on forest resources, impacting indigenous and rural communities disproportionately.

Challenges in Addressing Deforestation

- **Economic Dependence:** Agricultural exports and timber trade remain major sources of income for tropical countries.
- **Weak Governance:** Poor enforcement of forest conservation laws.
- **Population Pressure:** Rising demand for food and land.
- **Health Linkages:** Limited recognition of deforestation's direct impact on human mortality.

Way Ahead

- **Strengthen International Cooperation:** Global South requires financial and technological support to reduce deforestation without sacrificing development.
- **Integrate Health Dimension:** Climate-health linkages of deforestation should be included in policy frameworks.
- **Community Empowerment:** Indigenous communities must be involved in conservation decision-making.
- **Forest Monitoring:** Use satellite-based technologies for real-time tracking.

GS 2 - GOVERNANCE, CONSTITUTION, POLITY, SOCIAL JUSTICE AND INTERNATIONAL RELATIONS

A. POLITY**I. Fundamental Rights, DPSPs and Fundamental Duties****1. Commercial & Prohibited Speeches Not Part of Fundamental Rights: SC****Why in the news?**

- The Supreme Court on August 25, 2025 said social media influencers commercialise free speech and their comments have a capacity to hurt sentiments in a diverse society, which include the disabled, women, children, senior citizens and the minorities.

Supreme Court's Key Observations

- **Commercial speech:** E.g., advertisements, profit-driven promotions do not automatically get the same fundamental protection as political or social speech.

- **Prohibited/Hate Speech:** Expressions promoting enmity, hatred, or violence against any group based on inherent characteristics are not constitutionally protected.
- **Accountability of Influencers:** Influencers with large audiences must exercise responsibility and caution, as irresponsible speech causes harm or ridicule to specific communities—especially vulnerable ones like the disabled.
- **Social Media Guidelines:** The Supreme Court directed the government to frame comprehensive guidelines for regulating online content to curb harm and ensure accountability.

Laws Governing Commercial & Prohibited Speech in India

- **Consumer Protection Act, 2019:** Regulates misleading advertisements and unfair trade practices.
 - Establishes **Central Consumer Protection Authority (CCPA)** with power to ban misleading ads.
- **Sec. 67 of Information Technology Act, 2000:** prohibits publishing obscene material in electronic form.
- **Indecent Representation of Women (Prohibition) Act, 1986:** Bans derogatory portrayal of women in ads, publications, media.
- **Indian Penal Code (IPC), 1860 / Bharatiya Nyaya Sanhita, 2023:** Defamation (Sec. 499 IPC / Sec. 354 BNS), Promoting enmity between groups (Sec. 153A IPC / Sec. 194 BNS) & Obscenity (Sec. 292–294 IPC / Sec. 282 BNS).

2. Article 21

Why in the news?

- The Punjab and Haryana High Court granted bail to a Bangladeshi woman accused of forgery and illegal stay, ruling that **Article 21's right to personal liberty applies to foreigners.**

HC Observations

- High Court emphasized that foreigners also have a right to personal liberty, and prolonged detention without the ability to furnish sureties would cause **“irreversible injustice.”**
- The word **‘person’** in Article 21 is wide enough to cover not only citizens but also foreigners.
 - The **State has an obligation to protect the liberty** of such foreigners and ensure that their liberty is not deprived except in accordance with the procedure established by law”.
 - It also acknowledged the difficulty for undocumented migrants to furnish sureties and said bail conditions cannot be so harsh that they effectively deny freedom.

About Article 21

- **Text of Article 21:** "No person shall be deprived of his life or personal liberty except according to procedure established by law."

Key Features

- **Fundamental Right:** Article 21 is a **fundamental right** under Part III of the Constitution.
- **Protections Covered:** Guarantees **right to life** and **personal liberty**.
- **Procedure Requirement:** Deprivation is allowed **only according to “procedure established by law”**.
- **Judicial Interpretation:** The Supreme Court has expanded it to include the **right to live with dignity**, health, clean environment, shelter, education, and privacy.

Interpretation of Article 21 (Right to Life and Personal Liberty) – Supreme Court Judgments

- **A.K. Gopalan v. State of Madras (1950):** Early restrictive view; personal liberty limited to procedural safeguards.

- **Maneka Gandhi v. Union of India (1978):** Expanded scope; “life” and “personal liberty” include **right to live with dignity, travel, and choice**; introduced **due process** concept.
- **Francis Coralie Mullin v. Union Territory of Delhi (1981):** Right to shelter, livelihood, and basic amenities included under right to life.
- **Bandhua Mukti Morcha v. Union of India (1984):** Right against bonded labor recognized as part of Article 21.
- **Consumer Education & Research Centre v. Union of India (1995):** Environmental protection and pollution-free life included under right to life.
- **People’s Union for Civil Liberties v. Union of India (2003):** Right to health and medical care as essential part of life with dignity.
- **K.S. Puttaswamy v. Union of India (2017):** Right to privacy recognized as a fundamental aspect of Article 21.

Significance

- Protects citizens against **arbitrary deprivation of life and liberty**.
- Serves as a foundation for **social, economic, and cultural rights**.
- Acts as a **dynamic and evolving right**, shaped by judicial interpretations to include modern human rights dimensions.

3. Protecting Personality Rights

Why in the news?

- The Delhi High Court has recently issued a series of orders protecting the personality rights of Bollywood celebrities from unauthorised commercial use.

Faith and freedom

The Supreme Court is hearing pleas that have raised questions on the right to faith, marriage and personal liberty in a democracy as State governments bring in strict legislation against unlawful religious conversion



- Some petitioners have opposed the validity of the anti-religious conversion laws across 10 States while others said that the laws work to prevent conversion through allurement, fraud and force
- Senior advocate C.U. Singh, representing an NGO, said that the States had enacted increasingly stringent laws that even make it possible for third parties to file criminal complaints against interfaith couples
- Additional Solicitor-General K.M. Nataraj, on behalf of some States, opposed the pleas for stay on the laws
- The court scheduled the case after six weeks to consider the question of stay after hearing from the States

Common Law Protections

- Courts grant **injunctions, damages, and takedown orders** for misuse of persona in advertisements, merchandise, AI-generated content, or digital platforms.
- Landmark judgments:
 - *R. Rajagopal v. State of Tamil Nadu (1994)* – Recognized control over identity under **Article 21**.
 - *Rajinikanth case* – Misuse of name, image, and style restricted.

Intellectual Property Laws

- **Copyright Act, 1957:** Sections 38A (exclusive rights) & 38B (moral rights) protect performers’ work and objection to distortion.
- **Trade Marks Act, 1999:** Celebrities can register names, signatures, catchphrases as trademarks.
- **Tort of Passing Off:** Protects unregistered marks and prevents misrepresentation.

Recent Judicial Interventions

- **Delhi High Court 2023–2025:**
 - **Aishwarya Rai Bachchan & Abhishek Bachchan** – Prevented AI-generated misuse of images and voices.
 - **Karan Johar** – Protected from digital persona manipulation.
 - **Anil Kapoor & Jackie Shroff** – Restrained online entities exploiting name, image, voice, likeness.
- **Bombay High Court 2024:**
 - **Arijit Singh** – Voice cloning using AI declared actionable under personality rights.

Balancing Free Speech

- **Article 19(1)(a):** Right to free speech includes satire, parody, criticism, and artistic expression.
- Courts clarify that **commercial exploitation without consent** is illegal, but creative expression, lampooning, and reporting are protected.
- Key cases:
 - *DM Entertainment v. Baby Gift House (2010)* – Caricature, parody, and non-commercial use protected.
 - *Digital Collectibles PTE Ltd v. Galactus Funware (2023)* – Public domain usage for satire does not infringe rights.

Challenges

- No comprehensive legislation; protection depends on **piecemeal judicial precedents**.
- Ordinary citizens, especially women, face **deepfakes, revenge porn, and impersonation**, requiring tailored legal remedies.
- Enforcement is difficult due to the **scale of digital content and cross-border platforms**.

Conclusion

- Personality rights are an extension of **privacy, dignity, and autonomy under Article 21**.
- Courts are increasingly proactive in curbing **unauthorised commercial and AI-driven misuse** while maintaining a **balance with freedom of expression**.
- A **comprehensive legislative framework** is needed to standardize protections for both celebrities and ordinary citizens in the digital era.

4. Supreme Court on Anti-Conversion Laws**Why in the news?**

- The **Supreme Court (SC)** questioned the enforceability of anti-religious conversion provisions under “Freedom of Religion” Acts across 10 Indian States.

Background

- States including **Uttar Pradesh, Himachal Pradesh, Madhya Pradesh, Uttarakhand, Gujarat, Chhattisgarh, Haryana, Jharkhand, Karnataka**, and recently **Rajasthan**, enacted Freedom of Religion Acts.
- Laws criminalise conversions **through force, allurement, or fraud**, with penalties ranging from **20 years to life imprisonment**.
- Amendments empower **third parties to file complaints**, placing the **burden of proof** on the convert to prove voluntariness.

Issues Raised

- **Constitutional Challenge:** Petitioners claim these laws violate **Articles 14, 21, and 25**, restricting personal choice and faith propagation.

- **Draconian Enforcement:** Bail conditions are stringent, akin to **UAPA**, making legal relief for accused couples difficult.
- **Ambiguity in Determination:** SC asked, “Who decides if a religious conversion is deceitful?” highlighting practical and legal challenges.
- **Interference in Inter-Faith Marriages:** Laws allow **government or third-party scrutiny**, threatening privacy and autonomy.
- **Chilling Effect:** Critics argue laws restrict **normal religious practices, festivals, and personal decisions**.

Legal Positions

- **Petitioners:** NGO **Citizens for Justice and Peace** argued laws are used as templates to enact stricter versions across states.
 - Emphasised undue state interference in personal faith and choice of life partner.
- **Government:** Opposed petitions, questioning **locus standi** of NGOs and resisting stay of laws.
- **SC Observation:** Court emphasised its role is to **examine constitutionality**, not enforce or create law.
 - Raised concerns about practical enforceability and potential violation of **fundamental rights**.

Implications

- **Minority Rights:** Excessive state control could infringe on **religious freedoms** and personal liberty.
- **Judicial Oversight:** Courts may need to balance **faith protection** against **rights of individuals** in inter-faith marriages.
- **Policy Concerns:** States must ensure laws do not create a **chilling effect** on religious practice.
- **Burden of Proof:** Shifting the burden onto individuals may **violate principles of natural justice**.

Conclusion

The SC’s scrutiny highlights tensions between **religious protection and individual liberty**. Final adjudication will determine whether these Acts are **constitutional** or require modification.

II. Federal structure of the Constitution

1. Supreme Court prescribes time limits for Governors to act on Bills

Why in the news?

- The Supreme Court is hearing a Presidential reference on timelines and discretionary powers of Governors under Article 200.

Article 200

- Article 200 of the Constitution governs Governor’s assent to State Legislature Bills.
- The Governor has four options:
 - Give assent to the Bill.
 - Withhold assent (reject the Bill).
 - Return the Bill for reconsideration of the State Legislature.
 - Reserve the Bill for consideration of the President.
- The debate arises around whether the Governor can withhold assent or reserve Bills at his/her own discretion.

Constitutional Position

- **Article 163(1):** Governor acts on **Council of Ministers’ advice**, except in matters requiring discretion.

- **Article 200:** Uses “shall” regarding assent, implying **non-discretionary action** except in rare constitutional cases (e.g., Bill affecting High Court powers).
- **Sarkaria & Punchhi Commissions:**
 - Discretion limited to reservation for President in exceptional cases.
 - Suggested **6-month timeline** for Governor/President action.

Supreme Court April 2025 Judgment

- In State of Tamil Nadu vs Governor of Tamil Nadu:
 - Prescribed **3-month timeline** for Governors to act on Bills.
 - Governor must assent if the Bill is **repassed by State Legislature**.
 - Presidential decision on reserved Bills also limited to **3 months**.
- Relied on **past judgments**, commission recommendations, and Home Ministry OM 2016.
- Held that **unreasonable delays are subject to judicial review**.

Centre’s Argument

- Governor enjoys **constitutional discretion** (Article 163(2)) in certain matters.
- Courts **cannot prescribe timelines**, as Constitution does not specify any
- Issues between elected government, Governor, and President should be resolved **politically**, not judicially.

Opposition States’ Perspective

- Governors in opposition-ruled States **selectively delay or reserve Bills**.
- Argued that such delays **disrespect the popular mandate** of the elected government.

Way Forward

- Supreme Court’s Presidential reference expected to **clarify boundaries** between discretion and ministerial advice.

III. Parliament and State legislature

1. About 30% of MPs and MLAs face serious criminal cases

Why in the news?

- An analysis of MPs and MLAs across India shows that 31% of MPs and 29% of MLAs have declared serious criminal charges against them.

Reasons for Criminalization

- **Money and Muscle Power in Elections**
 - Electoral politics often demands large financial resources. Candidates with criminal backgrounds may have access to unaccounted wealth.
 - Muscle power helps enforce vote banks, intimidate opponents, and influence election outcomes.
- **Weak Enforcement of Legal Provisions**
 - Delays in the judiciary allow politicians to contest elections despite serious charges.
 - The Representation of the People Act disqualifies candidates only after conviction, creating a loophole.
- **Voter Behavior**
 - In some constituencies, voters may prioritize caste, religion, or local influence over integrity.
 - Criminality is sometimes tolerated if the candidate delivers development or protection of local interests.

Implications for Governance

- **Erosion of Public Trust**
 - Presence of politicians with criminal charges undermines faith in democratic institutions.
 - Citizens perceive the system as biased and corrupt, reducing civic engagement.
- **Policy Capture and Corruption**
 - Criminally charged legislators may misuse their power to influence investigations or policy decisions for personal gain.
 - Policies may be skewed to protect vested interests rather than serve the public.
- **Weakening Rule of Law**
 - The executive and legislative powers may be manipulated to shield accused representatives.
 - Law enforcement agencies may hesitate to act against powerful legislators.

Judicial and Legal Interventions

- **Supreme Court Directives**
 - The Supreme Court in *Lily Thomas vs Union of India* held that MPs and MLAs convicted of certain offences should be immediately disqualified.
 - *Public Interest Litigations* have pushed for faster disposal of criminal cases involving politicians.
- **Election Commission Measures**
 - Disclosure of criminal antecedents in affidavits is mandatory for all candidates.
 - Awareness campaigns inform voters about candidates with serious criminal cases.

Challenges in Reform

- **Judicial Delays:** Many criminal cases drag on for years due to procedural delays, adjournments, and backlog.
- **Political Will:** Resistance exists within political parties, as candidates with criminal backgrounds often win due to resources and influence.
- **Voter Complicity:** Social, caste, and local loyalties sometimes outweigh considerations of integrity in elections.

Key Committee Recommendations

- **The Law Commission's 244th Report (2014)** recommended disqualifying politicians from contesting elections as soon as charges are framed against them for offenses that carry a maximum punishment of five years or more.
- The report specifically recommended expediting trials for sitting MPs and MLAs by establishing fast-track courts.
- The **National Commission to Review the Working of the Constitution** in its 2002 report recommended measures to enhance the accountability of political parties, including the statutory audit of party expenses and the disclosure of candidates' assets and liabilities.
- **Indrajit Gupta Committee (1998) & 2nd ARC (2007)** recommended partial state funding of elections to curb the use of black money and reduce corruption.

Way Forward

- **Fast-Track Courts for Politicians:** Establish special courts to expedite trials of MPs and MLAs facing serious charges.
- **Pre-Candidature Screening:** Introduce legal reforms to prevent candidates with serious charges from contesting elections.
- **Electoral Awareness Campaigns:** Educate voters about the impact of electing representatives with criminal cases on governance and development.
- **Strengthening Party Accountability:** Political parties should avoid nominating candidates with serious criminal records and be held accountable for their choices.

2. Immigration and Foreigners Act, 2025

Why in the news?

- The Immigration and Foreigners Act, 2025 came into effect on 1st September 2025, consolidating India's immigration laws, imposing stricter penalties for forged documents, and strengthening reporting and monitoring of foreigners.

Key Provisions of the Immigration and Foreigners Act, 2025

- **Immigration Posts:** It empowers central government to notify designated immigration posts for entry into and exit from India.
- **Bureau of Immigration:** It provides for setting up of Bureau of Immigration for performing immigration functions including visa issuance and regulation of entry, transit, stay and movement within India.
- **Registration of Foreigners:** It requires foreigners to register with a Registration Officer upon their arrival in India.
- **Reporting Obligation:** It requires information of foreigners from carriers landing in India, educational institutions admitting foreign students, and medical institutions treating foreign patients.
- **Offences:** It penalises foreigners entering without valid passport or other travel documents with imprisonment of up to five years, fine up to five lakh rupees, or both.
- **Power of Arrest:** It empowers police officers not below the rank of a Head Constable to arrest without warrant.
- **Controlling Places frequented by Foreigners:** Civil authority may direct closure of such premises, or refuse admission to such premises to all foreigners.

Significance

- **National Security:** Imposes stricter penalties to counter fake documents used by terror and trafficking networks, helping prevent illegal immigration and overstays.
- **Administrative Efficiency:** Unifies fragmented, colonial-era statutes, minimizing duplication and improving the management roles of immigration authorities.
- **Global Best Practices:** Incorporates global standards such as carrier liability, biometric verification, and digital tracking.
- **Economic & Social Impact:** Enhances tracking of foreign students, workers, and tourists, and addresses pressing regional migration concerns, such as those from Bangladesh, Myanmar, and West Asian conflict zones.

IV. The Judiciary

1. Waqf (Amendment) Act, 2025

Why in the news

- On September 15, 2025, the Supreme Court (SC) issued an interim order on the **Waqf (Amendment) Act, 2025**.

Background

- **Waqf:** Charitable endowment in Islam for religious or philanthropic purposes.
- The 2025 Amendment aimed at:
 - Streamlining Waqf property administration
 - Enhancing transparency and accountability
 - Centralised registration of properties

Provisions Stayed by SC

- **District Collector powers:** Unilateral authority to decide whether property is government-owned and alter revenue records.
- **Five-year practising Islam requirement:** Requirement for creating Waqf through a formal deed, stayed pending framing of procedural rules.
- **Non-Muslim representation limits:** Caps on the number of non-Muslims in **Central Waqf Council** (max 4) and **State Waqf Boards** (max 3).

Provisions Upheld / Continuing

- **Derecognition of “Waqf by user”:** Prevents misuse of property claimed over long-term usage.
- **Centralised digital registration:** Mandatory recording of Waqf properties to improve transparency.
- **Application of Limitation Act, 1963:** Uniform application to Waqf lands, enabling recovery of encroached properties.
- **Property ownership requirement:** Only property owned by the person creating the Waqf may be dedicated.

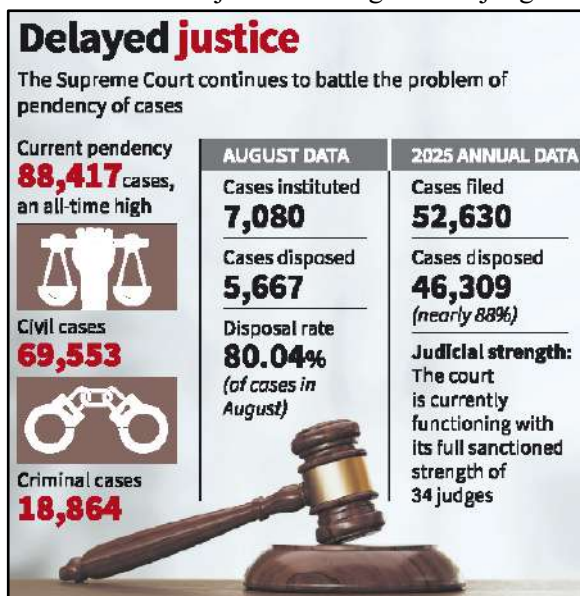
Broader Implications

- **Minority Rights:** Reinforces the community’s right to manage its religious institutions while balancing transparency.
- **Property Protection:** Safeguards Waqf property from arbitrary government takeover.
- **Judicial Oversight:** Ensures contentious provisions are examined in detail before enforcement.
- **Religious Autonomy:** Maintains scope for Muslims to create Waqf without executive interference.

2. Pendency of Cases in the Supreme Court

Why in the news?

- The pendency of cases in the Supreme Court has reached an all-time high of 88,417, even when the court is currently functioning with its full sanctioned judicial strength of 34 judges.



Causes of Escalating Pendency

- **Excessive Case Filings vs Disposal Rate:** In August 2025, 7,080 cases were filed, whereas only 5,667 were disposed, yielding a disposal rate of 80%.
 - Despite high activity, the intake continues to exceed output, leading to accumulation.

- **Complexity of Matters:** Many cases in the Supreme Court involve constitutional questions, cross-cutting laws, or multi-party disputes requiring detailed hearings, delaying disposal.
- **Pandemic and Post-Pandemic Backlog:** COVID-19 disrupted court operations, causing deferred hearings. Since 2023, the pendency has been steadily rising, despite proactive measures.
- **Vacancy Management:** Although successive Chief Justices (D.Y. Chandrachud, Sanjiv Khanna, B.R. Gavai) maintained minimal judicial vacancies, backlog continued to rise due to structural constraints rather than lack of manpower.
- **Limitations of Bench Strength:** Even with 34 judges and summer recess benches, the court struggles with the sheer volume and complexity of cases, reflecting an imbalance between judicial capacity and public demand for legal recourse.

Implications of Rising Pendency

- **Access to Justice:** Delay undermines the fundamental right to timely justice (Article 21), particularly affecting litigants in high-stake civil and criminal matters.
- **Judicial Credibility:** Persistent backlog can erode public trust in the judiciary, leading to perceptions of inefficiency and institutional inertia.
- **Impact on Legal System:** Lower courts' dependence on Supreme Court precedents may slow down judicial delivery across the country.
 - Prolonged litigation exacerbates costs, causing financial and psychological stress for litigants.
- **Policy and Governance Implications:** Delayed judgments on constitutional or statutory interpretation can stall implementation of policies and governance reforms.

Measures Taken by the Supreme Court

- **Working Through Summer Recess:** Chief Justice B.R. Gavai termed May-July "partial working days", creating 21 benches to clear cases. Senior-most judges presided over these benches to expedite hearings.
- **Filling Vacancies Promptly:** Successive CJIs ensured minimal judicial vacancies. Government approval of collegium recommendations within 48 hours has become routine.
- **Collegium Recommendations:** November 2023 collegium resolution stressed no vacancy should exist, recognising the mounting workload and urgent need for full-strength benches.

Way Forward

- **Increase Judicial Capacity:** Expand sanctioned strength of the Supreme Court, allowing more benches to hear cases simultaneously.
- **Alternative Dispute Resolution (ADR):** Encourage mediation, arbitration, and Lok Adalat mechanisms to resolve civil and commercial disputes before they reach the apex court.
- **Case Management and Digitalisation:** Leverage AI-based analytics to prioritise urgent matters and identify cases suitable for early disposal.
 - Strengthen e-Courts and digital hearings to maintain continuity and reduce adjournments.
- **Special Benches for Critical Matters:** Constitutionally and socially significant cases (fundamental rights, electoral disputes, environmental issues) may be assigned dedicated benches for faster resolution.
- **Encourage Legal Reforms:** Review procedural complexities in civil and criminal law that contribute to repetitive or avoidable litigation.
 - Introduce sunset provisions and case review mechanisms to prevent long-drawn cases.

B. GOVERNANCE

I. Government policies and Interventions

1. Supreme Court Guidelines on DNA Evidence in Criminal Cases

Why in the news?

- The Supreme Court, in *Kattavellai @ Devakar v. State of Tamil Nadu*, recently issued guidelines to maintain the integrity of deoxyribonucleic acid (DNA) samples in criminal cases.

Key Guidelines Issued by the Supreme Court

- **Collection Documentation:** DNA sample collection must include FIR details, case sections, investigating officer, serial numbers, and signatures of the medical professional, investigating officer, and independent witnesses.
- **Timely Transfer:** Investigating officers must ensure samples reach the FSL within **48 hours**; delays must be recorded with reasons and preservation measures.
- **Sample Integrity During Storage:** Packages cannot be opened, altered, or resealed without express trial court authorisation.
- **Chain of Custody:** A **Chain of Custody Register** must be maintained from collection to conviction/acquittal and appended to trial court records; any lapses must be explained by the investigating officer.

Legal Position of DNA Evidence

- DNA evidence is **opinion evidence** under Section 45 of the Evidence Act (Section 39, Bharatiya Sakshya Adhiniyam, 2023).
- Its **probative value is case-specific** and must be scientifically and legally verified.
- DNA alone cannot convict; proper procedure and corroboration with other evidence are essential.

Conclusion

By enforcing uniform documentation and chain-of-custody norms, the court seeks to prevent sample contamination, enhance judicial reliability, and balance investigative efficiency with the rights of the accused.

2. Karnataka High Court's Verdict on the 'Sahyog' Portal

Why in the news?

- On **September 24, 2025**, the **Karnataka High Court** dismissed a petition filed by **X Corporation** challenging the Union government's *Sahyog* portal, a platform created for issuing content takedown orders to internet intermediaries.

What is the Sahyog Portal?

- **Launched:** October 2024 by the **Union Home Ministry**, managed by the **Indian Cyber Crime Coordination Centre (I4C)**.
- **Purpose:** A centralised online communication channel for issuing takedown notices under **Section 79(3)(b)** of the IT Act.
- **Function:** Automates delivery of content removal requests to intermediaries (social media platforms, ISPs, web hosts).
- **Scale:** By April 2025, **65 intermediaries and nodal officers from all states/UTs and 7 Central agencies** were onboarded; **130 notices issued** to platforms like Google, YouTube, Amazon, Microsoft.

Legal Framework

- **Section 79 IT Act:** Provides *safe harbour* immunity to intermediaries for user-generated content, but immunity is conditional.
 - Lost if intermediaries fail to act on “actual knowledge” of unlawful content.
- **Section 69A IT Act:** Provides stricter safeguards—committee review, hearing opportunity, written orders—limited to national security, sovereignty, and public order.
- **Shreya Singhal v. Union of India (2015):** Supreme Court held that takedown orders under Section 79(3)(b) must originate from a court or government notification and align with Section 69A grounds.

X Corporation’s Arguments:

- *Sahyog = Censorship Portal:* Claimed it bypassed the procedural safeguards of Section 69A.
- **Overbroad “unlawful” standard** under Section 79(3)(b), compared to narrowly defined grounds in Section 69A.
- Lack of transparency, absence of hearing, and orders issued by state agencies, not just the Centre.
- Violates *Shreya Singhal* precedent.

Government’s Defence

- **Necessity:** Internet’s algorithmic virality demands faster tools for unlawful content removal.
- **Nature of Safe Harbour:** Not a right, but a statutory privilege contingent on due diligence.
- **Separation of Powers:** Sections 79 and 69A operate independently—non-compliance with 79 notices leads to loss of immunity, not direct blocking.
- **Standing of X:** As a foreign corporation, X cannot claim **Article 19(1)(a) rights** reserved for Indian citizens.

Karnataka High Court’s Ruling

- **Validity of Sahyog:** Declared the portal an “instrument of public good” under Section 79(3)(b).
- **On Free Speech:** Social media cannot remain unregulated; dignity of individuals, especially women, necessitates oversight.
- **On X’s Standing:** Reiterated that **Article 19 is confined to citizens**, not foreign corporations.
- **Observation on Compliance:** Criticised X for adhering to U.S. takedown laws but resisting Indian directives.
- **Impact:** Platforms must comply with Sahyog notices or risk losing safe harbour immunity.

3. Debate on Decriminalising Defamation**Why in the news?**

- On **September 22, 2025**, the Supreme Court observed that it may be time to **decriminalise defamation**, reopening debate on whether this colonial-era offence serves a purpose in a modern democracy.

What is Defamation?

- **Definition:** Publishing any statement that injures another’s reputation, without lawful justification.
- **Bharatiya Nyaya Sanhita, 2023 (Sec. 356):** Defamation covers words, writings, signs, or visible representations lowering a person’s moral or professional standing, even if said ironically.
- **Applicability:** Extends to individuals, groups, companies, associations, and even deceased persons.

Civil vs Criminal Defamation

- **Civil Defamation:** A private wrong; remedy is compensation.
- **Criminal Defamation:** A public offence; punishable with imprisonment or fine.
 - Requirements: Statement must be defamatory, identifiable, and communicated to a third party.
 - Truth as defence: Valid only if made *in public interest*, unlike in civil law where truth alone is a defence.

Judicial Position So Far

- **Subramanian Swamy v. Union of India (2016):** SC upheld constitutionality of criminal defamation (then IPC Sec. 499, now BNS Sec. 356).
- **Reasoning:**
 - Article 19(2) permits reasonable restrictions, including defamation.
 - Reputation is part of dignity and life under Article 21.
 - Civil remedies insufficient; harm to individual reputation affects society at large.
 - Rejected arguments of “chilling effect” on free speech.
- **Current Case (2025):** A professor sued *The Wire* for linking him to a dossier at JNU. After multiple summons and appeals, the case returned to SC, where a bench observed, “*It’s time to decriminalise all this.*”

Why is Decriminalisation Demanded?

- **Colonial Legacy:** Criminal defamation was introduced to suppress dissent.
- **Chilling Effect:** Journalists, activists, and opposition leaders face harassment through criminal cases.
- **Disproportionate Restriction:** Criminal liability for speech is seen as excessive under the proportionality test.
- **Alternative Remedy Exists:** Civil defamation already provides compensation for harm to reputation.

Why Retain Criminal Defamation?

- **Right to Reputation:** Recognised as part of Article 21 (life and dignity).
- **Public Order Concerns:** Malicious falsehoods may trigger unrest.
- **Preventing Abuse:** Courts argue civil remedies alone may not deter malicious attacks.
- **Proportionality Doctrine:** SC (2016) held that restrictions were reasonable and constitutionally valid.

What Will it Take to Decriminalise?

- **Judicial Path:** A larger bench (minimum 5 judges under **Article 145(3)**) must reconsider the 2016 judgment.
- **Legislative Path:** Parliament can amend the **Bharatiya Nyaya Sanhita (2023)** to remove criminal defamation.
- **Policy Rethink:** Balancing civil remedies with safeguards for reputation, perhaps through faster trials and statutory damages.

Way Forward

- **Constitutional Reconsideration:** Refer the matter to a Constitution Bench for a relook at proportionality.
- **Strengthen Civil Remedies:** Ensure speedy adjudication and adequate compensation in civil defamation cases.
- **Safeguards Against Misuse:** Introduce penalties for frivolous or malicious defamation suits.
- **Protect Both Rights:** A calibrated framework that ensures **free speech without compromising dignity**.

4. Visakhapatnam Declaration on India’s Digital Transformation

Why in the news?

- The **28th National Conference on e-Governance (NCeG)** concluded in Visakhapatnam with the adoption of the **Visakhapatnam Declaration (2025)**.

Key Highlights of the Visakhapatnam Declaration

- **Civil Services and Digital Competencies**
 - Advocated a **whole-of-government approach** to strengthen civil services with digital literacy, AI-driven tools, and agile frameworks.
 - Emphasised data-driven decision-making and capacity-building to transform service delivery.

- **Technology as an Enabler**

- Promotion of **AI, ML, Blockchain, GIS, IoT, and Data Analytics** for citizen-centric governance.
- Expansion of AI-driven platforms such as:
 - **Digital India BHASHINI** (multilingual real-time translation),
 - **Digi Yatra** (seamless digital travel),
 - **NADRES V2** (data for disaster resilience).
- Adoption of **ethical AI principles** for transparency and accountability.

Cybersecurity and Digital Trust

- Identified **Zero-Trust architecture, post-quantum cryptography, and AI-enabled monitoring systems** as national priorities.
- Cyber resilience across **transport, defence, and citizen platforms** emphasised.

Scaling Successful Models

- Replication of proven projects:
 - **SAMPADA 2.0 (Madhya Pradesh)** – agricultural value chains,
 - **eKhata (Bengaluru)** – property management,
 - **Rohini Gram Panchayat (Maharashtra)** – local e-governance,
 - **Drone Analytics Monitoring System (NHAI)** – infrastructure monitoring.

Sectoral Innovations

- **Agriculture:** Rollout of the **National Agri Stack** to aid farmers in credit access, climate-smart practices, and markets.
- **Urban Development:** Use of GIS, drone analytics, and real-time governance systems for smart cities.
- **Rural Governance:** Grassroots e-panchayat models scaled nationwide.

Significance

- **Citizen Empowerment:** Moves beyond digitisation to **inclusive participation** in governance.
- **Service Delivery:** Enhances **efficiency, transparency, and accountability**.
- **Digital Sovereignty:** Reinforces India's commitment to **secure digital infrastructure**.
- **National Vision:** Aligns e-governance with the roadmap for **Viksit Bharat 2047**.

Challenges Ahead

- Bridging the **digital divide** in remote and vulnerable regions.
- Balancing **privacy concerns** with expanded data-driven governance.
- Ensuring **interoperability and integration** across States and ministries.
- Mobilising **resources and capacity-building** for grassroots implementation.

Way Forward

- **Citizen-Centric Design:** Ensure inclusivity in every digital initiative.
- **Stronger Cybersecurity Frameworks:** Anticipate next-generation threats including AI-enabled cybercrime.
- **Public-Private Collaboration:** Harness start-ups and academia for innovative solutions.
- **Continuous Monitoring:** Use platforms like NeSDA for **performance benchmarking**.
- **Global Benchmarking:** Position India's e-governance model as an exportable best practice for other Global South countries.

II. Important Aspects of Governance (RTI, Citizen Charter etc)

1. Digital Personal Data Protection (DPDP) Act and RTI Act

Why in the news?

- Recent amendments under the **Digital Personal Data Protection (DPDP) Act** have dramatically altered **Section 8(1)(j)** of the RTI Act, raising concerns about a potential erosion of transparency and public oversight.

Significance of Section 8(1)(j) in the RTI Act

- Originally, Section 8(1)(j) balanced the right to information with privacy: personal information could be denied only if unrelated to public activity or an unwarranted invasion of privacy, unless **public interest** justified disclosure.
- The proviso mandated that information available to Parliament or State Legislatures cannot be denied to ordinary citizens, safeguarding democratic accountability.
- It relied on case-specific interpretation of “privacy,” evolving through judicial pronouncements such as **Justice K.S. Puttaswamy (Retd.) vs Union of India (2017)**.

Concerns with DPDP Amendment

- The DPDP Act reduces Section 8(1)(j) to a **six-word provision**, creating ambiguity on what constitutes “**personal information**.”
- Conflicting definitions exist:
 - Natural Person Interpretation** – personal data refers to an individual.
 - DPDP Interpretation** – includes firms, associations, Hindu Undivided Families (HUFs), and even the State.
- Broad interpretation enables denial of most government-held information, transforming RTI into a **Right to Deny Information (RDI)**.
- PIOs face severe penalties (up to ₹250 crore) for inadvertent disclosure, incentivising conservative, restrictive sharing.

Implications for Accountability and Corruption Control

- Loss of Public Oversight:** Citizens, historically the most effective monitors, are denied essential information.
- Denial of Critical Data:** Routine documents, such as corrected marksheets or government orders, could be withheld. Examples like Rajasthan’s pension data, which helped detect ghost employees, may no longer be accessible.
- Facilitation of Corruption:** Government opacity may enable unchecked malpractice, as information on fraud or misappropriation is shielded.

Way Forward: Safeguarding Transparency

- Media and Public Engagement:** Nationwide debates to highlight implications of the amendment.
- Political Accountability:** Citizens should demand explicit assurances from political parties to restore RTI’s original intent.
- Judicial Oversight:** Courts may need to clarify the primacy of RTI over DPDP in matters affecting public information.
- Strengthening Citizen Awareness:** Educating the public about their rights under RTI ensures bottom-up pressure on governance.

C. SOCIAL JUSTICE

I. Issues Relating to Development and Management of Social Sector/Services relating to Health, Education, Human Resources

1. India's Procurement Reforms and R&D Acceleration

Why in the news?

- India's **General Financial Rules (GFR) 2025** reforms provide **exemptions from GeM portal** and raise financial thresholds for R&D procurement.

Procurement as an Innovation Catalyst

- Public procurement**, if designed for innovation, creates **stable demand**, stimulating private R&D and patent filings.
- Pre-reform India forced researchers to buy sub-₹200 crore equipment via GeM, leading to **low-quality supplies** and bureaucratic delays.
- June 2025 reforms** allow:
 - Institutional heads to bypass GeM for specialised equipment
 - Direct purchase limits increased from ₹1 lakh → ₹2 lakh
 - Approval for global tenders up to ₹200 crore delegated to VCs and Directors
 - This approach aligns with "**catalytic procurement**", fostering early adoption of advanced technologies.

Global Lessons in R&D-Oriented Procurement

- Germany**: High-Tech Strategy & KOINNO agency promote **mission-oriented procurement** to stimulate innovation.
- USA SBIR Program**: Allocates 3% federal R&D funds for startups, using **phased contracts** to de-risk early-stage technologies.
- South Korea**: Pre-commercial procurement pays premium prices for prototypes meeting strategic targets.
- India's reforms **partially emulate these** but **lack market-shaping elements** and structured funding for high-risk, high-reward projects.

Recommendations for India

- Outcome-weighted tenders**: Evaluate bids based on supplier R&D investment, scalability, and innovation potential.
- Sandbox exemptions**: Allow institutes like **IITs, TIFR** to bypass GFR for a portion of purchases with accountability.
- AI-augmented sourcing**: Use **INDIAai ecosystem** for predictive supply chain management.
- Co-procurement alliances**: Aggregate high-cost items across labs, emulating EU Joint Procurement Agreement for economies of scale.
- Hybrid governance**: Combine **public oversight with private-sector agility**, ensuring accountability while stimulating innovation.

Conclusion

Coupling these reforms with **global best practices**, **AI-enabled procurement**, and **mission-oriented frameworks** can transform public procurement from a procedural hurdle into a **strategic enabler of innovation**.

2. The Growing Relevance of Traditional Medicine

Why in the news?

- Traditional medicine is practiced in **88% of WHO member states** (170 of 194 countries).

Global Market Trends

- The **global traditional medicine market** is projected to reach **\$583 billion by 2025**, growing at **10–20% annually**.
- Country-wise valuations:**
 - China (Traditional Chinese Medicine): \$122.4 billion
 - Australia (Herbal Medicine): \$3.97 billion
 - India (AYUSH sector): \$43.4 billion
- Shift from **reactive treatment** to **preventive and holistic approaches** addressing root causes.

India's AYUSH Sector Transformation

- Over 92,000 MSMEs** in AYUSH have grown **eight-fold in a decade**.
- Manufacturing revenues:** ₹21,697 crore (2014–15) → ₹1.37 lakh crore (2025)
- Services revenue:** ₹1.67 lakh crore
- Exports: \$1.54 billion to 150+ countries**
- Ayurveda recognized as a formal medical system in multiple nations.

Public Awareness and Usage

- NSSO Survey (2022–23):** 95% awareness in rural, 96% in urban India.
- Over **50% of the population** used AYUSH systems in the past year.
- Ayurveda is preferred for **preventive care and rejuvenation**.

Contemporary Relevance

- Ayurveda emphasizes **balance** between body, mind, humans, and nature.
- Holistic solutions address **lifestyle diseases, climate change, and planetary health**.
- Principles extend to **veterinary care and plant health**, promoting sustainability.

Conclusion

- India leads global efforts to **mainstream traditional medicine**, emphasizing **preventive, inclusive, affordable, and sustainable healthcare**.
- Ayurveda represents both a **medical system and a wellness movement**, bridging **ancient wisdom with modern science**.
- The theme for **Ayurveda Day 2025: "Ayurveda for People & Planet"** underscores its potential to shape a **balanced, sustainable future globally**.

3. Lessons from India's Vaccination Drive

Why in the news?

- India's **Universal Immunisation Programme (UIP)** is the largest globally, covering **2.6 crore infants and 2.9 crore pregnant women annually**.

Coverage and Expansion

- UIP provides **free immunisation against 12 diseases**, including vaccines in endemic regions.
- In the past decade, six vaccines were added: **Tetanus & Adult Diphtheria, Inactivated Poliovirus, Measles-Rubella, Rotavirus, Pneumococcal Conjugate, Japanese Encephalitis.**
- **Mission Indradhanush (2014) and Intensified MI (2017)** targeted low-coverage and missed populations.
 - By 2023, **5.46 crore children and 1.32 crore pregnant women** were vaccinated.
 - Integrated with **Gram Swaraj Abhiyan** for outreach enhancement.

Achievements

- Maintained **polio-free status since 2011.**
- Eliminated **maternal and neonatal tetanus (2015)** and declared **Yaws-free (2016).**
- **Measles-Rubella catch-up campaign (2017–2019):** 34.8 crore children vaccinated.
- **COVID-19 vaccination programme:** Launched January 16, 2021, delivering **220 crore doses by January 2023**, covering 97% with one dose and 90% with two doses.

Technology and Digital Integration

- **Platforms:** U-WIN for end-to-end digital vaccination tracking for children and pregnant women.
- **Complementary systems:** eVIN (stock management), **National Cold Chain MIS, SAFE-VAC module** for safety reporting.
- Cold chain strengthening via **Pradhan Mantri Ayushman Bharat Health Infrastructure Mission.**

Global Contributions

- India as the **largest vaccine manufacturing hub**, supporting **low- and middle-income countries** through **Vaccine Maitri.**
- Recognised with **Measles and Rubella Champion Award, 2024** for South-East Asia Region efforts.

Challenges

- Reaching **remote, migratory, and vaccine-hesitant populations.**
- **Immunity gaps** due to COVID-19 disruptions leading to measles outbreaks (2022–2024).
- Need for **sensitive disease surveillance** integrated with immunisation efforts.
- Monitoring and countering **anti-vaccine narratives.**

Way Forward

- Integrate **human, animal, and environmental health (One-Health approach)** in vaccine-preventable disease surveillance.
- Maintain and expand **digital tracking, cold chain infrastructure, and outreach programs.**
- Enhance **public awareness and trust**, especially in regions with low coverage.
- Sustain India's position as a **global vaccine leader** while ensuring **equitable domestic coverage.**

D. INTERNATIONAL RELATIONS

I. India and its Neighborhood- Relations

1. Katchatheevu Dispute

Why in the news?

- Sri Lankan President **Anura Kumara Dissanayake's visit to Katchatheevu (September 1, 2025)**—the first by a head of state—revived attention on the small, uninhabited island in the Palk Strait.

Historical Background

- Colonial Era Claims:** Competing claims between the **Madras Presidency** and **Ceylon** emerged in the 1920s under British rule.
- 1974 Agreement:** India recognised Sri Lanka's sovereignty over Katchatheevu, in return securing rights over **Wadge Bank** near Kanniyakumari, rich in marine resources.
- 1976 Agreement:** Both sides finalised the International Maritime Boundary Line (IMBL). Indian fishermen were allowed access for rest and religious purposes, but fishing rights were not granted.

Political Dimensions in India

- Recurring Electoral Rhetoric:** Successive political parties in Tamil Nadu—and national parties invoke the “retrieval” of Katchatheevu during elections.
- Judicial Position:** The Union government in 2013 and 2014 clarified that Katchatheevu was never India's territory formally ceded; retrieval would mean confrontation with a friendly neighbour.

The Fisheries Conflict: The Real Issue

- Ecological Stress:** Tamil Nadu's **bottom-trawling**—a destructive method—has depleted fish stocks in Indian waters, pushing boats across the IMBL.
- Frequent Arrests:** Over **230 Indian fishermen arrested in 2025** alone by the Sri Lankan Navy for trespassing.
- Sri Lankan Tamil Fishermen's Grievance:** Post-civil war communities in Jaffna argue they cannot rebuild livelihoods unless Indian bottom-trawling ceases.
- Acknowledged in Talks:** In 2016, India agreed to phase out bottom-trawling “at the earliest,” but the practice persists.

Why Katchatheevu Retrieval is Unrealistic?

- Diplomatic Constraints:** The sovereignty issue was legally settled decades ago; reopening it undermines bilateral trust.
- Strategic Ties:** India-Sri Lanka relations today encompass security, trade, and regional stability (e.g., Colombo Security Conclave).
- Practical Irrelevance:** Most arrests of Indian fishermen occur **well past Katchatheevu**, near Sri Lanka's northern shores.
- Domestic Political Utility:** The issue remains alive primarily due to electoral mobilisations in Tamil Nadu rather than genuine policy feasibility.

The Way Forward

- Transition from Bottom-Trawling:** Accelerate livelihood diversification and financial support for Tamil Nadu fishermen to adopt sustainable methods.
 - Example:** Promote deep-sea fishing with government subsidies and cooperative models.

- **Joint Mechanisms:** Strengthen India–Sri Lanka **Joint Working Group on Fisheries** for conflict resolution and real-time communication between coast guards.
- **Community-Level Dialogue:** Institutionalise fisher-to-fisher talks to build trust.
- **Focus on Blue Economy Cooperation:** Develop shared projects in aquaculture, marine conservation, and eco-tourism (including regulated pilgrimages to Katchatheevu).

2. Nepal's Youth-Led Protests

Why in the news?

- On 8–9 September 2025, Nepal witnessed **mass youth-led protests** in Kathmandu.

Background

- Nepal became a **constitutional republic in 2008**; current Constitution effective from 2015.
- Political instability persists with frequent government changes among leaders Oli, Deuba, and Prachanda.
- Resentment grew over centralization of power, authoritarian tendencies, and lack of accountability.

Drivers of the Protests

- **Social Media Ban:** The immediate trigger was the Oli government's prohibition of social media platforms like Instagram, X, and Facebook, seen as an attack on civic space.
- **Chronic Discontent:** Long-standing frustrations with nepotism, corruption, and unstable governance, with power alternating among Oli, Pushpa Kamal Dahal, and Sher Bahadur Deuba since 2015.
- **Economic Aspirations:** High youth unemployment, migration for jobs, and limited economic opportunities fuelled dissatisfaction among Gen Z.
- **Digital Coordination:** Unlike previous Jan Andolans, this uprising was organised via social media and online platforms like Discord, enabling rapid mobilisation and nationwide participation.

Nature of Protests

- Initially **peaceful**: students and youth gathered at **Maitighar Mandala**, marching toward Parliament.
- Rapid escalation due to clashes with security forces; tear gas and gunfire used.
- Violence on **9 September**: Parliament, Supreme Court, and government buildings set ablaze; attacks on political leaders' residences.

Broader Implications

- **Challenge to Traditional Politics:** The uprising exposes the inability of the post-2015 political system to meet citizen expectations, particularly youth aspirations.
- **Extra-Constitutional Influence:** While Gen Z catalysed change, bypassing formal democratic processes raises questions about institutional resilience and rule of law.
- **Governance & Elections:** The interim government faces the critical task of conducting credible elections and enabling new political forces to emerge.
- **Democratic Risks:** Any exploitation of this unrest by anti-democratic elements could reverse gains from the previous Jan Andolans.

Role of Gen Z

- Protesters: primarily **19–24 years**, digitally mobilized, educated, urban youth.
- Demands:
 - End corruption and nepotism
 - Transparent governance

- Accountability of political class
- Opportunities for youth employment and future security
- Maintained democratic orientation; not seeking monarchy or constitutional overturn.

Lessons for India

- **Youth Engagement:** Indian policymakers must recognise Gen Z as a key stakeholder; social media and digital platforms can rapidly mobilise opinion.
- **Transparency & Accountability:** Persistent corruption, nepotism, or lack of governance can catalyse mass protests; India must strengthen grievance redressal and civic feedback mechanisms.
- **Policy Communication:** Abrupt or poorly explained measures—like social media regulation—can trigger widespread dissent; gradual consultation is essential.
- **Inter-Generational Governance:** India must adapt democratic institutions to accommodate youth voices, integrating them in decision-making without bypassing constitutional procedures.
- **Crisis Preparedness:** India can learn from Nepal about maintaining law and order while protecting democratic rights during spontaneous movements.

3. Shanghai Cooperation Organization (SCO)

Why in the news?

- On **31 August 2025**, Prime Minister **Narendra Modi** met President **Xi Jinping** of China on the sidelines of the **Shanghai Cooperation Organization (SCO) Summit** in Tianjin.

Key Highlights of the Meeting

- **Bilateral Relations and Border Peace**
 - Positive momentum in relations since the **Kazan 2024 meeting** was acknowledged.
 - Both leaders stressed **peace and tranquility along the border**, noting **successful disengagement last year**.
 - Commitment to a **fair, reasonable, and mutually acceptable boundary resolution** while considering long-term bilateral interests.
 - Recognition of decisions by the **Special Representatives** and support for their ongoing efforts.
- **People-to-People Ties**
 - Strengthening ties via **direct flights and visa facilitation**.
 - Building on the **resumption of Kailash Manasarovar Yatra** and **tourist visas** to enhance cultural and religious exchanges.
- **Economic and Trade Cooperation**
 - Bilateral economies play a key role in **stabilizing world trade**.
 - Both leaders emphasized **expanding trade and investment** from a **political and strategic perspective** and reducing the trade deficit.
- **Strategic Autonomy and Multilateral Cooperation**
 - India and China pursue **strategic autonomy**; relations should not be viewed through a **third-country lens**.
 - Emphasis on **cooperation on global challenges**, including **terrorism, fair trade, and multilateral engagement**.

India's Position at the Summit

PM of India emphasized that the SCO rests on three pillars:

- **Security:** Ensuring regional peace and counterterrorism cooperation.
- **Connectivity:** Transforming SCO into a hub for cross-regional connectivity (digital, physical, and energy).
- **Opportunity:** Promoting mutual growth and cooperation.

Areas of Concern

- **Ongoing Border Tensions:**
 - The unresolved border dispute spans over 2,000 miles, marked by frequent clashes.
 - Incidents in Doklam (2017), Galwan Valley (2020), and northeastern states (Sikkim, Arunachal Pradesh).
- **Military Infrastructure:** Both countries have heavily fortified their border with roads, railways, and airstrips for rapid troop mobilization.
- **Belt and Road Initiative (BRI):** India has expressed reservations about China's Belt and Road Initiative, especially regarding the China-Pakistan Economic Corridor (CPEC), which passes through the territory of India.
- **Trade imbalance:** While politically desirable, reducing trade dependence is complicated by China's economic influence and India's need for foreign investment.

China's growing presence in the Neighbouring Region:

- **Sri Lanka:** China's presence at Hambantota Port and investments in an oil refinery raise concerns in India.
- **Nepal:** China's investments in infrastructure (e.g., Pokhara airport) challenge India's strategic position.
- **Bangladesh:** China's growing influence, including loan agreements, threatens India's regional influence.
- **Myanmar:** China's deepening ties with Myanmar, including the China-Myanmar Economic Corridor, strengthen its presence in India's backyard.

4. Saudi-Pakistan Strategic Mutual Defence Agreement (SMDA)

Why in the news?

- Saudi Arabia and Pakistan have formalized decades of informal military cooperation through a **mutual defence pact**.

Key Provisions

- **Collective defence commitment:** "Any aggression against either country is an aggression against both."
- Mechanisms include:
 - Joint military committees
 - Intelligence sharing
 - Expanded training programmes
- Pakistan may support Saudi security with its **military manpower**, though nuclear arrangements remain ambiguous.

Historical Context

- Pakistan-Saudi defence cooperation dates to **1951**, peak in **1979–1989** with 20,000 Pakistani troops deployed for Holy Harams and countering Iran/Yemen.
- Past issues:
 - Saudi treated Pakistani troops as **paid guards**
 - Pakistan resisted exclusion of **Shia troops**
 - 1990: Pakistani contingent withdrawn
- Saudi preference: minimal foreign troops on soil to avoid political/religious friction.

Significance in West Asia

- Signals a **shift in regional order**:
 - Arab states hedging against reliance on U.S. guarantees.
 - Diversifying alliances amid **Israel-Gaza conflict** and **Houthi missile threats**.
- Pakistan emerges as a **regional security provider**, leveraging experience and Muslim-majority solidarity.

Strategic Implications for Saudi Arabia

- Reduces dependence on U.S. and Israel for Gulf security.
- Provides a **hedge against Iranian influence and Houthi attacks**.
- Potential risks: entanglement in **South Asian disputes** and regional rivalries.

Implications for India

- India's growing strategic and economic ties with **Saudi Arabia** and **Israel** may face challenges.
- The pact could **limit India's influence** in the Gulf.
- Policy response: maintain **balanced diplomacy**, protect energy security, safeguard diaspora, and mitigate extremist spillovers.

Conclusion

- The Saudi-Pakistan pact formalizes a long-standing military partnership and **reshapes West Asia's security architecture**.
- India must adapt to **multipolar regional dynamics** while protecting its strategic interests.

II. India & World**1. India's Great Power Ambitions: Civilisational Foundations, Strategic Realities, and Western Perceptions****Why in the news?**

- India's aspiration to emerge as a global power has once again become a subject of international discourse following the publication of a July/August 2025 article in *Foreign Affairs*, titled "*India's Great Power Delusions – How New Delhi's Grand Strategy Thwarts Its Grand Ambitions.*"

Civilisational Foundations and Strategic Realities

- **Economic and Social Transformation:** Post-independence policies prioritised food security, industrialisation, and human capital development. The Green Revolution and India's emergence as a net food exporter created a strong structural base.
- **Moral Authority in International Relations:** India's Non-Alignment policy enabled it to act as a stabilising actor during the Cold War, building global credibility and soft power.
- **Strategic Autonomy:** India maintains independent engagement with powers like the U.S., Russia, and China. Platforms such as the Quad and SCO illustrate India's ability to balance competing interests while preserving sovereignty.
- **Technological Leadership:** India is increasingly gaining influence through "knowledge power," digital technologies, AI, and a skilled diaspora, shifting the focus from conventional military strength to cognitive and economic capabilities.

Western Misperceptions

- Overemphasis on military confrontation and dependency on the U.S. ignores India's diplomatic and civilisational approach to managing China and regional security.
- Underestimation of India's technological prowess and digital economy obscures its potential to influence global norms.
- Failure to recognise India's historical ability to manage contradictions—engaging with China and Russia while deepening U.S. and Western ties.

India's Strategic Roadmap for Great Power Status

- **Economic and Technological Foundations**
 - Overcoming the middle-income trap through sustained reforms in infrastructure, education, and R&D.
 - Leveraging technology-intensive sectors to gain competitive advantage in AI, space, biotechnology, and digital governance.
- **Autonomous Strategic Posture**
 - Strengthening defence self-reliance (Atmanirbhar Bharat) while maintaining flexible alliances.
 - Using multilateral platforms to shape global norms and balance power asymmetries in Asia.
- **Soft Power and Civilisational Diplomacy**
 - Promoting India's cultural, educational, and democratic values as instruments of influence.
 - Strategic communication to counter misperceptions and assert India's narrative on global stages.

Conclusion

Rather than seeking external validation, India's approach emphasises self-reliance and measured influence, positioning it as a responsible power shaping the 21st-century world order.

2. USA's 50% Tariffs on Indian Exports and Its Implications

Why in the news?

- The United States has imposed 50% tariffs on a wide range of Indian merchandise exports starting August 27, 2025.

Impact on India's Economy

- **Trade Impact:** India's exports to the US could fall from **\$87 billion in FY25** to \$49.6 billion in FY26, a decline of 43%.
- **Gems & Jewellery Council (GJEPC):** Demanding a duty drawback/ reimbursement scheme covering 25–50% of tariffs to protect competitiveness.
- **Textile Industry** is seeking Immediate cash support, Loan moratoriums, Fast-tracking FTAs with the EU and other partners to diversify export markets.
- **Job Protection:** Industries fear widespread layoffs in labour-intensive export hubs like Surat (diamonds), Tiruppur (textiles), and Andhra Pradesh (shrimp farming).
- **Competitors Benefiting:** Countries such as Vietnam, Bangladesh, Cambodia, Pakistan, and China face lower tariff rates and are expected to capture India's lost market share.

India initiatives to mitigate the impact

- **E-Commerce Export Hubs (ECEHs):** Proposed to provide integrated logistics, warehousing, and customs clearance facilities for online exporters.
- **Consultations with Industry Stakeholders:** Ongoing dialogue with MSMEs, global e-commerce giants, and retailers to balance regulatory reforms.
- **Exploring Inventory-Based E-Commerce:** Discussions underway to assess whether this model can reduce compliance burden for MSMEs.
- **Tariff Negotiations:** Efforts are being made to ensure India's sensitive export sectors remain competitive despite global protectionism.

Way Forward

- **Short-Term Relief Measures:** Targeted subsidies, duty drawback, or reimbursement schemes for heavily hit sectors. Temporary financial support packages to prevent job losses.

- **Diversification of Export Markets:** Accelerate FTA negotiations with EU, UK, and Gulf nations. Explore African and Latin American markets for textiles, gems, and marine products.

3. India–Saudi Arabia Defence Cooperation (2025)

Why in the news?

- The 7th meeting of the Joint Committee on Defence Cooperation (JCDC) was held recently.

Key Outcomes of the Meeting

- **Expansion of Defence Cooperation:** Training, industrial partnerships, maritime security, and joint military exercises.
 - India offered training slots for Saudi personnel in Indian institutions.
- **New Areas of Collaboration:** Cybersecurity, Tactical communication, Information technology, Disaster management etc.
- **Military Engagements:** India showcased 'Make in India' defence equipment.
 - Both sides explored joint production and industrial partnerships.

Economic and Trade Relations

- **Trade Volume:** Bilateral trade reached **USD 36.5 billion in 2024**, with India importing primarily **crude oil** and exporting **pharmaceuticals, engineering goods, and rice**.
- **Investment:** Saudi Arabia's **sovereign wealth fund (PIF)** has invested in India's energy, infrastructure, and technology sectors.
- **Energy Security:** India is **Saudi Arabia's second-largest oil importer**, importing nearly **16–18% of its crude oil needs**.
- **Diversification Efforts:** Both countries are exploring collaboration in **renewable energy, petrochemicals, and food security**.

Cultural and People-to-People Ties

- **Diaspora:** Over **2.5 million Indians** reside in Saudi Arabia, contributing significantly to the economy and remittances (~USD 8 billion annually).
- **Religious Linkages:** Millions of Indian pilgrims travel annually to **Hajj and Umrah**, strengthening cultural and religious ties.

4. Global South Must Work Together: EAM

Why in the news?

- India hosts meet of 20 'like-minded' countries on sidelines of UNGA; External Affairs Minister says multilateralism under attack and international organisations are being rendered ineffective.

Historical Background

- **Colonial Legacy:** Nations of the Global South emerged from centuries of resource extraction, leaving them with structural inequalities.
- **Cold War & Non-Aligned Movement (NAM):** Leaders like Nehru, Nasser, Tito, and Sukarno spearheaded collective solidarity outside the U.S.-Soviet blocs.
- **South-South Cooperation:** Bandung Conference (1955), G-77 formation (1964), and UNCTAD sought fair trade and development opportunities.

- **Contemporary Evolution:** The term “Global South” now reflects not just geography but **shared struggles and aspirations** in development, climate action, and sovereignty.

Why Global South Matters Today

- **Demographic & Economic Weight**
 - Home to the fastest-growing economies (India, Indonesia, Nigeria, Brazil).
 - Young populations: Africa’s median age is 19; India is set to remain the world’s most populous country till mid-century.
- **Climate Change:** Countries least responsible face the worst consequences (e.g., Pacific Island nations, African droughts).
- **Debt Crisis:** 60% of low-income countries are debt-distressed (IMF, 2023).
- **Geopolitical Leverage**
 - Many Global South states are pivotal in energy, minerals, shipping lanes (e.g., Gulf oil, Congo’s cobalt, Malacca Strait).
 - They act as **swing states** in multilateral negotiations, shaping trade, climate, and security outcomes.

India and the Global South

- **Historic Role:** Leadership in NAM, Afro-Asian solidarity, and South-South cooperation.
- **Recent Initiatives:**
 - **Voice of Global South Summits (2023–25)** — consultation platform with ~125 nations.
 - **G-20 Presidency 2023:** Placed Global South issues (climate finance, debt relief, digital equity) at the core of the New Delhi Declaration.
 - **South-South Institutions:** International Solar Alliance (ISA), Coalition for Disaster Resilient Infrastructure (CDRI).
 - **Diplomatic Narrative:** India positions itself as a **“bridge” between Global North and South**, advocating reforms in UNSC, WTO, IMF, and World Bank.

Challenges Before the Global South

- **Internal Fragmentation:**
 - Divergent interests (oil exporters vs importers; large emerging economies vs small island states).
 - Lack of unified political structures like the EU.
- **External Pressures:**
 - Geopolitical competition between U.S. and China forces alignment pressures.
 - Dependency on Northern finance, technology, and markets.
- **Structural Issues:**
 - Weak representation in multilateral institutions.
 - Limited ability to shape global narratives on security, digital governance, and trade.

The Way Forward

- **Institutionalise South-South Platforms:** Formalise Global South summits and create permanent secretariats for continuity.
- **Push for Multilateral Reforms:** Collective voice for UNSC expansion, fairer IMF quotas, and WTO dispute settlement reforms.
- **Leverage Collective Bargaining:** In climate talks (COP), demand equitable climate finance and technology transfers.
- **Economic Cooperation:** Create South-South development banks, trade corridors, and digital platforms to reduce Northern dependency.

- **India's Role:**

- Lead through example in digital inclusion (UPI, Aadhaar), renewable energy, and vaccine diplomacy.
- Balance between emerging economies (BRICS) and smaller vulnerable states (SIDS, LDCs).

III. Bilateral, Regional and Global Groupings and Agreements

1. Europe's Recognition of Palestine

Why in the news?

- In a significant diplomatic development, several European countries—including Spain, Ireland, and Norway—have formally recognised the state of Palestine.

Domestic Political Drivers in Europe

- Public opinion across Europe strongly supports upholding international law; the **2023 Eurobarometer** survey shows 72% of citizens advocate consistent application across conflicts.
- Youth activism, civil society advocacy, and widespread demonstrations have created electoral pressures for ruling parties to adopt concrete measures.
- Progressive and centre-left parties perceive recognition as aligning foreign policy with domestic moral expectations.

Variation Across European States

- **Spain, Ireland, Norway:** Historical sympathy for Palestine, social-democratic traditions, and prior involvement (e.g., Norway hosting Oslo Accords) enabled faster recognition.
- **Germany, Austria:** Reluctance due to Holocaust legacy and a commitment to Israel's security.
- **Eastern Europe (Poland, Hungary):** Historically pro-Palestinian under Soviet influence, yet contemporary alignment with U.S. policy constrains unilateral action.

EU Coordination Dynamics

- The **EU Common Foreign and Security Policy** requires unanimity among 27 members, making a collective stance difficult.
- Individual recognitions are coordinated as a “like-minded group” to maximise political impact and signal a gradual shift in EU norms.
- The stepwise approach highlights the tension between national sovereignty and collective EU foreign policy.

Implications and Lessons

- **Symbolic Assertion of Values:** European recognition signals that passivity is no longer acceptable in the face of humanitarian crises.
- **Pressure for Two-State Solution:** Recognition seeks to preserve the viability of a negotiated settlement rather than impose an immediate resolution.
- **Domestic Politics and Global Diplomacy Interlinkage:** Citizen activism and moral consensus increasingly shape foreign policy decisions.
- **Partial EU Cohesion:** The move underscores the limitations of EU unanimity while demonstrating the potential of coordinated sub-groups to effect change.

Conclusion

Europe's recognition of Palestine reflects an intersection of moral responsibility, legal consistency, and domestic accountability, catalysed by the humanitarian crisis in Gaza.

2. H-1B fee threatens India's IT firms and Big Tech business models

Why in the news?

- The Trump administration introduced a **\$100,000 annual fee for H-1B visas** targeting foreign IT workers.



Impact on Indian IT Firms

- Traditional model:** import Indian engineers willing to work at lower costs; H-1B filing fees were negligible.
- With \$100K per visa:**
 - Offshore delivery becomes more attractive, potentially **shifting jobs overseas**.
 - Onshore operations may become **economically unviable**, raising service costs.
- Potential **loss of competitive advantage** against U.S. rivals.

Impact on U.S. Companies

- Hiring decisions require **executive-level approval**, filtering for genuinely exceptional talent.
- Risk of **innovation exodus** as top STEM graduates may migrate to **Canada, Australia, UK**, or other competing nations.
- Smaller U.S. firms may struggle to absorb costs, **consolidating talent in larger corporations** like Google and Microsoft.

Broader Implications

- Could reduce onshore employment for U.S. workers if companies **move entire operations abroad**.
- Undermines U.S.'s **global talent attraction**, crucial for post-war dominance in science and technology.
- Timing coincides with **China's technological rise**, potentially ceding competitive advantages.
- Policy design is a **blunt instrument**, lacking nuanced exemptions for elite graduates or strategic sectors.

Gender Disparity and H-1B Visa

Age and Education Factors

- 75% of women approved** for new jobs are under 35 (vs 65% of men).
- 44% of women hold a Master's degree** vs 39% of men.
- Doctorate and professional-level differences are negligible.
- Indians dominate H-1B beneficiaries:** 60% of women, 75% of men in FY24.

Implications

- Employers may avoid sponsoring women**, especially younger or lower-paid applicants.
- Could **reduce career mobility** for Indian women IT professionals.
- May exacerbate **gender pay gaps** in global mobility programs.
- Likely to influence the **strategic decisions of Indian IT firms** regarding offshore versus onshore deployment.

Conclusion

- The \$100K H-1B fee threatens to **disrupt Indian IT business models and Big Tech operations**.
- While aimed at protecting domestic workers, it risks **losing global talent, increasing offshoring**, and **concentrating hiring among large tech firms**.
- Strategic recalibration is needed to **balance labor protection with innovation and talent retention**.

3. A New Strategic EU-India Agenda

Why in the news?

- The European Union (EU) released “**A New Strategic EU-India Agenda**” on trade, technology, security, defence, and climate.

Key Highlights of the Agenda

- **Trade & Economy:** Negotiations ongoing for a **Free Trade Agreement (FTA)**; trade has grown **90% over the last decade**.
- **Technology & Defence:** Discussions on **exchange of classified information** and collaboration in the defence industry.
- **Climate & Sustainability:** Agenda includes cooperation on clean energy and climate goals.

Challenges in EU-India Ties

- **Military Cooperation with Russia:** India’s participation in **Zapad-2025 exercises** raises EU concerns.
- **Russian Oil Imports:** Continued purchase of Russian oil complicates EU’s stance on **rules-based international order**.
- **Geopolitical Uncertainty:** EU aims to prevent India being pushed closer to Russia amid Ukraine conflict.
- **Negotiation Barriers:** Agricultural tariffs and Qualitative Control Orders (QCOs) are points of friction in FTA talks.

Significance

- Signals EU’s intent to **expand strategic partnerships beyond the U.S.**, especially in trade and security.
- Reflects the EU’s balancing act to **deepen engagement with India while upholding geopolitical norms**.
- EU sees India as a **key partner in West Asia, Indo-Pacific, and global supply chains**.

Way Forward

- **Resolve Russia-related issues:** India’s military exercises and oil imports may need clarification to build trust.
- **Strengthen multilateral cooperation:** On climate, technology, and defence without compromising strategic autonomy.
- **Conclude FTA:** A commercially meaningful trade agreement could significantly enhance EU-India economic ties.

IV. Important International Institutions, agencies and for a

1. Is a Shift Underway in India’s Foreign Policy?

Why in the news?

- Prime Minister Narendra Modi’s participation at the **Shanghai Cooperation Organisation (SCO) summit in Tianjin (September 1, 2025)** alongside Chinese President Xi Jinping and Russian President Vladimir Putin sparked global debate.

Bilateral Reset with China

- **First Visit Since Galwan (2020):** This marked Modi’s first visit to China in seven years and his first bilateral with Xi on Chinese soil post-Galwan.
- **Concessions on Both Sides:**

- Xi Jinping: Called India a “partner, not rival.”
- India: Appeared willing to decouple LAC tensions from broader ties.
- **Agreements:** Revived flights, visa facilitation, Kailash Manasarovar Yatra, and talks on trade imbalances. Border disputes delegated to Special Representatives (NSA Ajit Doval and Chinese FM Wang Yi).

Is There Really a Shift?

- **Strategic Autonomy Tradition:** India historically balances relations—non-alignment during the Cold War, multi-alignment in the post-Cold War era.
- **Engagement with East and West:** SCO outreach (China, Russia, Central Asia) is counterbalanced by Quad engagements (U.S., Japan, Australia).
- **Transactional Strains:** Tariffs, sanctions, visa issues, and U.S. demands on Russian oil imports have strained ties temporarily.
- **Pragmatism, not Alignment:** The Modi-Xi-Putin photo-op was symbolic, but no formal Russia-India-China trilateral was revived.

Strategic Autonomy in Current Global Context

- **United States:**
 - **Opportunities:** Expanding defence cooperation, technology transfers, Quad, IMEC (India-Middle East-Europe Corridor), and I2U2 platforms.
 - **Challenges:** Tariffs, sanctions pressure on Russian oil imports, and demands for policy alignment test India’s autonomy.
 - *India’s Approach:* Engages Washington without compromising on independent energy ties with Russia.
- **China:**
 - **Challenges:** Galwan clash (2020), border tensions, trade imbalance.
 - **Engagement:** Simultaneously deters militarily, strengthens Indo-Pacific partnerships, and engages with China in BRICS and SCO.
 - *India’s Approach:* Avoids outright confrontation or capitulation; balances rivalry with dialogue.
- **Russia:**
 - **Legacy Partner:** Defence, nuclear, and energy cooperation rooted in Cold War solidarity.
 - **Post-Ukraine Conflict:** India continues imports of Russian oil and weapons despite Western criticism.
 - *India’s Approach:* Diversifies partners (France, U.S., Israel) while retaining Moscow ties.
- **Global Perception:** India is seen as a “swing state” in global geopolitics, leveraging both blocs for national interest.

Broader Dimensions of Strategic Autonomy

- **Voice of the Global South:** India’s G-20 presidency (2023) showcased leadership in representing developing nations, emphasising pluralism and inclusivity.
- **Technology & Data Sovereignty:** Indigenous platforms (e.g., UPI, ONDC), critical mineral security, and AI/cyber governance reflect autonomy in digital domains.
- **Defence Modernisation:** Atmanirbhar Bharat in defence production aims to reduce dependence while sustaining external partnerships.
- **Climate Diplomacy:** Initiatives like **International Solar Alliance (ISA)** highlight autonomy in shaping global climate agendas.

Challenges to Strategic Autonomy

- **Economic Constraints:** Dependence on global supply chains, oil imports, and defence technology.
 - *Example:* Semiconductor ecosystem dominated by few global players.

- **China Factor:** Managing competition without jeopardising economic engagement.
- **Western Pressure:** Aligning with U.S. security priorities versus maintaining Russia ties.
- **Domestic Weaknesses:** Political polarisation and economic vulnerabilities can restrict independent decision-making.
- **Non-traditional Domains:** Cyber threats, AI warfare, and space competition demand redefined autonomy beyond territorial sovereignty.

Way Forward

- **Invest in Capabilities:** Economic strength, indigenous technology, and military preparedness are prerequisites for autonomy.
- **Diversify Partnerships:** Engage across regions (Africa, Middle East, ASEAN, Latin America) to reduce overdependence.
- **Strengthen Institutions:** Build resilient diplomatic and defence frameworks for consistent policy execution.
- **Promote Sustainable Practices:** From energy security to fisheries and climate governance, autonomy must rest on sustainable policies.

Conclusion

While the Tianjin summit projected imagery of India leaning eastward, the underlying reality reflects **continuity rather than change**. India's diplomacy is anchored in **strategic autonomy**, balancing relations across competing global poles to safeguard sovereignty, economic interests, and security needs.

2. Sustainable Development Goals (SDG) Index

Why in the news?

- In June this year, India secured its best-ever position in the Sustainable Development Goals (SDG) Index, ranking 99 out of 167 nations in the 2025 edition of the SDG Report.

Introduction

- India ranked **99/167 in the 2025 SDG Index**, its **best-ever position**, up from 109 in 2024.
- Despite improvements in basic services, **health and nutrition gaps remain**, especially in rural and tribal areas.
- **SDG 3** aims to “ensure healthy lives and promote well-being for all at all ages” by 2030.

Current Status and Gaps

- **Maternal Mortality Ratio (MMR):** 97 per 100,000 live births (target: 70).
- **Under-five mortality:** 32 per 1,000 live births (target: 25).
- **Life expectancy:** 70 years (target: 73.63).
- **Out-of-pocket health expenditure:** 13% of total consumption (target: 7.83%).
- **Immunisation coverage:** 93.23% (target: 100%).

Reasons for gaps:

- Limited access to quality healthcare infrastructure and services.
- Non-economic factors: poor nutrition, hygiene, sanitation, and lifestyle choices.
- Cultural practices, stigma, and low awareness hindering utilization of services.

Strategic Measures for Acceleration

- **Universal Health Insurance**

- Reduces catastrophic expenditure, improves equity.
- Evidence: Countries with strong insurance systems achieve better health outcomes.
- **Strengthening Primary Health Care**
 - High-quality PHCs to coordinate primary, secondary, and tertiary care.
 - **Digital health tools:** telemedicine, integrated health records, vaccination tracking.
 - Evidence: Lancet Digital Health Commission shows improved maternal and child health outcomes via digital platforms.
- **School-Based Health Education**
 - Focus on nutrition, hygiene, sanitation, reproductive health, mental health, road safety.
 - Behavioural change at young age ensures lifelong healthy practices.
 - Global examples: Finland (1970s) and Japan show reductions in disease incidence and increased life expectancy through school health programs.
- **Role of Stakeholders**
 - **Policymakers:** embed health education in curricula, invest in UHC and PHCs.
 - **Parents:** monitor school curricula; advocate for inclusion of health education.
 - **Community:** promote awareness of preventive health measures and hygiene practices.

Conclusion

- India's SDG 3 progress is encouraging but uneven. Holistic approaches combining **healthcare infrastructure, insurance, digital solutions, and education** are essential.
- **Compulsory school health education**, coupled with universal health coverage, can bridge gaps and contribute to **Viksit Bharat 2047**, ensuring a healthier, stronger India.



R.C.REDDY
GENERAL STUDIES-3
STUDY CIRCLE

A. INDIAN ECONOMY

I. Indian economy issues relating to planning, mobilization of resources

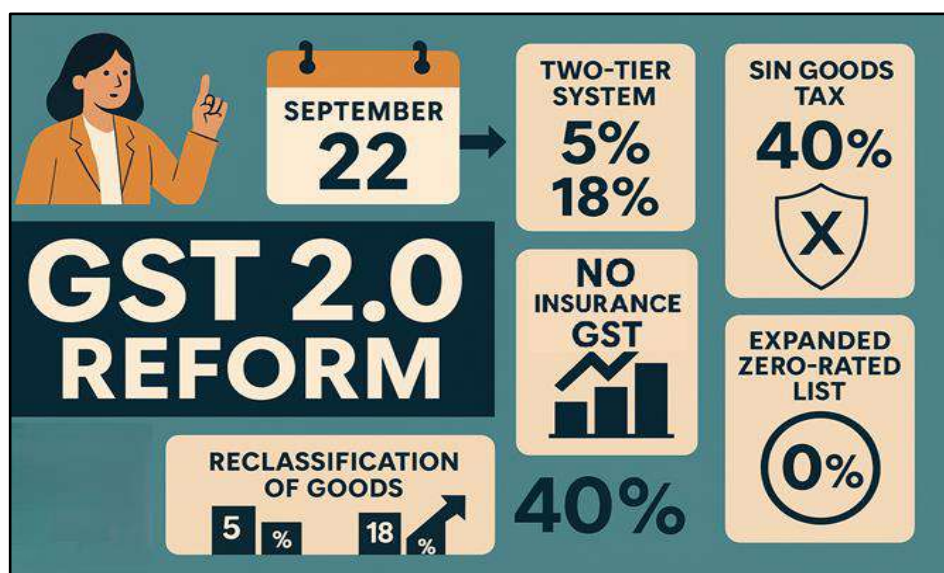
1. GST 2.0 – A LANDMARK IN INDIA'S TAX JOURNEY

Why in News?

- The **56th GST Council meeting (September 3, 2025)** introduced **GST 2.0**, a major reform simplifying India's tax structure.

Key Highlights of GST 2.0

- **Simplified Structure:** Replaces 4 slabs (5%, 12%, 18%, 28%) with **two main rates** — 5% (merit) and 18% (standard), plus **40% for luxury/de-merit goods**.
- **People-Oriented Reform:** Daily-use goods like **soap, shampoo, bicycles, and kitchenware** shifted to 5%; **essentials like milk, paneer, parathas** fully exempt.
- **Social Security Support:** For the first time, **life and health insurance** are **GST-free**, increasing affordability.
- **Correction of Inverted Duties:** Sectors like **textiles, fertilisers, and chemicals** see rationalised input-output rates.
- **Institutional Reform:** **GST Appellate Tribunal (GSTAT)** to be operational by year-end for faster dispute settlement.



Impact on Households & Social Security

- **Cheaper Essentials:** Soaps, shampoos, toothpaste, bicycles moved to **5% slab**.
- **Exempt Food Items:** UHT milk, paneer, chapatis, parathas exempt — helping **low- and middle-income families**.
- **Insurance & Healthcare:**
 - **GST-free life and health insurance**, encouraging wider coverage.
 - **Reduced rates for cancer drugs and rare disease medicines** make healthcare more affordable.

Benefits for Farmers & Rural India

- **Lower Farm Input Costs:** Fertilisers, ammonia, and sulphuric acid cut from 18% to 5%.
- **Affordable Farm Machinery:** Tractors and equipment now taxed at **5%**, enhancing rural productivity.
- **Price Stability:** Rationalisation reduces distortions, aiding **farm income** and **sustainability**.

Implications for Industry & Employment

- **Labour-Intensive Sectors:** Handicrafts, marble, granite, leather goods see **rate cuts**, generating jobs.
- **Textiles:** GST on man-made fibres reduced to 5%, resolving **inverted duty** and improving **exports**.
- **Infrastructure Boost:** **Cement** tax cut from 28% to 18%, spurring **housing** and **construction**.
- **Green Growth:** Renewable devices and EV components taxed lower to encourage **sustainability**.

Institutional & Process Reforms

- **GSTAT:** To ensure timely resolution and taxpayer confidence.
- **Compliance Ease:** Provisional refunds, risk-based assessments, and uniform valuation rules.
- **Global Alignment:** Simplified slabs match **international best practices** (Canada, Australia, Singapore).

Implementation Strategy

- **Phased Rollout** from **September 22, 2025** to ensure **revenue neutrality**.
- **Collaborative Decision-Making** by Centre and States — a sign of **strong fiscal federalism**.

Conclusion

- **GST 2.0** marks a **transformational step** in India's tax journey, simplifying rates, easing compliance, and enhancing inclusiveness. By aligning with **global practices** and ensuring **citizen welfare**, it lays the groundwork for **Viksit Bharat 2047** through a fair, transparent, and growth-friendly tax system.

2. IMPACT OF GST REFORMS ON THE COOPERATIVE SECTOR

Why in News?

- Recent GST reforms have reduced taxes on key cooperative products like dairy, tractors, and fertilisers, aiming to enhance competitiveness, increase income for cooperatives, and benefit farmers and rural enterprises.

Context

- The government expects GST reforms to strengthen cooperatives by lowering input costs and improving market competitiveness.
- Focus sectors include dairy, agriculture, and allied industries, which form the backbone of rural livelihoods.

Key GST Reforms Affecting Cooperatives

- Dairy Sector:** Tax on butter, ghee, and similar products reduced from 12% to 5%; GST on milk cans made of iron, steel, or aluminium lowered from 12% to 5%.
- Tractors:** GST on tractors below 1800 cc reduced to 5%, making them more affordable for farmers, including those in mixed farming.
- Fertiliser Inputs:** GST on ammonia, sulphuric acid, and nitric acid reduced from 18% to 5%, reducing costs for fertiliser manufacturers and keeping farmer input costs low.

About Cooperatives

- Cooperatives are member-owned organisations working to meet the economic, social, or cultural needs of members.
- UN SDG Alignment:** Cooperatives help reduce inequality, promote decent work, and alleviate poverty.
- Constitutional Support:** 97th Amendment (2011) established the right to form cooperatives (Article 19), Directive Principle (Article 43-B), and Part IX-B for cooperative governance (Articles 243-ZH to 243-ZT).

Benefits of Cooperatives

- Democratic Control:** Members participate equally in decision-making.
- Economic Participation:** Profits distributed based on usage, not capital contribution.
- Community Focus:** Resources and benefits retained locally.
- Better Services and Prices:** Pooling resources ensures efficiency and affordability.

Types of Cooperatives in India

- Agricultural:** Dairy cooperatives (Amul), farmers' cooperatives, fishermen cooperatives.
- Consumer Cooperatives:** Offer goods at reasonable prices.
- Worker Cooperatives:** Profits and management shared among workers.
- Credit Cooperatives:** Cooperative banks and credit societies provide financial services.
- Housing Cooperatives:** Collective housing initiatives for affordable living.

Challenges Faced

- Weak governance, corruption, and political interference.
- Limited access to credit and modern technology.
- Competition from private and multinational companies.

Legal Framework and Support

- Cooperative Societies Act** and **Multi-State Cooperative Societies Act (2002)** regulate operations.
- National Cooperative Policy (2002):** Improves governance, member participation, and sustainability.

- **Ministry of Cooperation (2021):** Supports cooperative growth, reforms, and financial aid.

Way Forward

- GST reforms can empower over 10 crore dairy farmers and strengthen rural enterprises.
- Focus on governance, technology adoption, and financial inclusion can ensure cooperatives contribute to inclusive growth and social development.

3. CAG REPORT ON STATES FISCAL HEALTH

Why in News?

- The Comptroller and Auditor General (CAG) released a report highlighting a sharp rise in public debt among Indian states over the past decade.

CAG Report on States' Fiscal Health

Debt Growth Trend

- States' total public debt has increased sharply over the last decade.
- Debt-to-GSDP ratio rose from 16.7% (2013-14) to 23% (2022-23).
- Some states like **Punjab, Nagaland, and West Bengal** have high debt (>30% of GSDP), while **Odisha, Maharashtra, and Gujarat** have low debt (<17%).

Debt vs Revenue Receipts

- On average, state debt equals 150% of revenue receipts.
- Many states borrow for current expenditure rather than investment, breaching the 'golden rule' of borrowing.

Reasons for Rising Debt

- **Populist Policies:** Farm loan waivers, subsidies, and old pension schemes funded through borrowing.
- **Competitive Welfare:** States compete in costly schemes, increasing fiscal stress.
- **COVID-19 Impact:** Economic contraction and extra borrowing pushed debt up.
- **GST Dependence:** Loss of independent taxation powers and end of GST compensation created revenue gaps.
- **Borrowing for Salaries & Subsidies:** In 11 states, >50% of net borrowings are used for non-productive expenses.

Concerns & Risks

- **Crowding Out:** High SDL borrowings increase interest rates, affecting private investment.
- **Inflation:** Debt-financed spending on consumption can fuel inflation.
- **Debt Servicing Pressure:** 20–25% of revenue often goes to interest, limiting development spending.
- **Centre-State Fiscal Balance:** Combined central (~57% of GDP) and state (~23% of GDP) debt pushes total public debt close to 80% of GDP, exceeding FRBM target of 60%.

About CAG

- Supreme audit authority under **Articles 148–151** of the Constitution.
- Audits government accounts for accountability and transparency.
- **Submits three types of reports:**
 - **Appropriation Accounts** – Usage of allocated funds.
 - **Finance Accounts** – Annual receipts and expenditures.
 - **Public Undertakings** – Finances of PSUs.

- Reports are presented to Parliament, examined by the **Public Accounts Committee (PAC)**.

Way Forward:

- **Fiscal Responsibility:** States must follow FRBM norms to maintain debt sustainability.
- **Prioritise Capital Spending:** Focus on infrastructure, health, education over subsidies.
- **Revenue Mobilisation:** Strengthen tax collection, rationalise subsidies, expand non-tax revenue.
- **Centre-State Coordination:** Conditional borrowing and transparent debt management to improve fiscal discipline.

Conclusion:

Rising state debt highlights the need for fiscal discipline, prioritising investment over consumption, and better revenue mobilisation. Ensuring sustainable borrowing and transparent spending is essential for long-term economic stability.

II. Growth and Development, employment

1. WOMEN DRIVING INDIA'S ECONOMIC GROWTH

Why in News?

- Recently the Ministry of Labour and Employment highlighted a significant rise in women's employment in India, nearly doubling from 2017-18 to 2023-24.

Recent Trends in Women's Labour Participation:

- Women's employment rate (WPR) increased from **22% in 2017-18 to 40.3% in 2023-24** (PLFS 2023-24).
- Unemployment among women decreased from **5.6% to 3.2%**.
- **Rural female employment** rose by **96%**, while **urban female employment** grew by **43%**.
- Over **1.56 crore women** joined the **formal sector** via EPFO in seven years.
- **16.69 crore women** are registered on **e-Shram**, giving access to welfare schemes.

Women Entrepreneurship:

- Women-owned enterprises increased from **17.4% in 2010-11 to 26.2% in 2023-24**.
- Number of **women-led MSMEs** almost **doubled from 1 crore to 1.92 crore**.
- **India Skills Report 2025** projects **55% global employability** for Indian graduates.

Government Initiatives:

- **Gender budgets** rose **429%**, from ₹0.85 lakh crore in FY 2013-14 to ₹4.49 lakh crore in FY 2025-26.
- Programs like **Startup India** encourage women entrepreneurship; nearly **50% of startups** have at least one-woman director.
- Flagship schemes such as **Namo Drone Didi** and **Deendayal Antyodaya Yojana – NRLM** provide training and resources.
- **PM Mudra Yojana** supports financial inclusion, with women receiving **68% of total loans**.
- **PM SVANidhi** has helped **street vendors**, with around **44% of beneficiaries being women**.

Significance of Women Participation:

- Higher female workforce can **boost GDP** and is key to achieving **70% workforce participation** under **Viksit Bharat 2047** vision.
- Employment **empowers women**, reduces gender inequality, and improves household welfare.

- India's **young population** provides an opportunity to utilize female talent.
- Supports **SDG 5 (Gender Equality)** and **SDG 8 (Decent Work & Economic Growth)**.

Challenges:

- **Patriarchal norms** limit women's mobility and career choices.
- **Unpaid care work** disproportionately affects women.
- **Lack of safe transport, sanitation, and workplace facilities** hinders participation.
- Women are mostly in **informal, low-paying, and unprotected jobs**.
- Schemes like **MGNREGA** and **Skill India** need **better gender-focused implementation**.

Way Forward:

- Expand **skills and vocational training** for women.
- Encourage **formal employment** and ensure **workplace safety**.
- Strictly enforce **harassment laws** and provide **crèches** at workplaces.
- Combined **policy reforms and societal change** can make women a **key driver of inclusive growth**.

Conclusion:

Rising women's participation in the workforce presents a major opportunity for India's economic and social development. Sustained reforms and supportive policies are essential to make women a pillar of inclusive growth.

2. BANKING INDUSTRY, A KEY DRIVER OF INDIA'S ECONOMIC GROWTH

Why in News?

- The President of India recently highlighted the crucial role of the banking sector in driving economic development, financial inclusion, and nation-building.

About India's Banking Sector

- **Financial Intermediary:** Banks act as the main conduit for credit delivery and liquidity management.
- **Types of Institutions:**
 - **Commercial Banks:** Public and private sector banks serving the general population.
 - **Cooperative & Local Area Banks:** Focus on niche markets and rural populations.
 - **Development Financial Institutions:** NABARD, SIDBI, IDBI fund agriculture, MSMEs, and infrastructure.
 - **NBFCs:** Over 9,000 entities catering to underserved segments.

Role in Economic and Fiscal Management

- **Monetary Policy Implementation:** Repo rate changes influence lending and deposit rates. Banks participate in liquidity operations like VRR and VRRR auctions.
- **Credit Expansion:** Lending to agriculture, MSMEs, and individuals drives economic activity.
- **Fiscal Management:**
 - Banks help finance public debt via G-Secs.
 - Deliver subsidies under DBT schemes like PM-KISAN, LPG, and other welfare programs.
 - Promote financial inclusion through initiatives like Pradhan Mantri Jan Dhan Yojana (56+ crore accounts).
- **Digital Finance:** UPI, mobile banking, and digital wallets improve accessibility, particularly in remote areas.
- **Support to MSMEs & Infrastructure:** Banks provide tailored credit to micro, small, and medium enterprises and fund critical infrastructure projects like roads, railways, and ports.

- **Agricultural and Rural Development:** Financial literacy, agri-tech initiatives, and RuPay-enabled Kisan Credit Cards empower rural communities.

Challenges in India's Banking Sector

- **Asset Quality:** High NPAs, especially in MSMEs and agriculture.
- **Capital Adequacy:** Smaller banks may struggle with Basel III compliance.
- **Financial Inclusion vs Profitability:** Rural outreach faces infrastructure and literacy gaps; higher net interest margins may indicate inefficiency.
- **Cybersecurity Threats:** Banks face phishing, ransomware, DDoS attacks, and fake apps.
- **Competition & Consolidation:** Mergers reduce market choice; intense competition may lead to risky lending.

Key Reforms and Measures

- **Banking Laws (Amendment) Act, 2025:** Strengthened governance, improved audit standards, updated investor protection rules.
- **4R Strategy for PSB Revival (2014):** Professional leadership selection via Banks Board Bureau, strategic guidance for capital and governance.
- **Decriminalisation & Compliance Simplification:** Jan Vishwas Bill 2.0 aims to reduce regulatory burden for MSMEs and startups, fostering trust-based governance.



Conclusion:

India's banking sector is central to economic growth, inclusive development, and financial stability. Ongoing reforms, digital initiatives, and stronger governance aim to enhance efficiency while addressing risks like NPAs, cybersecurity threats, and systemic vulnerabilities.

3. INDIA'S FDI LANDSCAPE

Why in News?

- **India recorded record gross FDI inflows in FY 2024–25.** However, large-scale outflows and disinvestments reduced, raising concerns about the actual developmental impact of foreign investment.

About FDI:

- **Foreign Direct Investment (FDI)** refers to cross-border investment in which an individual or business from one country invests in a business entity located in another country, with the aim of gaining **substantial influence or control** over its operations.
 - FDI has been a key driver of India's economic transformation since 1991, bringing capital, technology, and global connections.
 - **Recent trends show a divergence:** while gross inflows are high, net capital retained for domestic development is shrinking due to repatriations and outward investments.
 - This gap affects job creation, industrial expansion, and long-term economic resilience.

Inflows vs. Outflows

- **Gross FDI:** \$81 billion in FY 2024–25, up 13.7% from previous year.
- **Outflows/Disinvestments:** Increased to \$51.4 billion, up 51% from FY 2023–24.
- **Net Retained Capital:** Only \$0.4 billion remained in India after accounting for outflows.
- **Investor Behaviour:** Shift from long-term industrial projects to short-term profit and tax arbitrage.

Decline in Manufacturing FDI

- Manufacturing's share in FDI dropped to 12% of total inflows.
- Preference for rent-seeking sectors like financial services, energy distribution, and hospitality.
- Weak multiplier effect: These sectors contribute less to industrial growth, technology transfer, and employment.

Rising Outward FDI

- Outward FDI by Indian companies rose from \$13 billion in FY 2011–12 to \$29.2 billion in FY 2024–25.
- Motivated by regulatory inefficiencies, infrastructure gaps, and policy unpredictability.
- Major destinations: Developed countries offering stable tax regimes and strategic resources.

Structural Challenges in India's Investment Climate

- **Regulatory Opacity:** Complex compliance discourages investors.
- **Policy Instability:** Frequent shifts reduce confidence in long-term projects.
- **Governance Gaps:** Difference between policies on paper and ground execution.
- **Tax Havens:** Mauritius and Singapore dominate inflows due to treaty-based advantages.

Importance of Sustained FDI

- Supports balance of payments and currency stability.
- Provides flexibility for monetary policy.
- Essential for advanced manufacturing, clean energy, and technology sectors.

Remedial Measures

- Simplify regulatory processes and reduce procedural delays.
- Ensure policy consistency for investor trust.
- Upgrade infrastructure in logistics, energy, and digital networks.
- Strengthen legal and institutional frameworks for predictable governance.
- Invest in skill development to match industry requirements.

Conclusion

India's FDI story is at a crucial juncture: high inflows exist, but net capital for domestic industrial growth is minimal. Structural reforms focusing on long-term investment, policy predictability, and infrastructure development are vital for converting FDI into sustainable economic growth.

4. INDIA'S PHASE OF LOW INFLATION AND HIGH GROWTH

Why in News?

- India's economy is witnessing a positive shift with **retail inflation easing** and **strong GDP growth**, marking a reversal from last year's high inflation–low growth.

Macroeconomic Transformation: From Stress to Stability

- Last Year's Scenario:** The economy faced **high inflation** that eroded purchasing power and slowed growth.
- Current Outlook:** India now enjoys **stable prices and rising output**, improving household welfare and fiscal space.
- Growth–Inflation Gap:** Widened to **5.5 percentage points** in 2025, compared to **2.1 points** last year, reflecting stronger economic fundamentals.

Key Inflation Trends (August 2025)

- Retail Inflation:** 2.1%, showing strong price control.
- Food Inflation:**
 - Vegetables: **-15.9%**
 - Pulses: **-14.5%**
- Essential Items:** Inflation in **fuel, housing, clothing, and footwear** remained steady or declined.
- Welfare Cushion:** Free food grains under the **National Food Security Act (NFSA)** ensured food affordability.

Factors Driving the Macroeconomic Improvement

- Domestic Policy Support:** GST rate cuts (effective **September 22**) likely to lower consumer prices. NFSA schemes cushioning vulnerable sections.
- Global Stability:** Decline in crude oil prices limits imported inflation. Limited impact expected even if Russian crude purchases reduce.
- Monetary Management:** RBI's **prudent stance** maintained price stability. Possible **rate cut** by December 2025 to support growth.

Opportunities Ahead

- Stable Inflation Outlook:** Indicators suggest continued low inflation.
- Policy Flexibility:** Space for expansionary fiscal and monetary measures.
- Boost to Consumption:** Enhanced purchasing power of households.
- Investment Climate:** Predictable prices attract both domestic and foreign investors.

Challenges and Caution

- Data Reliability:** Questions over accuracy of inflation and GDP figures.
- Sustainability:** Need to ensure low inflation persists amidst global shocks.
- Global Risks:** Oil price volatility and supply chain disruptions remain concerns.

Conclusion

India's **macroeconomic turnaround**—with **low inflation and robust growth**—marks a phase of **resilience and effective policy coordination**. While this mix strengthens purchasing power and policy freedom, sustaining it will require continued **price vigilance, structural reforms, and inclusive growth strategies**.

5. NATIONAL GLOBAL CAPABILITY CENTRES (GCC) POLICY

Why in News?

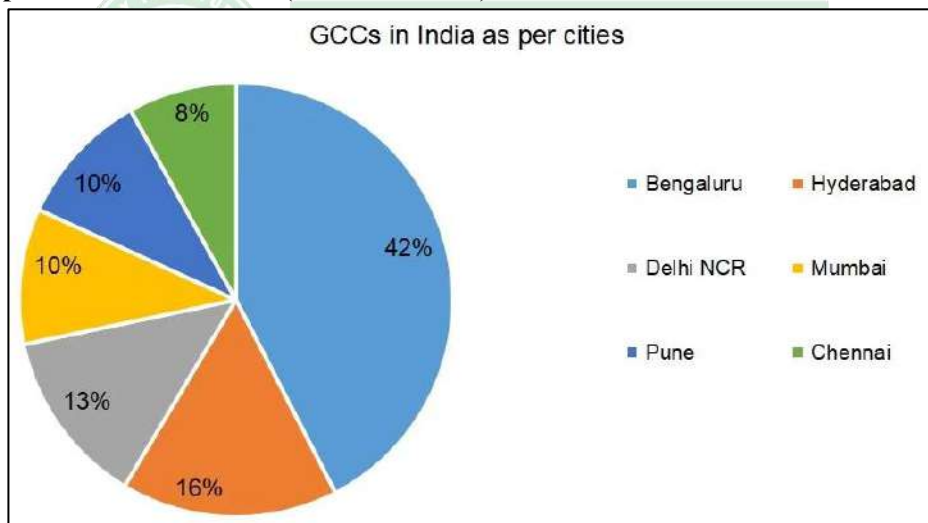
- The **Confederation of Indian Industry (CII)** has proposed a **National Framework for Global Capability Centres (GCCs)** to boost India's role as a global innovation and talent hub.

About Global Capability Centres (GCCs)

- GCCs (also called Global In-house Centres) are offshore units set up by multinational companies to deliver specialized services—like **IT, R&D, analytics, finance, and customer support**—to their parent firms.
- Evolution:** Initially created for **cost-saving**, they now serve as **strategic innovation hubs** driving business transformation and competitiveness.

India's GCC Ecosystem

- Current Status:**
 - Over **1,800 GCCs** operating in India.
 - Employ **2.16 million professionals**.
 - Contribute **\$68 billion in direct GVA** (~1.8% of GDP).
- Future Potential (by 2030):**
 - Could grow to **5,000 GCCs**, generating **\$154–199 billion** in GVA.
 - Employment potential:** 20–25 million jobs, including **4–5 million high-skill roles** (AI, cybersecurity, R&D).
 - Total impact:** \$470–600 billion (direct + indirect).



Key Growth Drivers

- Skilled Talent Base:** India's diverse and tech-savvy workforce supports high-value innovation.
- Tech Advancements:** Rapid adoption of **AI, ML, IoT, blockchain** enabling global-scale solutions.
- Strategic Shift:** GCCs now act as **centres of excellence** rather than cost-saving units.
- Policy Support:** Initiatives like **Digital India** and reforms improving **ease of doing business**.

CII's Key Recommendations

- Investment Facilitation:** Establish **Digital Economic Zones** with ready infrastructure and competitive incentives.
- Single-Window Portal:** Launch a **National GCC Portal** for seamless approvals and coordination.
- Regional Expansion:** Promote GCCs in **Tier-2/3 cities** (Coimbatore, Indore, Jaipur, Bhubaneswar) to reduce costs and tap local talent.

- **Talent Development:** Align national skilling policies with GCC demand in **digital and emerging technologies**.

Way Forward

- GCCs are becoming key drivers of innovation, high-skill employment, and export growth in India. A focused national policy with enabling tax, infrastructure, and talent measures can position India as a global hub for digital excellence and accelerate progress toward the \$5 trillion economy goal.

III. Inclusive growth and issues

1. THE GENDER ANGLE TO INDIA'S ECONOMIC VULNERABILITIES

Why in News?

- India faces rising economic risks due to its **low female labour participation**, especially as **U.S. tariff hikes** threaten export sectors where **women form a large share** of the workforce.

Economic Shocks and Gendered Impact

- **Tariff exposure:** \$40 billion worth of exports face **50% U.S. tariffs**, threatening nearly **1% GDP loss**.
- **Employment hit:** Over **50 million workers**, mostly women, risk job insecurity.
- **Competitiveness gap:** India may face **30–35% higher costs** than rivals like Vietnam.
- **Export dependency:** U.S. accounts for **18% of India's exports**, showing lack of diversification.

Women's Labour Force – A Weak Link

- **Low participation:** Female Labour Force Participation Rate (FLFPR) stuck at **37–41.7%**, far below **China (60%)**.
- **Lost potential:** IMF estimates gender parity could raise **GDP by 27%**.
- **Barriers:** Patriarchal norms, **unpaid care work**, **unsafe transport**, and **limited facilities** restrict opportunities.
- **Urban paradox:** Despite better education, **urban female employment** remains stagnant.

Demographic Dividend at Risk

- **Window closing by 2045:** India's young workforce advantage is temporary.
- **Global lessons:**
 - **China & Japan:** Growth boosted by women's workforce inclusion.
 - **Southern Europe:** Ignored women's employment, resulting in **stagnation**.
- **India's risk:** Without women's participation, the **demographic dividend** may be **wasted**.

Learning from Global Models

- **U.S. (WWII):** Equal pay + childcare boosted female workforce.
- **China:** State-backed childcare raised FLFPR to **60%**.
- **Japan:** Reforms raised participation from **63% → 70%**.
- **Netherlands:** Flexible part-time jobs with full benefits improved inclusion.

Emerging Indian Responses

- **Karnataka's Shakti Scheme:** Free travel → 40% rise in women ridership.
- **Gig Economy Empowerment:** Platforms like *Urban Company* offer **₹18k–25k/month**, insurance, maternity benefits.
- **Employment Schemes:** *Rajasthan's IGUEGS* – **65% jobs for women**, first-time workforce entry.
- **Fiscal incentives:** Support for **female entrepreneurs** and **digital skilling**.

Conclusion:

- India's economic fragility stems as much from **external shocks** as from the **internal exclusion of women**. To ensure **sustainable growth** and **global competitiveness**, **women's empowerment** must shift from being a **social goal** to a **strategic economic priority**.

2. FOOD DEPRIVATION IN INDIA**Why in News?**

- The 2024 NSS Household Consumption Survey and the World Bank's 2025 Poverty & Equity Brief reveal many Indians still cannot afford two nutritious meals a day.

Contrasting Narratives of Poverty

- World Bank Estimates:** Extreme poverty declined from 16.2% in 2011-12 to 2.3% in 2022-23.
- Thali Index Reality:** 50% of rural and 20% of urban households cannot afford two balanced meals per day.
- Deprivation Gap:** Food often comes after expenses on rent, healthcare, and transport, limiting access to nutritious meals.

Why Measure Poverty Through the Thali Index?

- Beyond Calories:** Traditional poverty lines ignore nutrition and dietary adequacy.
- Balanced Meal Concept:** A thali includes rice, dal, vegetables, roti, curd, and salad—representing a complete meal.
- Cost Factor:** One home-cooked thali costs around ₹30; many households cannot afford two per day.

Effectiveness of the Public Distribution System (PDS)

- Persistent Food Deprivation:** Even with PDS support, 40% rural and 10% urban households cannot afford two thalis/day.
- Inefficient Subsidy Distribution:** In rural areas, high-income groups often receive most of the subsidy, leaving the poorest underserved.
- Urban Progressivity:** Urban PDS is better targeted but still includes households not in need.

Limitations of Focusing Only on Cereals

- Equalised Cereal Consumption:** Both rich and poor consume similar rice/wheat, showing PDS success but limited impact on nutrition.
- Protein Inequality:** Pulses consumption among the poorest 5% is half that of the richest 5%, highlighting gaps in protein security.

Policy Recommendations: Protein-Focused Reforms

- Expand Pulse Distribution:** Redirect subsidies towards pulses to ensure protein security.
- Rationalise Cereal Subsidies:** Trim excess rice/wheat entitlements for wealthier groups to reduce FCI storage costs.
- Targeted PDS Approach:** Focus on ensuring “two thalis/day” norm with pulses inclusion to make the system efficient and equitable.
- Global Relevance:** Achieving equalised food consumption would set a benchmark in welfare policy worldwide.

Conclusion

While decades of PDS reforms have equalised cereal access, India's next challenge is protein security. Targeted pulse distribution and rationalised subsidies can optimise public expenditure, reduce inequalities, and ensure equitable primary food consumption across the country.

IV. Agriculture and allied

1. INDIA'S ENDEAVOUR TO UNLOCK ITS MARINE FISHERIES POTENTIAL

Why in News?

- The Ministry of Fisheries released draft rules to promote sustainable fishing in India's Exclusive Economic Zone (EEZ) and High Seas, aiming to fully utilise marine resources while preventing illegal and unregulated fishing.

India's Marine Fisheries Potential

- Coastline & Infrastructure:** India has ~11,098 km of coastline, 1,457 landing centres, and 3,461 fishing villages.
- Global Position:** Third-largest fish producer globally, contributing 8% of total output (2022-23).
- EEZ Potential:** Covers nearly 2 million sq km, with estimated annual capture potential of 5.31 million metric tonnes.
- Current Production:** Marine fish catch recorded at 44.95 lakh tonnes (2023-24), up from 44.32 lakh tonnes (2022-23).
- High-Value Species:** Tuna and tuna-like species identified as growth opportunities, especially for exports.

Regulatory Framework and Governance

- High Seas Authorization:** Indian vessels require a Letter of Authorisation (LOA) valid for three years.
- IUU Fishing Ban:** Strict prohibition on Illegal, Unreported, and Unregulated fishing.
- Compliance with RFMOs:** Includes catch limits, gear restrictions, bycatch mitigation, FAD management, and voyage reporting.
- Capacity Building:** Training for small-scale and traditional fishers to participate in High Seas fishing and enhance efficiency.

Regional Focus: Andaman & Nicobar and Lakshadweep

- Andaman & Nicobar:** EEZ of 6.6 lakh sq km; notified "tuna cluster" with on-board processing, licensing, and single-window clearance.
- Lakshadweep:** EEZ of 4 lakh sq km plus 4,200 sq km lagoon; development in tuna fisheries, aquaculture, and sustainable lagoon-based fishing.

Challenges in Fisheries Sector

- Underutilisation:** Offshore and deep-sea fisheries potential remains largely untapped.
- Resource Access:** Traditional fishers face barriers in technology, capital, and training.
- Infrastructure Gaps:** Limited cold chains, harbours, and modern processing reduce efficiency.
- Environmental Risks:** Bycatch, coral reef damage, and unsustainable gear threaten ecosystems.
- Enforcement:** Weak surveillance limits control over illegal fishing.

Government Initiatives

- MPEDA:** Technology upgrades, quality certification, and market development.
- NMFAP:** Enhancing infrastructure, technology, and resource assessment.

- **PMMSY:** Blue Revolution for sustainable fisheries (FY2020-21 to FY2024-25).
- **FIDF:** Fund to address fisheries infrastructure needs.
- **Kisan Credit Card (KCC):** Financial support for farmers.

Way Ahead

- **Infrastructure Strengthening:** Modern harbours, cold chains, and processing facilities to reduce losses.
- **Value Addition & Exports:** Focus on high-value species like tuna with robust value chains and global market linkages.
- **Capacity Building:** Expand training for small-scale and traditional fishers to access deep-sea and High Seas opportunities.

Conclusion

India has significant marine fisheries potential but faces challenges in utilisation, infrastructure, and sustainability. Draft guidelines and government initiatives aim to ensure responsible, modern, and globally competitive fisheries development.

2. FERTILISER SHORTAGES AMID MONSOON SURGE

Why in News?

- In 2025, a strong southwest monsoon increased kharif sowing, sharply raising fertiliser demand. Domestic production and imports lagged, causing shortages that affected crop nutrition and sowing efficiency.

Importance of Fertilisers in Agriculture

- Provide essential nutrients like Nitrogen (N), Phosphorus (P), Potassium (K), and Sulphur (S) necessary for crop growth.
- Ensure higher crop yields and food security.
- India is the **second-largest consumer** and **third-largest producer** of fertilisers globally.
- A good monsoon increases soil moisture, water reservoirs, and groundwater recharge, driving higher sowing and fertiliser consumption.



Current Supply-Side Constraints

- **Urea Production Decline:** Domestic urea output dropped from 102.1 lakh tonnes (April–July 2024) to 93.6 lakh tonnes (April–July 2025).
- **DAP Production Stagnant:** Diammonium phosphate (DAP) production remained unchanged at 13.7 lakh tonnes.
- **Import Shortages:** Supply restrictions from China, a major exporter, have reduced imports of urea and DAP.

TABLE 1 SALE OF MAJOR FERTILISER PRODUCTS

	2023-24	2024-25	Apr-Jul 2024	Apr-Jul 2025	%Growth
Urea	357.80	387.74	108.86	124.28	14.2
DAP	108.12	92.81	29.44	25.68	-12.8
NPKS	110.73	142.14	39.34	50.03	27.2
SSP	45.44	49.28	15.55	20.01	28.7
MOP	16.45	22.02	4.94	7.05	42.8

Source: The Fertiliser Association of India.

Fertiliser Subsidy Framework

- **Urea Subsidy Scheme:** Farmers pay a maximum retail price (MRP) of ₹242 for a 45 kg urea bag, while actual cost is around ₹3,000.
- **Nutrient-Based Subsidy (NBS) Policy:** Subsidy is linked to nutrient content in P&K fertilisers, encouraging balanced usage.
- **Government Budget Allocation (FY2025–26):**
 - Urea subsidy: ₹1.19 lakh crore
 - NPK subsidy: ₹0.49 lakh crore
- **One Nation One Fertiliser Scheme:** Ensures uniform branding and transparency.
- **PM PRANAM Scheme:** Incentivizes states to promote alternative fertilisers and balanced chemical fertiliser use.

Way Forward

- **Advance Demand Forecasting:** Align fertiliser allocation with anticipated crop acreage to prevent shortages during good monsoon years.
- **Diversified Imports:** Reduce over-reliance on China by signing long-term contracts with multiple suppliers.
- **Capacity Expansion:** Fast-track commissioning of domestic urea plants under “Atmanirbhar Bharat” to reduce import dependency.
- **Sustainable Practices:** Promote use of nano-urea, bio-fertilisers, and soil health cards to gradually reduce chemical fertiliser intensity.

Conclusion

Balanced fertiliser supply is essential for sustaining agricultural productivity, especially during bumper monsoons. Strategic planning, domestic capacity expansion, diversified imports, and adoption of sustainable fertilisers are key to ensuring long-term food security and crop health in India.

3. NITI AAYOG'S STRATEGY FOR SELF-RELIANT PULSES SECTOR

Why in News?

- NITI Aayog has released a report titled *“Strategies and Pathways for Accelerating Growth in Pulses towards the Goal of Atmanirbharta”*, aiming to make India self-reliant in pulses.

Importance of Pulses in India

- Nutritional Security:** Rich in protein, fiber, vitamins, and minerals; support human and animal health. Contribute to **SDG 2 (Zero Hunger)** and **SDG 3 (Good Health and Well-being)**.
- Sustainable Agriculture:** Improve soil fertility, conserve water, reduce synthetic fertilizer use, and have a low carbon footprint. Support **SDG 13 (Climate Action)** and **SDG 15 (Life on Land)**.
- Production Stats:** India accounts for ~38% of global area and ~28% of global pulse production; still the second-largest importer after China.
- Major Producing States:** Madhya Pradesh, Maharashtra, and Rajasthan contribute over 55% of total production.

Challenges in Pulse Production

- Low Yield:** India's average yield (0.74 t/ha) is below the global average (0.97 t/ha); lowest among top 10 pulse producers.
- Technological Gaps:** Limited adoption of high-yielding varieties; weak extension services; poor access to quality seeds and modern technologies.
- Pest & Disease Management:** Inadequate measures increase crop losses.
- Environmental Constraints:** Predominantly rainfed farming; insufficient irrigation; climate risks like droughts, erratic rainfall, El Niño/La Niña events.
- Economic & Market Issues:** Price volatility, low profitability compared to cereals, fragmented marketing channels discourage farmers.

Recommendations for Self-Reliance

- Area Retention & Diversification:** Maintain current pulse-growing areas and promote crop clustering based on agro-ecological zones.
- Seed & Technology Support:** Provide quality seeds and treatment kits; implement “One Block–One Seed Village” in 111 high-potential districts.
- Climate Adaptation:** Incorporate proactive measures to reduce climate-related risks.
- Data & Technology:** Use monitoring systems, decision-support tools, and tech platforms for transparency, traceability, and market intelligence.

Mission Atmanirbharta in Pulses (Union Budget 2025–26)

- Assured Procurement:** NAFED and NCCF to buy pulses under four-year agreements at guaranteed prices.
- Seed Systems & Traceability:** Ensure quality seed distribution and cluster-based production hubs.
- Strengthening FPOs:** Improve bargaining power, access to inputs, and market linkages for farmers.
- Nutrition Promotion:** Expand pulse usage in PDS and mid-day meal schemes.
- Value Chain Development:** Focus on mechanization, post-harvest loss reduction, and value addition.

Conclusion:

The NITI Aayog strategy and Mission Atmanirbharta aim to enhance productivity, ensure farmer income, reduce import dependence, and make India self-reliant in pulses through technology, market support, and sustainable farming practices.

4. FIVE YEARS OF BLUE REVOLUTION

Why in News?

- The **Pradhan Mantri Matsya Sampada Yojana (PMMSY)** has completed **five years** since its launch in **2020**, marking a significant milestone in India's fisheries development journey.

Background

- The **Blue Revolution** (2015) aimed to modernize fisheries, enhance productivity, and strengthen infrastructure.
- Despite progress, challenges persisted in post-harvest handling, fisher welfare, and market access.
- To address these, **PMMSY** was launched in **September 2020**, building on earlier achievements with a holistic and integrated approach.

About Pradhan Mantri Matsya Sampada Yojana (PMMSY)

- Announced in **Union Budget 2019–20** and launched in **2020** to achieve a **Blue Revolution 2.0**.
- Focus: Sustainable fisheries growth, modern technology, infrastructure, and fisher welfare.

Rs 20,000 Crores for Pradhan Mantri Matsya Sampada Yojana (1/2)

- PMMSY to be launched for integrated, sustainable, inclusive development of marine and inland fisheries
- Rs. 11,000 Cr for activities in marine, inland fisheries & aquaculture
- Rs. 9000 Cr for Infrastructure- Fishing Harbors, Cold Chain, Markets etc.
- Key Activities will be cage culture, seaweed farming, ornamental fisheries & new fishing vessels, traceability, lab network etc.

Objectives

- Sustainable Growth:** Harness the full potential of fisheries responsibly and equitably.
- Higher Productivity:** Expand and diversify fish farming using available land and water.
- Value Chain Modernisation:** Strengthen post-harvest management, cold storage, and processing.
- Income Growth:** Double fishers' income and generate employment.
- Export Boost:** Enhance contribution to India's **Agriculture GVA** and seafood exports.
- Social Security:** Provide physical and economic security to fishers.

Key Achievements (2020–2025)

- Record Production:** 195 lakh tonnes in FY 2024–25 (up from 141.64 lakh tonnes in 2019–20).
- Global Ranking:** India now the **2nd largest fish producer**, contributing **8%** to global output.

- **Export Growth:** Seafood exports rose from ₹46,662 crore (2019–20) to ₹60,525 crore (2023–24).
- **Employment:** Over 58 lakh livelihoods created; 99,000+ women empowered.
- **Women's Participation:** Financial support up to 60% of project cost for women-led enterprises.
- **Infrastructure:** Development of cold chains, hatcheries, and value-added processing units.

Challenges

- **Climate Vulnerability:** Rising sea temperatures and extreme weather affecting marine life.
- **Infrastructure Gaps:** Limited cold storage and logistics in remote areas.
- **Overfishing:** Resource depletion and unsustainable practices.
- **Limited Inclusion:** Many small fishers lack access to formal credit and schemes.

Conclusion:

PMMSY has successfully built on the Blue Revolution, ensuring growth that is economically viable, socially inclusive, and environmentally sustainable.

V. Food processing and related industries

1. APEDA LAUNCHES BHARATI INITIATIVE TO BOOST AGRI-FOOD EXPORTS

Why in News?

- The **Agricultural and Processed Food Products Export Development Authority (APEDA)** has introduced the **BHARATI Initiative**, *Bharat's Hub for Agritech, Resilience, Advancement, and Incubation for Export Enablement*.

Key Features of BHARATI

- **Startup-Centric Programme:** First cohort to support **100 agri-food and agri-tech startups**. Focus on innovation, value addition, and export readiness.
- **Three-Month Accelerator:** Training on **product development, global regulations, market access, and collaborative solutions**.
- **Targeted Sectors:** GI-tagged products, organic foods, superfoods, and processed Indian food products.
- **Collaborative Framework:** Partnerships with **state boards, IITs/NITs, industry associations, and private accelerators**.
- **Export Enablement:** Equips startups to meet **international quality standards** like **SPS** (Sanitary and Phytosanitary) and **TBT** (Technical Barriers to Trade).



Significance of the Initiative

- **Diversification of Agri-Exports:** Expands into **high-value niche markets** such as **organic** and **traditional food products**.
- **Startup Ecosystem Support:** Bridges gaps in **incubation**, **funding**, and **scaling** for small agri-tech ventures.
- **Encourages Innovation:** Promotes **R&D in packaging**, **traceability**, and **cold-chain logistics** to reduce wastage.
- **Policy Alignment:** Supports government visions like **Atmanirbhar Bharat**, **Digital India**, and **Vocal for Local**.
- **Farmer Empowerment:** Encourages **value addition** and **better farm-gate prices** through backward linkages.
- **Global Competitiveness:** Helps exporters meet **international safety and quality standards**.

Challenges Ahead

- **Fragmented supply chains** and limited **cold storage capacity**.
- **Stringent trade barriers** and **import regulations** abroad.
- **Funding constraints** for small startups.
- **Weak export infrastructure** in smaller cities.

Way Forward

- **Scale-up the Initiative:** Create a **permanent incubation network** beyond the pilot.
- **Policy Integration:** Sync with **FPO**, **food processing**, and **export promotion** schemes.
- **Global Collaboration:** Partner with **foreign markets** for technology and knowledge exchange.
- **Sustainability Focus:** Promote **eco-friendly packaging** and **climate-resilient logistics**.

About APEDA

- **Established:** 1986 under the **Ministry of Commerce & Industry**.
- **Mandate:** Promote and develop export of **scheduled products** like **fruits, vegetables, cereals, meat, dairy, and processed foods**.
- **Scope:** Oversees **700+ products** under **14 categories**.

Conclusion:

The BHARATI Initiative is a strategic step to build a robust agri-export ecosystem, empower startups, and position India as a global leader in agri-food innovation — provided challenges of infrastructure, funding, and compliance are addressed.

VI. Industry and Industrial Policies**1. CALL FOR INDIA TO BECOME A 'PRODUCT NATION'****Why in News?**

- Amid rising US tariff actions and global trade challenges, experts emphasize that India should move from being service-centric to creating high-value products, enhancing economic and strategic strength.

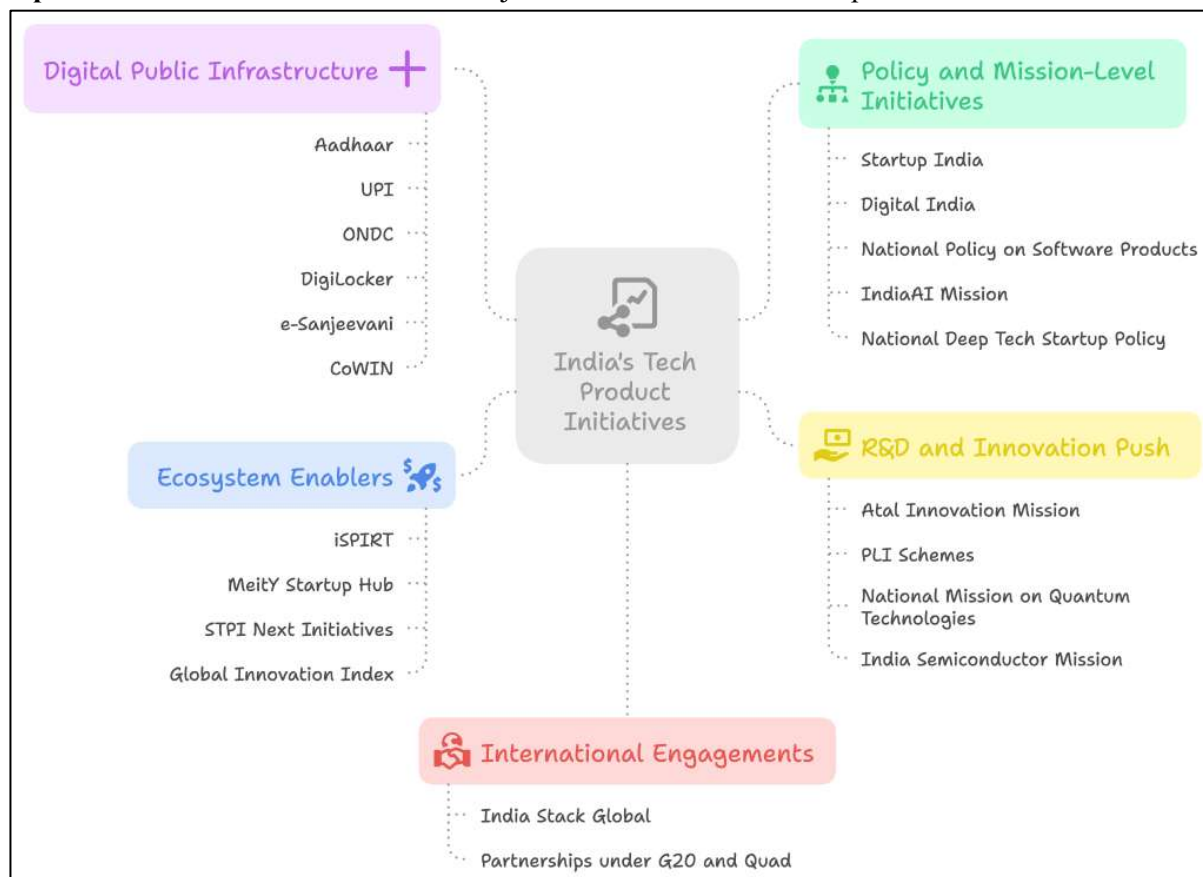
What is a Product Nation?

- A **product nation** is a country that focuses on **designing, manufacturing, and exporting globally competitive products**, rather than primarily offering services or outsourcing.

Key features include:

- **Innovation Focus:** Strong emphasis on research, development, and intellectual property creation.

- **Global Scalability:** Products designed for worldwide markets, not just domestic or single-client needs.
- **Ecosystem Development:** Supportive policies, incubators, venture capital, and collaboration among government, industry, and academia.
- **Talent Utilization:** Skilled workforce engaged in product design, engineering, and entrepreneurship.
- **Export Orientation:** Products become major contributors to national exports.



Why India Needs to Become a Product Nation:

- **Global Strategic Leverage:** US tariff actions reveal India's lack of strategic products, unlike China, limiting bargaining power in global trade.
- **Reduce Import Dependence:** India imports critical technologies (chips, batteries, rare earths); domestic product creation strengthens economic security.
- **Boost Economic Competitiveness:** Moving beyond service-led growth to **IP-driven products** can increase exports, global value chain participation, and high-value profits.
- **Employment & Talent Utilization:** Leveraging India's engineering talent for home-grown products creates **skilled jobs** and prevents brain drain.
- **Diplomatic & Strategic Autonomy:** Owning key products enhances India's negotiating power and global respect.
- **National Security:** Critical technologies like AI, semiconductors, biotech, and batteries are increasingly strategic; domestic capabilities reduce vulnerability.

Challenges for India:

- **Low R&D Investment:** Less than **1% of GDP** spent on research, compared to 2–3% in developed nations.
- **Service-Oriented IT Ecosystem:** IT outsourcing mindset dominates, limiting product innovation.
- **Funding Constraints:** Venture capital favors proven service startups over risky deep-tech products.

- **Talent Gaps:** Plenty of engineers but shortage of product managers, designers, chip developers, and AI researchers.
- **Infrastructure Limitations:** Weak hardware manufacturing ecosystem and inefficient logistics.
- **Global Competitiveness:** Indian products face branding, quality, and market access challenges; strong competition from China, USA, South Korea.

Way Forward:

- Increase **R&D investment** and strengthen **IP protection**.
- Develop **deep-tech talent** and retain skilled professionals.
- Provide **risk capital** and world-class **innovation infrastructure**.
- Promote “**Made in India, Designed for the World**” products through simplified policies and strong global branding.
- Foster **innovation clusters** to accelerate product development and exports.

Conclusion:

Transitioning into a product nation can strengthen India’s economy, global influence, and national security. Focused investment in innovation, talent, and infrastructure is key to achieving this vision.

2. INDIA SETS EYES ON \$1-TRILLION SEMICONDUCTOR MARKET

Why in News?

- At **SEMICON India 2025 (4th Edition)**, the **Prime Minister** unveiled a **national roadmap** to make India a **global semiconductor manufacturing hub**.

Why Semiconductors Matter

- Semiconductors are the **core of all modern technologies**, powering **smartphones**, **electric vehicles**, **defence systems**, **satellites**, and **AI applications**.
- They are essential for **economic resilience**, **digital transformation**, and **strategic autonomy**.
- Global chip shortages have highlighted the need for **domestic capacity** and **supply chain security**.

India’s Semiconductor Strategy Nodal Agency

- The **Ministry of Electronics and IT (MeitY)** oversees the sector through the **India Semiconductor Mission (ISM)**.
- **Goal:** Build a **complete ecosystem** — from **design to manufacturing**.

INDIA SEMICONDUCTOR MISSION (ISM)

An independent division under **Digital India Corporation**, responsible for implementing **SEMICON India Programme**.

Key Schemes include:

- **Semiconductor Fabs:** 50% support of total project cost.
- **Display Fabs:** 50% assistance.
- **Compound Semiconductors & ATMP Units:** 50% of capital cost.
- **Design Linked Incentive (DLI):** Encourages chip design startups (23 supported so far).

TURNING INDIA INTO THE GLOBAL HUB OF ELECTRONIC MANUFACTURING

Union Cabinet approves programme for development of sustainable semiconductors and display ecosystem

- Incentives worth **Rs 2.3 lakh crore** to position India as global hub for electronics manufacturing
- Rs 76,000 crore** approved for development of semiconductors and display manufacturing ecosystem
- Setting up of **India Semiconductor Mission (ISM)** to drive this sector

Recent Milestones (2025)

- **SEMICON India 2025 Theme:** “Building the Next Semiconductor Powerhouse”.
- Participation from **350+ global firms**.
- Launch of India’s **first indigenous chip**, co-developed by **ISRO’s VSSC** and **Semiconductor Laboratory (Chandigarh)**.
- Inauguration of the **first OSAT pilot line** in **Sanand, Gujarat**.
- Approval for major projects: **SiCSem**, **CDIL**, **3D Glass Solutions**, and **ASIP**.
- **Five new projects** sanctioned in 2025, totalling **\$18 billion investment**.

Next Steps for ISM

- **Single-window clearance** system for faster approvals.
- Commitment to reduce delays from **“file to factory”**.
- Emphasis on **long-term incentives** for sustained growth.

India’s Role in the Global Supply Chain

India aims to strengthen **three pillars** of the global semiconductor ecosystem:

- **Equipment Manufacturing** – leveraging **MSMEs** for component production.
- **Materials Supply** – abundant **chemicals, gases, and minerals** for fabrication.
- **Services & Talent** – strong base in **R&D, AI, IoT**, and **data analytics**.

Challenges Ahead

- High capital intensity and technological complexity.
- Need for skilled workforce and stable policies.
- Building infrastructure and ensuring global competitiveness.

Conclusion

India’s renewed semiconductor push reflects a strategic move to become a **global tech powerhouse**, reduce **import dependency**, and ensure **economic and digital sovereignty**. Success in this mission will be key to realizing India’s **\$1 trillion electronics dream by 2030**.

3. INDIA'S RECENT MARITIME REFORMS NEED COURSE CORRECTION

Why in News?

- The Government has recently overhauled several **century-old maritime laws** through the **Ports Bill 2025**, **Merchant Shipping Act**, **Coastal Shipping Act**, and **Carriage of Goods by Sea Bill 2025**.

Background

- India's maritime laws were outdated and fragmented, hindering growth and investment.
- The new reforms aim to promote **ease of doing business**, **sustainability**, and **global competitiveness**.
- However, critics highlight risks of **over-centralisation**, **foreign control**, and **reduced state autonomy**.

Key Maritime Reforms and Issues

1. Ports Bill, 2025 – Centralisation Concerns

- Establishes a **Maritime State Development Council** dominated by the Centre.
- Restricts States from framing independent port development policies.
- Central projects like **Sagarmala** and **PM Gati Shakti** may override local needs.
- Critics argue this weakens **cooperative federalism** and **fiscal independence** of coastal States.

2. Merchant Shipping Act – Ownership and Sovereignty

- Allows **partial foreign ownership** of Indian-flagged ships (earlier required full Indian ownership).
- Exact ownership threshold left to **executive discretion**, raising concerns of **foreign control**.
- **Bareboat Charter-Cum-Demise (BBCD)** leases could let foreign firms exercise de facto control over Indian vessels.
- Risks emergence of “**flag of convenience**”, undermining **maritime sovereignty**.

3. Coastal Shipping Act – Local Players' Challenges

- Maintains **cabotage rules** (only Indian-flagged ships in coastal trade).
- Yet, **DG Shipping** can permit foreign vessels citing vague reasons like “national interest.”
- Heavy compliance and reporting burdens affect **small shipping firms** and **fishing communities**.
- State input reduced under the **National Coastal and Inland Shipping Strategic Plan**.

4. Dispute Resolution & Ease of Doing Business

- **Clause 17** bars civil courts from port-related disputes, relying on **internal committees**.
- Lack of **independent judicial oversight** may deter investors and small operators.
- **Vague compliance rules** could create uncertainty and excessive discretion.

Implications

- **Positive:** Modern legal framework, improved global competitiveness, uniform policy.
- **Concerns:** Reduced **State autonomy**, possible **foreign dominance**, and **regulatory uncertainty** for small players.

What Is the Indian Ports Bill 2025?

A transformative legislation passed by the Rajya Sabha, replacing the 1908 Indian Ports Act. It aims to modernize port operations, enhance efficiency, and integrate global best practices



INDIAN PORTS BILL, 2025 (WHICH REPLACES THE INDIAN PORTS ACT, 1908):

Legal Recognition for State Maritime Boards

- Coastal State Maritime Boards are now given **statutory status**, responsible for **port planning**, **licensing**, **tariff setting**, and enforcing **safety and environmental standards**.

Centralised Oversight through Maritime State Development Council (MSDC)

- Headed by the **Union Ports Minister**, the MSDC will issue **national guidelines**, ensure **tariff transparency**, and coordinate **national maritime policies**, reducing individual State autonomy.

Structured Dispute Resolution Mechanism

- A new **Dispute Resolution Committee (DRC)** will handle conflicts among **non-major ports**, users, and operators; **civil courts are excluded**, with **appeals** going to **High Courts**.

Modernised Safety, Environment, and Tariff Regulations

- Ports must follow **MARPOL** and **Ballast Water** norms; maintain **waste facilities**, **pollution control**, and **emergency systems**.
- Tariffs** are set by **port boards** or **State bodies**, ensuring uniformity.

Updated Offences and Penalties

- Introduces **monetary fines** for minor violations and **imprisonment** for serious offences like **endangering vessels** or **pollution**.
- Encourages **compounding** of first-time offences, aligning with **decriminalisation reforms**.

Conclusion

India's maritime reform push is a **necessary modernization step**, but current frameworks risk **over-centralisation** and **loss of sovereignty**. True reform should prioritise **Clear ownership rules**, **independent dispute resolution**, and **Cooperative federalism**.

4. SCHEME TO PROMOTE CRITICAL MINERAL RECYCLING IN INDIA

Why in News?

- The Union Cabinet approved a **Rs.1,500 crore incentive scheme** to build domestic recycling capacity for critical minerals from e-waste, lithium-ion batteries, and other secondary sources, under the **National Critical Mineral Mission (NCMM)**.

About Critical Minerals

- Minerals essential for economic growth and national security; supply concentration can create vulnerabilities.
- India's List:** 30 minerals including lithium, cobalt, nickel, rare earth elements, titanium, tungsten, and cadmium.
- Applications:**
 - Clean Energy & EVs:** Lithium, cobalt, nickel for batteries; minerals for solar panels and wind turbines.
 - Advanced Manufacturing & Defense:** Beryllium, titanium, tungsten for electronics, defense, and permanent magnets.
 - Healthcare & Technology:** PGMs used in medical devices and cancer treatment.

Objectives of the Recycling Scheme

- Tenure:** FY 2025-26 to FY 2030-31.
- Scope:** New units, capacity expansion, modernization, and diversification.
- Eligible Feedstock:** E-waste, lithium-ion battery scrap, and other secondary sources like catalytic converters.
- Beneficiaries:** Both large established recyclers and small/start-up entities (one-third of outlay for small players).
- Incentives:**
 - Capex Subsidy:** 20% on plant, machinery, and utilities; time-bound conditions apply.
 - Opex Subsidy:** Linked to incremental sales; 40% in year 2, 60% in year 5.
 - Ceiling:** ₹50 crore for large players, ₹25 crore for small entities.

Need for Critical Mineral Recycling

- Rising E-Waste:** Growth of EVs and renewable energy will increase waste; PV module waste expected to grow from 100 kt in FY23 to 340 kt by 2030; EV batteries ~500 kt.
- Scarce Primary Reserves:** Domestic mining and refining capacities for rare earths remain underdeveloped.
- Dependence on China:** China controls 60–70% of global rare earth production and 85–90% of refining, posing strategic risk.
- Environmental & Regulatory Constraints:** Mining and refining primary minerals is limited due to environmental concerns.



Challenges

- Technology gaps in advanced recycling.
- Environmental risks from toxic waste and emissions.
- Regulatory hurdles delaying approvals.
- Infrastructure deficits for collection and processing.

Way Forward

- Invest in R&D and technology transfer for efficient recycling.
- Promote PPPs and start-up participation.
- Develop integrated collection and processing networks for e-waste and battery scrap.
- Ensure strict environmental safeguards.
- Launch skill development programs for workforce in recycling and waste management.

Conclusion:

The scheme strengthens India's self-reliance in critical minerals while reducing environmental risks and import dependence. Efficient implementation and technological advancement are key to achieving sustainable mineral recycling.

5. PM MITRA PARKS**Why in News?**

- PM has urged citizens to buy locally-made products and laid the foundation for the first PM MITRA textile park in Madhya Pradesh.

Make in India and PM MITRA Parks

- **PM MITRA Parks:** Mega Integrated Textile Region and Apparel parks are planned in seven states including Madhya Pradesh, Tamil Nadu, Telangana, Gujarat, Karnataka, Uttar Pradesh, and Maharashtra.
- **5F Theme:** Farm → Fibre → Factory → Fashion → Foreign; ensures end-to-end textile value chain development.
- **Objective:** Promote domestic production, generate employment, and increase exports in the textile sector.

Current Status of Manufacturing in India

- **Contribution to GDP:** Manufacturing contributes 17% of India's GDP; target is 25%.
- **Growth Performance:** Output growth of 21.5% and GVA growth of 7.3% (2022–23).
- **Key Sectors:** Metals, petroleum products, food processing, chemicals, motor vehicles – together contribute 58% of total output.
- **Employment:** 22 lakh jobs added in 2022–23; major contributors include Maharashtra, Gujarat, Tamil Nadu, Karnataka, Uttar Pradesh.

Challenges in Manufacturing

- **Infrastructure Bottlenecks:** High logistics costs, power shortages, poor port connectivity.
- **R&D & Innovation:** Low investment (<1% of GDP) limits technological advancement.
- **Import Dependence:** Heavy reliance on semiconductors, electronics, and defence equipment.
- **Skill Gaps:** Workforce skills mismatch with industry needs.
- **Productivity Issues:** Outdated machinery, fragmented units, low automation.

Key Achievements under Make in India

- **Ease of Doing Business:** India ranked 63rd in 2020, up from 142nd in 2014.
- **Vaccines:** India became a global vaccine hub, supplying ~60% of global needs.
- **Transport:** Indigenous Vande Bharat trains – 102 services operational.
- **Defence:** INS Vikrant aircraft carrier, defence production ₹1.27 lakh crore with exports to 90+ countries.
- **Electronics & Mobile:** Production grew from USD 48B (FY17) to USD 101B (FY23); India is now the second-largest mobile manufacturer.

Way Forward

- Strengthen domestic manufacturing across sunrise sectors (semiconductors, renewable energy, medical devices).
- Promote technological innovation and skill development.
- Enhance global competitiveness through exports and improved infrastructure.

Conclusion:

Make in India has strengthened the industrial base, increased domestic production, and generated employment. Sustained policy support and investment will further boost manufacturing and global competitiveness.

6. INDIA'S MANUFACTURING SECTOR: PERFORMANCE AND POLICY**Why in News?**

- India's manufacturing sector is witnessing strong growth, driven by rising domestic demand, export expansion, and government initiatives, positioning it as a key driver of economic growth and global competitiveness.

Current Growth and Production

- **Overall Growth:** Index of Industrial Production (IIP) for July 2025 shows 3.5% growth overall and 5.4% in manufacturing.
- **Exports:** Total manufacturing exports rose 6.18% YoY to US\$ 349.35 billion (April–August 2025).
- **Future Target:** Sector on track to reach US\$ 1 trillion by FY26; projected to add US\$ 500 billion annually to the global economy by 2030.

Key Sectors Driving Growth

- **Electronics:** Production increased sixfold; exports grew eightfold; import dependence reduced from 75% to nearly zero; mobile manufacturing now 2 → 300 units.
- **Pharmaceuticals:** 3rd largest globally by volume; supplies over 50% of vaccines and 40% of generics to the US; projected market USD 130B by 2030, USD 450B by 2047.
- **Automobiles:** Contributes 7.1% of GDP; produced over 3.1 crore vehicles in FY25; India is 4th largest global producer.
- **Textiles:** 2.3% of GDP, 12% of exports; employs 45 million people; projected to reach US\$ 350B by 2030; PM MITRA parks to generate 20 lakh jobs.

Importance of Manufacturing

- **Investment Destination:** Strong reforms, stable policies, and simpler regulations attract global FDI.
- **Employment Generation:** Boosts skilled and semi-skilled employment; increasing female workforce participation.
- **Global Supply Chains:** Strengthens India's role as a global manufacturing hub.

Policy Support and Initiatives

- **GST Reforms:** Simplified slabs, reduced rates, enhanced MSME efficiency.
- **National Manufacturing Mission (NMM):** Unified strategy for clean, sustainable industrial growth.
- **PLI Scheme:** ₹1.97 lakh crore outlay for 14 sectors; boosts exports, investment, and jobs.
- **National Logistics Policy (NLP):** Reduces logistics costs; integrates multi-modal connectivity and digital systems.
- **Startup India & Skill India:** Supports innovation, entrepreneurship, and demand-driven workforce.
- **Industrial Corridor Development:** Smart industrial cities with multi-modal connectivity, enhancing global appeal.

Future Outlook

- India targets a \$35 trillion economy by 2047, with manufacturing as a central growth engine.
- Strong policy support, incentives, and supply chain resilience provide a clear path for industrial expansion.
- Opportunity to evolve from “factory of the world” to global innovation and leadership hub.

Conclusion:

India's logistics sector is evolving with policy support, digital integration, and sustainable practices to reduce costs and boost competitiveness. Efficient, multimodal, and green logistics will be key to strengthening India's trade and economic growth.

VII. Services sector**1. MEDICAL TOURISM & NON-RESIDENT INDIANS (NRIS)****Why in News?**

- India is emerging as a preferred destination for medical tourism, with rising NRI interest due to cost-effective, high-quality healthcare and improved accessibility across cities.

Medical Tourism in India

- Medical tourism refers to traveling internationally to access healthcare services.
- **Scale:** In 2023, India received over 6.35 lakh foreign patients seeking medical care.
- **Growth Potential:** The sector is expanding to include both major cities and smaller towns with improving connectivity.

Why India is Attractive for Medical Tourists

- **Cost Advantage:** Surgeries in India cost 60–90% less than in the US; for example, a heart bypass costing \$100,000 abroad costs \$10,000–\$20,000 in India.
- **World-Class Infrastructure:** Hospitals have advanced diagnostic and surgical technologies; many doctors are trained internationally.
- **Shorter Waiting Times:** Critical procedures are scheduled faster compared to developed nations.
- **English Proficiency:** Most medical staff can communicate in English, easing interactions for international patients.
- **Insurance Uptake:** Health insurance among NRIs has grown over 150%, especially among young adults and women, covering treatments for parents in India.

Geographic Expansion

- **Beyond Metro Cities:** Cities like Hyderabad, Kochi, and Ahmedabad, as well as towns like Thrissur and Thane, are emerging as medical hubs.
- **Improved Accessibility:** Better flight connectivity and simplified e-Medical visas enhance convenience for international patients.

Challenges in Medical & Wellness Tourism

- **Quality Assurance:** Unregulated growth of wellness centers raises concerns over service standards and safety.
- **Ethical Issues:** Aggressive marketing and lack of transparency in outcomes pose ethical risks.
- **Accessibility & Logistics:** NRIs face challenges in hospital selection, visas, and travel coordination.
- **Cost Transparency:** Hidden expenses and limited insurance coverage create financial uncertainties.
- **Patient Safety:** Infections, poor hygiene, and limited legal recourse for malpractice remain concerns.

Government Initiatives

- **Digital Support:** 'Heal in India' portal aids international patients in booking and planning.
- **Visa Facilitation:** E-Medical Visa available for 167 countries; Ayush Visa for traditional medicine seekers.
- **Promotion & Support:** Medical Value Travel Summits, wellness centre accreditation, and Market Development Assistance (MDA) promote quality standards and global outreach.

Wellness Tourism

- **Focus on Traditional Systems:** Ayurveda, Yoga, Siddha, and Naturopathy attract international visitors seeking preventive care and rejuvenation.
- **Accreditation & Support:** NABH and AYUSH ensure quality; government provides incentives for global participation.

Conclusion:

Medical and wellness tourism in India is rapidly growing due to affordable care, advanced infrastructure, and expanding accessibility. Government support, insurance growth, and focus on quality assurance are key to making India a global healthcare hub.

VIII. Infrastructure**1. ENERGY SOVEREIGNTY: INDIA'S NEW STRATEGIC IMPERATIVE****Why in News?**

- India's heavy dependence on imported energy and exposure to volatile global markets and geopolitical tensions poses significant risks to its economic and strategic stability.

Introduction:

- India imports over **85% of crude oil** and **50% of natural gas**, making energy a major economic and strategic vulnerability.
- Dependence on a few suppliers, particularly from West Asia, exposes India to price shocks and geopolitical risks.
- Energy sovereignty is now essential for economic stability, national security, and resilient growth.

Why Energy Sovereignty Matters:

- **Import Dependence:** Heavy reliance on crude and gas imports increases vulnerability to global disruptions.
- **Economic Burden:** Energy imports worth **\$170 billion** (25% of total imports) strain the rupee and trade deficit.

- **Geopolitical Risks:** Overreliance on partners like Russia (35–40% of imports) creates strategic exposure.
- **Global Flashpoints:** Conflicts like Israel-Iran tensions can disrupt millions of barrels of oil, pushing global prices up.
- **Fragile Transition:** Fossil fuels still supply **80% of energy**; over-reliance on intermittent renewables risks grid failures.

Lessons from Global Energy Shocks:

- **1973 Oil Embargo:** Highlighted need for strategic reserves and diversified sourcing.
- **2011 Fukushima Disaster:** Nuclear risks emphasized the need for a balanced energy mix.
- **2021 Texas Freeze:** Weather-proofing and resilience are critical for energy systems.
- **2022 Russia-Ukraine War:** Sudden gas supply disruptions forced record LNG prices.
- **2025 Iberian Blackout:** Overdependence on renewables without storage risks grid collapse.

India's Five Pillars of Energy Sovereignty:

- **Coal Gasification:** Convert abundant coal reserves into syngas, hydrogen, methanol, and fertilizers, ensuring domestic supply.
- **Biofuels & SATAT:** Ethanol blending and compressed biogas reduce crude imports, enhance rural income, and restore soil health.
- **Nuclear Power:** Thorium roadmap, uranium partnerships, and Small Modular Reactors (SMRs) provide zero-carbon dispatchable energy.
- **Green Hydrogen:** Domestic production of electrolyzers, catalysts, and storage to build sovereign hydrogen value chains by 2030.
- **Pumped Hydro Storage:** Provides grid stability and complements renewable energy by acting as scalable energy storage.

Diversification and Strategy:

- West Asia's crude share reduced from **60% to under 45%**; Russia and other suppliers now part of a diversified import strategy.
- Indigenous capacity building complements global partnerships for long-term energy security.
- Transition to renewables is pursued alongside resilience and reliability.

Conclusion:

Energy sovereignty is central to India's economic stability, national security, and strategic autonomy. Developing coal gasification, biofuels, nuclear, green hydrogen, and pumped hydro ensures a resilient and self-reliant energy future.

2. ROAD ACCIDENTS IN INDIA 2023

Why in News?

- The Ministry of Road Transport and Highways (MoRTH) released the 'Road Accidents in India 2023' report, revealing a record rise in accidents and fatalities.

Overview of 2023 Road Accidents

- **Total accidents:** 4,80,583 cases (4.2% increase from 2022).
- **Deaths:** 1,72,890 – the highest ever recorded (2.6% increase from 2022).
- **Injured:** 4,62,825 people (4.4% increase).
- **Fatal accidents:** 1,60,509 (3.04% growth), accounting for 33.4% of all accidents.

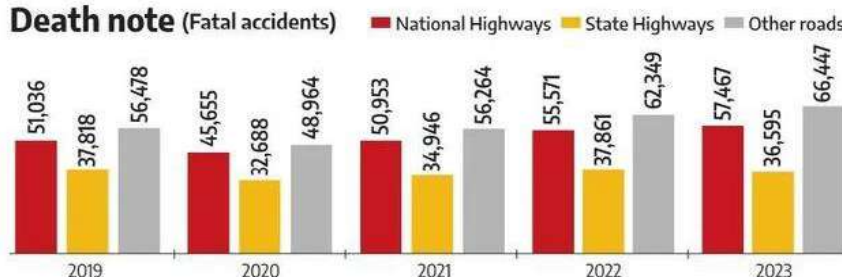
Who is Most at Risk

- **Young adults (18–45 years):** 66.4% of fatalities.
- **Working-age group (18–60 years):** 83.4% of total deaths.
- **Two-wheeler users:** 44.8% of fatalities.
- **Pedestrians:** ~20% of deaths.
- **Children:** Over 9,489 fatalities.

Crash report

Year	Accidents	% chg Y-o-Y	Fatalities	% chg Y-o-Y	Injuries	% chg Y-o-Y
2019	456,959	-2.9	158,984	0.9	449,360	-3.3
2020	372,181	-18.6	138,383	-13	346,747	-22.8
2021	412,432	10.8	153,972	11.3	384,448	10.9
2022	461,312	11.9	168,491	9.4	443,366	15.3
2023	480,583	4.2	172,890	2.6	462,825	4.4

Death note (Fatal accidents)



Source: Road Accidents in India 2023 report

Major Causes of Road Accidents

- **Overspeeding (68%):** Leading cause of deaths; reduces reaction time, increases severity.
- **Wrong-side driving (5.5%):** Head-on collisions from overtaking or one-way violations.
- **Distracted driving:** Mobile phone use, eating, or adjusting controls while driving.
- **Drunk driving:** Impairs judgment and reflexes.
- **Poor road conditions:** Potholes, missing signage, unmarked speed breakers.
- **Vehicle defects:** Brake failure, tire bursts, mechanical issues.
- **Weather & visibility:** Fog, rain, low light conditions.
- **Neglect of safety gear:** Helmets and seatbelts not used.

Government Initiatives

- **Right to safe travel** under Article 21.
- **Bharat NCAP:** Safety ratings for vehicles to empower buyers.
- **Vehicle scrapping policy:** 44 Registered Vehicle Scrapping Facilities across 15 states.
- **Electronic enforcement:** Speed cameras, CCTV, automated traffic rules.
- **Emergency care:** Cashless treatment scheme under Motor Vehicles (Amendment) Act, 2019.

Global Frameworks

- **Brasilia Declaration (2015):** Reduce road deaths by 50% by 2030 (SDG Target 3.6).
- **UN Decade of Action for Road Safety (2021–2030).**
- **Stockholm Declaration (2020):** Strengthens global safety commitments.
- **World Bank (2020):** \$109 billion needed to cut road fatalities by 50% in the next decade.

Key Committees & Policies

- **Sundar Committee (2005):** Recommended National Road Safety Policy & National Road Safety Board.
- **National Road Safety Council (NRSC):** Advisory body under MoRTH.

- **Working Group on Road Safety Education:** Focuses on driver training, public awareness, school programs.
- **Supreme Court Committee on Road Safety:** Implements 4Es – Engineering, Education, Enforcement, Emergency.

Conclusion:

Rising road accidents, mainly due to over speeding, poor infrastructure, and unsafe driving, pose a serious threat to lives. Coordinated efforts in enforcement, safer vehicles, awareness, and emergency care are essential to reduce fatalities.

3. GOVERNMENT TO PUSH GEOTHERMAL ENERGY PILOTS UNDER NEW POLICY

Why in News?

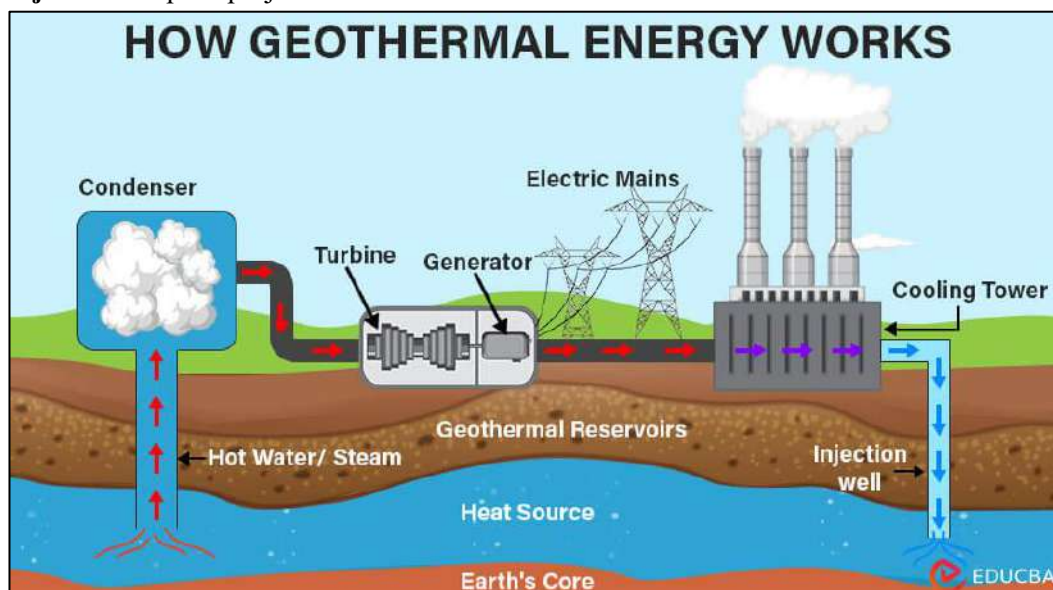
- The Ministry of New & Renewable Energy (MNRE) launched India's first National Policy on Geothermal Energy in September 2025.

Geothermal energy

- Geothermal energy uses heat from the Earth for power generation and direct applications like heating, agriculture, aquaculture, and industrial cooling.
- India has significant geothermal potential but currently has no large-scale grid-connected geothermal plants.

Key Features of Geothermal Policy 2025

- **Launch & Implementation:** MNRE is the nodal agency, working with state governments, oil & gas firms, academic institutions, and other ministries.
- **Financial & Regulatory Support:**
 - Tax incentives, grants, concessional financing, and long-term leases (up to 30 years).
 - Viability Gap Funding (VGF) of ₹36 crore per MW to offset high upfront costs.
 - Open access waivers, must-run status, and parity with other renewable sources.
- **Repurposing Wells:** Focus on using abandoned oil & gas wells, with pilots involving ONGC, Vedanta, and Reliance.
- **Global Collaboration:** Partnerships with Iceland, Norway, US, and Indonesia for research on Enhanced Geothermal Systems (EGS) and Advanced Geothermal Systems (AGS).
- **Pilot Projects:** Five pilot projects sanctioned for resource assessment and demonstration across regions.



MAJOR GEOTHERMAL SITES IN INDIA

- **Ladakh:** Puga & Chhumathang – high-temperature hot springs for power and heating.
- **Himachal Pradesh:** Manikaran & Satluj/Beas/Spiti Valleys – pilot plants & tourism-linked heating.
- **Uttarakhand:** Tapoban & Alaknanda Valley – research & pilot projects.
- **Gujarat:** Cambay Graben & Lasundra – repurposing abandoned wells & direct-use applications.

Future Roadmap

- **Targets:** 10 GW by 2030; potential ~100 GW by 2045.
- **Vision 2047:** Hybrid solar-geothermal projects, heating for cold regions (Ladakh, Northeast, Andaman & Nicobar), supporting Net Zero 2070.

Conclusion:

India's new Geothermal Policy marks a strategic step toward tapping clean, sustainable energy and achieving Net Zero 2070 goals. Scaling pilot projects and repurposing wells can unlock the country's vast geothermal potential while supporting regional development and energy security.

IX. Trade and External sector**1. USA'S TARIFFS ON INDIAN EXPORTS AND ITS IMPLICATIONS****Why in News?**

- The United States has recently imposed **50% import tariffs** on a wide range of **Indian goods** from **August 27, 2025**, affecting key **labour-intensive sectors** and raising concerns over trade losses and employment.

Background

- The 50% tariff is a combination of:
 - **25% base tariff** (announced in July 2025), and
 - **25% additional penalty** linked to India's **Russian oil and defence imports**.
- The action targets merchandise sectors where India has strong export presence.

Sectors Impacted

- Textiles & Apparel
- Gems and Jewellery
- Shrimp and Marine Products
- Carpets & Leather Goods
- Furniture and Handicrafts

Exempted Goods: Pharmaceuticals, Electronics, and Petroleum Products.

Impact on India's Economy

- **Trade Decline:** Exports to the US may drop from **\$87 billion (FY25)** to **\$49.6 billion (FY26)** — a **43% fall**.
- **Economic Significance:** The US makes up **20%** of India's merchandise exports and around **2% of GDP**.
- **Employment Risk:** Job losses feared in hubs like **Surat (diamonds)**, **Tiruppur (textiles)**, and **Andhra Pradesh (shrimp)**.
- **Global Competitors' Advantage:** **Vietnam, Bangladesh, Cambodia, Pakistan, and China** likely to fill India's export gap due to lower tariff exposure.

Industry Demands

- **Gems & Jewellery Council:** Duty reimbursement scheme to offset tariff losses.
- **Textile Sector:** Cash support, loan relief, and faster **FTA talks** with **EU and UK** to access new markets.

Government Measures

- **E-Commerce Export Hubs (ECEHs):** Plans to provide logistics, warehousing, and customs support to small exporters.
- **Stakeholder Consultations:** Engaging with **MSMEs, retailers, and e-commerce platforms** to ease compliance.
- **Tariff Talks:** Exploring **diplomatic solutions** and **trade adjustments** to sustain competitiveness.

Way Forward

- **Short-Term Support:** Subsidies, **duty drawback**, and **financial aid** for affected sectors.
- **Market Diversification:** Speed up **FTAs** with **EU, UK, Gulf**, and explore **Africa, Latin America**.
- **Enhancing Competitiveness:** Promote **technology, innovation**, and **value-added exports**.

Conclusion:

The US tariff hike poses a **serious challenge** to India's export-led sectors. Proactive trade diplomacy, market diversification, and support for vulnerable industries are vital to cushion the impact and sustain growth momentum.

2. INDIA'S ENERGY SOVEREIGNTY: THE NEW STRATEGIC PRIORITY**Why in News?**

- Recent global conflicts and oil price volatility have exposed India's heavy dependence on energy imports. Geopolitical tensions, such as the Israel–Iran crisis, have highlighted the strategic risks of relying on foreign energy sources.

Concerns Over Import Dependence

- **High Dependence:** Crude and gas imports form nearly **25% of total imports**.
- **Economic Burden:** Import bills above **\$170 billion** pressure the rupee and trade deficit.
- **Geopolitical Risk:** Over-reliance on Russia (now 35–40% of imports) and West Asia increases exposure to global conflicts.
- **Volatile Markets:** Brent crude prices surged beyond **\$100/barrel** amid Middle East tensions.

Global Lessons from Past Energy Crises

- **1973 Oil Shock:** Exposed overdependence; nations built **strategic reserves**.
- **2021 Texas Freeze:** Highlighted weaknesses in **weather-proofing and resilience**.
- **2022 Russia-Ukraine War:** Europe's gas crisis stressed **diversified sourcing**.
- **2025 Iberian Blackout:** Showed risks of **over-reliance on renewables** without backup.

Five Pillars of India's Energy Sovereignty

- **Coal Gasification:** Converts coal into **syngas, hydrogen, and methanol** using advanced tech. Reduces crude dependence and uses India's **150 billion tonne reserves** sustainably.
- **Biofuels:** **Ethanol blending** saved forex and boosted farmers' income. **SATAT scheme** promotes compressed biogas, improving soil health.
- **Nuclear Energy:** Zero-carbon, reliable power source; focus on **SMRs** and **thorium** roadmap. Needed for **baseload stability** in a renewable-heavy grid.

- **Green Hydrogen:** Goal: **5 MMT/year by 2030**. Builds a **sovereign hydrogen ecosystem** for clean industrial use.

India's Diversification Strategy

- Reduced West Asia share from **60% to <45%**.
- Expanding partnerships beyond Russia to ensure **balanced sourcing**.
- Focus on **domestic capacity, resilience, and gradual transition**.

Conclusion

Energy sovereignty is crucial for India's economic stability and national security. Strengthening domestic sources like coal gasification, biofuels, nuclear, hydrogen, and pumped hydro ensures resilience and self-reliance.

3. SURGING EXPORTS NARROW INDIA'S TRADE DEFICIT

Why in News?

- India's trade deficit has significantly narrowed due to strong growth in merchandise exports and moderation in imports, indicating improved stability in the external sector.

What is a Trade Deficit?

- A **trade deficit** occurs when a nation's **imports exceed its exports**.
- Persistent deficits can weaken the **domestic currency** and strain foreign exchange reserves.

Key Drivers Behind the Improvement

Policy Push for Exports

- **Government schemes** like **Production Linked Incentive (PLI)** and **RoDTEP** enhanced export competitiveness.
- Better **logistics infrastructure** under **PM GatiShakti** reduced costs and improved efficiency.
- Exporters maintained strong performance despite global challenges such as **25–50% U.S. tariffs**.

Strong Services Sector Surplus

- **IT, fintech, consulting, and business process management** sectors led global demand.
- A **services trade surplus** of nearly **\$16.7 billion** helped offset the merchandise deficit.

Controlled Imports

- **Lower global crude and commodity prices** reduced the import bill.
- Initiatives in **electronics, defence, and renewable energy** manufacturing helped reduce foreign dependence.

Economic Implications

- **Stronger External Stability** – Reduced trade gap supports the **current account balance**.
- **Rupee and Forex Support** – Lower deficit boosts **foreign reserves** and strengthens **investor confidence**.
- **Competitiveness Boost** – Ability to expand exports amid global headwinds signals **resilience**.
- **Growth Momentum** – Export expansion aids **GDP growth, employment, and industrial output**.

Challenges Ahead

- **Global Headwinds:** Slow global growth, trade tensions, and protectionism can affect demand.
- **Market Concentration:** Heavy reliance on the **U.S. and EU** increases vulnerability to policy shifts.

- **Limited Value Addition:** Many exports remain in **low to mid-value** categories.
- **Rising Service Imports:** Could erode the **net surplus** over time.

Way Forward

- **Market Diversification** – Expand trade ties with **Africa, Latin America, and ASEAN**.
- **Promote High-Value Exports** – Focus on **electronics, green tech, pharma, and defence**.
- **Sustain Services Edge** – Invest in **skills, digital infrastructure, and regulatory reforms**.
- **Strategic Import Management** – Strengthen domestic capability in **semiconductors and clean energy**.
- **Use Supply Chain Shifts** – Leverage **China+1 strategy** to attract manufacturing investments.

Conclusion

India's narrowing trade deficit reflects a **resilient export sector**, stable imports, and strong **services performance**. Continued diversification, high-value exports, and domestic manufacturing will be key to maintaining external balance and achieving sustainable growth.

B. ENVIRONMENT

I. Biodiversity and conservation

1. EXEMPTIONS FOR MINERAL EXPLORATION DRILLING ON FOREST LAND

Why in News?

- The Forest Advisory Committee (FAC) under the Union Environment Ministry has approved expanded exemptions for mineral exploration drilling on forest land to boost India's resource and energy security.

Background

- **Forest Conservation Act, 1980:** Traditionally requires central approval for any activity on forest land not linked to forest use.
- **2023 Amendment:** Allowed limited exemptions for exploratory drilling.
- **Current Update:** FAC has increased borehole limits and streamlined conditions to facilitate mineral exploration.

Key Policy Features

- **Borehole Limit:** 62–80 boreholes per 10 sq km allowed, each up to 6-inch diameter; varies with mineral type.
- **Previous Limit:** Up to 25 boreholes per 10 sq km and 80 shot holes per sq km; up to 100 trees could be felled.
- **Operational Timing:** Drilling restricted to 9 a.m.–5:30 p.m. to reduce wildlife disturbance.
- **Site Restoration:** Boreholes must be cement-plugged post-use.
- **No-Go Zones:** Drilling prohibited in wildlife habitats, riparian areas, biodiversity hotspots, endangered species zones, and culturally significant sites.

Objectives and Rationale

- **Critical Mineral Access:** Key minerals like lithium, cobalt, nickel needed for clean energy, defence, and strategic sectors.
- **Ease of Doing Business:** Reduces delays from repeated central approvals for temporary surveys.
- **Private Sector Participation:** Encourages investment and quicker exploration-to-project timelines.
- **Economic Growth:** Minerals support infrastructure, manufacturing, green technologies, and strategic self-reliance.

Concerns and Challenges

- **Ecological Risks:** Noise, vibration, and potential contamination of water sources.
- **Biodiversity Loss:** Compensatory afforestation cannot fully offset old-growth forest or species loss.
- **Community Rights:** Forest Rights Act (FRA) may be bypassed if exploration is reclassified as “forest activity.”
- **Regulatory Oversight:** Reclassification risks circumventing FCA 1980 scrutiny, raising governance concerns.

Way Forward

- **Strict Enforcement:** Ensure temporary drilling, proper plugging, and site restoration.
- **Independent Monitoring:** Use satellites and third-party audits for compliance checks.
- **Advanced Technology:** Employ drones, remote sensing, and geophysical tools to reduce excessive drilling.
- **Strengthen Safeguards:** Map no-go zones and impose stricter rules in ecologically sensitive areas.
- **Enhanced Compensatory Measures:** Focus on native species, biodiversity protection, and long-term ecosystem monitoring.

Conclusion:

While expanded exemptions aim to boost India’s mineral exploration and energy security, strict ecological safeguards and community rights must be ensured to prevent long-term environmental and social impacts. Balanced implementation is key to sustainable resource development.

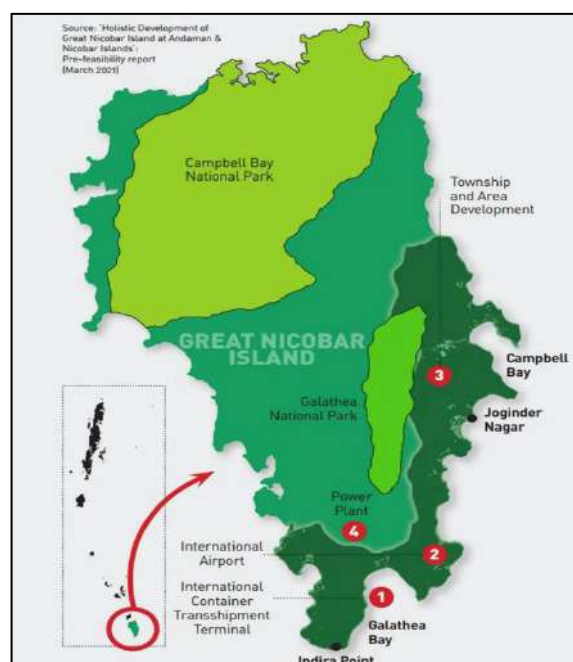
2. THE MAKING OF AN ECOLOGICAL DISASTER IN GREAT NICOBAR

Why in News?

- The Great Nicobar Island Project has sparked controversy for threatening tribal communities, biodiversity, and disaster resilience, raising concerns about ecological, social, and legal safeguards.

Context

- The project involves large-scale infrastructure development on Great Nicobar Island, a biodiversity hotspot and home to Nicobarese and Shompen tribes.
- Experts warn it may exacerbate environmental degradation and expose the island to natural disasters like tsunamis and earthquakes.



Threat to Tribal Communities

- **Nicobarese Displacement:** Project site overlaps ancestral villages; communities displaced by 2004 tsunami face permanent relocation.
- **Shompen Vulnerability:** Particularly Vulnerable Tribal Group (PVTG) risks cultural and ecological extinction.
- **Legal Violations:** National Commission for Scheduled Tribes (NCST) and tribal councils bypassed; no informed consent obtained.

Governance and Legal Concerns

- **Social Impact Assessment (SIA) Failure:** Tribal voices excluded; rehabilitation ignored.
- **Forest Rights Act (FRA) Ignored:** Shompen authority over forests sidelined.
- **Constitutional Neglect:** Democratic accountability compromised by ignoring statutory bodies.

Ecological Risks

- **Deforestation:** Ministry projects 8.5 lakh trees to be cut; independent estimates suggest 32–58 lakh.
- **Compensatory Afforestation Issues:** Planned in Haryana, ecologically mismatched; some land already auctioned for mining.
- **CRZ Violation:** Port site falls under CRZ 1A, critical for turtle nesting and coral reefs.
- **Wildlife Threats:** Nicobar long-tailed macaque, sea turtles, and dugongs at risk due to flawed assessments.

Disaster Vulnerability

- **Seismic Risks:** Island in Seismic Zone V; 2004 tsunami caused 15 feet subsidence; 2025 earthquake of 6.2 magnitude reinforces vulnerability.
- **Infrastructure Threat:** Mega-projects at high risk from earthquakes and tsunamis, endangering lives and investment.

Way Forward

- **Inclusive Development:** Obtain free, prior, informed consent of tribes; empower tribal councils under FRA.
- **Legal and Institutional Strengthening:** Consult NCST; improve Social Impact Assessments with community participation.
- **Ecological Restoration:** Conduct afforestation within the island; enforce CRZ norms; declare Great Nicobar as an Ecologically Sensitive Zone.
- **Disaster-Resilient Planning:** Design infrastructure for Seismic Zone V; promote low-impact, eco-friendly development.
- **Alternative Livelihoods:** Focus on sustainable fisheries, forest-based products, eco-tourism; limit large-scale civilian infrastructure.

Conclusion:

The Great Nicobar Project risks turning into an ecological and humanitarian disaster if tribal rights, biodiversity, and disaster resilience are ignored. Development must balance economic ambitions with environmental sustainability and social justice.

II. Environmental pollution

1. NATIONAL DESIGNATED AUTHORITY FOR CARBON MARKETS

Why in News?

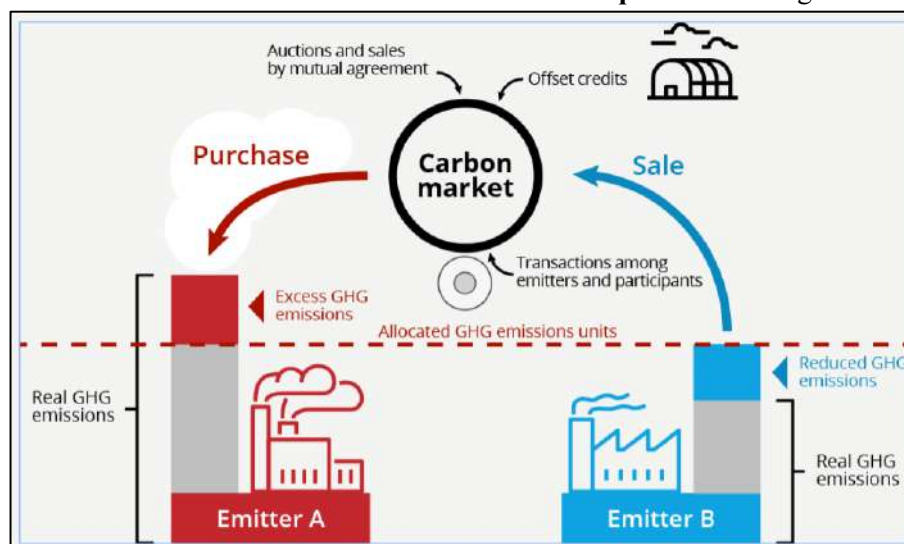
- The government has formed a **National Designated Authority (NDA)** to operationalise a **carbon trading mechanism** under India's commitments to the **Paris Agreement**.

About the National Designated Authority (NDA)

- Purpose:** To enable and supervise a national **carbon emission trading system**.
- Legal Basis:** Formed under **Article 6** of the **Paris Agreement**, which outlines frameworks for international carbon trading.
- Composition:** 21-member body chaired by the **Environment Ministry Secretary**, with members from
 - Ministry of External Affairs,**
 - Ministry of Renewable Energy,**
 - NITI Aayog,**
 - Steel Ministry, and others.**
- Key Functions:**
 - Recommend eligible activities for emission reduction trading.
 - Approve and authorise carbon offset projects.
 - Align carbon credits with **India's NDC** and sustainable goals.

India's Nationally Determined Contributions (NDCs)

- India has pledged to:
 - Cut **emission intensity of GDP by 45%** (from 2005 levels) by **2030**.
 - Achieve **50% power capacity** from **non-fossil fuel sources** by 2030.
 - Create an additional **carbon sink of 2.5–3 billion tonnes CO₂ equivalent** through afforestation.



Carbon Markets

- A carbon market is a system where **countries, companies, or individuals** can **buy and sell “carbon credits”**.
- What is a Carbon Credit:** 1 Carbon Credit = 1 tonne of CO₂ (or equivalent greenhouse gas) **reduced, avoided, or removed** from the atmosphere.
- Purpose:** To encourage people and industries to **cut their emissions** by giving them **financial rewards** for doing so.

- **How it Works:** If a company **emits less** than its allowed limit, it gets **extra credits**. It can **sell** these credits to another company that **exceeds** its limit.

INDIA'S EMERGING CARBON MARKET FRAMEWORK

- **Carbon Credit Trading Scheme (CCTS)** – launched in 2024.
- **Model: Rate-based Emission Trading System (ETS)** – focuses on **emission intensity** (not absolute limits).
- **Coverage:** Initially includes **nine energy-intensive sectors**.
- **Incentives:**
 - Facilities performing better than benchmarks earn **credit certificates**.
 - Encourages industries to **decarbonise efficiently**.

Complementary Government Initiatives

- **Mission LiFE** : promotes sustainable lifestyles.
- **Green Credit Programme:** rewards eco-friendly actions.
- **National Steering Committee for Indian Carbon Market (NSCICM)** and **Bureau of Energy Efficiency (BEE)** established for oversight.
- Encouragement of **private sector** and **voluntary participation**.

Significance and Way Forward

- Helps India meet **climate goals** while supporting **economic growth**.
- Balances **development needs** with **decarbonisation**.
- Prepares India for global measures like **EU's Carbon Border Adjustment Mechanism (CBAM)**.
- Offers a **flexible, market-driven** path to reduce emissions.

Conclusion:

India's creation of the **NDA** is a strategic step toward building a robust **carbon market**, integrating **economic efficiency** with **environmental responsibility**. A well-regulated, rate-based **ETS** can make India a leader in climate innovation while safeguarding its **developmental priorities**.

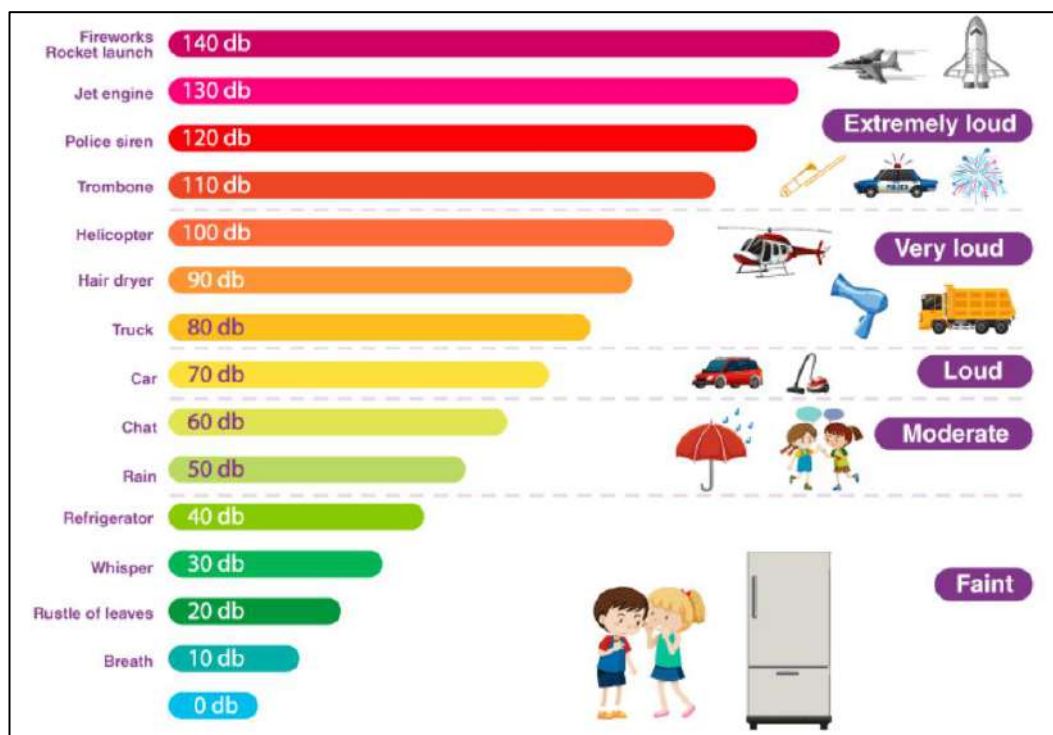
2. NOISE POLLUTION IS RISING BUT POLICY IS FALLING SILENT

Why in News?

- Recent data reveals that **noise levels in Indian cities** are consistently breaching **permissible limits**, especially near **schools, hospitals, and residential zones**, turning noise into an **ignored public health crisis**.

Major Sources of Urban Noise

- **Traffic & Transport:** Continuous **honking, engine noise**, and **road congestion** are major contributors.
- **Construction Activities:** **Night-time drilling, crane operations**, and **pile driving** continue unchecked despite restrictions.
- **Public Gatherings & Events:** **Religious functions, political rallies**, and **celebrations** often use loudspeakers beyond allowed limits.
- **Festivals & Firecrackers:** Crackers during **Diwali** or **rallies** push decibel levels far above safe thresholds.
- **Diesel Generators:** Widely used during **power cuts**, adding to continuous background noise.



Impact on Human Health and Environment

- **Physical Health:** Causes **hypertension**, **hearing loss**, **sleep disturbance**, and **cardiac stress**.
- **Mental Well-being:** Triggers **irritability**, **anxiety**, **fatigue**, and **lower concentration**.
- **Vulnerable Groups:** **Children** and **elderly** face greater developmental and psychological harm.
- **Ecosystem Effects:** Disturbs **urban wildlife**, alters **breeding patterns**, and reduces **biodiversity**.

Legal and Policy Framework

- **WHO Guidelines:** Safe limits, **50 dB (day)** and **40 dB (night)** in **silent zones**.
- **Noise Pollution (Regulation & Control) Rules, 2000:** Categorizes zones and sets decibel limits with enforcement provisions.
- **CPCB's National Ambient Noise Monitoring Network (NANMN), 2011:** Designed for **real-time noise data collection**, though coverage is limited.
- **Judicial Support: Supreme Court (2024):** Declared excessive noise as a **violation of Article 21** (Right to life and dignity).
- **Constitutional Backing: Article 21** – Ensures right to peaceful and healthy living. **Article 48A** – Directs the State to protect the environment.

Current Status

- Cities like **Delhi**, **Bengaluru**, and **Mumbai** frequently record **noise levels above safe limits**.
- Enforcement remains **weak** due to limited resources and **lack of coordination** among agencies.

Way Forward

- **Stronger Implementation:** Equip **pollution control boards** with **real-time monitoring tools** and **penal powers**.
- **Urban Planning Reforms:** Create **buffer zones** between **noisy** and **sensitive areas**.
- **Public Awareness:** Conduct campaigns on **health hazards** and **legal consequences** of noise pollution.
- **Smart Monitoring:** Use **AI and IoT sensors** for continuous tracking and automated alerts.
- **Institutional Coordination:** Integrate actions of **municipal bodies**, **traffic police**, and **environmental regulators** through a **unified command**.

Conclusion:

Noise pollution, though less visible, is a **serious environmental and health threat**. Strengthening **laws**, ensuring **real-time monitoring**, and promoting **public awareness** are crucial to restoring **urban quietude** and safeguarding **public well-being**.

III. Indian Initiatives, efforts and Commitments**1. INDIA'S ELECTRIC LEAP FOR GREEN MOBILITY****Why in News?**

- India has crossed the milestone of **56.75 lakh registered electric vehicles** by **February 2025**, showing strong progress in clean mobility adoption.

About Electric Vehicles (EVs)

- EVs run on **electric motors** powered by **batteries**, unlike traditional vehicles using fossil fuels.
- They help in tackling **air pollution**, **climate change**, and **oil dependency**.
- India aims to cut **carbon emissions by 1 billion tonnes by 2030**, reduce **carbon intensity below 45%**, and reach **net zero by 2070**.

Advantages of Electric Vehicles (EVs) in India:

- Reduces pollution** by eliminating tailpipe emissions and improving air quality.
- Cuts fuel costs** and saves foreign exchange by lowering oil imports.
- Creates green jobs** and boosts domestic manufacturing under Make in India.
- Supports climate goals** and India's transition to a net-zero economy by 2070.

Incentives for adopting Electric Vehicles (EVs) in India:

- FAME-II Scheme:** Gives **direct subsidies** on EV purchase (for e-2W, e-3W, and e-buses).
- Lower GST:** EVs are taxed at **5%**, compared to 28% for petrol/diesel vehicles.
- Road Tax & Registration Fee Exemption:** Many states offer **zero road tax** and **no registration charges** on EVs.
- Income Tax Benefit:** Up to **₹1.5 lakh deduction** on interest paid for EV loans (under Section 80EEB).
- PLI Scheme:** Incentives for manufacturers to produce **EVs and batteries** in India.



Challenges in EV Adoption

- **High Cost:** EVs remain expensive due to **battery costs** and limited economies of scale.
- **Insufficient Charging Network:** Lack of widespread and fast charging stations restricts large-scale adoption.
- **Range Anxiety:** Consumers worry about **running out of charge** before finding a charging point.
- **Battery Import Dependence:** Heavy reliance on **imported lithium-ion batteries** raises cost and supply risks.
- **Low Awareness:** Limited knowledge among buyers about EV benefits, models, and long-term savings.

Government Initiatives

- **National Electric Mobility Mission Plan (NEMMP) & FAME-I (2015-2019):** Boosted EV adoption and hybrid vehicle promotion.
- **FAME-II (2019):** Focus on **public transport electrification**, e-buses, and **charging infrastructure**.
- **PLI Scheme (2021):** Incentives for **domestic manufacturing** of advanced EV components.
- **PM E-Drive (2024-2028):** Offers **purchase incentives** and promotes charging network growth.
- **SPMEPCI (2024):** Allows **reduced import duties (15%)** on high-end EVs to attract global automakers.

NITI Aayog's Suggestions

- Shift from **incentives to mandates** — define clear timelines for **Zero Emission Vehicle (ZEV)** adoption.
- Implement **saturation model** — focus support on select cities before scaling up.
- Create **pooled financing** for e-buses and e-trucks.
- Promote **battery R&D** through academia-industry-government partnerships.

Conclusion

India's growing EV adoption marks a significant step toward **green mobility** and **carbon reduction**. Addressing cost barriers, infrastructure gaps, and domestic manufacturing will be key to achieving the **2030 and 2070 climate goals**.

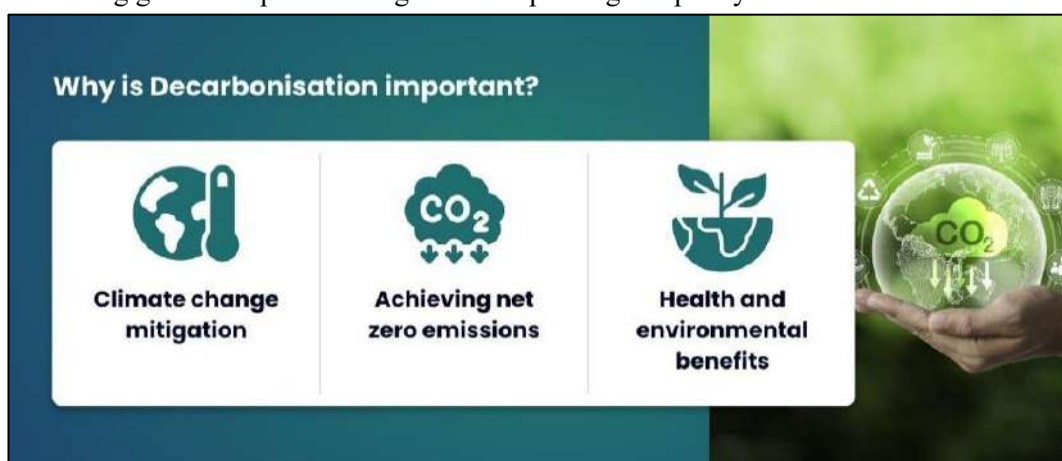
2. DECARBONISATION OF INDIA'S EMISSION-INTENSIVE SECTORS

Why in News?

- A study by the Centre for Social and Economic Progress highlights that India will require an additional \$467 billion by 2030 to decarbonize its four major emission-heavy sectors: **steel, cement, power, and road transport**.

What is Decarbonisation?

- Reducing carbon dioxide (CO₂) emissions or equivalent greenhouse gases from energy-intensive sectors.
- Involves switching to renewable energy sources like solar, wind, and biomass.
- Essential for meeting global temperature targets and improving air quality.



Need for Decarbonisation in India

- **Emission Contribution:** Steel, cement, power, and road transport are the largest CO₂ emitters.
- **Climate Commitments:** Necessary to fulfill India's Nationally Determined Contributions (NDCs) under the Paris Agreement.
- **Public Health:** Emissions from these sectors worsen PM_{2.5} and NO_x pollution, affecting urban populations.
- **Energy Security:** Reduced fossil fuel dependence lowers import bills and strengthens strategic autonomy.
- **Economic Competitiveness:** Global trade increasingly favors low-carbon supply chains; decarbonisation prevents India from losing market advantages.

Challenges in Decarbonisation

- **High Fossil Fuel Dependence:** Over 70% of India's electricity comes from coal; transition requires rapid renewable scale-up.
- **Technology Gaps:** Green hydrogen, carbon capture and storage (CCS), and large-scale battery storage are costly and underdeveloped.
- **Regulatory Fragmentation:** Multiple overlapping central and state regulations slow implementation.
- **Financing Needs:** Total investment required is \$467 billion by 2030.
 - **Steel:** \$251B (CCS and low-carbon tech)
 - **Cement:** \$141B
 - **Power:** \$47B
 - **Road transport:** \$18B
- **Social Implications:** Millions employed in fossil fuel industries need reskilling and social protection.

Progress Made

- **Non-Fossil Fuel Capacity:** India achieved 50% of electricity capacity from renewable sources, five years ahead of the 2030 target.
- **Policy Support:** Schemes like PM-KUSUM and PM Surya Ghar empower farmers and households to generate solar energy.
- **Renewable Expansion:** Utility-scale solar parks, wind energy, and bioenergy projects provide co-benefits like rural jobs, cleaner air, and public health improvements.
- **Global Leadership:** India is recognized for balancing climate action with equity and sustainable development.

Way Forward

- **Sectoral Roadmaps:** Develop detailed plans with clear milestones for steel, cement, power, and transport sectors.
- **Grid Modernization:** Enhance electricity infrastructure to integrate renewable energy efficiently.
- **Public-Private Partnerships:** Encourage collaboration to accelerate investment and technology adoption.
- **Target Alignment:** Achieve 500 GW of non-fossil energy capacity by 2030 and net-zero emissions by 2070.
- **Inclusive Transition:** Provide reskilling and social support for workers in fossil fuel sectors.

Conclusion:

Decarbonisation is vital for India to meet climate goals, reduce pollution, and enhance energy security. Strategic investments, technology adoption, and inclusive policies will ensure sustainable economic growth while transitioning to a low-carbon economy.

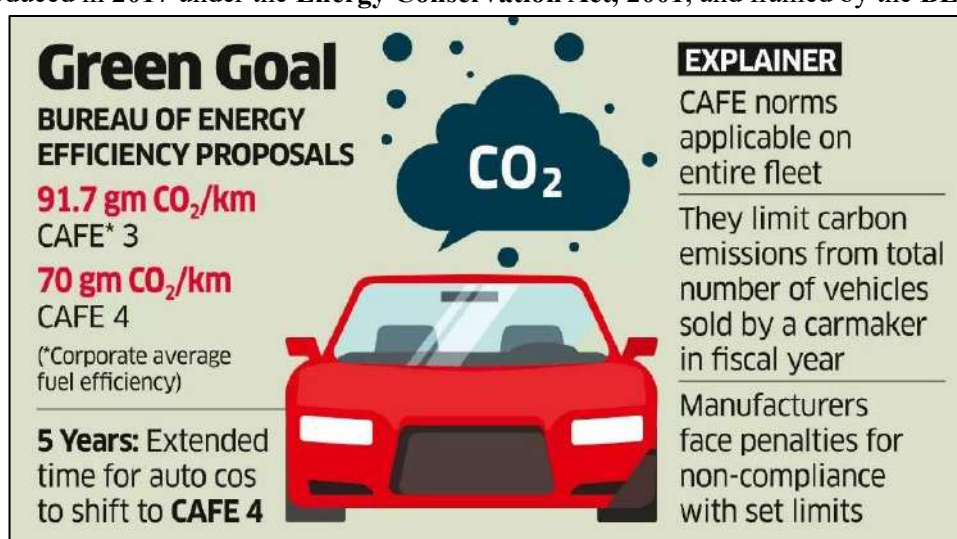
3. CORPORATE AVERAGE FUEL EFFICIENCY (CAFE) NORMS

Why in News?

- The **Bureau of Energy Efficiency (BEE)**, under the **Ministry of Power**, has released **draft CAFE-3 and CAFE-4 standards**.

What are CAFE Norms?

- Meaning:** CAFE norms are **fuel efficiency standards** that require automobile manufacturers to maintain an **average fuel economy and CO₂ emission level** across their entire fleet of passenger vehicles.
- Purpose:** To improve **energy efficiency**, **cut down CO₂ emissions**, and **reduce dependence on imported oil**.
- Coverage:** Applicable to **passenger vehicles below 3,500 kg gross weight**, including **petrol, diesel, LPG, CNG, hybrid, and electric** models.
- Origin:** First launched in the **United States (1975)** after the **Arab Oil Crisis**.
- In India:** Introduced in **2017** under the **Energy Conservation Act, 2001**, and framed by the **BEE**.



Objectives

- Promote **fuel-efficient** and **low-emission** vehicles.
- Encourage adoption of **EVs, hybrids**, and **flex-fuel** models.
- Strengthen **energy security** and align with **India's Net Zero 2070 target**.

Implementation Phases in India

- CAFE I (2017–2022):** CO₂ limit – **130 g/km**
- CAFE II (2022–2027):** CO₂ limit – **113 g/km**
- CAFE III (Draft, 2027–2032):** CO₂ limit – **91.7 g/km**, aligned with **WLTP** (global test procedure)
- CAFE IV (Draft, 2032–2037):** CO₂ limit – **70 g/km** (most stringent)

Key Features of Draft CAFE-3 & CAFE-4 (2025)

- Pooling Option:** Up to **3 automakers** can combine their fleets for compliance; if targets are missed, the **pool manager** pays the penalty.
- Flexibility:** A company can join only **one pool per year**, with the option to **switch later**.
- Relief for Small Cars:** Cars under **4 meters**, weighing less than **909 kg**, with engines below **1200 cc** get up to **9 g/km CO₂ relaxation**.
- Incentives:** Benefits for **EVs, strong hybrids**, and **ethanol-blend flex-fuel** vehicles.
- Goal:** Balance **decarbonisation** with **affordability** and support revival of the **small car market**.

Compliance & Penalties

- Non-compliance leads to **financial penalties** under the **Energy Conservation Act, 2001**.
- Automakers can earn **CAFE credits**, which may be **traded or carried forward** to manage short-term gaps.

Environmental Impact

- Promotes **fuel-efficient designs** and **clean technology**.
- Supports **India's climate goals** and reduces **oil consumption**.
- Encourages shift to **sustainable mobility** solutions.

Difference from Bharat Stage (BS) Norms

- **CAFE:** Focuses on **fleet-level CO₂ emissions** and **fuel efficiency**.
- **BS Norms:** Target **individual vehicle pollutants** (NO_x, CO, PM).
- **CAFE regulated by BEE**, while **BS norms** are under **MoEFCC/CPCB**.

Conclusion:

CAFE norms act as a long-term energy and climate policy tool, pushing automakers towards greener fleets, while Bharat Stage norms focus on reducing toxic emissions from each vehicle. Together, they shape cleaner and more efficient mobility in India.

4. INDIA NEEDS TO BUILD CLIMATE-RESILIENT CITIES**Why in News?**

- With rapid urbanisation, India's cities face rising climate risks including floods, heatwaves, cyclones, and water stress.

Urban Transformation and Climate Risk

- By 2030, cities will generate over 70% of new jobs; by 2050, nearly 1 billion people will live in urban areas.
- Rapid urbanisation presents opportunities for growth but increases vulnerability to climate-induced disasters.
- Key climate risks: Floods, urban heat islands, cyclones, water scarcity, and infrastructural strain.

Steps to Build Climate-Resilient Cities**1. Integrated Urban Planning**

- Incorporate climate risk assessments into city planning.
- Promote compact, mixed-use development to reduce congestion and resource strain.
- Manage urban water using catchment-based approaches.

2. Nature-Based Solutions

- Restore wetlands, lakes, mangroves, and urban forests.
- Encourage permeable surfaces, green roofs, and rainwater harvesting to manage excess rainfall.

3. Climate-Responsive Infrastructure

- Upgrade drainage systems and install early flood-warning mechanisms.
- Retrofit buildings for energy efficiency and disaster resilience.
- Invest in solar-powered public transport and low-carbon mobility.

4. Inclusive Governance

- Empower local bodies with climate-focused mandates.
- Involve citizens in planning and decision-making.
- Strengthen institutional capacity at municipal and state levels.

Financing and Innovation

- Mobilise funds via green bonds, PPPs, and national urban missions.
- Support climate-tech startups and pilot projects.
- Ensure alignment of urban growth with sustainability and climate goals.

Key Challenges

- **Flooding:** Two-thirds of urban residents at risk; projected losses of \$30 billion by 2070. Cities like Kolkata and Chennai exemplify need for integrated flood management.
- **Extreme Heat:** Intensified by urban heat islands; solutions include cool roofs, tree cover, and adaptive work schedules.
- **Housing Vulnerability:** Over 144 million new homes needed by 2070; construction must be climate-resilient.
- **Transport Risks:** Roads and rail vulnerable to floods; require drainage improvements and alternative routing.
- **Waste & Pollution:** Poor municipal services reduce air, water, and soil quality, undermining livability.

Way Forward

- Strengthen institutional capacity and inter-agency collaboration for climate action.
- Early investment in adaptive infrastructure to save lives and prevent economic losses.
- Design housing to withstand floods, heatwaves, cyclones, and earthquakes.
- Modernise municipal services with projects like waste-to-energy and sustainable transport.
- Promote citizen engagement to ensure inclusive, participatory urban development.

Conclusion:

Building climate-resilient cities is critical for safeguarding India's growing urban population and economy. Proactive planning, inclusive governance, and sustainable infrastructure can mitigate disasters and enhance urban livability.

C. DISASTER MANAGEMENT**I. Disasters and their management****1. CHALLENGES OF MONSOON VARIABILITY AND DISASTER PREPAREDNESS****Why in News?**

- The recent floods underline how **climate change** is altering monsoon behaviour revealing the **fragility of Himalayan ecosystems** and the **gaps in India's disaster response system**.

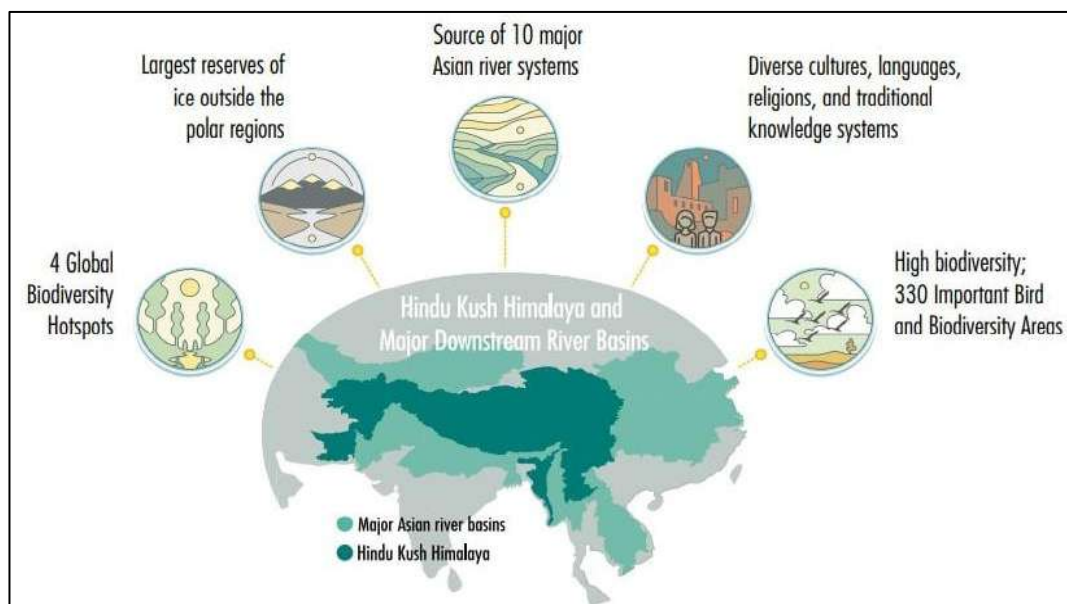
Increasing Monsoon Variability

- **Erratic Rainfall Patterns:** Rainfall now occurs in **short, heavy spells** instead of being evenly distributed, overwhelming rivers and slopes.
- **Frequent Extremes:** Such intense rainfall events are now **recurring**, not rare anomalies.
- **Greater Impact:** Sudden bursts lead to **flash floods, erosion, and loss of topsoil**, affecting both rural and urban landscapes.

Fragile Himalayan Ecosystem

- **Deforestation:** Road projects and urban expansion have led to **loss of natural vegetation**, which stabilises slopes.
- **Unsafe Construction:** Roads and buildings are often built without **geological safety**, worsening landslide risks.

- **Reduced Natural Buffers:** Shrinking wetlands and catchments reduce **flood absorption capacity**, leading to downstream siltation.



Disaster Preparedness Gaps

- **Inadequate Early Warnings:** While forecasts exist, **localized alerts** and community-level communication remain weak.
- **Relief over Prevention:** Focus is still on **post-disaster response**, not **risk reduction**.
- **Lack of Drills and Planning:** Few **community drills** or **pre-positioned supplies** exist in high-risk zones.
- **Reactive Governance:** Each flood is treated as “unexpected,” ignoring **past expert warnings**.

Policy and Developmental Challenges

- **Unplanned Infrastructure:** Strategic and urban projects continue in **ecologically unstable areas**.
- **Poor Compensatory Measures:** Afforestation often fails to match **lost biodiversity and soil strength**.
- **Neglect of Climate Resilience:** Speed-focused development neglects **environmental safeguards**.

The Way Forward:

- **From Reaction to Prevention:** Invest in **risk mapping**, slope stabilisation, and early warning systems.
- **Community Preparedness:** Regular **training, awareness**, and **mock drills** in vulnerable districts.
- **Eco-Sensitive Development:** Ensure infrastructure respects **natural contours** and **drainage systems**.
- **Integrated Planning:** Coordinate between **climate, environment, and disaster agencies**.

Conclusion:

To reduce recurring devastation, India must shift from reactive relief to proactive resilience — through sustainable infrastructure, stronger early warning, and community-based disaster management.

2. TOPOGRAPHY, CLIMATE CHANGE, AND HEAVY RAINFALL IN THE HIMALAYAS

Why in News?

Uttarakhand and Himachal Pradesh have experienced extreme rainfall recently, triggering landslides, flash floods, and the loss of lives.

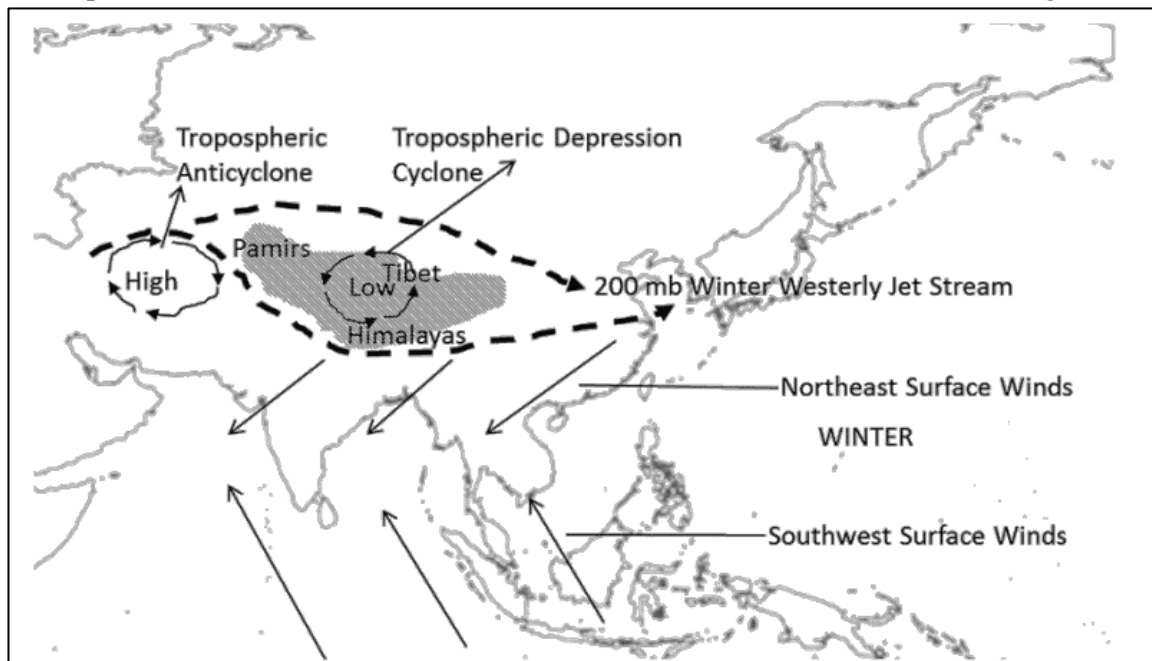
- Himalayan regions are naturally prone to such disasters, but climate change is increasing the severity and unpredictability.

Reasons for Unusually High Rainfall

- **Active Monsoon Systems:** Low-pressure systems from the Bay of Bengal are moving unusually far north, bringing intense rainfall.
- **Surplus Rainfall:** Northwestern India recorded 34% above normal rainfall in August and 67% above normal in early September.
- **Record Events:** Udhampur (J&K) received 630 mm in 24 hours; Leh recorded 59 mm in 48 hours, the highest since 1973.

Why Hilly Regions Are More Vulnerable

- **Fragile Geology:** Steep slopes and loose soil amplify landslides, mudslides, and flash floods.
- **River Choke-Points:** Blocked streams lead to sudden water gushes, damaging settlements and infrastructure.
- **Comparative Impact:** Heavy rain that drains safely in plains can trigger catastrophic slope failures in mountains.
- **Recent Examples:** Landslides in Mandi, Kullu, Dharali, Tharali, and Jammu illustrate cascading effects.



Impact of Climate Change on Himalayan Monsoons

- **Western Disturbances:** Shifts in winter weather patterns interact with summer monsoons, intensifying rainfall.
- **Global Warming:** Rising temperatures increase atmospheric moisture and alter wind patterns.
- **Arctic Influence:** Melting Arctic ice may affect jet streams, complicating rainfall distribution.
- **Future Patterns:** Expect longer dry periods punctuated by extreme rainfall events.

Implications for Uttarakhand and Himachal Pradesh

- **Human Cost:** Frequent deaths, displacement, and loss of livelihoods.
- **Economic Disruption:** Blocked roads, tourism losses, and damage to hydroelectric projects.
- **Policy Challenges:** Need for climate-resilient infrastructure, strict land-use regulations, and advanced weather forecasting.

Conclusion

The recent Himalayan landslides show the region's vulnerability to climate change. Combining ecological sensitivity, early warning systems, and resilient infrastructure is essential to protect lives and livelihoods in these fragile mountain states.

D. SCIENCE AND TECHNOLOGY

I. Developments and their Applications and Effects in Everyday Life.

1. CLASSGPT, HOW AI IS TRANSFORMING INDIAN CAMPUSES

Why in News?

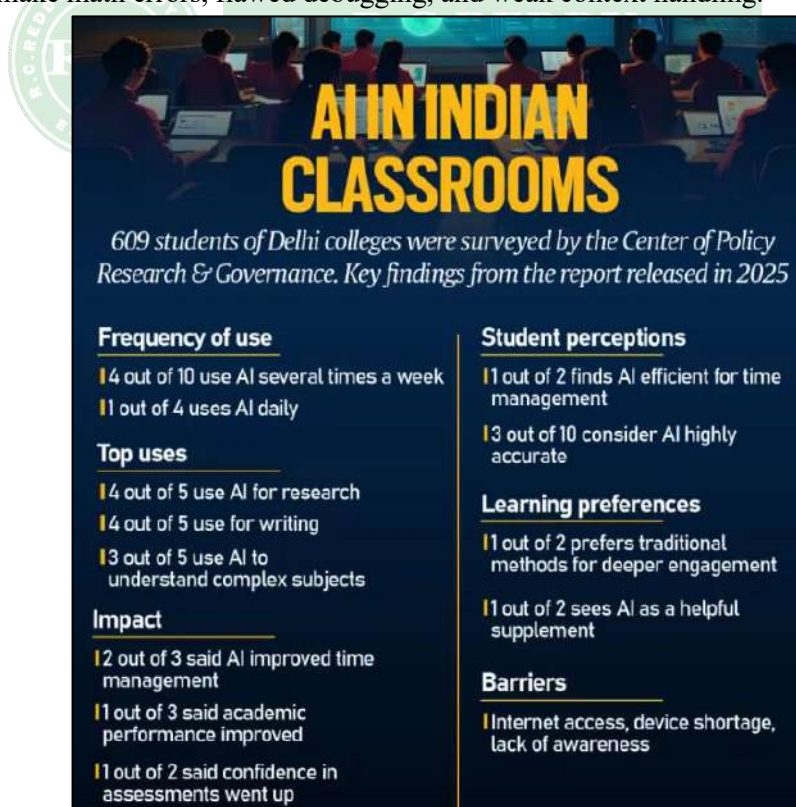
- With AI tools like ChatGPT and Gemini widely used in Indian higher education, institutions are rethinking teaching, evaluation, and ethics to balance innovation with academic integrity.

Introduction:

- Generative AI has become integral to learning, assisting students with assignments, coding, summarisation, and emails.
- Faculty face challenges in maintaining originality, critical thinking, and academic honesty.
- Institutional responses range from outright bans to full integration into curricula, shaping India's knowledge economy and workforce readiness.

Changing Landscape of Education with AI:

- Student Usage:** IIT Delhi survey (2024) shows 80% of students use AI frequently; 10% use premium versions.
- Faculty Usage:** 77% use AI for summarising research, creating slides, and drafting communication.
- Motivations:** Simplifying concepts, summarisation, mind maps, and scenario simulations.
- Concerns:** AI can make math errors, flawed debugging, and weak context handling.



Integrity Dilemmas in Classrooms:

- Students question whether AI use is “cheating” or “time-saving.”
- IIT Delhi recommended revising plagiarism policies to mandate disclosure of AI usage.
- Faculty worry students may treat AI outputs as unquestionable “truth,” reducing critical thinking.

Institutional Responses in India:

- **Integration:** IIT Delhi – AI courses and workshops; IIIT Delhi – 90% exams, 10% assignments; IIM Ranchi – evaluation rubrics for responsible AI.
- **Ethics & Literacy:** Ashoka University offers AI literacy and ethics courses.
- **Graded Approach:** Shiv Nadar University’s five-level “Gen AI Assessment Scale” from prohibition to responsible autonomy.
- **Strict Bans:** Some universities enforce “No AI” policies for handwritten assignments.

Pedagogical Innovations:

- **Classroom Use:** AI automates routine tasks like code generation, freeing time for problem-solving.
- **Assessment:** Interactive viva voce, project-based evaluation, and scenario testing.
- **Ethics Integration:** Courses on “Ethics of AI” to promote responsible use.
- **Balanced Approach:** AI used after core concepts to preserve critical thinking.

Global Perspectives:

- **USA:** Princeton provides AI licenses; Oxford mandates disclosure.
- **Australia:** TEQSA guidelines legalise AI with disclosure; oral exams revived.
- **UK:** TeacherMatic ensures sector-wide learning integration.

Conclusion:

AI is permanently reshaping Indian education. Effective regulation, ethical integration, and skill-focused deployment can make AI a catalyst for critical thinking, innovation, and national competitiveness.

II. Achievements of Indians in Science & Technology**1. THE LONG MARCH TOWARDS TECHNOLOGICAL INDEPENDENCE****Why in News?**

- On India’s 79th Independence Day, experts highlighted achieving technological independence has become crucial for national security and economic resilience.

Context

- India has rapidly digitalized its economy but relies heavily on foreign technology for critical infrastructure and services.
- Dependence on global cloud providers, operating systems, and AI platforms creates a strategic risk.
- Technological sovereignty is now recognized as an essential aspect of national freedom.

Geopolitical Risks of Technology Dependence

- **Cyber Warfare:** Modern conflicts increasingly involve software attacks, drones, and cyber operations.
- **Critical Infrastructure Vulnerability:** Banks, railways, and power grids rely on foreign ICT systems.
- **Economic and Security Risks:** Foreign control of cloud and AI services can disrupt the economy or national security, as seen in recent service stoppages.

Technological Sovereignty in India

- **Software Gaps:** India lacks indigenous operating systems, databases, and core software for critical applications.

- **Open-Source Pathway:** Community-driven solutions like Linux, Android, and Hadoop provide models for building transparent, trusted systems.
- **IT Professional Role:** Indian tech experts must collaborate to develop, maintain, and secure indigenous platforms.

Hardware Independence Challenges

- **Semiconductor Industry:** Manufacturing chips requires high investments, expertise, and complex supply chains.
- **Strategic Approach:** Focus on chip design, assembly, and specific hardware components initially, even if full fabrication is outsourced.
- **Global Lessons:** Taiwan and South Korea built semiconductor expertise over decades through patient, mission-driven strategies.

Open-Source and Indigenous Solutions

- **Community-Led Model:** Open-source adoption fosters resilience, self-reliance, and transparency.
- **Limitations:** Current open-source systems are often controlled via centralised foreign cloud infrastructure.
- **Sustainability:** Requires professional product development, long-term maintenance, and funding beyond government support.

Steps Towards Technological Sovereignty

- Form dedicated teams for client-side (email, database, calendar) and server-side tools (cloud, web services).
- Function as product-driven units, not academic projects.
- Launch a national mission with strong engineering and project management support.
- Enable ecosystem via regulatory support, incentives, and private-sector participation.

Conclusion

India's political freedom must now be complemented by technological independence. Reducing foreign dependence in software and hardware is critical to safeguarding security, economic stability, and strategic autonomy.

2. INDIA PROJECTS FIVE-FOLD GROWTH IN SPACE ECONOMY

Why in News?

- The government aims to expand India's share in the global space economy while fostering self-reliance and industrial growth.

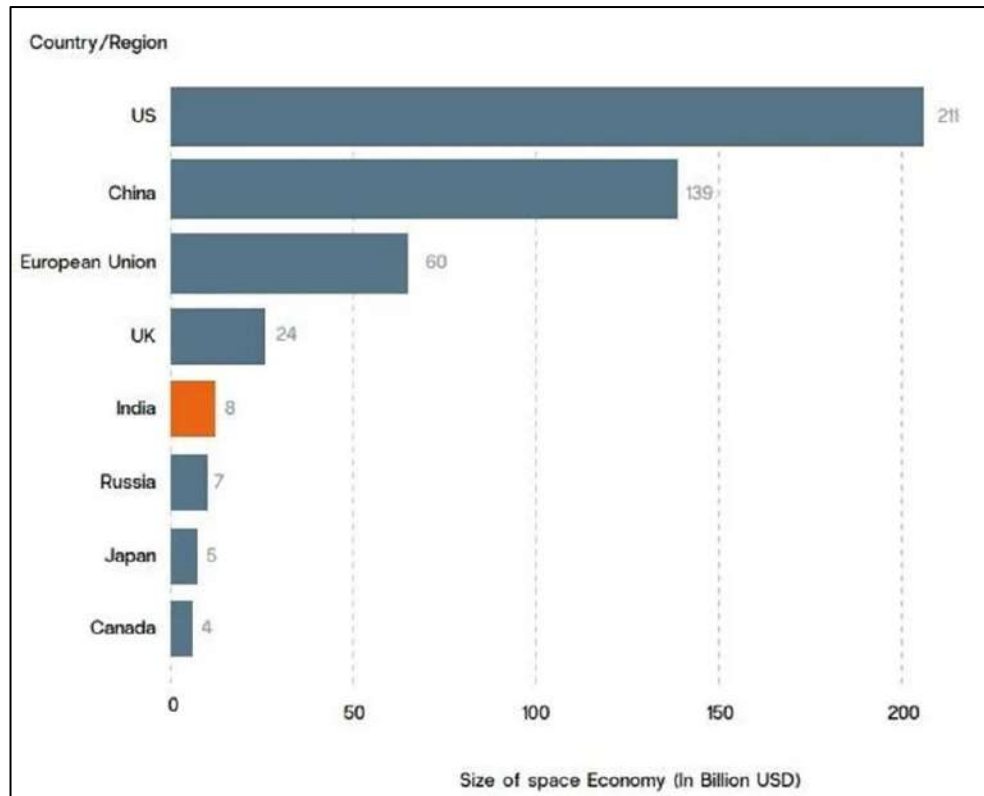
Current Status of India's Space Economy

- India contributes 2–3% of the global space economy; expected to rise to 8% by 2030 and 15% by 2047.
- Over 400 private space companies operate in India; the country ranks 5th globally in number of space firms.
- Private space start-ups grew from 1 in 2022 to nearly 200 in 2024.
- Funding for start-ups reached \$124.7 million in 2023 from \$67.2 million in 2021.
- Skyroot launched India's first privately-built rocket, Vikram-S, marking a milestone in satellite launch capability.

Government Initiatives & Policy Measures

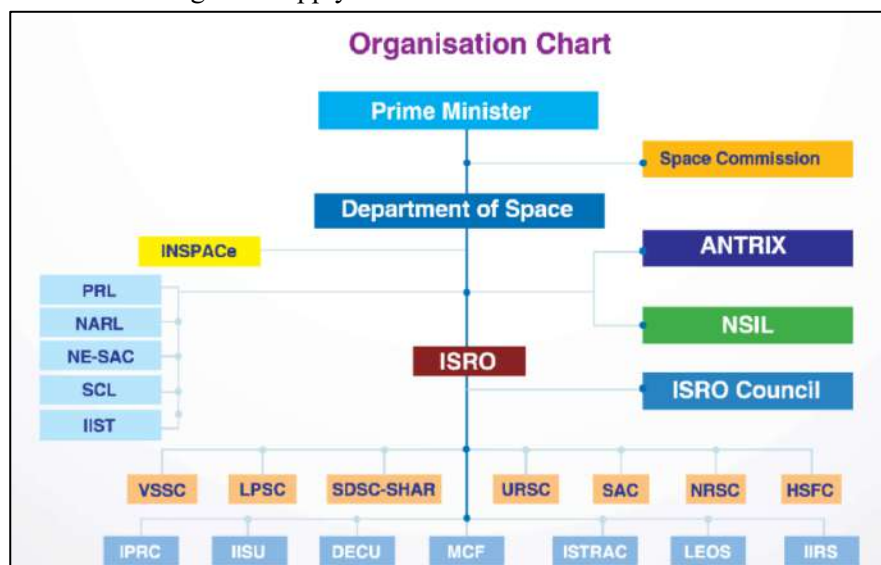
- **Space Sector Reforms (2020):** Enabled private sector participation and clarified roles of IN-SPACe, ISRO, NSIL.
- **Venture Capital Fund:** Rs.1,000 crore VC fund approved to support space start-ups and SMEs.
- **FDI Policy:** 100% FDI allowed in satellite component manufacturing; up to 74% automatic for satellites, 49% for launch vehicles and spaceports.

- **Space Vision 2047:**
 - Bharatiya Antariksh Station (BAS) first module by 2028.
 - Gaganyaan human spaceflight by 2027.
 - Chandrayaan-4 by 2027; Venus Orbiter Mission by 2028.
 - Next Generation Satellite Launch Vehicle (NGLV) by 2032.
- **SpaceTech Innovation Network (SpIN):** Public-private collaboration promoting innovation among start-ups and SMEs.



Challenges in Space Economy

- Technology gaps in advanced satellites and launch systems.
- High capital and R&D requirements.
- Integration of private entities into global supply chains.



ROLES OF KEY ORGANIZATIONS UNDER INDIAN SPACE POLICY 2023

- **IN-SPaCe (Indian National Space Promotion & Authorization Center):**
 - Single-window authorization for private and government space activities.
 - Promotes industry clusters, incubation centers, accelerators.
 - Facilitates technology transfer from ISRO.
 - Approves remote sensing data and launch manifests.
- **ISRO (Indian Space Research Organisation):**
 - Focuses on R&D, human spaceflight, and scientific exploration.
 - Transfers operational systems to industry.
 - Provides open access to remote sensing data.
 - Supports academia-industry collaboration.
- **NSIL (NewSpace India Limited):**
 - Commercial arm of DoS, commercializes ISRO technologies.
 - Manufactures space assets for government and private clients.
- **Department of Space (DoS):**
 - Coordinates policies, international cooperation, and safe operations.
 - Resolves disputes and maintains global standards in navigation systems.

Way Ahead

- Encourage private companies to set up manufacturing facilities domestically.
- Promote innovation and entrepreneurship in space tech.
- Integrate Indian firms into global value chains, supporting Make in India and Atmanirbhar Bharat initiatives.

Conclusion:

India's space sector is poised for exponential growth, combining government support, private innovation, and global collaborations. Strategic reforms and policy initiatives aim to make India a global space hub by 2033.

3. AI FOR VIKSIT BHARAT ROADMAP AND FRONTIER TECH REPOSITORY**Why in News?**

- NITI Aayog has unveiled two key initiatives, **AI for Viksit Bharat Roadmap** and **NITI Frontier Tech Repository**, aimed at accelerating India's economic growth through artificial intelligence (AI).

AI for Viksit Bharat Roadmap

- **Objective:** To turn AI's potential into real-world outcomes for economic growth and social transformation.
- **Key Focus Areas:**
 - **Industry Adoption:** Encourage AI use across sectors to improve efficiency, productivity, and decision-making.
 - **Innovation Boost:** Leverage generative AI to transform research and development (R&D) and foster innovation.
- **Vision:**
 - Mainstream AI-assisted solutions in every district.
 - Position India as a leader in global AI adoption for inclusive growth.



NITI Frontier Tech Repository

- **Overview:** A digital platform featuring **200+ case studies** showcasing how states and startups use frontier technologies.
- **Sectors Covered:** Agriculture, Healthcare, Education, and National Security.
- **Supporting Initiatives:**
 - **Frontier 50 Initiative:** Supports 50 Aspirational Districts to deploy frontier tech solutions for faster development.
 - **NITI Frontier Tech Impact Awards:** Recognizes and scales best-performing states using technology in governance and public service.

AI's Potential Across Key Sectors

- **Banking & Finance:** Enhance fraud detection and compliance. Potential to contribute billions to sectoral growth by 2035.
- **Manufacturing:** AI-led automation and generative design to boost output and innovation.
- **Pharma & Biotech:** AI-enabled drug discovery reduces timelines and costs. Supports India's shift toward innovation-led pharmaceuticals.
- **Automotive:** Rise of software-driven vehicles and AI-enabled component design for efficiency and value creation.

Key Challenges

- Fragmented data and weak privacy frameworks.
- Legacy IT systems in industries.
- Shortage of skilled AI professionals.
- Regulatory delays and cybersecurity risks.
- Ethical concerns like bias and transparency.

Strategic Enablers for AI Roadmap

- **Digital Infrastructure:** Strengthen AI computing, 5G, and robotics zones.
- **Data Governance:** Secure, consent-based sharing and robust data platforms.
- **Skill Development:** Introduce AI education, certifications, and diaspora talent programs.
- **Regulation:** Establish ethical norms, audit systems, and global alignment.

Conclusion

To achieve the **Viksit Bharat 2047** vision, India must integrate AI deeply across sectors, lead in global AI innovation, and build a strong ecosystem that drives productivity, inclusivity, and sustainable growth.

III. Awareness in the fields of IT, Space,

1. UNSEEN LABOUR AND EXPLOITATION IN ARTIFICIAL INTELLIGENCE

Why in News?

- Recent reports have exposed the exploitation of low-paid workers, often called “ghost workers,” who perform critical tasks like data annotation and content moderation for AI systems.

Introduction

- AI is often portrayed as autonomous and error-free, but human labour underpins its functioning.
- Millions of invisible workers label data, moderate content, and train AI models.
- Their contributions are unrecognised, poorly paid, and unprotected.

Areas of Human Involvement in AI

- **Data Annotation:** Humans tag text, images, videos, and audio to help AI understand content.
- **Training AI Models:** Annotators correct AI errors and refine outputs in models like ChatGPT and Gemini.
- **Content Moderation:** Workers screen graphic and harmful content, risking severe mental health issues.
- **AI-Generated Media:** Voice actors and performers record sounds and actions for datasets.

Challenges Faced by Workers

- **Low Wages:** Often less than \$2/hour in countries like Kenya.
- **Harsh Working Conditions:** Tight deadlines, constant surveillance, risk of sudden dismissal.
- **Union Suppression:** Workers raising concerns face dismissal; collective bargaining limited.
- **Fragmented Supply Chains:** Work outsourced via multiple intermediaries; employer accountability is unclear.

Global Governance Concerns

- Exploitation concentrated in developing countries (Kenya, India, Philippines, China).
- Existing international labour frameworks insufficient for digital gig work.
- Big Tech profits while invisibilising labour contributions.
- Need for regulation to ensure fair pay, dignity, and transparency.

Way Forward

- **Transparency:** Companies should disclose AI supply chains.
- **Fair Labour Standards:** Minimum wages, safety norms, and psychological support for workers.
- **Recognition:** Treat ghost workers as an essential digital labour force.
- **Global Cooperation:** Multilateral agreements to regulate AI labour similar to climate treaties.

VALUE ADDITION

- **ILO Conventions 190 & 204:** Address workplace violence and formalisation of informal work.
- **EU AI Act (2025):** Regulates AI systems, ensuring human oversight.
- **Santa Clara Principles (2018):** Calls for transparency and accountability in online content moderation.
- **Concepts:** Digital colonialism, surveillance capitalism, ghost work, cognitive labour, platform precarity.
- **India Context:**
 - Code on Social Security (2020) recognises gig workers but weak in implementation.
 - NITI Aayog predicts 23.5 million gig workers by 2030.
 - Personal Data Protection Act (2023) regulates data but not labour rights.

Conclusion:

AI relies heavily on invisible human labour whose exploitation challenges ethics and human rights. Ensuring fair treatment, transparency, and global standards is essential for a just AI-driven future.

E. SECURITY**I. Linkages between development and spread of extremism****1. BUILDING ROADS IN MAOIST-AFFECTED TRIBAL REGIONS****Why in News?**

- Recent studies and field evidence show that road connectivity in Maoist-affected areas of Chhattisgarh, Jharkhand, and Odisha is emerging as a critical tool for peacebuilding, governance, and inclusive development.

Context

- Roads in insurgency-hit areas symbolize state presence and governance.
- Infrastructure improves access to electricity, healthcare, education, and security.
- Development alone cannot resolve conflict—it must be paired with justice, dignity, and inclusion.

Roads as Tools to Reclaim Governance

- **Visible State Authority:** Roads enable schools, clinics, and police stations, signaling government accountability.
- **Weakening Parallel Systems:** Maoists run informal courts, taxation, and welfare services; roads reduce their influence.
- **Gambetta's Insight:** Insurgents thrive in governance vacuums; infrastructure fills that void.

Political and Social Impact of Roads

- **Symbolic Presence:** Roads communicate that the state is committed to the area.
- **Crime Reduction:** Connectivity reduces rural crime rates (Jain & Biswas, 2023).
- **Global Evidence:** Poor connectivity globally correlates with higher violence (Prieto-Curiel & Menezes, 2020).

Safeguards for Effective Development

- **Justice Mechanisms:** Establish functioning courts to prevent arbitrary authority.
- **Inclusive Infrastructure:** Schools, clinics, and social services must accompany roads.
- **Community Participation:** Roads should be built with local consultation to ensure legitimacy and trust.

India's Anti-Naxal Strategy

- **Security Operations:** Focused offensives like Operation Black Forest, joint CRPF-state actions.
- **Connectivity-First Approach:** Roads → schools → clinics → police camps.
- **Surrender & Rehabilitation:** Livelihood support and legal reintegration for surrendered cadres.
- **Technology & Intelligence:** UAVs, geolocation, and signal interception to strengthen operations.
- **Development & Governance:** Implementation of PESA, FRA, MGNREGA, and social welfare schemes to address grievances.

Insurgent Governance and Challenges

- **Rudimentary Welfare:** Maoists provide basic health and social services to gain local legitimacy.
- **Coercive Legitimacy:** Their services are tied to fear and control, lacking democratic accountability.
- **Extralegal Justice Risks:** “Jan adalats” issue punishments without due process, similar to khap panchayats’ exclusionary justice.

Way Forward

- **Balanced Approach:** Combine security with public service delivery to build trust.
- **Rights-Based Development:** Ensure Gram Sabha consent, FRA, and PESA adherence.
- **Accountable Institutions:** Mobile courts, schools, and health camps to replace extralegal justice.
- **Sustainable Rehabilitation:** Provide long-term skills, jobs, and livelihood security.
- **Political Economy Measures:** Regulate projects, enforce benefit-sharing to prevent discontent.
- **Human Rights Oversight:** Independent monitoring to maintain legitimacy.

Conclusion

Roads in Maoist-affected tribal regions are not merely transport links—they are instruments of governance, peace, and inclusive growth. For sustainable impact, infrastructure must be accompanied by democratic institutions, rights-based development, and livelihood opportunities.

II. Challenges to Internal Security through Communication Networks**1. CONDUCT OF SOCIAL MEDIA COMPANIES DURING POLITICAL UNREST****Why in News?**

- The recent political unrest in Nepal led to the fall of the K.P. Sharma Oli government and a ban on 26 social media platforms.

Reasons for Passivity

- **Profit Motives:** Companies prioritise access to lucrative markets over defending user rights.
- **Government Pressure:** Risk of fines, imprisonment, or exclusion discourages resistance.
- **Commercial vs. Civic Responsibility:** Platforms project neutrality while continuing to profit, leaving users exposed.

Global Pattern of Passivity

- **Russia (2018):** Telegram resisted technically but offered limited political support to users.
- **Myanmar (2021):** Facebook ban cut off protestors from communication and organisation.
- **Nigeria (2021):** Twitter suspension cost \$26 million/day, with minimal corporate response.
- **Iran (2022):** Instagram and WhatsApp issued generic statements while small businesses suffered.

Available Technological Solutions

- **Decentralised Networks:** Tor, I2P, Mastodon, Signal proxies allow traffic rerouting.
- **Corporate Tools:** Google's Outline VPN, WhatsApp over HTTPS, and YouTube delivery networks.
- **Underutilisation:** Fear of retaliation and loss of ad revenue prevents their widespread use.

Comparison with Other Industries

- **Financial Sector:** PayPal and Visa stopped services in Russia on ethical grounds.
- **Wikipedia:** Won a legal battle against Turkey's ban, restoring access.
- **Telecom Companies:** Comply with government orders immediately; social media firms claim neutrality, creating a paradox.

Wider Consequences of Passivity

- **Digital Divide:** Wealthier users bypass bans using VPNs; poorer citizens remain disconnected.
- **Insecurity:** Users move to unsafe alternatives; scams and misinformation increase.
- **Corporate Power Paradox:** Big Social companies' revenues surpass the GDPs of affected countries yet they claim helplessness.

Way Forward

- **Transparency:** Publicly disclose government shutdown orders, justifications, and corporate responses.
- **Technical Contingencies:** Develop standardised proxy networks, fallback systems, and decentralised tools.
- **Regional Cooperation:** Blocs like SAARC and AU can negotiate common demands with Big Tech.
- **Moral Responsibility:** Companies must balance profits with protecting civic infrastructure.

Value Addition

- **Santa Clara Principles (2018):** Promote transparency in content moderation and government takedown requests.
- **UNHRC Resolution (2016):** Recognises internet access as a human right; shutdowns violate international law.
- **Economic Impact:** Nigeria's Twitter ban (2021) cost \$26 million/day; India often leads in global internet shutdowns.
- **Concepts:** Digital authoritarianism, surveillance capitalism, and civic infrastructure risks underline the stakes in the Global South.

Conclusion:

The Nepal unrest highlights how social media companies' passivity during crises weakens democratic resilience and deepens the digital divide. Firms must prioritise transparency, decentralisation, and moral responsibility over profits to protect civic infrastructure.

III. Security Challenges and their Management in Border Areas**1. INDIAN ARMY'S DRONE INDUCTION****Why in News?**

- The Indian Army is rapidly expanding its drone and counter-drone capabilities, including training and operational deployment, to strengthen surveillance, precision targeting, and combat readiness in modern warfare.

Indian Army's Drone Induction Plans

- **Drone Training Centers:** Planned at 19 major institutions, including Indian Military Academy, Infantry School, and Officers Training Academy.
- **Integration in Curriculum:** Drone training to be part of standard training for all ranks.
- **Operational Units:** Every infantry battalion to have a drone platoon; artillery units to get counter-drone systems.
- **Precision Batteries:** New units being raised to integrate UAV-based targeting and reconnaissance.

Need and Objectives

- **Adversary Threats:** Increased drone incursions post-Operation Sindoor require robust counter-drone measures.
- **Modern Warfare Requirement:** Drones have become standard weapons, enhancing battlefield awareness and operational reach.
- **Procurement and Training:** Emergency acquisition of ~1,000 drones and 600 simulators to equip and train personnel.
- **Operational Roles:** Surveillance, combat support, logistics, and medical evacuation.

Challenges

- **High Costs:** Training, deployment, and maintenance of drones are resource-intensive.
- **Cybersecurity & Interoperability:** Ensuring secure communication and smooth integration with existing systems.
- **Balancing Operations:** Combining drone use with traditional manned operations for effective strategy.
- **Ethical and Safe Use:** Maintaining accountability and compliance during combat and surveillance missions.
- **Overreliance Risks:** Excessive dependence on drones may weaken long-term combat readiness.

Way Forward

- Complete drone training for all soldiers by 2027.
- Encourage indigenous drone technology development to reduce import dependence.
- Integrate UAVs in logistics, combat, and medical evacuation operations.
- Strengthen cybersecurity measures and interoperability with existing weapon systems.
- Continuous review of drone strategies to balance manned and unmanned operations effectively.

DRONES IN INDIAN DEFENCE:

Surveillance / Reconnaissance Drones:

- **Heron** (Israel) – Long-endurance UAV for reconnaissance and intelligence gathering.
- **Searcher Mk II** (Israel) – Tactical drone used for surveillance and target acquisition.
- **Rustom** (India) – Indigenous UAV for reconnaissance and surveillance missions.
- **NETRA** (India) – Small drone for border and urban surveillance.

Combat / Armed Drones:

- **IAI Harop** (Israel) – Loitering munition / “suicide drone” for precision strikes.
- **DRDO ABHYAS** (India) – High-speed target drone used for training and strike simulations.

Conclusion

The Army's drone induction signifies a strategic shift to tech-enabled warfare, making UAVs and counter-UAV systems central to battalion readiness while emphasizing skill development, surveillance, and precision targeting for future-ready operations.

GENERAL STUDIES – 4

I. Ethics and Human Interface

1. WILDLIFE COMMODIFICATION AND ETHICAL CONCERNS

Why in News?

- Recent reports from **China** revealed instances of **drugged lion cubs and trained red pandas** being used for entertainment, highlighting a disturbing trend of wildlife commodification and systemic animal cruelty.

Patterns of Wildlife Exploitation

- Systemic Animal Cruelty:** Animals are drugged, declawed, defanged, or mutilated to make them appear safe for human handling.
- Vanity-Driven Exploitation:** Social media platforms amplify such practices, where interaction videos with exotic animals generate likes, followers, and financial gains, reinforcing demand.

Global Implications of Wildlife Trafficking

- Biodiversity Loss:** Trafficking undermines conservation goals under **CITES** and the **Convention on Biological Diversity**, threatening endangered species.
- Public Health Risk:** Unregulated human-animal contact raises chances of zoonotic outbreaks, as suspected in the **COVID-19 pandemic** origins.
- Organised Crime Nexus:** Wildlife trade has links with **Latin American drug cartels and transnational criminal groups**, catering to luxury markets in Asia, especially China.

Ethical Issues Involved

- Violation of Animal Rights:** Animals, as sentient beings, possess intrinsic dignity; exploiting them for amusement breaches their right to live free from harm.
- Spectacle Culture:** Social media algorithms reward sensational cruelty, normalising perverse entertainment and desensitising audiences.
- Ethical Governance Gap:** Weak animal protection laws and lax enforcement reveal a failure of states to uphold moral responsibility toward non-human beings.

Ethical Frameworks

- Deontological Ethics:** Treating animals as commodities violates the principle of respecting them as ends in themselves.
- Virtue Ethics:** Compassion, restraint, and dignity should guide human-animal interactions.
- Global Moral Responsibility:** Societies are ethically bound to balance human needs with protection of all life forms.

Way Forward

- Global Coalition:** Work towards a UN convention on preventing commodification of wildlife and ensuring ethical treatment.
- Ethical Consumption:** Campaigns must counter the use of animals in **tourism, medicine, and luxury markets**.
- Community Alternatives:** Provide sustainable livelihoods to reduce dependence on poaching and trafficking.
- Social Media Accountability:** Collaborate with platforms to detect, flag, and ban animal exploitation content.
- Legal Strengthening:** Countries must adopt strict anti-cruelty laws aligned with international conventions.

Conclusion

The commodification of wildlife reflects both **ethical erosion and governance gaps**. Safeguarding biodiversity, ensuring public health, and upholding compassion demand stricter regulation, global cooperation, and societal responsibility. A humane future must rest on **dignity for all living beings**.

II. Aptitude and Foundational Values for Civil Service

1. ETHICAL DIGITAL CONDUCT IN CIVIL SERVICE

Why in News?

- The **Maharashtra government** recently issued directions regulating the social media use of government employees to safeguard neutrality and confidentiality. Similarly, in **April 2025**, **LBSNAA** advised probationary civil servants to exercise restraint and integrity in their digital conduct.

Key Pillars of Ethical Digital Conduct

- **Transparency:** Digital communication by officers must remain clear, accessible, and comprehensible to citizens, ensuring public trust in institutions.
- **Accountability:** Civil servants are answerable for their online behavior, which should reflect the values of the service and align with ethical and legal standards.
- **Impartiality:** Political neutrality must be preserved. Online posts should not create even the perception of bias.
- **Integrity:** Honesty and fairness in digital spaces strengthen credibility and prevent deception, misinformation, or unethical endorsement.

Why Regulation is Justified

- **Preservation of Political Neutrality:** Civil servants must be apolitical. Expressing political views online compromises impartiality and decision-making fairness.
- **Safeguarding Confidentiality:** Social media can unintentionally leak sensitive information, harming governance and security.
- **Maintaining Institutional Dignity:** Misuse of digital platforms can tarnish the state's image, as seen in the **Somnath Zende case** in Pune.
- **Public Interest Principle:** Following Gandhian ethics and utilitarian reasoning, the greater good of society outweighs individual freedom when neutrality is at stake.

Concerns Against Overregulation

- **Freedom of Expression:** Over-regulation may undermine **Article 19(1)(a)**, violating civil servants' basic rights.
- **Erosion of Transparency:** Social media enables officers to share information and engage directly with citizens, improving accountability.
- **Generational Disconnect:** Younger officers, more active online, may feel restricted, reducing empathy and inclusivity in governance.
- **Morale Issues:** Strict controls may reduce trust within the service, weakening motivation and openness.

Existing Frameworks

- **Central Civil Services (Conduct) Rules, 1964** – bar political activity and criticism of government.
- **All India Services (Conduct) Rules, 1968** – require dignified conduct, confidentiality.
- **RTI Act, 2005 & Official Secrets Act, 1923** – prevent leakage of sensitive information.

Measures for Balanced Regulation

- Formulate **clear, specific guidelines** on permissible online behavior.
- Encourage **constructive use** of social media for awareness and grievance redressal.
- Integrate **digital ethics training** into civil service curricula.
- Adopt **graded accountability mechanisms** instead of harsh blanket punishments.
- Promote **virtue-based self-regulation** rooted in restraint, humility, and integrity.

Conclusion

Digital platforms provide opportunities but also risks for civil servants. Regulation should ensure **neutrality, confidentiality, and integrity** while respecting reasonable freedom of expression. A balanced framework will strengthen both **public trust** and the **ethical foundations of governance**.

III. Ethics in Public Administration**1. STRAY DOG MENACE IN INDIA: LEGAL AND ETHICAL DIMENSIONS****Why in News?**

- The **Supreme Court of India** recently took suo motu cognizance of rising **stray dog attacks in the National Capital Region (NCR)** and directed authorities to remove them, after several fatal incidents involving children. This has triggered a debate on balancing **public safety with animal rights**.

Magnitude of the Problem

- India has an estimated **62–80 million stray dogs**, one of the largest populations globally.
- **Over 2.2 million dog-bite cases** were reported in 2024 alone, causing significant public health concerns.
- **Rabies burden:** India accounts for about **36% of global rabies deaths**, with children and elderly being most vulnerable.
- **Delhi statistics:** More than **35,000 animal bite incidents** were reported in just the first half of 2025.
- The **economic cost** of rabies treatment averages **₹5,128 per case**, straining public health budgets.

Legal and Policy Framework for Stray Dog Management**Constitutional Provisions**

- **Article 246(3):** States empowered to legislate on livestock preservation and animal disease prevention.
- **Articles 243(W) & 246:** Urban local bodies entrusted with stray dog management.
- **Article 51A(g):** Fundamental duty to show compassion to living creatures.
- **Article 21:** Expanded by SC (Animal Welfare Board v. Nagaraja, 2014) to include **animals' right to life**.

Laws and Policies

- **Prevention of Cruelty to Animals Act, 1960:** Prohibits cruelty, mandates humane treatment.
- **Animal Birth Control (ABC) Rules, 2023:** Focus on sterilization, vaccination, and return to locality.
- **National Rabies Control Programme (NRCP):** Aims at **rabies elimination by 2030** through vaccination, surveillance, and awareness.

Ethical Aspects of Stray Dog Management

- **Human Safety vs. Animal Rights:** Rising attacks threaten **citizens' right to life**, while strays are protected by humane laws.

- **Children at risk:** Frequent cases highlight negligence in protecting the vulnerable.
- **Unequal treatment:** Pet dogs are valued, while strays face neglect, raising questions of **discrimination in animal welfare**.
- **Culling vs. Coexistence:** Brutal methods like poisoning or relocation violate compassion-based ethics.
- **Mismanagement and Corruption:** Inefficient sterilization programs and misuse of funds undermine both **safety and welfare goals**.

Ethical Frameworks Guiding Policy

- **Utilitarianism:** Sterilization and vaccination minimize rabies risk while avoiding cruelty.
- **Deontology:** State has an equal duty towards **human safety and animal care**.
- **Rights-based approach:** Stray dogs have intrinsic rights to survival and humane treatment.
- **Ahimsa Tradition:** Indian ethos stresses **coexistence with all beings**.
- **One Health Approach:** Human, animal, and environmental health must be integrated.

Best Practices and Global Lessons

- **Bengaluru (2019–23):** 10% decline in stray population, 20% rise in neutering rates.
- **Netherlands:** Became “stray dog free” through **Collect-Neuter-Vaccinate-Return (CNVR)** and adoption drives.
- **Istanbul, Turkey:** Tags sterilized dogs, engages community feeders, nearly eliminated rabies.
- **Bangkok, Thailand:** Shifted from culling to TNVR, reducing rabies and dog-human conflict.

Measures for Balancing Public Safety and Animal Welfare

- **Strengthen ABC and NRCP Programs** – Ensure scientific sterilization, mass vaccination, and regular monitoring.
- **Dedicated Shelters and Feeding Zones** – To reduce aggressive encounters on streets.
- **Strict Regulation of Pet Ownership** – Prevent abandonment through fines and awareness campaigns.
- **Public Education** – Promote safe interactions, responsible ownership, and compassion.
- **Community Involvement** – Collaboration with NGOs, resident groups, and veterinary experts.
- **Emergency Response Systems** – Helpline numbers and rapid medical support for bite victims.
- **Service Roles for Dogs** – Train and rehabilitate strays for roles in **therapy, security, and disaster relief**, creating value-based coexistence.

Conclusion

India faces a complex challenge of protecting citizens from rising dog-bite incidents while safeguarding animal rights. A balanced approach rooted in **effective policy, humane practices, and public awareness** is essential. By aligning **compassion with responsibility**, society can achieve safer communities and harmonious coexistence with animals.