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By Guna Mathivanan



MONTHLY CURRENT AFFAIRS MAGAZINE

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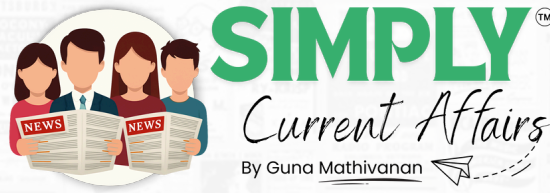
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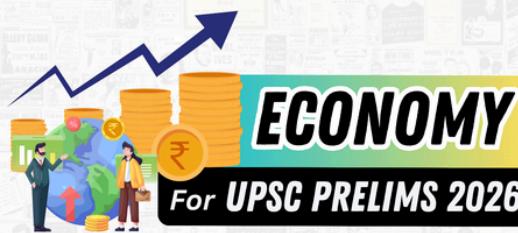
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GS-1

1) Elderly Women in India

Source: The Hindu | Syllabus: GS I: Role of Women and Women's Organization, Population and Associated Issues, Poverty and Developmental issues, Urbanization, their problems and their remedies

Background:

- According to the **India Ageing Report 2023** as published by the International Institute for Population Sciences and the United Nations Population Fund, there will be a significant increase in India's elderly population, with people **aged 60 years and older** estimated to comprise **over 20% of the population by 2050**.
- The average **lifespan of women is more than that of men by 2.7 years**, resulting in a demographic tilt favouring more elderly women.
- This is a concern because McKinsey Health Institute estimates that **women are likely to spend 25% more time in poor health compared to men**, much of those in their later years.

Problems Faced by Elderly Women:

- **Health-Seeking Behaviour:** Elderly women often **de-prioritize their own health** due to household dynamics and caregiving responsibilities. They face difficulties accessing healthcare facilities because of mobility limitations and dependence on family members.
- **Financial Vulnerability:** Many older women have **no personal income** and rely on family for medical expenses. Low health insurance coverage prevents timely and adequate healthcare access.
- **Dependence on others:** Need of support from a family member (usually a male member) to access healthcare hinders women seeking health care.
 - An UNFPA study to understand the needs and challenges of older women in India found that **two-thirds of older women are accompanied by their children or grandchildren (versus 41% among older men)**, indicating a higher level of dependency.
- **Social Isolation: Widowhood** can lead to living alone or in senior communities, increasing loneliness. Ongoing caregiving duties can add **emotional stress and reduce social engagement**.
- **Gender-Specific Health Challenges:** Post-menopausal women face higher risks of **osteoporosis, arthritis, cardiovascular disease, and diabetes**. **Uro-gynaecological** conditions and late-diagnosed cancers disproportionately affect elderly women.
- **Mental Health Issues:** Elderly women experience higher rates of **depression and anxiety** due to caregiving burdens and isolation. Mental health problems are **under-reported** and under-treated because of stigma and limited services.
- **Systemic and Structural Barriers:** Healthcare systems have limited female providers and gender-sensitive infrastructure. Rural women face additional barriers due to distance, transport issues, and poor facility availability.

Ways to Improve their Lives:

- **Gender-Sensitive Healthcare:** Health systems should recognize women's caregiving roles and physiological differences.
 - For example, having female healthcare providers and gender-appropriate facilities can improve access and comfort.
- **Outreach and Access:** Mobile clinics and community health workers help reach women who cannot travel easily.



- Kerala's **Vayomithram Project** provides mobile clinics and free medicines to elderly women.
- **Geriatric Screening:** Women should be screened for conditions like osteoporosis, Alzheimer's, urinary incontinence, and gynaecological cancers. Early detection of **breast and ovarian cancers** can improve survival outcomes.
- **Health Insurance Reform:** Expand coverage to include preventive care, outpatient services, and women-specific geriatric needs.
 - Programs like **Ayushman Bharat PM-JAY** could add packages for mammograms, osteoporosis screening, and home-based care.
- **Financial Security:** Pensions should consider informal work and caregiving histories. Schemes like the **Indira Gandhi National Old Age Pension** can be improved with gender-sensitive eligibility and higher payouts.
- **Assistive Devices and Community Support:** Provide walking aids, hearing aids, and spectacles via **Rashtriya Vayoshri Yojana**. Senior citizen centers should be built under the **Smart Cities Mission** to offer social, emotional, and health support.
- **Social Engagement and Awareness:** Encourage women-led self-help groups, volunteering, and hobbies to reduce isolation.
 - Programs like **Kudumbashree** in Kerala foster social engagement and economic empowerment among elderly women.

Conclusion:

- Women spend their lives holding families and communities together. As they age, it is our turn to support them with **healthcare that listens, systems that include, and policies that understand** their journeys.
- When we focus on elderly women, we build a stronger fabric for everyone that is foundational to the sustainable economic growth of a caring society.

2) Role of Urban Challenge Fund

Source: Business Standard | Syllabus: GS I: Role of Women and Women's Organization, Population and Associated Issues, Poverty and Developmental issues, Urbanization, their problems and their remedies

Context and Background:

- The world's urban population has reached an estimated 4.7 billion, or 57.5% of the world's total population, with projections to double by 2050.
- World Bank estimates suggest around **40% of India's population live in urban areas**, in around 9,000 statutory and census towns.
- **Cities in India occupy just 3.0% of the nation's land**, but their contribution to **gross domestic product (GDP) is a massive 60.0%**.
- India's cities are brimming with potential but are struck with **outdated funding models and overburdened infrastructure**.

Problems Faced by Urban Regions in Infrastructure Development:

- **Underinvestment:** Urban utilities received **investments of only 0.6% of GDP** between 2011–2018. This is just a quarter of what is required.
 - Existing systems cannot keep pace with population growth. Service delivery struggles under rising demand.
- **Unfulfilled decentralisation:** Despite constitutional amendments (74th Constitutional Amendment), most cities are managed by entities other than local bodies.
 - Urban planning and decision-making are mostly done by **parastatal and private organizations**, leaving elected representatives with limited control.



- **Inadequate Spatial Planning:** Urban planning in India is mostly based on outdated frameworks which does not accommodate the rapid population growth and urbanization trends.
 - This has led to **overcrowding, in peri-urban areas**, where displaced workers and migrants settle in poorly planned neighborhoods.
- **Climate Change Impacts:** Indian cities face extreme climate-related challenges, including **urban flooding** during heavy rains, **heat island effects** from unregulated urban sprawl, and high levels of pollution.
- **Massive Migration:** Economic distress based migration, both from rural to urban areas and between urban centers places put pressure on already stretched infrastructure.
- **Housing Shortages:** Around 40% of India's urban population lives in slums without essential services such as water, sanitation, and secure housing.
- **Weak private sector participation:** The **Smart Cities Mission**, launched in 2015 to drive innovation and modernisation in urban areas was **ambitious to bring in private investments**. **Only 6 per cent** of its projects were implemented through **public-private** partnerships (PPPs).
 - This shows challenges such as low investor confidence and lack of viable revenue models.
- **Municipal financial weakness:** Urban Local Bodies (ULBs) struggle with limited financial strength, as most lack the creditworthiness required to raise funds through **municipal bonds**.
 - This has increased their **dependence on external sources** of funding such as state or central transfers.
 - At the same time, cities have **failed to mobilise adequate local revenues**: the share of ULBs in total capital outlays has fallen from 30% a decade ago to just 15% today.
 - **Property tax collection remains stagnant** at 0.15% of GDP, and attempts to introduce "user-pay" charges for municipal services face strong political resistance.
- **Limited institutional capacity:** Tier 2 and 3 cities lack technical and financial expertise. They struggle to prepare and manage complex projects.

Urban Challenge Fund (UCF):

- The UCF is a ₹1 lakh crore initiative announced in the Union Budget to transform cities into growth hubs. It marks a shift from entitlement-based grants to a **competitive, performance-linked funding framework**.
- **Funding structure:** The UCF provides 25% central support, while cities must raise at least 50% through bonds, loans, or PPPs.
- **Objective:** It aims to push cities to design ambitious, revenue-generating, and innovative projects that attract private capital.
- **Focus areas:** The fund targets cities as growth hubs, creative redevelopment, and improvements in water and sanitation.
- **Approach:** It uses a competitive, performance-linked framework, prioritising high-impact projects with clear revenue models and avoiding overlaps with existing schemes.
- **Design intent:** The UCF seeks to reward innovation, improve financial sustainability, and shift cities from entitlement-based grants to performance-driven growth.

Ways to UCF Effectively:

- **Embed lifecycle thinking:** Project planning should not be limited to creation of the project alone. It should include **operations, maintenance, and service quality** from the start. **Infrastructure should be treated as a service, not just a product**.
- **Encourage private participation:** Risks for the investments of the private parties must be reduced through credit guarantees, revenue protection, and similar tools. This will help attract private investors.
- **Own Revenue mobilisation:** Cities should improve property tax collection. They should also use fair user charges and manage money transparently.
- **Institutional capacity:** Smaller cities need project preparation cells. They also need technical support to create new project proposals and take it to suitable investors.



- **Innovation through challenges:** The UCF can run special challenges like a hackathon. Top projects can be helped with funding based on results and outcomes.
- **Impactful projects:** Focus should be on projects with revenue models such as Transit hubs, waste-to-energy plants, and smart water systems. Projects already covered by other schemes should be avoided.
- **Institutional clarity:** The UCF must be managed by a simple and responsive body. It should keep competition, autonomy, and innovation at the core.

Conclusion:

- If India is to truly become Viksit Bharat by 2047, our cities must first become bankable, liveable, and resilient. The Urban Challenge Fund has the potential to act as a catalyst for ensuring such a progress in Indian cities.

3) Landslides in Dharali

Source: The Hindu | Syllabus: GS I: Important Geophysical Phenomena such as earthquakes, Tsunami, Volcanic activity, cyclone etc., geographical features and their location-changes in critical geographical features (including water-bodies and ice-caps) and in flora and fauna and the effects of such changes

Background:

- Recently, Dharali, a Himalayan village on the Gangotri pilgrimage route (Uttarakhand), was devastated by a cloudburst and landslide triggered by the swelling of the Kheer Gad stream.

What is a landslide?

- Landslides are **natural phenomena** that usually occur in mountainous regions with steep slopes.
- During a landslide, **large amounts of rock, boulders, loose mud, soil, and debris roll down slopes and hillsides**, gathering great momentum and often taking vegetation or buildings along.
- Landslides are seen as being caused by two factors,
 - **Conditioning factors** are **underlying conditions or characteristics of a specific area** that make it more susceptible or vulnerable to certain events, such as landslides.
 - **Triggering factors** are the **immediate causes or events that initiate** a landslide, acting on the pre-existing vulnerabilities created by conditioning factors.
 - While conditioning factors make an area susceptible to landslides, triggering factors are the events that actually set the landslide in motion.

Reasons Behind Landslides:

Conditioning Factors:

- **Topography and Slope:** Steep slopes and mountainous terrain in many regions make them naturally prone to landslides.
- **Soil and Geology:** Loose, weathered soil that becomes easily saturated, combined with unstable or fractured rock formations, increases the risk of slope failure.
- **Geomorphology:** Natural drainage patterns, river valleys, and loose, weathered material on slopes affect the stability of land. These features make an area more vulnerable to landslide events.

Triggering Factors:

- **Intense Rainfall:** Continuous or very heavy rainfall fills the soil with water and makes it lose strength. Sudden cloudbursts or downpours can quickly trigger landslides.
- **Land Use Change:** Cutting down native trees removes strong roots that hold the soil together. **Shallow-rooted crops or plantations** cannot stop the soil from slipping on slopes.
 - Growing only one type of crop (**monocropping**) weakens the soil's natural balance. Without varied vegetation, the land becomes less stable and more prone to sliding.
- **Anthropogenic Activities:** Human actions like road building, quarrying, and unplanned construction disturb the natural slope. These changes increase the risk of landslides.



- **Atmospheric Conditions:** Certain weather systems like a **cloudburst or cyclone** can bring sudden, very heavy rainfall. Such short bursts of extreme rain make landslides more likely.

Impacts of Landslides:

- **Loss of Life:** Landslides can trap or bury people under mud and rocks. This often leads to many deaths and missing persons.
- **Damage to Property and Livelihoods:** Houses, hotels, and shops get washed away or destroyed. **Roads and bridges** are also badly damaged.
 - Farmers lose their **fields, orchards**, and crops during landslides. **Small businesses** and tourism also suffer huge losses.
 - Many families lose their **homes and are forced to leave**. They often have to stay in relief camps or temporary shelters.
- **Psychological Trauma:** Survivors face **stress, fear, and sleepless nights** after the disaster. Many continue to relive the tragedy in their minds.
- **Health Issues:** People may get injured or develop **infections from dirty water** and damp conditions. Lack of proper sanitation in camps adds to health problems.
- **Environmental Damage:** Fertile soil, forests, and rivers are destroyed by the flow of debris. This also leads to loss of plants, animals, and biodiversity.

Measures to Reduce Landslide Incidents:

- **Implement Sustainable Land Use and Development Practices:** Authorities should enforce strict regulations on construction and land development in ecologically sensitive areas.
 - They should also **avoid building on steep slopes** and ensure that all projects undergo geological assessments and environmental studies.
- **Afforestation and Vegetation Management:** Native vegetation should be restored and maintained on slopes to stabilise the soil with deep-rooted plants.
- **Improve Drainage Systems:** Effective drainage systems should be constructed to manage surface runoff and prevent water from accumulating.
 - Proper drainage channels on roads and in agricultural fields help reduce waterlogging and the risk of landslides.
- **Community-Based Monitoring and Early Warning Systems:** Local monitoring and warning systems should be set up to detect early signs of landslides, such as cracks or ground movement.
 - Involving **communities ensures faster evacuation** and response during heavy rains.
- **Promote and Implement Conservation Policies:** Governments should enforce ecological recommendations to protect high-risk zones by declaring them Ecologically Sensitive Zones (ESZ).
 - Harmful activities like mining, quarrying, and deforestation should be restricted in these areas to reduce landslide risks.

Conclusion:

- Landslides are natural disasters further made worse by human activities and poor land management.
- Adoption of sustainable development and enforcing conservation policies can help to reduce the risks and vulnerable regions can be made safer for people and the environment.



4) Female Labour Force Participation

Source: Business Standard | Syllabus: GS-I - Role of Women and Women's Organization, Population and Associated Issues, Poverty and Developmental issues, Urbanization, their problems and their remedies

Context and Background:

- At a recent Governing Council meeting of the NITI Aayog, Prime Minister Narendra Modi emphasised the importance of developing stronger policies and laws to improve the participation of women in the workforce.
- This came after the **World Bank Report on India's low India's female labour force participation (LFPR)**, at around **33 per cent** (2024).
- This raises a fundamental question as to why so few women work in India.
 - Lower participation of women in the workforce is due to interplay of various factors like **Socio-cultural norms** (societal attitude to women's work), **supply-side factors** (women's willingness to work, ability to get work), and **demand-side factors** (the availability of work).

Factors affecting Women Employment:

- **Caste:** Studies on caste and LFP have conflicting results.
 - **Higher caste women** have **better access to education** and **formal sector jobs**.
 - Higher caste women have lower LFP due to the economic stability in their families. Even in women headed families, lower LFP is witnessed.
 - On the other hand, **Lower caste** women have **higher LFP due to economic necessity**. More often this employment is confined to the informal sector.
 - **Lower-caste women** often face economic disadvantages, resulting in a higher share of them **being illiterate**. Limited educational opportunities confine them to **jobs** in the **informal sector**.
 - However, if a woman from this background manages to **pursue education** beyond school, affirmative action policies from the state enable entry into the **formal economy**, particularly in the **public sector**.
- **Patriarchy in the society:** Societal expectations from women to primarily focus on **housework and care work** and manage the needs of a household, mostly prevent them from participating in the workforce.
 - Indian women spend **eight times more time than men on unpaid care work**, compared to a global average of three times (UN Women 2019)
 - Neglect of female education within the family due to the **emphasis on the education of male children** also handicaps the employment prospects of women, mainly in middle class groups.
- **Wage Disparity:** Women frequently face wage discrimination, earning less than men for the same work. This can discourage them from seeking employment.
 - India ranks **120th out of 146 countries** (World Economic Forum Global **Gender Gap Report 2024**) in terms of **wage equality** for men and women.
- **Job Availability:** Sectors that predominantly employ women, such as agriculture and textiles, often offer low wages and poor working conditions. Limited opportunities in higher-paying sectors reduce overall female participation.
- **Workplace Safety:** Concerns about safety and harassment in the workplace or in travel to workplace can deter women from seeking employment, particularly in industries where such risks are perceived to be higher.
- **Lack of Access to Capital:** Women have lesser access to financial resources and credit, which limits their ability to start and sustain businesses.



- Economic dependence on male family members can discourage women from seeking employment, as their financial contribution may not be seen as necessary.

Benefits of Women employment:

- **Societal good:** In any case, irrespective of whether it is the informal or formal economy, women's participation in the labour force is beneficial for them and the larger society.
- **Voice within the family:** Studies show that a woman's ability to create revenue increases her **capacity to make decisions** for her and her family.
- **Better Reproductive health and Child health:** Education and employment are directly associated with a **delayed age of marriage** and the age of the **first childbirth** among women.
- **Child Education:** Studies have also shown that when the mother is earning, the chances of a child's schooling are higher.
- **Protection from Patriarchy:** Further, when women have control over resources, they are less susceptible to domestic violence and enjoy more mobility.

Measures needed to increase Female LFPR:

- **Expanding Manufacturing Opportunities:** Labour-intensive sectors such as **readymade garments, footwear, and light manufacturing** should be integrated into schemes like the Production Linked Incentive (PLI) to generate more employment opportunities for women.
 - It is also necessary to address cost disadvantages and regulatory challenges that reduce job creation in these sectors, with a particular focus on offering incentives that encourage the hiring of women.
- **Enhancing Skilling and Formal Employment:** Targeted initiatives should be implemented to improve access to relevant and **affordable skilling programs** for women, especially in industries with significant potential for formal employment.
 - The number of **training institutes** catering exclusively to women should be increased, and financial assistance, such as scholarships and subsidised loans, should be provided to boost female participation.
- **Improving Urban Infrastructure and Mobility:** Urban infrastructure and public transportation systems should be developed with a **gender-sensitive approach** to enhance women's mobility and their access to education and employment.
 - Investments in high-quality, subsidised urban care infrastructure, such as childcare and eldercare centres, are also essential to reduce the caregiving burden on women and enable greater workforce participation.
- **Promoting Clean Energy Adoption:** Households should be incentivised to adopt clean cooking technologies through measures like cash rebates and production-linked incentives, thereby reducing the time women spend on domestic chores.
- **Investing in Women's Education:** Greater investment in women's education is needed to enhance their human capital and enable access to higher-quality job opportunities.
 - Policies should be adopted to guarantee equal access to education for girls and women, including addressing logistical and cultural barriers such as long distances to schools and restrictive societal norms.
- **Addressing Gender Stereotypes and Norms:** Awareness campaigns should be launched to challenge persistent gender stereotypes and highlight the importance of women's participation in the workforce.
 - The active involvement of men and community leaders should be encouraged in advocating for gender equality and supporting women's rights to equal opportunities in employment.

Conclusion:

- As history has shown, women are empowered when they step out of their homes with quality skills and enter market work only when their education levels rise and "good" jobs appear.
- After nearly declining continuously for five decades, India's WLFPR has begun showing a rising trend, increasing from 23 per cent in 2017-18 to 33 per cent in 2024.



- To keep this momentum going, we will require a continued long-term focus on women empowerment for unleashing women's potential to achieve the goal of Viksit Bharat @2047.



GS-2

1) Freedom of Good Health

Source: Yojana | Syllabus: GS-II: Issues Relating to Development and Management of Social Sector/Services relating to Health, Education, Human Resources

Context

- The vision of Building a Healthy India has been brought to life through **Ayushman Bharat**, a comprehensive response to the structural challenges of India's healthcare system.
- Its **four pillars** - **Ayushman Bharat Arogya Mandir (AAM)**, **Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB PM-JAY)**, **Ayushman Bharat Digital Mission (ABDM)**, and the **Pradhan Mantri Ayushman Bharat Health Infrastructure Mission (PM-ABHIM)** - together form forward-looking health ecosystem aimed at achieving **Universal Health Coverage (UHC)**.

About the Pillars

- In 2018, the Government of India launched **AB PM-JAY**, the **world's largest publicly funded health assurance scheme**, offering **free hospitalisation of up to Rupees 5 lakh per family per year for secondary and tertiary care** to economically vulnerable groups.
 - The scheme's reach extends across more than **32,000 public and private hospitals**, with 46% being private hospitals, and its **pan-India portability** ensures that migrants, seasonal workers, and the urban poor can access care regardless of geography.
- In 2018, the first **Ayushman Arogya Mandir** was also set up with a vision to **deliver expanded range services that go beyond maternal and childcare** and include **care for non-communicable diseases, palliative care and free essential drugs and diagnostic services**.
 - Through Arogya Mandirs, **comprehensive primary healthcare** is provided by strengthening Sub Health Centres (SHCs) and Primary Health Centres (PHCs).
- **ABDM**, launched in 2021, aims to develop the backbone necessary to support the **integrated digital health infrastructure** of the country through **digital highways**.
 - **Three digital registries** anchor ABDM. The **Ayushman Bharat Health Account (ABHA)** is a **14-digit unique health ID** that allows individuals to access their digital health records from anywhere in the country. The **Healthcare Professionals Registry (HPR)** is a verified list of licensed practitioners across all systems of medicine. The **Health Facility Registry (HFR)** provides a single source for all public and private hospitals, clinics, laboratories, and diagnostic centres.
- Meanwhile, the launch of **PM-ABHIM** in 2021 addressed the **structural need for infrastructure investment**, particularly at the **primary and critical care levels**.
 - It became India's first large-scale, centrally supported public health infrastructure programme to prepare health systems in responding effectively to current and future pandemics or health emergencies.

Three-Pronged Strategy

- While **PM-JAY** and **ABDM** focus on **access and continuity**, **Ayushman Arogya Mandir** and **PM-ABHIM** seek to **upgrade the physical infrastructure** of India's health system.
- This aspect of the mission has a **three-pronged strategy**.
 - First, it **strengthens surveillance and response mechanisms** through integrated public health labs, disease surveillance units, and national platforms for epidemic intelligence.
 - Second, it establishes **critical care hospital blocks and emergency services** to reduce preventable deaths and improve readiness.



- Third, it **expands access to frontline care** through Ayushman Arogya Mandirs, which are essentially revamped Health and Wellness Centres that offer a comprehensive package of services. These services range from diagnostics and maternal health to mental health counselling and managing chronic diseases.

Conclusion

- While each mission under Ayushman Bharat is significant, it is their **synergy that creates the greatest impact**.
- **PM-JAY** enables citizens to **access life-saving care without fear of financial ruin**. **ABDM** ensures that **care is continuous, data-driven, and portable**. **Ayushman Arogya Mandir and PM-ABHIM** build the **human and physical infrastructure and network** to make that care resilient and responsive.
- Together, they are giving India a health system that is not just **reactive and curative** but also **preventive and participatory**.

2) Criminalization of Politics

Source: The Hindu | Syllabus: GS II: Parliament and State Legislatures—Structure, Functioning, Conduct of Business, Powers & Privileges and Issues Arising out of these

Definition:

- The criminalization of politics refers to the **infiltration of criminals, lawbreakers, and corrupt individuals into the political system**, who then use their power and influence to further their interests at the cost of the country and its citizens.
- The Supreme Court of India, in *S.R. Bommai vs Union of India* and *Manoj Narula vs Union of India*, had advised that individuals with serious criminal charges should not be entrusted with executive power.
- According to a comprehensive analysis by the Association for Democratic Reforms and National Election Watch of all 543 winning candidates in the **2024 general election, 251 Members of Parliament (46%) had declared criminal cases** against themselves, up from **43% in 2019, 34% in 2014, and 30% in 2009**, representing a 55% increase over 15 years.

Causes of Criminalisation of Politics:

- **Money power in elections:** Candidates use black money and mafia funds to finance campaigns and buy votes. This creates unfair advantages and deepens corruption in the electoral process.
- **Muscle power:** Politicians rely on “goondas” and thugs to threaten rivals and influence voters. Violence during elections makes the process unsafe and undemocratic.
- **Party calculations:** Political parties give tickets to candidates who are “winnable” regardless of their criminal background. Winning elections takes priority over ethics and accountability.
- **Judicial pendency:** Court cases against politicians drag on for years without conclusion. This delay allows accused individuals to keep contesting and holding office..
- **Lawlessness and corruption:** Leaders misuse power for personal or group gain instead of public welfare. This creates a culture of impunity where breaking the law is normalized.

Impacts of Criminalisation of Politics:

- **Erosion of public trust:** Citizens lose faith in the credibility of the system and their elected representatives. This deepens voter apathy and people will be less willing to participate in elections.
- **Weak rule of law and rise of impunity:** Criminal politicians reduce the standard of constitutional morality, accountability, and respect for legal institutions. This normalizes lawlessness and **encourages future offenders to enter politics**.
- **Poor governance:** Politicians with criminal backgrounds prioritize personal gain over public welfare leading to further corruption. This leads to misuse of state resources and weak delivery of social schemes.



- **Reduces economic development:** It discourages investors (forced to pay money to politicians), disrupts social schemes (diversion of government resources), increases poverty, and widens inequality.
- **Damage to India's reputation:** The country's image suffers internationally, affecting relations with other states and institutions. It reduces India's credibility in global forums that demand transparency and rule of law.

Recent Bill:

- The **proposed Constitution (One Hundred and Thirtieth Amendment) Bill, 2025** was introduced with the aim of addressing the criminalization of politics.
- Under this, **Ministers, Chief Ministers and even the Prime Minister** must either **resign or automatically be subject to removal** if they continue to be **in custody even after a consecutive period of 30 days** in crimes that carry a **maximum punishment of five years or more** of imprisonment.
- The foundation for this Bill rests on **Articles 75, 164 and 239AA** of the Constitution, which deal with the appointment and tenure of Ministers in the **Union, States and Delhi, respectively**.

Issues in the Bill:

- **Violation of Presumption of Innocence:** The Bill forces Ministers to resign if they are detained for 30 days, even without conviction.
 - This **treats an accused person as guilty before trial** thus undermining the principle of presumption of innocence, which forms **part of the right to life and liberty under Article 21**.
- **Scope for Political Misuse:** The Bill allows removals either through executive advice or automatic rules. This creates room for partisan games where leaders can shield their supporters or target opponents.
- **Inconsistency Between Legislators and Ministers:** **Lawmakers** in Parliament or State Assemblies are disqualified only after **conviction under the Representation of the People Act, 1951**. Ministers are to face harsher treatment under this bill by being removed just on arrest, leading to unequal standards.
- **Political Instability:** Ministers forced to resign after 30 days in custody can be reinstated once released on bail. This **repeated cycle of exit and return** disrupts governance and creates instability in administration.

Way Forward:

- **Link to judicial milestones:** Resignation of ministers can be **linked to the framing of charges by a competent court instead of mere arrest**. This ensures only cases that pass judicial scrutiny move forward, filtering out frivolous or politically motivated arrests.
- **Independent review mechanism:** A tribunal or judicial panel can be set up to decide if conditions for removal are met, preventing executive misuse. Such a **body would add impartiality and act as a safeguard** against partisan manipulation.
- **Provide interim suspension:** Suspension of ministerial functions during trial period can be imposed rather than outright removal. Suspension also **prevents frequent resignations and reinstatements** that create instability.
- **Limit to serious offences:** Apply the rule only to cases involving corruption and moral turpitude, not all crimes with five-year punishments. This avoids **punishing Ministers for relatively minor offences that do not harm public trust**.

Conclusion:

- The Constitution (130th Amendment) Bill, 2025, is seen as a strong move against corruption, but its current form risks **undermining justice and fairness**.
- The bill is referred to the Joint Parliamentary Committee (JPC) and the JPC should carefully recalibrate the bill to incorporate due process and institutional checks.



- In the long run, power without integrity corrodes democracy, and integrity without fairness endangers it.

3) India-Japan Ties

Source: The Hindu | Syllabus: GS II: Effect of Policies and Politics of Developed and Developing Countries on India's interests, Indian Diaspora

Background:

- Friendship between India and Japan has a long history rooted in spiritual affinity and strong cultural and civilizational ties.
- An **early documented direct contact** with Japan was with the **Todaiji Temple in Nara**, where the consecration of the **towering statue of Lord Buddha** was performed by an Indian monk Bodhisena in 752 AD.
- Signing of a **peace treaty in 1952** marked the beginning of diplomatic relations between the countries.
- India-Japan relations were elevated to **'Global Partnership' in 2000, 'Strategic and Global Partnership' in 2006, and 'Special Strategic and Global Partnership' in 2014.**
- Regular Annual Summits have been held between India and Japan since 2006.
- **Japan's bilateral trade** with India totaled **US\$ 22.85 billion during FY 2023-24.**
 - Exports from Japan to India during this period were US\$ 17.69 billion and imports were US\$ 5.15 billion.
- **India-Japan Comprehensive Economic Partnership (CEPA)** Agreement came into effect from 1 August 2011. The Agreement covers not only **trade in goods but also services**, movement of natural persons, investments, intellectual property rights, custom procedures and other trade related issues.
- **Japan's Investments in India:** Cumulatively, **from 2000** until December 2024, the investments to India have been around **US\$ 43.2 billion ranking Japan fifth among source countries for FDI.**
- **Japanese Official Development Assistance (ODA):** Japan has been extending bilateral loan and grant assistance to India since 1958. **Japan is the largest bilateral donor to India.**
 - The Japanese ODA supports India's efforts for accelerated economic development particularly in priority areas like power, transportation, environmental projects and projects related to basic human needs.
- **Civil Nuclear Cooperation:** Agreement on Cooperation in the Peaceful Uses of Nuclear Energy was signed in November 2016.
 - India, despite not signing the Nuclear Non Proliferation Treaty, was able to sign this agreement with Japan. This showed India's image as a peaceful nuclear power in the eyes of the only country to be affected by a nuclear weapon.
- **India-Japan Act East Forum** was established in 2017 with the aim to provide a platform for India-Japan collaboration under the idea of India's **"Act East Policy"** and Japan's **"Vision of a Free and Open Indo-Pacific"**.
 - The **Forum identifies specific projects for economic modernization of India's North-East region** such as those pertaining to connectivity, developmental infrastructure, industrial linkages as well as **people-to-people contacts.**

Significance of this relation in the coming years:

- **Economic & Investment:** Japan's **¥10 trillion (\$68B) investment plan over the next decade** will boost India's infrastructure, manufacturing, clean energy, and technology.



- Investment in the **E10 series Shinkansen for the Mumbai–Ahmedabad high-speed rail** project highlights long-term collaboration and technology transfer.
- **Technology & Innovation:** The upgraded **digital partnership** now extends to artificial intelligence and startup ecosystems.
 - Cooperation on semiconductors, pharmaceuticals, critical minerals, and clean energy strengthens India's effort to build diversified supply chains.
- **Security & Strategic Affairs:** The revision of the 2008 Joint Declaration on Security Cooperation aligns defence ties with present-day realities.
 - The Economic Security Initiative anchors Japan more firmly in India's security and resilience planning.
- **Geopolitical & Regional Balance:** India and Japan reinforce their shared commitment to a **free, open, and rules-based Indo-Pacific order**.
 - In the situation of U.S. unpredictability and China's hostile normalisation, Japan provides India with consistency, resources, and a dependable long-term partnership.

Challenges in this Relationship:

- **Economic Growth Concerns:** India is struggling to consistently deliver high growth, with recent trends showing difficulties in even reaching 6%.
 - Japan's massive investment pledge and technology transfer projects require India to implement reforms and accelerate growth.
 - **Delays or inefficiencies on India's side** could dilute the benefits and **test Japanese patience**.
- **China's Strategic Influence:** Beijing's dominant role in global manufacturing and supply chains gives it an edge over India that could overshadow India-Japan cooperation.
 - Both the countries have to take detailed strategic balancing measures against China to maintain their hold in the Indo-Pacific Region.
- **U.S. Uncertainty:** The unpredictability of the Trump administration casts doubt on the consistency of U.S. engagement in the **Indo-Pacific**.
 - This weakens the momentum of the **Quad**, where Japan and India rely on U.S. commitment to **maintain strategic balance against China**.
 - If the **role of the US diminishes**, it could limit how far India and Japan can advance shared Indo-Pacific objectives.
 - It will also force these countries to **constantly recalibrate** their strategies to make up **for policy changes in the US**.

Way Forward:

- **Long-Term Strategic Cooperation:** India and Japan should build on their shared democratic values and Indo-Pacific vision to institutionalize partnerships that endure beyond changing global dynamics.
 - With U.S. unpredictability and China's mistrust, India must position Japan as a consistent and reliable partner to balance regional uncertainties.
- **Expand Beyond Economy:** Cooperation should widen into areas like **technology, digital ecosystems, clean energy, and maritime security**, creating fruitful outcomes that benefit both nations.
- Japan's commitments to this relationship reinforces India as one of its most reliable partners in navigating the challenges of the Indo-Pacific, from economic resilience to maritime security.
- Japan also offers consistency, resources and a shared strategic outlook rooted in democratic values and a free and open Indo-Pacific. Therefore, India can also identify Japan as its dependable partner.



4) Demographic Dividend

Source: The Hindu | Syllabus: GS II: Issues Relating to Development and Management of Social Sector/Services relating to Health, Education, Human Resources

Definition:

- Demographic dividend is the **potential for increased economic growth** in a country resulting from a **large working-age population** relative to dependent populations (children and the elderly).
- In the Indian context, people between ages 15 and 59 are considered the working age population.

Opportunities from this large Demographic dividend for India:

- Large Working-Age Population:** Over **65% of Indians are under 35 years old**. This offers a massive workforce that can fuel productivity and innovation.
- Economic Growth Potential:** A young, employable population can **boost GDP growth** by increasing labor supply and consumer demand. According to UN data, India's demographic dividend could add **up to 2% to annual GDP growth** if harnessed well.
- Global Workforce Advantage:** As developed countries face **aging populations** (e.g., Japan, Europe), India can become the **talent supplier of the world**. Sectors like IT, healthcare, and engineering already rely heavily on Indian professionals.
- Entrepreneurship & Innovation:** Young populations are more likely to **start businesses** and adopt new technologies. India's booming **startup ecosystem** (3rd largest globally) is fueled by its youth.
- Digital Transformation Leadership:** With rapid smartphone and internet adoption, India's youth can **drive the global digital economy**, AI, and tech-based services.
- Rising Consumer Base:** Young workers mean a **growing middle class** with higher purchasing power. This boosts demand for housing, education, healthcare, e-commerce, and lifestyle services.
- Demographic Window of Opportunity:** India's working-age population will keep expanding until around **2040–2050**, giving it a **30-year window** to use this advantage.

Challenges in utilizing India's Demographic Dividend:

- Outdated education system:** Curricula run on slow three-year cycles, remain exam-centric, and are not aligned with the rapidly changing job market.
- Employability gap:** Despite producing millions of graduates, many are underemployed or unemployable, with only **43% of graduates considered job-ready** (Graduate Skills Index 2025, Mercer-Mettl).
 - Around **40–50% of engineering graduates** have not been placed in jobs over the past decade.
- Skills and automation risk:** Nearly **70% of Indian jobs are at risk from automation by 2030** (McKinsey); at the same time, AI could create 170 million jobs but displace 92 million (World Economic Forum).
- Career awareness deficit:** **93% of students in classes 8–12** are aware of only seven traditional career options, while only **7% receive formal career guidance** (Mindler Career Awareness Survey 2022).
 - More than **65% of high school graduates** pursue degrees not aligned with their interests or abilities (India Skills Report 2024).
- Weak EdTech efforts:** Most EdTech platforms in India, such as Coursera, Udemy primarily focus on **test preparation and rote learning** rather than building practical, job-ready skills.



- While these platforms have increased access to **online education**, the certificates they provide **no longer hold strong value in the job market** because employers increasingly see them as insufficient signals of competence.
- **Shortfall in government schemes:** The Indian government has launched multiple initiatives like the **Skill India Mission**, which aimed to train over 400 million individuals by 2022. Despite heavy funding and national focus, the mission fell far short of its target.
 - Alongside it, several other schemes like **Pradhan Mantri Kaushal Vikas Yojana (PMKVY)**, **Pradhan Mantri Kaushal Kendras (PMKK)**, **Jan Shikshan Sansthan (JSS)**, **Pradhan Mantri Yuva Yojana (PMYY)** and **SANKALP** were introduced. However, the abundance of overlapping policies had not led to definite outcomes.

Way Forward:

- **Overhaul of Education System: National Education Policy 2020** has provided a pathway to regularly upgrade education. It also had options for providing employable skills to the students. Using this framework school and college curricula should be modernised quickly, **moving away from rote learning to practical, job-ready skills**.
- **Skilling as a national priority:** India should focus on large-scale upskilling, reskilling, and career readiness to prepare youth for an AI-driven job market. Different schemes should be integrated to have a cohesive strategy in this direction.
- **Strengthen career guidance:** Students should be exposed to diverse career paths and align education choices with student aptitudes and interests. This would enable maximum efficiency in education and employment.
- India's ambition to emerge as a global digital powerhouse rests on its ability to integrate technology, education and employment into a coherent national framework.
- India must prepare its youth not for the jobs of yesterday, but for the careers of tomorrow. This can help to convert India's demographic dividend into an asset or a liability.

5) Hunger Problem

Source: The Hindu | Syllabus: GS II: Issues relating to Poverty and Hunger

Context and Background:

- According to the Food and Agriculture Organisation, hunger is **chronic undernourishment** as people do not regularly consume enough **calories and nutrients** to maintain normal body functions and health.
- It differs from temporary appetite or fasting; hunger reflects a **persistent lack of access to adequate, safe, and nutritious food**.
- The **Global Hunger Index (GHI) 2024** placed India at **105th out of 127 countries** and categorized it as having a serious malnutrition problem.
- In recent years, the malnutrition situation has seen some progress in the Country.

India's Progress in Hunger problem:

- **Decline in Undernourishment:** India reduced undernourishment from 14.3% (2020–2022) to 12% (2022–2024). This translates to **30 million fewer people** living with hunger.
- **Public Distribution System (PDS): Digitalisation, Aadhaar-enabled targeting, and biometric authentication** strengthened the system. The **One Nation One Ration Card** platform made **entitlements portable**, supporting over 800 million people.
- **Nutrition-Focused Schemes:** The Pradhan Mantri Poshan Shakti Nirman (PM POSHAN) scheme launched in 2021 and the Integrated Child Development Services (ICDS) are promoting dietary diversity.



- In ICDS, dietary diversity is achieved by providing **supplementary nutrition** that includes different food groups (cereals, pulses, vegetables, milk, and eggs where possible) through Anganwadi Centres.
- **Global Contribution:** The **Food and Agriculture Organization (FAO)** recognises India's progress as a **model for other developing nations**. India's digital governance and social protection initiatives can be shared across the **Global South**.

Challenges in tackling the Hunger problem:

- **Unaffordable Healthy Diets:** Over 60% of the population cannot afford a healthy diet due to high prices of nutrient-dense foods.
- **Weak Post-Harvest Infrastructure:** Inadequate cold chains and inefficient market linkages reduce the availability and affordability of nutritious foods.
- **Food Losses:** About 13% of food is lost between farm and market, directly affecting supply and prices.
- **Nutrition Gap:** Even as hunger falls, **malnutrition, obesity, and micronutrient deficiencies** are rising among poor urban and rural populations.
 - The **National Family Health Survey round 5 (NFHS-5, 2019-21)** suggests that **nearly one in every four men or women is obese in India**.
- **Nutritional inequality** based on **gender** is a major concern. It refers to the **uneven distribution of access and consumption of nutritious food** based on gender.
 - **NFHS-5** reveals that **57% of women in the age group 15 to 49 years are anaemic**, in comparison to 26% of men; nearly one in five women are underweight. Women are far more likely to be malnourished than men in India.

Way Forward:

- **Nutrient-rich foods:** India should increase production of pulses, fruits, vegetables, and animal-source products. These foods must be affordable and within reach of poor families.
- **Post-harvest systems:** Cold storage and digital logistics systems need expansion to strengthen supply chains. This will **cut the 13% food loss** between farm and market.
- **Women and Farmer Producer Organizations (FPOs):** Women-led food businesses and cooperatives should get more support. Farmer Producer Organizations that grow climate-resilient crops can boost nutrition and incomes.
- **Digital platforms:** The Agriculture Stack (AgriStack), the National Agriculture Market (e-NAM), and geospatial tools should be used effectively. These platforms improve farm planning, market access, and nutrition-focused programs.

6) Corporate Social Responsibility in India

Source: Business Standard | Syllabus: GS-II: Important Aspects of Governance, Transparency and Accountability, E-governance- applications, models, successes, limitations, and potential; Citizens Charters, Transparency & Accountability and institutional and other measures

Background:

- India's Corporate Social Responsibility (CSR) policy **mandates companies** to engage in initiatives that **contribute to the welfare of society**.
- **India is the first country** in the world to make **CSR mandatory**, following an amendment to The Company Act, 2013 in 2014.
- After the latest amendments, it requires companies with a net worth of ₹500 crore or a minimum turnover of ₹1,000 crore in any given financial year spend at least 2% of their net profit over the preceding three years on CSR activities.



- Businesses can use these funds in areas such as **education, poverty, gender equality, and hunger** as part of their CSR compliance.

Positive Aspects in CSR Activity:

- **Funding for Social Causes:** CSR provides essential financial support to grassroots Civil Society Organisation (CSO). Recently, foreign funding for CSOs have become tougher and this CSR helps to compensate for the decline in foreign funding.
- **National Priorities:** CSR channels corporate spending into government-priority sectors like health and education. It ensures corporate giving supports socio-economic development of the nation.
- **Corporate Engagement with Society:** CSR initiatives take executives out of their corporate spaces. It connects them directly with real-world community challenges.
- CSR spending has grown strongly, reaching ₹17,967 crore in FY24 with **98% of companies meeting their obligations**.
- **More than half of the companies** in India **voluntarily spend more than the legally required 2%** of their average net profits on CSR activities.

Issues in the CSR Activity:

- **Geographical Distribution:** CSR funds are **heavily directed toward wealthier states** such as Maharashtra, and Tamil Nadu, where many large companies are based.
 - As a result, poorer “aspirational” districts in states like Chattisgarh, Odisha and North Eastern States get less than 20% of total CSR funds.
- **Sectoral Distribution:** Most CSR spending is done in **high-visibility areas like education and healthcare**. While these are important, other important issues such as slum development, livelihood enhancement, and environmental projects receive far less funding.
- **Public Relations Focus:** Many companies select **projects that provide strong publicity** and positive brand image. This approach can **sideline causes that are urgent** but do not have media coverage.
- **Government Interference Risk:** The legal nature of CSR spending allows the government to dictate how and where companies must invest.
 - Future rules, such as region-specific spending targets, can reduce corporate flexibility and innovation in designing impactful social projects.
- **Compliance-Driven Approach:** The mandatory nature of CSR may discourage companies from deeply engaging with communities and they will focus only on meeting the legal requirement.

Way Forward:

- India can also look into practices like Inheritance Taxes, used in the USA and European countries, to shore up more resources for its welfare expenditure.
- India's CSR law has successfully increased corporate contributions to social causes and provided vital funding for NGOs, but its impact on reducing regional and sectoral inequalities remains stunted.
- For CSR to positively impact socio-economic outcomes, it must go beyond compliance and focus on long-term, high-impact initiatives that address the nation's urgent developmental needs.

7) Early Childhood Care and Education

Source: The Hindu | Syllabus: GS II: Issues Relating to Development and Management of Social Sector/Services relating to Health, Education, Human Resources

Definition and Background:

- Early childhood is defined as the period from birth to eight years of age. Early child development includes physical, socio-emotional, cognitive and motor development between 0-8 years of age.



- Early childhood care and education (ECCE) encompasses **nurturing, education, and support provided to children from birth to around eight years old**, crucial for their holistic development and future success.
- The National Education Policy 2020 (NEP) has brought in significant changes in the field of ECCE.

Significance of ECCE:

- **Foundation for Lifelong Learning:** The early years are critical, because this is the period in life when the brain develops most rapidly and has a high capacity for change, and the foundation is laid for health and wellbeing throughout life.
 - Research and experience have repeatedly demonstrated that early childhood development programmes and opportunities for early learning improve child outcomes during subsequent schooling.
- **Promotes Equity:** Access to quality ECCE can help mitigate disparities by providing all children, regardless of socioeconomic background, with a strong start in life.
- **Enhances Social Skills:** Early interaction with peers and caregivers in ECCE settings helps children develop essential social skills like cooperation, empathy, and communication.
 - Nobel Laureate Heckman's Perry Preschool study found that children who received high quality ECCE grew into less violent adults with stronger socio-emotional skills built early might even help prevent later student suicides
- **Prepares for School:** ECCE programs prepare children for formal schooling by instilling routines, basic literacy and numeracy skills, and a love for learning.
- **Supports Economic Development:** Investing in ECCE yields long-term economic benefits by producing a skilled workforce, reducing healthcare and social costs, and fostering innovation and productivity.

Changes Brought by NEP in ECCE:

- **Expansion of ECCE:** The NEP 2020 has initiated the introduction of preschool classes (Balvatika 1, 2, 3) for children aged 3–6 years in **government schools**, which were earlier not part of the formal schooling system.
 - While private schools have had nursery classes for a long time, government schools have historically admitted children after 6 years. This change aims to reduce this inequality.
- **Enhanced Budget Allocation:** The Ministry of Education has started allocating funds under the **Samagra Shiksha scheme** for ECCE, encouraging States and Union Territories to introduce preschool classes.
- **Focus on 0–3 Year Age Group:** At present, overburdened Anganwadi workers focus more on 3-6 year olds who are physically present at the centres and are easy to manage. This has affected the services to 0-3 year olds through home visits.
 - If government schools assume responsibility over 3-6 year-olds, the Anganwadi system could redirect its focus towards 0-3 year olds, along with the care of pregnant and lactating mothers, through more intensive home visits.

Measures to improve the quality of ECCE:

- **Research and Evidence-Based Policy:** Systematic research should be conducted within the Indian context to assess the impact of ECCE interventions like the Anganwadi system, on child development outcomes and broader macroeconomic implications.
 - This must be the guide to policy decisions and ensure effective allocation of resources.
- **Need to Avoid Excessive Schoolification:** As schools increasingly assume responsibility for ECCE, it is essential to maintain a play-based and holistic approach to preschool education, avoiding an early and narrow emphasis on academic skills such as reading and writing.
- **Investment in Infrastructure:** Adequate resources should be allocated to improve the infrastructure of ECCE centres. Only then, these centres can provide safe and child-friendly environments for learning and development.



- **Teacher Training and Capacity Building:** Comprehensive training and continuous professional development opportunities should be provided for ECCE educators to strengthen their knowledge and skills in varied aspects of ECCE.
- **Curriculum Enhancement:** A culturally relevant and age-appropriate curriculum, with region specific adaptations, should be developed and implemented.
- **Monitoring and Evaluation:** Monitoring and evaluation systems must be established to assess the quality and effectiveness of ECCE programmes, including regular evaluations of child outcomes, teacher performance, and feedback mechanisms to support continuous improvement.

Conclusion:

- The path from developing to developed countries is paved with human development investment, and the earlier it is the better.
- If we want India's women to work and India's children to thrive, investing in ECCE is the way forward.

8) India's relations with Myanmar

Source: The Hindu | Syllabus: GS II: India and its Neighbourhood- Relations

Background

- India-Myanmar relations are rooted in shared **historical, ethnic, cultural and religious ties**.
- As the land of Lord Buddha, India is a country of pilgrimage for the people of Myanmar.
- The geographical proximity of the two countries has helped develop and sustain cordial relations and facilitated people-to people contact. India and Myanmar share a long **land border of over 1600 km and a maritime boundary in the Bay of Bengal**.
- A **large population of Indian origin** (according to some estimates about 2.5 million) lives in Myanmar.
- **India and Myanmar signed a Treaty of Friendship in 1951.** The visit of the Prime Minister Rajiv Gandhi in 1987 laid the foundations for a stronger relationship between India and Myanmar.
- In 2018, both countries signed a landmark '**Land Border Crossing Agreement**' to deal with the pending border problems along with issues relating to smuggling and illicit drug trafficking.
- In 2021, Myanmar military leaders ousted the elected government of Aung San Suu Kyi. This started a conflict between different ethnic armed organisations (EAOs) and the military junta in Myanmar leading to a serious humanitarian crisis.
- Since October 2023, the **ethnic armed groups and the People's Defence Force** (an anti military organisation) in Myanmar have coordinated their effort to resist the military junta.
- These **groups** have been fighting the junta for many years, but this is the first time that they have been coordinated and have been able to **hold at least 45% of the territory in Myanmar**.

Challenges in India's relations with Myanmar

- **Refugee Influx:** The ongoing conflict between the military junta and ethnic armed organisations (EAOs) has created a **severe humanitarian crisis** in Myanmar, affecting civilians and leading to a dire need for humanitarian assistance.
 - The conflict has resulted in a **significant influx of refugees into India**, particularly in the northeastern states, straining local resources and complicating border management.
- **Balancing Relations with Military Junta and Democratic Forces:** India's traditional policy of maintaining cordial relations with the military junta is increasingly problematic as the junta fails to control large parts of the country and faces widespread rebellion.
 - Balancing support for democratic forces, such as the National Unity Government (NUG) and other democratic movements, while maintaining relations with the military junta is complex and fraught with diplomatic challenges.



- Delivering humanitarian assistance to conflict-affected areas in Myanmar without appearing to interfere in its internal affairs is a delicate balance that India needs to manage.
- **Influence of External Powers:** China has significant influence over both the military junta and some EAOs, which complicates India's strategic interests and efforts to balance power in the region.
- **Regional Stability:** The potential balkanization of Myanmar, with its fragmentation into various ethnic and political entities, poses a risk to regional stability and directly impacts India's security and economic interests.
- **Lack of Cohesion Among Resistance Groups:** While the EAOs and the People's Defence Force (PDF) have shown unprecedented coordination, their varying objectives and alliances make it difficult for India to engage with them uniformly.
- **Security Concerns in Northeast India:** The instability in Myanmar, particularly the idea of a larger Kuki state that includes parts of Myanmar, has direct implications for India's northeastern states, exacerbating local tensions and security issues.
 - Some Kuki underground groups are trying to control border routes with intentions that may destabilise the region, requiring vigilant security measures.
- **Humanitarian and Diplomatic Dilemmas:**
 - Ensuring effective communication and cooperation with the government in Naypyidaw to address humanitarian needs while respecting Myanmar's sovereignty is challenging.

Measure available before India:

- **Establish Dialogue with EAOs:** Open channels of communication with EAOs to help affected civilians. Explore potential cooperation with these groups to ensure the delivery of humanitarian aid and at the same time continue diplomatic relations with the military junta while emphasising humanitarian concerns.
- **Engage in Multilateral Dialogue:** Participate in **Track 1.5 and Track 2 dialogues**, such as those initiated by Thailand (**Bangkok process**), to foster regional stability.
 - Collaborate with neighbouring countries like Thailand, Bangladesh, Laos, and China to find a collective solution to the crisis.
- **Humanitarian Assistance:** India can offer essential humanitarian assistance, particularly in border areas between India and Myanmar. Critical resources such as water, sanitary products, anaesthesia, and medical support can be supplied for injured civilians.
 - **Asylum Seekers and Refugees:** India should treat the refugees fleeing persecution in a humane manner under constitutional and international norms.
- **Monitor and Address Security Concerns:** India should address potential threats related to the fragmentation of Myanmar, such as the creation of autonomous regions or states within its territory.
 - India should ensure that the instability does not spill over into India's northeastern regions, particularly concerning the states like Manipur.
- **End Arms Sales to the Junta:** India can consider stopping weapon and equipment transfers to the Myanmar military. Continued sales undermine India's credibility and directly contribute to violence against civilians.
- **Long-term Development and Cooperation:** India should continue investing in infrastructure and development projects that benefit both countries.

Conclusion:

- India's relations with Myanmar are multilayered: old historical ties, strong relations during the anti-colonial struggle against British rule.
- India often has proclaimed being on the side of the Myanmar common people. Now India should take steps to show its solidarity with the common people of Myanmar. Such measures should convey its deep interest in the good health, stability, and prosperity of Myanmar.



- This can lead to mutual benefit and ensure that Myanmar plays a constructive role in India's 'Act East' policy amid its internal turmoil and external influences from China and other powers.

9) Special Intensive Revision Process

Source: The Hindu | Syllabus: GS II : Appointment to various Constitutional Posts, Powers, Functions and Responsibilities of various Constitutional Bodies

Definition and Background:

- The **Election Commission of India (ECI)** initiated the **Special Intensive Revision (SIR)** in Bihar ahead of the 2025 Legislative Assembly elections.
- **Article 324 of the Constitution** provides that the superintendence, direction and control of the preparation of electoral rolls for the conduct of elections to Parliament and State legislature is the responsibility of ECI.
- The electoral rolls are prepared by the ECI as per the **provisions of the Representation of the People Act, 1950 (RP Act)**.
 - **Section 21 of the RP Act** deals with the preparation and revision of electoral rolls.
- Using the powers under Section 21, the ECI has started the SIR process to update and verify electoral rolls.
 - In the process, **all voters must submit enumeration forms** to show that they are ordinarily resident in a particular constituency.
 - In the current Bihar SIR, voters enrolled after 2003 must also provide proof of date and place of birth.

Why Now?

- The Election Commission has noted that there have been **large scale additions and deletions to the electoral rolls over the last 20 years** due to rapid urbanisation and migration.
 - This has increased the possibility of **duplicate entries in the roll**. The Commission is constitutionally obligated to ensure that only citizens are enrolled in the electoral rolls.
 - Accordingly, the EC has decided to carry out an SIR for the entire country, starting with Bihar.

Issues in the current SIR process:

- **Risk of Migrant Voter Exclusion:** Migrant workers, who are temporarily away from their home constituencies for work, may not be able to submit the required forms and documents in time.
 - Though they retain ties to their native place and often return there periodically, they risk being **marked as "permanently shifted"** and deleted from the electoral roll.
 - Such exclusions could **disenfranchise millions of internal migrants**, violating their democratic rights.
- **Massive Administrative Burden:** Over 8 crore voters must submit forms, with 3 crore needing extra documents. The sheer volume increases the chance of mistakes in inclusion and exclusion.
- **Exclusion of Aadhaar as Valid Document:** The Election Commission of India has excluded Aadhaar as valid proof of date and place of birth or citizenship for the current Special Intensive Revision (SIR) process.
 - Its exclusion puts a large population at risk of being left out of the electoral roll.
 - **Registration of Electors Rules, 1960**, which governs new voter registration, lists Aadhaar as a valid document for establishing date of birth and residence.
- **Short Timeline:** The entire process is scheduled for just 31 days. Such limited time can compromise accuracy and coverage.



- **Documentation Challenges:** The list of acceptable documents includes items like caste certificates, land allotment records, family registers, etc., which are difficult to access for many rural and low-income voters.
 - Obtaining parental documents is especially difficult for those born before official recordkeeping became common.
 - These strict documentation demands could disproportionately affect those without formal education, stable housing, or property ownership, making it hard for legitimate voters to remain on the rolls.

Stance of the Election Commission and issues in it:

- The ECI says that the migrants who have shifted out of their native State/constituency can **register as an elector in their new place of residence**. This approach also has significant issues.
- **Resistance from Regional Parties:** Political parties in in-migration States (States where migrants move for work) argue that migrants are not permanent residents and **do not understand local political issues**, thus should not influence election outcomes.
- **Fear of Vote Dilution:** These parties worry that **inclusion of migrant voters** could shift voting patterns and dilute the influence of local electorates.
- **Social Friction and Identity Politics:** Migrant inclusion may spark **regional identity tensions**, especially in States where local-versus-outsider sentiments are strong. This could be **exploited for political gains**.

Measures to improve Participation of Migrant Workers in Voting Process:

- **Polling Day Holiday:** Ensuring polling day is a mandatory paid holiday will help migrant workers take time off work. This can significantly improve voter turnout among working populations.
- **Special Transportation Services:** Running additional trains and buses on election days can assist migrants in reaching their home constituencies.
- **Offer Paid Leave:** Giving a few extra days of paid leave for travel can help migrant voters participate. This support can ease financial and time-related constraints.
- **Implement Remote Voting Solutions:** The Election Commission of India should work to develop remote voting technologies like the Remote Electronic Voting Machine (RVM). These systems can enable migrants to vote without travelling.
- **Amend the Representation of the People Act:** Parliament should consider changes to the RP Act to protect migrant labourers' right to choose their voting constituency. This would provide long-term legal clarity and inclusiveness.

Conclusion:

- The SIR process is a crucial initiative to ensure clean and accurate electoral rolls. However, its implementation must balance the need for verification with the constitutional right to vote, especially for vulnerable groups like migrants.
- An inclusive and flexible approach is essential for a proper conduct of the SIR process.

10) US Sanctions on India

Source: The Hindu | Syllabus: GS II: Effect of Policies and Politics of Developed and Developing Countries on India's interests, Indian Diaspora

Background:

- The United States imposed 25% reciprocal tariffs on India's exports with effect from August 7, 2025.
- On August 6, 2025, the U.S. also imposed a penal levy of an additional 25% on India's exports because India continued to import oil from Russia.



- The two taken together can weaken India's exports to the U.S. This is a concerning point because, **India has a trade surplus of around \$45 Billion** with the US and it is one of the very few countries with which India has a healthy trade surplus.
- The value of **bilateral trade** between the countries stands at **US \$ 212.3 Bn (2024)**.

Possible Impacts of the Sanctions:

- **Export Decline:** U.S.-bound Indian exports may reduce by up to 25% due to the 25% reciprocal tariff. This would severely affect sectors with a high dependency on the U.S. market.
- **GDP Growth Reduction:** The tariff impact alone could lower GDP growth by about 0.6 percentage points. When combined with the penal levy, the total reduction could exceed 0.6 points from the base rate of 6.5%.
- **Current Account Deficit (CAD):** CAD may rise from 0.6% to around 1.15% of GDP as export earnings drop. Costlier oil imports could push the deficit even higher.
- **Higher Import Costs:** The penal levy can act as a barrier to importing Russian crude and thus forcing purchases from other suppliers. This can raise India's overall energy import bills.
- **Rupee Depreciation:** The rupee weakened to ₹87.5 per USD after the tariff announcement. Currency depreciation increases import costs and adds inflationary pressure.
- **Global Policy Precedent:** Using tariffs to influence another nation's policy goes against the free and fair trade principles. Continued use of such measures could destabilise global trade relations.

Measures Available Before India:

- **Negotiate with the U.S.:** The Indian government can use the window before the trade deal is finalised to **seek tariff relief without conceding on sensitive sectors** like agriculture, allied activities, and micro, small, and medium enterprises.
- **Highlight Inequity:** India can present the penal levy as discriminatory, pointing out that other nations import more from Russia, to build global support against the measure.
- **Diversify Export Markets:** The country can work on expanding trade relationships with other nations to reduce dependence on the U.S., even though this will be challenging in the short term.
- **Review and Reduce Import Tariffs:** Authorities can consider lowering tariffs on imports that supply inputs to export production. This can reduce the negative impacts of high import duties on export competitiveness.
- **Work with Other Nations:** India can collaborate and bring together global partners to push for a fairer and more stable international trade system. They can come together to revive the World Trade Organisation (WTO) platform or try to develop a new system.

Conclusion:

- The immediate impact of the tariffs on the growth rate of India may be managed but continuation of this kind of trade regime will not be in the interests of all countries including the U.S. and India.

11) India- Middle East Economic Corridor

Source: Indian Express | Syllabus: GS II: Bilateral, Regional and Global Groupings and Agreements involving India and/or affecting India's interests

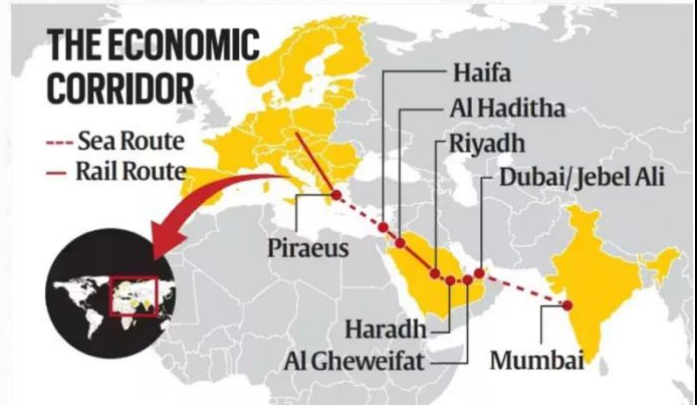
Context:

- India's National Security Council Secretariat held a meeting of envoys and officials from the United States, UAE, Saudi Arabia, France, Italy, Germany, Israel, Jordan and the European Union, recently, to discuss progress on the India-Middle East-Europe Economic Corridor (IMEC).



What is IMEC?

- On the **sidelines of the G20 Leaders' Summit** (Sept. 2023), Leaders of India, European Union, France, Germany, Italy, Saudi Arabia, UAE and US announced an MOU committing to work together to develop a new **India-Middle East-Europe Economic Corridor (IMEC)**.
- The IMEC will comprise **two separate corridors**,
 - the **east corridor connecting India to the Gulf and**
 - the **northern corridor connecting the Gulf to Europe.**
- The corridor will provide reliable and cost-effective **cross-border ship to rail transit networks to supplement existing maritime routes.**
- It intends to increase efficiency, reduce costs, secure regional supply chains, increase trade accessibility, enhance economic cooperation, generate jobs and lower greenhouse gas emission.
- This will ultimately result in a transformative **integration of Asia, Europe and the Middle East (West Asia).**



Significance of IMEC for India:

- Faster trade route to Europe:** IMEC can cut shipping time from India to Europe by around 40% compared to the Red Sea route, making Indian exports more competitive in European markets.
- Strategic diversification** by providing an alternative to the Red Sea corridor, it reduces vulnerability to disruptions like Houthi attacks on shipping routes.
- Strengthened Gulf partnerships:** It can help build on India's strong ties with the UAE and Saudi Arabia. These countries already have strategic agreements and brisk trade with India (Eg: digital payment integration such as UPI).
- Multisectoral cooperation:** IMEC scheme includes development of shared infrastructure for **electricity, digital connectivity, and clean hydrogen exports** thus leading to broader economic links.
- Enhanced geopolitical standing:** It can help position India as a central link between Asia, the Gulf, and Europe, increasing its influence in global connectivity and trade networks.

Current Challenges in the implementation of IMEC:

- Gaza conflict impact:** Israel's war in Gaza has caused major regional tensions due to large casualties and reckless nature. This has stopped cooperation between players like Saudi Arabia, Jordan and UAE with Israel on the IMEC project.
- Rising trade insurance costs:** Conflict in the region has raised cargo insurance premiums. This makes trade through the corridor more expensive.
- Underdeveloped cross-Gulf railway:** The railway link between Saudi Arabia and the UAE is still incomplete. This slows the connection between the eastern and western parts of IMEC.
- Limited trade harmonisation:** There is no common tariff standard across the corridor. Financial integration is low, and port capacities vary greatly.
- Intra-Gulf economic rivalry:** Saudi Arabia and the UAE have competing trade policies. This rivalry hurts unity needed for IMEC's success.

Conclusion:

- The lasting solution to help in the implementation of IMEC lies in solving the **Israel-Palestine Conflict**. This fundamental Middle East problem should be brought to an end to ensure peaceful and inclusive development of the region.



- India with its partners can **focus on the eastern leg** using existing strategic partnerships, especially with the UAE and Saudi Arabia.
- Working on trade facilitation issues such as tariffs, insurance, and port capacities can prepare the corridor for full operation when conditions improve.

12) Citizen Engagement in Health Governance

Source: The Hindu | Syllabus: GS II: Government Policies and Interventions for Development in various sectors and Issues arising out of their Design and Implementation

Context:

- Doorstep healthcare for people in India is provided in many states like Tamil Nadu's *Makkalai Thedi Maruthuvam* (2021) and Karnataka's *Gruha Arogya* (2024).
- These schemes show a progress in proactive healthcare, they also raise the question of **how effectively citizens can formally engage with and influence health governance** at different levels.
- **Health governance** refers to the **processes, structures, and institutions** through which decisions about **health policies, services, and systems** are **made and implemented**.
 - It involves **government bodies, civil society, and other stakeholders** working together to ensure accountability, equity, and effectiveness in health care.

Need of Citizen engagement in Health Governance:

- **Affirms self-respect:** People's participation recognises citizens as active agents in shaping health systems rather than just passive recipients of care.
- **Counters epistemic injustice:** It values community knowledge and lived experiences alongside professional expertise.
 - *Epistemic injustice refers to the unfair treatment of people as knowers, where their knowledge, experience, or credibility is undervalued or dismissed. It means treating someone's ideas or experiences as unimportant or not believable.*
- **Democratic values:** It ensures that **people have a role** in decisions affecting their health and healthcare services.
- **Strengthens accountability:** It makes health systems and officials answerable to the public.
- **Challenges elite dominance:** It reduces the control of decision-making by a small group of powerful actors.
- **Reduces corruption:** It increases transparency through citizen oversight in governance.
- **Mutual understanding and trust:** It creates stronger relationships between providers like the front line workers and general public.
- **Improves service uptake:** It enhances the use of healthcare services through community involvement.
- **Better health outcomes:** It leads to improved health by aligning services with community needs.

Government Measures for Citizen Engagement in Health Governance:

- **National Rural Health Mission (NRHM)** launched in 2005 institutionalised public engagement in health governance by creating formal spaces for citizens to participate in decision-making about health services.
- **Village Health Sanitation and Nutrition Committees (VHSNCs)** were established to be inclusive, particularly of women and marginalised groups, and were supported by untied funds to enable local health initiatives.
- **Rogi Kalyan Samitis** were created to involve communities in the management and improvement of health facilities.



- **Mahila Arogya Samitis** were introduced in urban areas as platforms for women to engage with health planning and service delivery in their communities.
- **Ward Committees in urban areas**, which are a part of Local self governing system, allow residents to participate in governance processes, including those related to health.

Challenges in Citizen Engagement Process:

- **Inactive or weak engagement platforms:** Committees such as Village Health Sanitation and Nutrition Committees (VHSNCs) and Mahila Arogya Samitis are missing in some areas, and where they exist, they face issues like unclear roles, infrequent meetings, poor intersectoral coordination, and underutilisation of funds.
- **Social hierarchies:** Deep-rooted inequalities in society marginalise certain groups and prevent their genuine participation in health governance.
- **Top-down mindset:** Policymakers and health workers view communities as passive “beneficiaries” rather than as rights-holders or active partners in shaping health systems.
- **Medicalised leadership:** Health governance is dominated by doctors trained mainly in biomedical models. Leadership roles are mostly given based on seniority rather than public health expertise.
- **Resistance to engagement:** Health system actors may resist public participation due to fears of increased workload, greater accountability pressures and the lack of a level playing field in governance processes.
- **Tokenistic or absent community input in planning:** Although bottom-up planning is promoted in policy under the **National Health Mission**, in practice, genuine community participation in planning is rare.
- **Alternative, adversarial channels:** In the absence of functional or inclusive platforms for engagement, citizens resort to protests, media campaigns, and legal action to express their concerns.

Way Forward:

- **Fundamental mindset shift:** Community engagement should be valued as much as the outcomes it aims to achieve, rather than being treated just as a means to meet programme targets.
- **Empowering communities:** Citizens should be empowered by provision of information about health rights and governance platforms, adequate civic awareness from an early stage, intentional efforts to reach marginalised groups, and equipping them with the knowledge, tools, and resources needed to participate effectively in health decision-making.
- **Sensitise health system actors:** Health professionals should be encouraged and made to view **communities as partners** instead of passive recipients.
 - Health System providers should be made to move beyond framing poor awareness as the main reason for low health-seeking behaviour.
- **Platforms for public engagement:** Ensure that existing or new platforms are active, inclusive, and meaningful in enabling citizen participation in health governance.



13) Freedom to Innovate

Source: Yojana | Syllabus: GS-II: Important Aspects of Governance, Transparency and Accountability, E-governance- applications, models, successes, limitations, and potential; Citizens Charters, Transparency & Accountability and institutional and other measures

Context

- India's innovation ecosystem, as detailed in the attached article, highlights a comprehensive and evolving landscape shaped by historical legacy, constitutional values, governance reforms, and dynamic sectoral initiatives.

Historical and Constitutional Foundations

- Innovation is deeply rooted in Indian civilization, evolving from ancient agricultural revolutions and knowledge hubs like **Takshashila and Nalanda** to contemporary digital platforms.
- This tradition has been sustained through resilience despite colonial rule and disruptions.
- Constitutionally, **innovation aligns with rights to equality, dignity, and the duty to develop a scientific temper**, positioning it as a tool for empowering citizens and driving development.

Strategic Policy and Governance

- Recent reforms have established specialized institutions and allocated substantial funding for research and development (R&D).
- The Anusandhan National Research Foundation (ANRF)** enables easier access to R&D resources for universities and private-sector collaborators.
- The 2025 Budget pushes ₹20,000 crore for strategic R&D, coupled with dedicated Deep-Tech Funds, 10,000+ research fellowships, and a strong focus on strategic technologies such as **AI, quantum computing, biotechnology, and semiconductors**. Policies aim to move innovation from a privilege to a national imperative, fostering public-private partnerships and incentivizing risk-taking and commercialization.

Grassroots and Sectoral Innovations

- Grassroots innovation receives attention through the **National Innovation Foundation, Atal Innovation Mission, Atal Tinkering Labs, and Unnat Bharat Abhiyan**.
- These programs promote regional solutions, rural entrepreneurship, and community-driven development, ensuring that innovation is not confined to metropolitan centers.
- In agriculture, initiatives embrace drones, **AI, and IoT (Agriculture 4.0)**, supported by targeted youth programs and government hackathons.
- Health innovation is powered by **Ayushman Bharat Digital Mission** and national registries, with policies targeting affordable pharmaceuticals and digital health records.

Digital Public Infrastructure and Regulatory Reform

- India's digital public infrastructure—built on **Aadhaar, UPI, DigiLocker, and ONDC**—enables inclusive access to services, supporting startups and MSMEs across urban and rural divides.
- The government is also addressing **systemic barriers** through regulatory reforms, new funding models, and streamlined processes for research and commercialization.
- These initiatives aim to make innovation **more accessible, transparent, and effective in tackling national challenges**.

Impact and Global Standing

- India's innovation ecosystem is undergoing rapid expansion, becoming the world's third largest startup environment, with **1.57 lakh recognized startups and more than 100 unicorns as of 2025**.
- Startups from Tier 2 and Tier 3 cities have risen to comprise over half the ecosystem, reflecting systemic maturity, regional inclusivity, and a democratized landscape for entrepreneurship.



India's rise in global ranking shows progress in aligning policies with international best practices and fostering an environment conducive to innovation-led growth.

Conclusion

- By balancing strategic investments, grassroots empowerment, and digital equity, India moves toward becoming a global leader in science, technology, and innovation. The drive to make innovation accessible and impactful reflects its importance for national development and global competitiveness.



GS-3

1) E-waste Management in India

Source: The Hindu | Syllabus: GS III: Conservation, Environmental Pollution and Degradation, Environmental Impact Assessment

Background

- India confronts a formidable challenge of managing e-waste. India's e-waste volumes soared by 151.03% in six years, from 7,08,445 metric tonnes in 2017-18 to 17,78,400 metric tonnes in 2023-24.
- India is the world's third-largest producer of E-waste** at present. **Only 10% of e-waste reaches formal recycling systems** in India.
- In this situation, India's system for management of E-waste has many inadequacies.

E-Waste (Management) Rules, 2022

- E-Waste (Management) Rules, 2022 is in force from 1st April, 2023. The objective of the said rules is to take all steps required to **ensure that e-waste is managed in a manner which shall protect health and environment against any adverse effects**, which may result from such e-waste.
- These rules put in place an **improved Extended Producer Responsibility (EPR)** regime for e-waste recycling in which all the manufacturer, producer, refurbisher and recycler are required to register on a portal developed by the Central Pollution Control Board (CPCB).
- This would **facilitate and channelize the informal sector** to the formal sector for doing business and ensure recycling of e-waste in an environmentally sound manner.
- Provisions for **environmental compensation and verification & audit** have also been introduced.
- These rules also **promote Circular Economy** through EPR regime and scientific recycling/disposal of the e-waste.

Challenges in India's E-waste Management System

- Environmental degradation:** Improper e-waste disposal releases toxic substances like lead, mercury, cyanide, and sulphuric acid into air, water, and soil, which harms the ecosystems.
- Health hazards:** Informal recyclers suffer due to long exposure to toxins which causes serious health issues and lifespan loss.
- Economic loss:** India loses over \$10 billion annually due to environmental damage and over ₹80,000 crore in unrecovered critical metal value due to crude recycling methods.
- Loss of tax revenue:** Informal recycling is largely unaccounted for, causing an estimated \$20 billion loss in annual tax revenue.
- Impact on the formal recycling sector:** The informal sector's cost advantage discourages investment in safe, formal recycling infrastructure.
- Informal repair ecosystem** remains **mostly excluded** from digital, skilling, and sustainability frameworks despite being important to extending product lifespans.
 - In the E-Waste (Management) Rules, 2022, there is only a passing reference to using repair service to reduce the generation of e-wastes.
- Obstacle to circular economy:** Inefficient recycling wastes valuable resources and prevents India from transforming e-waste into economic opportunity through sustainable recovery and reuse.

Measures to address the issues in E-waste disposal

- Extended Producer Responsibility:** EPR should be enforced strictly with regulations that are environment friendly and easy to follow. This can hold producers accountable for safe end-of-life product disposal.



- *Extended Producer Responsibility is a policy approach that makes producers responsible for the end-of-life management of their products and packaging.*
- *It shifts the burden of waste management from municipalities and taxpayers to the producers who place those products on the market.*
- **Formalise the recycling sector:** Integration of informal recyclers into the formal system through training, certification, and incentives to promote safe and efficient recycling practices can make the sector more sustainable.
- **Recycling and repair infrastructure:** Advanced and decentralised recycling facilities equipped with modern technology can handle growing e-waste volumes safely and efficiently.
- **Promote sustainable product design** Encourage manufacturers to adopt eco-friendly, durable, and recyclable product designs to reduce future e-waste generation.
- **Integration of informal repair systems:** India must recognize these workers as **stewards of sustainability**, providing them access to **training, certification, social protection, and digital platforms**.
- **Repair-friendly product design:** Hardware standards and procurement policies should require that products be **designed for disassembly and easy repair**, not just for compactness or obsolescence.
- **AI for repair knowledge:** AI tools can help **document tacit repair expertise**, create decision trees, and enable broader learning without stripping away local context or skill.
- **Public awareness and consumer participation:** Campaigns should go beyond disposal awareness to promote **repair culture** and reduce the throwaway mindset.

Conclusion

- India's e-waste management challenge is both a crisis and an opportunity. A sustainable future requires **not only recycling** but also **repair, reuse, and design reform**.
- With rising population and growing E-waste accumulation, managing it effectively can provide a great service to the environment.
- Managing e-waste effectively can provide immense environmental, economic, and social value but only if **inclusive, repair-ready systems** are built into the heart of India's sustainability roadmap.

2) Money Laundering

Source: The Hindu | Syllabus: GS III: Challenges to Internal Security through Communication Networks, Role of Media and Social Networking Sites in Internal Security Challenges, Basics of Cyber Security; Money-Laundering and its prevention

Definition and Context:

- Money laundering, as defined under **Section 3 of Prevention of Money Laundering Act (PMLA)**, is an act through which processes or activities connected to the **proceeds of crime are concealed**, possessed, acquired, or used and **projected as untainted property** or claiming to be untainted property.
 - In simple terms, it means **hiding or using money gained from crime and making it look like it came from a legal source**.
- A report submitted by the Finance Minister in the Rajya Sabha states that **5,892 cases** were taken up by the Enforcement Directorate (ED) under the Prevention of Money Laundering Act (PMLA) 2002, since 2015.
 - Of these cases, **only 15 convictions** have yet been ordered by special courts showing that the number of convictions is far from satisfactory.
 - The report also shows that **money laundering cases have been rising**, signalling that the government has not been able to check such financial crimes.



Process of Money Laundering:

- **Placement:** This is the first stage where illicit money is introduced into the financial system. It is usually done by breaking large amounts into smaller deposits, a method known as "smurfing", to avoid detection.
- **Layering:** In this stage, the money is moved through complex layers of financial transactions. The goal is to obscure the origin of the funds by routing them through multiple accounts, companies, or jurisdictions.
- **Integration:** This is the final stage where the laundered money re-enters the legitimate economy. It is invested in real estate, businesses, luxury assets, or other legal financial ventures to make it appear clean and legitimate.

Problems to Indian Economy due to Money Laundering:

- **Loss of Government Revenue:** Money laundering leads to large-scale tax evasion, reducing the funds available for public services and infrastructure. This weakens the government's ability to invest in development and welfare programs.
- **Weakened Financial Institutions:** It damages the credibility of banks and financial systems by introducing illegal funds. This can reduce investor confidence and increase the risk of financial fraud.
- **Inflation and Economic Distortion:** Illegal money entering markets can push up prices of assets like real estate. It distorts supply-demand dynamics and affects affordability for genuine buyers.
- **Harm to Legitimate Businesses:** Criminally funded businesses can offer unfair pricing, hurting honest enterprises. This discourages entrepreneurship and weakens healthy market competition.
- **Terrorism and Crime Funding:** Laundered money is used to finance terrorism and organized crime. This threatens national security and creates social and political instability.

Government Measures to tackle Money Laundering:

Legal Framework and Compliance

- **Prevention of Money Laundering Act, 2002:** India's primary legislation to combat money laundering, which aligns with Financial Action Task Force (FATF) recommendations by criminalizing money laundering and enabling the Government or the public authority to confiscate the property earned from the illegally gained proceeds.

Institutional framework

- **Enforcement directorate (ED):** A government agency responsible for enforcement of the **Foreign Exchange Management Act, 1999 (FEMA)** and certain provisions under the **Prevention of Money Laundering Act (PMLA)**.
- **Finance Intelligence Unit- India (FIU-IND):** National agency responsible for receiving, processing, analyzing and disseminating information relating to suspect financial transactions.

Engagement with International Bodies:

- **FATF Membership:** India is an active member of the FATF and the Asia/Pacific Group on Money Laundering (APG), participating in mutual evaluations and implementing FATF recommendations.
- **Egmont Group:** FIU-IND is a member of the Egmont Group, which facilitates international cooperation and information sharing on financial intelligence.
- **Bilateral Treaties:** India has entered into mutual legal assistance treaties (MLATs) and extradition treaties with several countries, enhancing cross-border cooperation.

Issues in current mechanisms:

- **Low Conviction Rate:** Though thousands of cases filed under PMLA, only a handful have led to convictions. This reflects weak investigation, poor evidence gathering and procedural lapses.
- **Political Misuse of Law:** Authorities have been accused of using the law to target political rivals. Such selective enforcement damages the credibility of legal institutions.
- **Inter-Agency Coordination:** Enforcement bodies work in isolation without proper data or intelligence sharing. This reduces the overall efficiency of tracking and prosecuting offenders.



- **Judicial Delays:** Special courts handling PMLA cases are overburdened, leading to prolonged trials. Delay in resolution hampers justice and weakens deterrence.
- **Arbitrary Use Without FIR:** Under the Prevention of Money Laundering Act (PMLA), authorities are allowed to initiate investigations and attach properties based on an Enforcement Case Information Report (ECIR), even when no First Information Report (FIR) or formal criminal case has been registered for the offence. This has raised serious concerns in the fairness of the process.

Way Forward:

- **FATF Recommendations:** Authorities should adhere to the Financial Action Task Force guidelines to improve investigation standards and prevent misuse of the law.
- **Proper handling of Cases:** Money laundering cases must be dealt with responsibly to avoid unjustified actions and ensure only genuine cases are pursued.
 - The law should be applied fairly and **not used as a tool for political targeting**, as this undermines its credibility and purpose.
- **Improve International Cooperation through DTAA:** Strengthen the use of **Double Taxation Avoidance Agreements (DTAA)** with other countries to enhance information exchange and curb cross-border money laundering.
- **Address Implementation Gaps:** The growing number of cases and low convictions indicate poor implementation; improving enforcement efficiency is essential to make the law effective.

3) Radicalisation

Source: The Hindu | Syllabus: GS III: Challenges to Internal Security through Communication Networks, Role of Media and Social Networking Sites in Internal Security Challenges, Basics of Cyber Security; Money-Laundering and its prevention

Definition

- Radicalization is generally defined as a process through which an **individual adopts an increasingly extremist set of beliefs and aspirations**.
- Radicalisation has been described as a four stage process:-
 - **Pre-radical:** A person joins or identifies with a group or organisation.
 - **Self-identify:** The person believes and accepts the beliefs and views held by the group or organisation.
 - **Indoctrination:** The person is groomed by the group or organisation pulling them further down the pathway.
 - **Violent Extremist (VE) activities:** The person becomes involved in violent and extremist acts.
- Radicalisation can take place not only through **physical meetings** but also through **online meetings**, sharing of indoctrinating content online or offline.

Factors leading to Radicalisation

- **Structural motivators:** These include **repression, corruption, unemployment, inequality, discrimination, a history of hostility** between identity groups, external state interventions in the affairs of other nations, and so on.
 - **Marginalized ethnic or religious communities** (e.g., **Rohingya in Myanmar**) may become radicalized due to persistent inequality and lack of representation.
- **Individual incentives:** These include a **sense of purpose** (generated through acting in accordance with perceived **ideological tenets**), adventure, belonging, acceptance, status, material enticements, fear of repercussions by VE entities, expected rewards in the afterlife, and so on.
 - **Individuals rejected by peers** or society may feel embraced by extremist networks, which often provide a strong sense of identity.



- Groups like **Al-Shabaab in Somalia** offer **monthly wages** and food, attracting impoverished recruits.
- **Enabling factors:** These include the presence of **violent extremist mentors** (including religious leaders and individuals from social networks, among others), access to radical online communities, social networks with violent extremist associations, access to weaponry or other relevant items, a comparative lack of state presence, an absence of familial support, and so on.
 - Founder of **Lashkar-e-Taiba, Hafiz Saeed** is an example of a **violent extremist mentor**.
 - He uses **ideology, charisma, religious authority, and organizational infrastructure** to radicalize and mobilize individuals toward **terrorism**.

Radicalisation as a cause for Terror Acts

- **Legitimization of Violence:** As individuals become more radicalized, they may increasingly see **violence as a legitimate means** to achieve ideological, political, or religious goals.
- **Justification of Terrorist Acts:** Radicalized individuals will try to **justify terrorism** as a necessary or honorable action in defence or promotion of their beliefs.
- **Non-Linear Path to Violent Action:** Radicalization is a **non-linear process**, meaning justification for violence can occur **before or after ideological commitment**, and may still result in **support or execution of terrorist acts**.
- **Socialization into Violent Ideologies:** Radicalization often involves **learning and socialization** into a worldview that endorses violence, which increases the likelihood of engaging in terrorism.
- **Influence of Recruiters and Enabling Factors:** Violent extremist recruiters exploit personal vulnerabilities, pushing radicalized individuals toward **active participation in terrorism**.
- **Trigger Events and Catalysts:** Radicalized individuals may **not act until a triggering event** (e.g., perceived injustice or a personal crisis) pushes them over the edge, resulting in violent or terrorist actions.

Measures to Counter Radicalisation

- **Reforming Education:** Introduce peace education, empathy training, and conflict resolution into the school curriculum.
 - **Samagra Shiksha Abhiyan** scheme can be **expanded to include peace studies, media literacy, and ethics education**, especially in conflict-sensitive regions like Jammu & Kashmir.
- **Community-Level Youth Engagement:** Local youth councils involving teachers, social workers, reformed offenders, and police can be created to monitor and guide vulnerable youth.
 - **Rashtriya Yuva Sashaktikaran Karyakram (RYSK)** can be adapted into a preventive tool against radicalisation by involving local mentors and conducting outreach in sensitive districts.
- **De-Radicalisation using Digital media:** Mobile-friendly platforms that teach media literacy and help young users identify fake news, hate speech, and radical content should be developed.
 - **PM eVIDYA and DIKSHA Platforms** can integrate modules on digital hygiene, cyber ethics, and de-radicalisation education.
- **Economic Upliftment:** Economic alternatives to at-risk youth through skills training and job placement can pull them away from radicalisation.
 - **Pradhan Mantri Kaushal Vikas Yojana (PMKVY)** can be adapted to create custom skill centres to act as rehabilitation and redirection hubs for youth susceptible to radicalisation.
- **Mental Health Support and Emotional Resilience:** Mental health services should be made available at all levels to address trauma, identity crises, and emotional voids that extremists often exploit.
 - **National Mental Health Programme (NMHP)** can provide mental health professionals to work with schools and panchayats to identify and counsel at-risk youth and offer therapeutic interventions.



- **Adequate Funding:** There should be funds given to those who are closest to youth i.e, school principals, sports coaches, and local non-governmental organisation workers. They should be **empowered with training and resources** to lead real change at ground level.

Conclusion

- The cure to extremists who arise within the territory of the country is not always a military operation. It could be cured by a good teacher, a timely mentor and a government that outlines a road map for its young and guides them in the right path.

4) Employment Linked Incentive Scheme

Source: The Hindu | Syllabus: GS III: Indian Economy and issues relating to Planning, Mobilization of Resources, Growth, Development and Employment

Context:

- On July 1, 2025, the Government of India approved the Employment Linked Incentive (ELI) Scheme to support employment generation, with a budget of nearly 1 lakh crore Rupees.
- ELI is a scheme aimed at directly **incentivizing companies based on the number of new jobs they create**.
- Unlike traditional incentive schemes like **Production Linked Incentives (PLI)**, which **reward companies based on their production output**, ELI focuses purely on employment.
- The idea is to provide **financial incentives to companies for each new payroll job they add**, irrespective of the industry they belong to or the nature of their production.
- While being an ambitious attempt to generate employment, many concerns are highlighted in this scheme by experts.

Shortcomings in the ELI Scheme:

- **Employer-centric design:** The scheme is built around providing fiscal incentives to employers for creating jobs rather than directly improving workers' conditions or rights.
- **Skill mismatch:** It does not address the significant **gap between the skills workers possess and the qualifications required for available jobs**.
- **Reinforces capital-labour asymmetry:** The scheme gives more **power to employers** by offering them subsidies. This can make **wage gaps bigger** and reduce workers' ability to negotiate better pay or conditions.
- **Informal sector:** The eligibility criteria favour **firms that are registered** with the Employees' Provident Fund Organisation (EPFO). This leaves out about 90% of the labour force that works in the informal economy without access to the scheme's benefits.
- **Disguised unemployment:** Employers could show existing jobs as new just to get subsidies. This can lead to workers being counted as employed without real increases in output.
- **Manufacturing sector bias:** The scheme focuses heavily on manufacturing. This is a problem because automation and machines are reducing the number of jobs in this sector.
- **Neglect of other sectors: Agriculture and services** employ most workers in India. These sectors receive **little attention** or benefits from the scheme.
 - Many **women and rural youth** work in agriculture and services. Because the scheme favours manufacturing, these groups get left out.
- **Short-term focus:** The scheme aims to **quickly increase** job numbers. It does not make sure that jobs are long-lasting, good quality, or protect workers' rights.

Other Factors Affecting Employment Scenario in India:

- **Low job fit and Underemployment:** Only 8.25% of graduates have jobs that match their qualifications. Many work in roles below their education level.



- **Lack of training:** Only 4.9% of youth have formal vocational training. This limits their chances of getting good jobs.

Solutions to overcome the Challenges in ELI:

- **Improve skills and education:** The government should invest in **better training systems**. This will help low-skilled workers get jobs that match industry needs.
- **Support informal workers:** Authorities should ensure **social security and formal contracts** to informal workers. This will make their jobs more secure.
- **Long-term jobs:** Policies should focus on jobs that last and improve productivity. They should avoid only chasing short-term employment gains.
- **Worker rights:** Policymakers should ensure that the new jobs do not weaken worker protections. They should safeguard workers' ability to negotiate fair wages.
- **Focus on all Sectors:** Employment policies should benefit all sectors, not just formal or manufacturing. This will make opportunities more equal.
- **Quality over Quantity:** Policymakers should not only count how many jobs are created. They should work to make jobs better and more productive.

Conclusion:

- The ELI Scheme is a major step in addressing unemployment but its shortcomings can prolong existing inequalities.
- A stronger focus on skills, informal sector inclusion, and long-term job quality is essential for real impact and this alone can lead to sustainable employment growth.

5) Ethanol Blending

Source: The Hindu | Syllabus: GS III: Conservation, Environmental Pollution and Degradation, Environmental Impact Assessment

Background and Definition:

- Biofuels are liquid or gaseous fuels produced from **renewable biomass resources** that are **generally high in sugar** (such as sugarcane, sugarbeet, sweet sorghum), **starch** (such as corn and cassava) or **oils** (such as soybeans, rapeseed, coconut, sunflowers, and palms).
- The two most commonly used biofuels are **ethanol and biodiesel**.
- The **National Policy on Biofuels**, formulated by the **Ministry of New & Renewable Energy** in **2018**, seeks to **mainstream biofuels within the energy and transportation sectors**.
 - This initiative is vital to **reducing India's dependency on imported fossil fuels** and **ensuring energy security** in an **environmentally sustainable manner**.
- The Policy allows **use of surplus food grains for production of ethanol** for blending with petrol.
- Ethanol blending is the **process of mixing ethanol** (a biofuel usually made from crops like sugarcane, corn, or rice) with petrol in different proportions to be used as fuel in vehicles.
 - **E10** = 10% ethanol + 90% petrol
 - **E20** = 20% ethanol + 80% petrol
- The Policy was **amended in 2022** to accelerate the deadline for achieving a **20 percent ethanol blending rate in petrol (E20)**, moving it from **2030** to the more ambitious target of **2025-26**.
- India successfully achieved **20% ethanol blending in petrol** in **July 2025**.

Benefits due to Ethanol Blending:

- **Environmental Benefits:** Ethanol blending **reduces greenhouse gas emissions** by about 30% when using E20 fuel compared to E10. It has already avoided **736 lakh metric tonnes of carbon dioxide emissions**, which is **equivalent to planting 30 crore trees**.
 - Ethanol blending supports India's long-term commitment to achieve **net-zero carbon emissions by 2070**.



- It establishes biofuels and natural gas as essential **“bridge fuels”** in India’s clean energy transition roadmap.
- **Economic Benefits:** Ethanol blending has saved India more than **₹1.44 lakh crore in foreign exchange** between 2014–15 and 2025. It reduces dependence on crude oil imports, thereby strengthening India’s overall energy security.
- **Agricultural & Social Benefits:** The programme ensures assured and timely payments to farmers, which has helped reduce pending payments by Sugarcane mills to sugarcane farmers.
 - It can also **contribute to reducing farmer distress and suicides** in regions like Vidarbha.
- **Automotive & Performance Benefits:** E20 fuel provides vehicles with **better acceleration and smoother ride quality** compared to E10.
 - Its higher octane rating of 108.5, as opposed to petrol’s 84.4, makes it particularly suited for modern high-compression engines.

Concerns in Ethanol Blending:

- **Consumer Concerns:** A survey across 315 districts found that two in three petrol vehicle owners are against the E20 mandate, with only 12% supporting it.
 - Vehicle owners reported concerns of **reduced mileage and increased maintenance costs** when using E20 fuel.
 - The Union **government itself admitted** that there is a **marginal drop in engine efficiency** when vehicles run on E20 fuel.
- **Unequal Consumer Benefit:** Although India saved more than ₹1.40 lakh crore in foreign exchange through ethanol blending and oil prices fell by 65%, public sector **oil companies passed on only a 2% reduction in petrol prices** to consumers, raising concerns that the benefits are not reaching the public.
- **Water Use in Agriculture:** Ethanol production relies heavily on sugarcane, and cultivating **one tonne of sugarcane requires 60–70 tonnes of water**.
 - Since many sugarcane-growing regions in India **do not receive sufficient rainfall**, farmers are forced to depend on **groundwater extraction**, which is unsustainable.
- **Land Degradation:** Unsustainable sugarcane cultivation has accelerated land degradation, and the Desertification and **Land Degradation Atlas of India (2021)** reported that almost **30% of India’s total land area** is already **degraded**.
- **Food Security Concerns:** The diversion of food grains to ethanol production has increased sharply, with 5.2 million metric tonnes of rice and over 34% of corn output allocated for ethanol in 2024–25.
 - This diversion forced India to import about 9.7 lakh tonnes of corn, a six-fold rise compared to the previous year.
- **Trade Pressures:** The United States (US) has criticized India’s **ethanol policies as a trade barrier** and has pushed for relaxed restrictions on ethanol imports from the US.
 - Indian sugar mills warn that such a move could weaken domestic capacity and undermine years of investment in ethanol production.
- **Impact on EV Transition:** Ethanol blending has reduced carbon dioxide emissions, but experts argue that it may **delay the adoption of electric vehicles** in India.
 - EVs can achieve much greater emission reductions, and countries like China and the EU are very fast in their EV adoption compared to India.

Way Forward:

- **Consumer-Centric Measures:** The government should provide **tax incentives or subsidies on E10 and E20 fuels**, as recommended by NITI Aayog, to compensate consumers for efficiency losses.
 - It should also allow **consumers flexibility** in choosing between **ethanol-blended petrol and regular petrol**.



- **Oil companies** should be mandated to **pass on savings** from lower crude imports and reduced forex spending to consumers.
- **Agricultural and Land Sustainability:** Policies must **encourage diversification** away from water-intensive sugarcane by expanding ethanol production from surplus rice, and other crops.
 - The diversion of food grains like rice and maize into ethanol must be carefully monitored to **prevent shortages and rising imports**.
 - Ethanol policy should prioritize using **agricultural waste and non-food feedstocks** to minimize risks to **food security**.
 - Ethanol production targets should be balanced with strong measures to prevent land degradation and unsustainable irrigation.
 - **Regular environmental impact assessments** should be integrated into ethanol policies.
- **EV Transition Strategy:** Ethanol should be treated as a **short- to medium-term “bridge fuel,”** while India simultaneously accelerates its electric vehicle adoption to achieve deeper decarbonisation. Both should be made to work as complements.

6) Need for dedicated Space Legislation

Source: The Hindu | Syllabus: GS III: Awareness in the fields of IT, Space, Computers, Robotics, Nano-technology, Bio-technology and issues relating to Intellectual Property Rights

Context and Background:

- India celebrated its second **National Space Day** on **August 23**.
- India's projects like the Chandrayaan-3's soft-landing near the lunar south pole to the upcoming Gaganyaan, Bharat Antariksh Station are setting new frontiers for its space sector.
- But India lacks a dedicated legal architecture which is necessary to participate in the global race to explore, innovate, and commercialise outer space.

Current Approach to manage Space Sector in India:

- India follows a **methodical and incremental strategy** in framing space legislation.
- The **Department of Space** is proceeding carefully with technical regulations to ensure safe and authorised space operations.
- A **catalogue of Indian Standards for Space Industry** has been created to set safety standards for space activities.
- The **Indian Space Policy** provides guidance on activities that non-governmental entities are encouraged to undertake.
- The **IN-SPACE Norms, Guidelines and Procedures (NPG) 2023** are in place to implement the Indian Space Policy with respect to authorisation of space activities.
 - **Indian National Space Promotion and Authorisation Centre (IN-SPACE)** is a single-window, independent, nodal agency that functions as an autonomous agency in the Department of Space (DOS).
 - It is formed following the Space sector reforms to enable and facilitate the participation of private players.
- However, the **all-in-all “space activities law”** that would incorporate **provisions of the Outer Space Treaty** into domestic legislation and comprehensive regulatory framework is still pending.

Need of a Dedicated Space Legislation:

- **Global obligations:** India has ratified key **UN space treaties**. A national law is required to implement their principles domestically.
 - **Outer Space Treaty, 1967:** Declares outer space as the province of all mankind and prohibits national appropriation.



- **Rescue Agreement, 1968:** Requires states to assist astronauts in distress and return them safely.
- **Liability Convention, 1972:** Makes states liable for damages caused by their space objects.
- **Registration Convention, 1976:** Obligates states to maintain a registry of objects launched into outer space.
- **Moon Agreement, 1979:** Establishes the Moon and its resources as the common heritage of mankind. **India has not ratified this treaty.**
- **Regulatory clarity:** Indian Space Policy 2023 has intent and direction, but does not have legal force. A dedicated space law will create **binding and enforceable rules for both government and private players.**
 - It will provide **predictability** in how approvals are given and activities are monitored.
 - This clarity will give stability to companies, researchers, and investors, as they will know the exact legal framework within which they can operate.
- **Strengthening IN-SPaCe:** IN-SPaCe currently functions **without statutory backing.** Legal authority will make it a **stronger central regulator.**
- **Efficient approvals:** Clear licensing rules, timelines, and processes will reduce delays. It will also remove confusion from multiple ministry approvals.
- **Investments:** Clear Foreign Direct Investment (FDI) norms will make it easier for global investors to put money into India's space sector. Defined rules will **help startups and private companies** raise funds without facing legal confusion.
- **Clear Liability Norms:** Liability coverage will assure investors that risks are managed at the national level. At the same time, **affordable insurance schemes** will protect startups from losses if space assets are damaged, making investment less risky and more attractive.
- **Protecting innovation:** Law can secure intellectual property rights for companies. It can also prevent migration of talent to other jurisdictions.
- **Ensuring safety:** Legislation can mandate accident investigations. It can also create **enforceable space debris management** rules.
- **Independent review:** A statutory **appellate body will resolve disputes.** It will also help prevent conflicts of interest in regulation.

Conclusion:

- Globally, governments recognise the strategic importance of space technologies. Countries like the USA and Japan have enacted frameworks to manage licensing, liability coverage, and commercial rights over space activities.
- For the Indian Space sector to realise its full potential, different stakeholders must work together to standardise and harmonise technologies, improve accessibility and usability. For this to materialise, a dedicated legislation can be of great help.

7) Disinvestment

Source: Business Standard | Syllabus: GS III: Indian Economy and issues relating to Planning, Mobilization of Resources, Growth, Development and Employment.

Definition:

- Disinvestment is the process by which a **government or organization sells or liquidates its stake** (ownership, shares, or assets) in a **public sector enterprise (PSE) or company.**
- In the Indian context, it usually refers to the **government reducing its ownership in public enterprises**, either **partially (minority stake sale)** or **fully (privatisation).**



- In 2021, Prime Minister Narendra Modi said that *“the government has no business to be in business”* outlining a bold disinvestment vision, with a ₹1.75 trillion FY22 target. However, progress has been disappointing, with divestment activity falling below pre-2021 levels.

Rationale for Disinvestment in India:

- **1991 Liberalisation, Privatisation and Globalisation reforms:** The reforms opened most sectors to private participation and reduced government control. This led to the need for a shift away from state dominance in business, which was followed from the time of Independence.
- **Government’s limited capacity:** The state has to prioritise essential public functions like defence, justice, education, and healthcare. Running PSEs consumes scarce time, energy, and resources.
- **Efficiency:** PSEs face bureaucratic delays and excessive focus on processes instead of outcomes. Private ownership can transform their work culture and improve results.
- **Reducing fiscal burden:** Large government capital remains locked in PSEs without adequate returns. Budgetary resources are diverted into equity and loans for PSEs instead of core needs.
 - This expenditure was higher than 50 per cent of the ₹10.2 trillion capex in the FY25 Budget.
- **Revenue generation:** Disinvestment was designed to provide an additional non-tax revenue source. It also helps contain the growing fiscal deficit.
- **Strengthening markets and regulation:** PSEs have the practice of demanding preferential treatment from regulators and thus weakening fair market rules. Equal treatment improves discipline and credibility in markets.
- **Boosting investor confidence:** Privatisation builds trust among investors about reforms and governance. It signals that PSEs will be run with efficiency and accountability.

Problems Slowing down Disinvestment process in India:

- **Policy inconsistency:** Ambitious targets are announced in budgets, but actual disinvestment falls short. This mismatch between policy and implementation weakens reform credibility.
- **Ministerial resistance:** Ministries controlling PSEs are reluctant to give up their administrative powers. Such resistance delays the transfer of ownership and slows privatisation.
- **Bureaucratic fear:** Officials avoid taking bold decisions due to fear of scrutiny from agencies like the **Central Bureau of Investigation (CBI)** and the **Central Vigilance Commission (CVC)**. Concerns over being accused of undervaluing assets create inertia in the process.
- **Misleading justifications:** Disinvestment is stalled with arguments like need for endless restructuring, or citing “strategic reasons.” These excuses are used to delay or block sales, even of profitable PSEs.

Way Forward:

- **Committed disinvestment policy:** The government must revive its declared policy of exiting from all non-strategic sectors and act on it with discipline and urgency. A time-bound and well-planned roadmap should be implemented.
- **Focus on privatisation over stake sales:** Instead of selling small minority stakes, the priority should be full privatisation of selected PSEs. This alone can **change their work culture and improve efficiency**.
- **Planning and execution:** Disinvestment should be backed by professional planning and proper execution mechanisms. Clear guidelines, realistic valuations, and transparency will reduce delays and suspicion.
- **Limit government’s commercial role:** Reducing ministries’ involvement in PSE operations and appointments will free resources for essential public functions. This also aligns with the broader goal of “minimising government.”



8) Artificial Intelligence

Source: Indian Express | Syllabus: GS III: Awareness in the fields of IT, Space, Computers, Robotics, Nano-technology, Bio-technology and issues relating to Intellectual Property Rights

Definition and Background:

- Artificial intelligence, or AI, is technology that **enables computers and machines to simulate human intelligence** and problem-solving capabilities.
 - On its own or combined with other technologies (e.g., sensors, geolocation, robotics) AI can perform tasks that would otherwise require human intelligence or intervention.
 - Digital assistants, GPS guidance, autonomous vehicles, and generative AI tools (like Open AI's Chat GPT) are just a few examples of AI in the daily news and our daily lives.
 - Generative AI** refers to deep-learning models that can generate high-quality text, images, and other content based on the data they were trained on.
- Recently, there were headlines of layoffs in different companies. Some of these were linked to deployment of AI.
- India, with its vast labour pool, should take action to shape the path of AI in ways that its impact on jobs, productivity, and economy is inclusive.
- Researchers have come up with two distinct AI pathways -
 - Automation** and
 - Augmentation**.
- Automation path** aims to use AI to replace human workers, **boosting efficiency** but risking **job losses**.
- Augmentation path** aims to involve using AI to **complement human effort**, enhancing productivity while preserving or expanding employment.

Benefits for India's Employment sector due to AI:

- Job Creation and Evolution:** ServiceNow-Pearson AI Skills Research 2025 report indicates that agentic AI could reshape over 10.35 million jobs and **create 3 million new tech roles** in India by 2030.
 - A 2025 ILO study highlights that, as new tasks emerge in AI deployment, jobs are **likely to evolve rather than disappear**.
 - Agentic AI are AI systems that are designed to autonomously make decisions and act, with the ability to pursue complex goals with limited supervision.*
- Productivity Boost:** Tata Steel has adopted AI co-pilots that assist engineers in their work. Instead of replacing workers, this enhances efficiency and supports more effective operations.
- Worker Well-being:** Siemens is deploying generative AI to streamline processes and improve workplace efficiency. This not only raises productivity but also contributes to a healthier and more supportive work environment.
- Reskilling Opportunities:** Infosys has initiated large-scale programmes to reskill employees for AI-driven roles. Such efforts help workers adapt to evolving job demands and stay relevant in the digital economy.
- Skill Gap Reduction:** Generative AI tools act as collaborative aids for low-skilled workers. They help narrow capability gaps by enabling these workers to perform complex tasks more effectively.
- MSME Empowerment:** With access to AI-based digital tools and infrastructure, small and medium enterprises can expand operations. This can transform them into **engines of employment-rich growth** across the country.

Challenges in Employment Sector due to AI:

- Risk of Job Displacement:** Automation path threatens to replace workers in labour-intensive sectors such as **services**.



- Since services account for **55% of GDP and 31% of employment**, large-scale disruption here could significantly affect livelihoods.
- **Slow Pace of Skilling:** The pace of AI-related skilling and reskilling in India is still slow, particularly among informal and low-wage workers. This creates a gap between the skills workers possess and the competencies demanded by new AI-driven jobs.
- **Market Concentration:** The growing dominance of a few **vertically integrated AI firms** could replicate platform-era distortions (like Google, Amazon, or Meta). This concentration risks placing **critical employment-related AI decisions in the hands of a small number of companies**.
 - **Vertically integrated firms** are companies that **control multiple stages of a supply chain**.
 - In the AI context, this could mean one company controlling: Infrastructure (cloud computing, storage, chips) Models (large language models, foundational AI systems) Applications (AI tools, services built on top).
- **Infrastructure Barriers:** Proprietary standards, bundling of services, and infrastructure lock-ins can restrict smaller firms and startups from accessing AI tools. Such barriers limit healthy competition and reduce the scope of AI-driven job creation.
 - **Proprietary standards:** When AI systems use closed, company-specific standards that prevent compatibility with others.
 - **Bundling of services:** Forcing users to buy multiple AI services together instead of choosing only what they need.
 - **Infrastructure lock-ins:** Situations where businesses become dependent on one AI provider's computing, storage, or tools, making it hard to switch to competitors.
- **Unequal Exposure:** Agriculture employs the largest share of India's workforce, yet its exposure to AI remains minimal.
 - If AI adoption favours **only high-skill and well-resourced workers**, existing economic and social **divides could deepen**.
 - Instead of bridging opportunity gaps, AI may **reinforce** them unless addressed through inclusive policies.

Way Forward:

- **Open Markets:** India should keep AI ecosystems accessible for all types of companies to prevent dominance by a few firms. This would ensure fair competition and broader participation.
 - Equal access to cloud, edge computing, and datasets should be provided as public goods. This would allow startups and MSMEs to innovate effectively.
- **Open Standards:** The adoption of open and interoperable systems is necessary to avoid vendor lock-ins. Shared infrastructure would make AI growth more inclusive.
- **Support Local Innovation:** Indigenous development of Small Language Models, domain-optimized AI tools, and local language applications must be prioritised. Such efforts will ensure AI adoption is tailored to India's diverse needs.
- **Infrastructure Support:** Public investment should not only focus on large startups but also on incubators, accelerators, and mentorship for a wider set of enterprises. By supporting sustainable startups and MSMEs, the government can build a robust ecosystem that generates employment-rich growth.



9) Power at the centre

Source: Indian Express | Syllabus: GS III: Infrastructure: Energy, Ports, Roads, Airports, Railways etc.

Introduction:

- As **China** rapidly transforms into the world's first major "**electro-state**", an economy that has made the furthest advances in electrifying its economy based increasingly on renewables, **India** faces an urgent imperative to **reform its power sector fundamentals**.
- The **industries and technologies defining the future**—artificial intelligence, electric vehicles, and data centers—are **all electricity-intensive**.
- This transformation represents a fundamental shift where **electricity, rather than software, will drive global economic dominance**.

India's Current Economic Vulnerabilities:

- India's economic outlook remains uncertain, with potential growth slowing due to several structural weaknesses:
 - Declining **private investment levels**;
 - Weak **domestic consumption patterns**;
 - Struggling **manufacturing export performance**;
 - Anticipated **reduction in China-plus-one investment opportunities** due to Trump administration policies.

1991 Moment:

- Current economic conditions evoke **comparisons to India's 1991 crisis**, suggesting the urgent need for **comprehensive supply-side reforms** to enhance productivity and competitiveness.
- However, one sector stands out as particularly critical for this transformation: the **electricity sector**.

Electricity Sector's Structural Problems:

- The electricity sector's problems are extensively documented:
 - **Chronic losses** in distribution companies (DISCOMs)
 - Persistent **operational inefficiencies**
 - **Compromised state government finances**
 - **Repeated bailout cycles** without sustainable solutions.

Three Critical Facts About Electricity's Economic Impact:

Fact 1: 100% Manufacturing Tax:

- Indian manufacturing firms pay electricity costs that are **approximately twice the efficient cost of supply**, effectively imposing a nearly 100% tax on production.
- Nobel Prize winners **Peter Diamond and James Mirrlees** showed that **no fiscal system should tax production**. India's electricity pricing violates this principle while other tax reforms attempt to adhere to it.
 - **Inefficiencies in power distribution sector management** account for half of this tax and the remaining half owes to **cross-subsidization policies** where industrial and commercial users subsidize agriculture and domestic consumers.
- This **tax falls disproportionately on small and medium enterprises**, as large firms can access **captive power supply or negotiate favorable terms** with state governments.

Fact 2: Shifting Subsidy Landscape:

- **Households today account for almost as much of the electricity subsidies as agriculture**.
 - **Electricity subsidies to the agricultural and domestic consumers** amount to about **1.2-1.3 per cent of GDP**. Of this, **agriculture** used to account for **71 per cent** in 2015, which has declined to **53 per cent** in 2024-25.



- Correspondingly, **households**, which accounted for **29 per cent** of the subsidy in 2011, now **account for almost as much as agriculture today**.
- The **competitive populism** in electricity pricing has led to **households becoming big beneficiaries of subsidies**.

Fact 3: The Regressive Reality of Subsidies:

- Between **70-85% of electricity subsidies flow to middle-class and wealthy households** rather than genuinely poor consumers.
- These subsidies for the wealthy **provoke taxes (through cross-subsidies)** on economic activity, creating a **"double whammy of inefficiencies."**

Reform Framework and Principles:

Effective electricity sector reform requires adherence to **four fundamental principles**:

1. **Radical Simplicity:** Electricity tariffs should vary **only for technical reasons**, not policy considerations.
2. **No Inefficiency Charges:** No electricity user should pay for supply inefficiencies.
3. **Cost Recovery from Non-Poor:** All users except the genuinely poor should pay efficient supply costs.
4. **No Above-Cost Pricing:** No user should pay more than efficient supply costs.

Other Focus Areas:

- Greater emphasis should be placed on enabling **orderly exit mechanisms** to increase pressure on state governments and DISCOMs to reform.
- Successful transition will require **coordinated burden-sharing between central and state governments** to finance transition costs.

Conclusion:

- The electricity distribution sector represents one of the final **major public sector monopolies** inflicting substantial economic damage. Its reform has become essential for India's economic competitiveness.
 - **India's telecommunications sector** provides a relevant model. Subjecting the public sector telecommunications monopoly to competitive pressure sparked the country's **IT revolution**. A similar transformation is overdue in the electricity sector.

10) Co-firing of Bio Mass

Source: Business Standard | Syllabus: GS III: Conservation, Environmental Pollution and Degradation, Environmental Impact Assessment

Definition and Context:

- **Biomass co-firing** is the process of **simultaneously burning biomass**, such as agricultural waste or wood, with **coal in a thermal power plant** to generate electricity.
- **Biomass pellets** are a **small, cylindrical, and compressed form of organic material** derived from various renewable sources.
- Biomass pellets are typically produced from a variety of organic materials like **wood, wood chips, sawdust, agricultural residues, energy crops, etc.**
- Under the **Union Ministry of Power's SAMARTH Mission (Sustainable Agrarian Mission on Use of Agri Residue in Thermal Power Plants)**, all coal-based thermal plants are currently required to **replace 5 per cent of their coal with biomass pellets**.
 - This proportion will be **raised to 7 per cent this year**.



Potential of Biomass co-firing in India:

- **Emission Reductions:** Biomass co-firing can lower CO₂ emissions by 15–20% for every unit of electricity. It provides a **low-cost way to reduce the carbon footprint** of coal-based power plants.
- **Air Pollution Mitigation:** **Stubble burning** in Punjab and Haryana contributes up to **40% of winter air pollution in the Indo-Gangetic Plain**. Using stubble residues for biomass pellet production reduces burning and helps improve seasonal air quality.
- **Waste Utilisation:** India generates over 500 million tonnes of **agricultural residues** each year. About **140 million tonnes remain surplus** and can be converted into biomass pellets instead of being discarded.
- **Farmer Incomes:** Farmers can earn **₹3,000–6,000 per acre** by selling residues to pellet manufacturers.
- **Job Creation:** Full-scale deployment of biomass co-firing **could create over 50,000 direct jobs**. Employment opportunities also arise in pellet production, transport, and supply chain services.
- **Rural Economy:** If even a **third of India's surplus residue** were monetised, it could support **10–20 million farmer families** and translate into **₹6,000–24,000 crore** in new rural revenues annually.
- **Inclusive Development Pathway:** Biomass co-firing has the potential to bring together the **interests of farmers, rural workers, energy companies, and environmental advocates** in a balanced manner.

Challenges hindering greater adoption of Biomass cofiring:

- **Uneven Uptake:** Some public-sector utilities have made progress by utilizing the co-firing process, but others are lagging behind. This uneven adoption slows the overall impact of the SAMARTH Mission.
- **Cost Concerns:** Power producers are worried about the **additional expenses linked to biomass procurement**. There are no clear price benchmarks and due to this, plants are cautious in taking long-term adoption measures.
- **Technical Compatibility:** Certain plants face **challenges in adapting equipment to handle biomass pellets** alongside coal. This raises doubts about efficiency and consistent performance at higher blend levels.
- **Supply Chain Gaps:** Limited pellet availability and **weak logistics** networks reduce reliability. Plants cannot depend on an **unsteady supply** and it makes large-scale adoption difficult.
- **Private Sector Hesitancy:** Some private generators remain reluctant due to **uncertain regulatory enforcement**. They fear penalties or dead investments if supportive policies are not implemented consistently.

Way Forward:

- **Standardise Procurement:** Clear procurement norms are essential, with standardised pellet specifications, transparent price benchmarks, and reliable sourcing contracts to build confidence among producers and users.
 - A regulatory requirement that 3–5% of total energy in coal-based plants be generated from biomass pellets would ensure systematic uptake across the sector.
- **Monitoring:** Stronger systems for tracking performance are needed, including plant-level co-firing data, emissions reduction reports, and published case studies of successful implementation
- **Incentivise Compliance:** Biomass co-firing should be aligned with carbon markets or renewable energy certificates, creating additional financial incentives for adoption and performance.
- **Support Manufacturers:** Small pellet producers require capacity-building support, including easier access to credit and assistance in meeting quality standards, so that supply chains can expand sustainably.
- **Adoption from global best practices:**



- Countries such as **Sweden and the United Kingdom** have adopted biomass co-firing as a **transitional strategy**.
- The **UK's Drax power station**, once fully coal-powered, now generates more than **80% of its electricity from sustainable biomass**.
- **Japan and South Korea** have integrated biomass co-firing into their **national energy plans, targeting up to 20% biomass blending in coal plants**. These efforts are backed by **long-term purchase agreements and dedicated logistics infrastructure**.
- **Indonesia** has a target of achieving a **10% biomass blend**. This approach is designed as a **bridge solution** to reduce emissions while continuing to operate coal assets.

Conclusion:

- As India seeks to meet its net-zero target by 2070 and deliver on its nationally determined contributions, such pragmatic, locally rooted strategies will be essential.
- Biomass co-firing is **not a path breaking solution**, but it is a bridge solution that can deliver **measurable benefits at relatively low cost**.
- India has already taken the **first steps with the SAMARTH Mission**. Strengthening this effort through thoughtful implementation and measured incentives could go a long way in transforming the ideas of waste, energy, and prosperity in rural India.

11) Railways in India

Source: Business Standard | Syllabus: GS III: Infrastructure: Energy, Ports, Roads, Airports, Railways etc.

Context:

- Indian Railways is a public sector giant that carries over **20 million passengers and four million tonnes of freight daily across a 69,000-km network**.
- It is the **world's fourth-largest railway system** and the **largest under a single management**.
- It has been central to India's growth story right from the **British period in spreading and integrating the idea of India** to connecting remote regions, supporting vulnerable populations, and driving development in the present times.
- Railways, which carry such a significance also face varied types of challenges in its every day operation and long term sustainability.

Importance of Railways to India:

- **Economic driver:** Railways enables **cost-effective movement of goods and people**, sustaining industries and agriculture across India. Its freight operations contribute directly to GDP growth and ensure the smooth functioning of supply chains.
- **Regional integration:** It connects remote and underserved areas, binding together India's vast geography. This promotes balanced regional development and strengthens national unity.
- **Social inclusion:** It offers affordable fares that make **mobility accessible to millions**, especially low-income and vulnerable groups.
- **Cross-subsidisation model:** Railways uses freight revenues to cover losses in passenger services, keeping travel affordable for common citizens. In this way, it balances commercial operations with public service obligations.
- **Public sector backbone:** It functions as one of India's largest state-run enterprises, exemplifying infrastructure-led development and also reflects the government's commitment to nation-building and economic transformation.



Challenges faced by Indian Railways:

- **Financial strain:** Working expenses for 2025–26 are estimated at ₹2.96 trillion, leaving very little room for surplus. An **operating ratio of 98.4%** indicates near-total consumption of revenues by expenses, endangering financial sustainability.
 - **Operating Ratio:** The percentage of working expenses to gross revenue, showing how much the Railways spends to earn each ₹100.
- **Slowing freight growth:** Overall freight volumes are rising, but the year-on-year growth has fallen year after year. From 185 Million Tonnes (MT) in 2021–22 to only 26 MT in 2024–25, the slowdown signals weakening momentum.
- **Overdependence on coal:** Nearly half of railway freight revenue and tonnage comes from coal transport. With renewable energy expansion and pit-head power plants reducing long-haul coal movement, this reliance is unsustainable.
- **Passenger segment losses:** Passenger services run at fares below cost, causing losses exceeding ₹50,000 crore annually. These losses are perpetually cross-subsidised by freight revenues, limiting overall profitability.
- **Revenue shortfalls:** Passenger numbers in 2024–25 reached about 7,300 million, still below pre-Covid levels of 8,400 million in 2018–19. Total revenues also missed estimates by around ₹11,000 crore, showing continued gaps.
- **High fixed costs:** Salaries and pensions alone account for more than 64% of total railway revenues. Along with fuel, leasing charges, and asset maintenance, these fixed costs leave little scope for reductions.
- **Dependence on budgetary support:** Record allocations from gross budgetary support have funded railway expansion over the last decade.
 - Infrastructure of Indian Railways is in need of continuous upgradation and for this Railways should spend on capital expenditure. Always depending on Budget allocation is not sustainable.
- **Non-fare revenue gap:** Less than 10% of revenues currently come from non-fare streams such as advertising, land use, or services.

Measures to address the Challenges:

- **Aggressive freight strategies:** Marketing and rationalising freight rates to match market pricing can increase revenues from that sector.
 - **Private participation** can be allowed in the freight sector to improve efficiency.
 - Construction of new Dedicated Freight Corridors (DFCs), alongside robust business plans for efficient utilisation.
- **Disinvestment:** Divesting Railway Public Sector Units (PSUs) and converting production units into central PSUs can help to improve efficiency and reduce government burden.
- **Tariff regulation:** Reconsidering the creation of a **Rail Tariff Regulatory Authority** for transparent and market-aligned fare fixation.
 - Gradual rise in passenger fares to reach breakeven in operations should also be pursued.
- **Non-fare revenue:** Expanding non-fare revenue streams (advertising, land monetisation, services) from below 10% to a target of 25–30% of total revenues.

Conclusion:

- It is time for the Indian Railways to evolve coherent strategies to focus on its core business of transporting freight and passengers.
- A stronger, leaner railway network will not only be more sustainable in the long term, but it will also be better equipped to accelerate India's economy towards the ambitions of Viksit Bharat.



12) Satellite Internet

Source: The Hindu | Syllabus: GS III: Awareness in the fields of IT, Space, Computers, Robotics, Nano-technology, Bio-technology and issues relating to Intellectual Property Rights

Definition:

- **Satellite internet** is a form of internet connectivity **delivered through satellites in orbit**, rather than cables or ground-based towers.
- It uses a **space segment** (satellites carrying communication payloads) and a **ground segment** (user terminals and ground stations) to transmit data.

Working of Satellite Internet:

- The space segment consists of the satellites in orbit, while the ground segment includes all equipment on Earth that communicates with them.
- The satellites **carry communication payloads** for data transmission. Satellites are deployed in three main orbits: the Geostationary Earth Orbit (GEO), the Medium Earth Orbit (MEO), and the Low Earth Orbit (LEO).
- Satellite internet **mainly uses LEO satellites** for transmission. LEO satellites orbit at altitudes **below 2,000 km**.
 - Their **proximity to Earth** results in **very low latency**.
 - They are also smaller, often table-sized, making them **cheaper and quicker to deploy**.
 - Their main disadvantage is their smaller coverage area hence to achieve global coverage, **LEO systems form “mega-constellations”**. These are networks of hundreds or thousands of satellites working in unison.
 - The smaller satellites are capable of on-board signal processing. This **enhances data transmission efficiency**, improves signal quality, and allows for greater flexibility.
 - This on-board intelligence simplifies the user terminals on the ground making it smaller, cheaper, and more accessible to individual households.
- **Optical inter-satellite** links allow **satellites to communicate** directly with **each other in space**. This network can **route data globally with minimal reliance on ground stations**, reducing latency and increasing efficiency.
- Maintaining continuous connectivity between the satellites is a challenge as it moves at nearly 27,000 km per hour.
- To ensure uninterrupted service, the network must **seamlessly “hand over” the connection from one satellite to the next**.
- This is **achieved with steerable antennas** that can track multiple users and ground stations simultaneously.

Advantages of Satellite Internet:

- **Connectivity gaps:** Satellite internet connects remote and sparsely populated regions where **ground networks are economically unviable**. It ensures access in areas lacking terrestrial infrastructure.
- **Resilience during disasters:** It continues to function when floods, earthquakes, or other disasters disrupt ground-based networks. This makes it vital for disaster response and recovery.
- **Mobility and flexibility:** Satellite internet supports connectivity for moving platforms like airplanes and ships. It can also be deployed quickly for temporary operations in remote locations.

Applications of Satellite Internet:

- **Military operations:** Satellite internet enables secure communication for coordinating troop movements, medical evacuations, and drone operations..
- **In transportation**, it will enhance navigation systems, support self-driving cars, and improve logistics.



- In **disaster management**, it can provide early warnings, and coordinate rescue efforts.
- The **healthcare** sector can benefit from **telemedicine and remote patient monitoring**.

Concerns in the Usage:

- **Security risks:** Its borderless nature allows illegal use. Security forces in India have confiscated smuggled Starlink devices from insurgent groups and drug rackets.
- **Regulatory concerns:** Control and governance of mega-constellations raise international legal and policy challenges. Nations view them as a new dimension of power and should develop systems to regulate this sector in view of national interest.

Way Forward:

- The satellite internet presents immense opportunities but also creates complex security and regulatory challenges.
- It is necessary for countries like India to develop comprehensive strategies to integrate the technology into national resilience plans.
- India should also **use it to bridge the digital divide and encourage economic development**.
- India should also **actively participate in shaping its international governance** as these systems have the ability to define the next era of global connectivity and strategic advantage.

13) Digital revolution in Indian Agriculture

Source: Kurukshetra | Syllabus: GS III: Major Crops - Cropping Patterns in various parts of the country, - Different Types of Irrigation and Irrigation Systems; Storage, Transport and Marketing of Agricultural Produce and Issues and Related Constraints; E-technology in the aid of farmers

Background:

- The agriculture and allied sector has **historically been a cornerstone of the Indian economy**.
- In 2023-24, it contributed nearly **18% to the country's Gross Value Added (GVA)** at current prices. It provides a livelihood for over **46% of the population**.
- The sector's GVA increased more than threefold, from ₹15.02 lakh crore in 2011-12 to ₹48.78 lakh crore in 2023-24.
- The **relative share of agriculture in the total GVA has declined due to faster growth in the industrial and services sectors**. This shift necessitates modernizing and diversifying agriculture by integrating advanced technologies and **promoting digitisation**.
- The cutting-edge technologies like **artificial intelligence (AI), drones, GPS-enabled machinery, satellite imagery, and Internet of Things (IoT)-based solutions** are revolutionising farming practices.

Key Digital Interventions in Indian Agriculture:

- **Precision Farming and IoT:** This kind of system utilizes smart devices with sensors to collect real-time data on soil, crops, and weather. This helps in the **precise application of inputs like water and fertilizers**, reducing waste and improving efficiency.
- **Artificial Intelligence (AI):** AI tools **analyze data from various sources** like satellite imagery and weather patterns to **provide actionable insights for farmers**.
 - Projects like **Microsoft's FarmVibes** have demonstrated a 40% increase in crop yields and significant reductions in fertilizer and water use.
- **Satellite and Remote Sensing:** These technologies offer **large-scale monitoring of crops, soil health, and climate**. They are used for tasks like crop growth assessment, pest detection, and yield forecasting. **Government initiatives like FASAL (Forecasting Agricultural output using Space, Agro meteorology, and Land-based observations)** use this data for accurate crop forecasting.



- **Digital Marketplaces and e-Governance:** Platforms like **e-NAM (electronic- National Agriculture Market)** connect farmers directly with buyers, ensuring fair pricing and **reducing the role of intermediaries**.
 - Other platforms like **Kisan Suvidha** and **m-Kisan** provide farmers with real-time information on weather, market prices, and farming advisories.
- **Blockchain Technology:** A decentralized **digital ledger that ensures traceability** and transparency from "**farm to fork**". This helps verify the origin and quality of produce, boosting consumer confidence and allowing farmers to access premium markets.
- **Hardware Automation:** The use of advanced machines like **automated irrigation systems** and drone sprayers reduces manual labor and improves efficiency.
 - Tools like **Nano Ganesh** allow **remote control** of irrigation **pumps** via mobile phones.

Benefits due to Digital Initiatives:

- **Improved efficiency and higher yields** through precise use of resources like water and fertilizers.
- **Increased income** and improved livelihoods by connecting farmers directly to markets for fairer prices.
- **Enhanced sustainability** by conserving natural resources and minimizing environmental impact.

Limitations of these Initiatives:

- **Limited Access and Infrastructure:** It is difficult to scale these initiatives to all farmers, especially in remote regions, due to **poor network access** and inadequate rural infrastructure.
- **Low Digital Literacy:** Many farmers have limited digital literacy, and the lack of content in regional languages makes it hard for them to effectively use digital tools.
- **High Costs:** The high **initial cost** of digital devices and a lack of infrastructure slow down adoption, particularly for small and marginal farmers.
- **Trust and Privacy Concerns:** Data privacy and ownership issues further affect widespread adoption, requiring measures to build trust.

Government Initiatives promoting Digitisation in Indian Agriculture:

- **Digital Agriculture Mission:** This mission aims to create a robust **digital ecosystem** using technologies like AI, IoT, and drones to provide timely and reliable information to farmers. The mission was approved on September 2, 2024, with a total outlay of ₹2,817 crore.
- **AgriStack Project:** A key part of the Digital Agriculture Mission, it creates a comprehensive **digital database of farmers**, including land holdings and cropping patterns. It has already created a database for over 11 crore farmers.
- **e-NAM:** Launched in 2016, this platform has integrated 1,522 mandis across 23 states and 4 Union Territories. It has facilitated agricultural trade worth over ₹4.01 lakh crore.
- **Common Service Centres (CSCs):** These centers provide a range of digital services to rural communities, including soil testing, weather information, and agricultural insurance. As of May 2025, over 436,000 CSCs were in rural areas.
- **Sub-Mission on Agricultural Mechanization (SMAM):** Launched in 2014-15, this scheme provides **financial assistance for farmers** to purchase modern machinery and equipment, including drones.
- **Namo Drone Didi Scheme:** This initiative, launched on November 30, 2023, empowers **rural women by training them to operate agricultural drones**. The government has approved a plan to provide 15,000 drones to women's self-help groups (SHGs) over three years.

Conclusion:

- To fully harness the transformative potential of digital agriculture, India must adopt a multi-pronged strategy that addresses both technological and socio-economic challenges.
 - **Empowering farmers with targeted, localized training programs** in vernacular languages to improve digital literacy.



- Continued **investment** in strengthening rural digital infrastructure.
- Developing **public-private partnerships** to develop and scale affordable, farmer-centric technologies.
- With these measures and Government support through the various schemes, India can ensure that the benefits of digital agriculture reach every corner of the country.

14) Rise of Agritech Startups in India

Source: Kurukshetra | Syllabus: GS III: Major Crops - Cropping Patterns in various parts of the country, - Different Types of Irrigation and Irrigation Systems; Storage, Transport and Marketing of Agricultural Produce and Issues and Related Constraints; E-technology in the aid of farmers

Background:

- India's agricultural sector is a cornerstone of its economy, employing nearly half the workforce and contributing about 17% to the nation's GDP.
- Despite its importance, the sector **struggles with challenges** like low productivity, fragmented supply chains, and climate vulnerabilities.
- In response, **agritech startups are using technology** to empower farmers and **transform agriculture**.
- As of 2025, there are **over 4,000 agritech startups** in India. The sector has attracted more than **\$2.4 billion in investments** since 2014, with a 28% increase in deal volume in 2024 compared to 2023.
- Government initiatives like Startup India and Digital India have fueled this growth by offering tax exemptions, funding support, and improved rural internet connectivity.

Key Areas with Impact of Agri Startups:

- **Precision Farming:** Startups use AI, IoT, and satellite data to optimize resource use and boost yields. A 2022 IndiaAI report predicts that **AI-driven solutions** could increase crop yields by **20-30% by 2030**.
 - For example, **startups like Cropin** are integrating satellite data and IoT devices to provide near-real-time insights, helping farmers make data-driven decisions.
- **Supply Chain Optimization:** Startups use **data analytics and logistics platforms** to connect farmers directly with buyers, which reduces post-harvest losses and ensures fair prices.
 - **Inefficient supply chains** have long led to **losses of 20-30% for perishables** in India.
- **Access to Inputs and Finance:** Startups provide access to seeds, fertilizers, and equipment through digital marketplaces. Agri-fintech startups are also helping to **bridge the credit gap for smallholder farmers** who often struggle to get loans.
 - Agri-fintech startups like **Arya.ag**, which has facilitated ₹15,000 crore worth of commodity storage and ₹8,000 crore in financing, are using blockchain and digital platforms to provide transparent loan systems.
- **Global Collaboration:** Indian agritech startups are partnering with **international firms** and research institutions. This **drives innovation** in areas like genetic research for high-yield crops and sustainable farming practices.
 - For instance, **Ecozen's solar-powered solutions** are gaining traction in global markets, positioning India as a hub for agritech innovation.
- **Digital Advisory Services:** Platforms provide **real-time advice on crop management**, pest control, and weather forecasting through mobile apps and SMS.
- **Sustainable Practices:** Startups are introducing solutions like solar-powered cold storage and irrigation to reduce post-harvest losses and **promote eco-friendly farming**.



- **Climate-Resilient Farming:** With climate change disrupting traditional farming patterns, startups are focusing on solutions like drought-resistant crops, vertical farming, and hydroponics.

Overcoming Challenges:

- **Limited Digital Literacy:** Only 23% of rural India has reliable smartphone and internet access.
 - Startups are addressing this by offering **user-friendly apps with content in local languages** and providing SMS-based advisories.
- **High Initial Costs:** The high cost of technologies like drones and IoT devices can be a barrier for small farmers.
 - Startups are introducing **pay-per-use models and leveraging government subsidies** to make these tools more affordable.
- **Fragmented Landholdings and Diversity:** Startups need to tailor solutions to local needs due to fragmented landholdings and regional diversity.
 - They are **collaborating with local institutions like Krishi Vigyan Kendras** to build trust and provide training.

Conclusion:

- Agritech startups are rewriting the story of Indian agriculture, transforming it from a traditional, loss-making sector into a dynamic, technology-driven industry.
- As these startups integrate advanced technologies, collaborate globally, and align with India's sustainability goals, they are set to lead the fourth agricultural revolution.

15) Cooperative path for India to reach SDGs

Source: Kurukshetra | Syllabus: GS III: Inclusive Growth and issues arising from it

Background of SDGs:

- The Sustainable Development Goals (SDGs) are **a set of 17 interconnected global objectives** aimed at addressing pressing social, economic, and environmental challenges to achieve sustainable development by 2030.
- These goals were **adopted by the United Nations General Assembly in 2015 as part of the 2030 Agenda for Sustainable Development**.
- These goals cover a wide range of issues, including **poverty eradication, quality education, gender equality, clean water and sanitation, affordable and clean energy, sustainable cities and communities, climate action, life below water, and life on land, among others**.

Background of Cooperatives:

- Cooperatives are **member-owned, democratically governed institutions** that work on principles of **mutual assistance, equity, and solidarity**.
- Unlike traditional business models that prioritize profit, cooperatives **focus on member welfare and community development**.
- With over 8.5 lakh cooperative societies and more than 30 crore members, **India's cooperative ecosystem** spans across key sectors, **agriculture, dairy, credit & banking, housing, fisheries, sugar, textiles, handicraft, marketing, consumer, and services**.
- The cooperative movement in India has been instrumental in **achieving food security** and rural resilience:
 - The **Green Revolution** was bolstered by agricultural credit, **Indian Farmers Fertiliser Cooperative Limited (IFFCO), Krishak Bharati Cooperative Limited (KRIBHCO)** and marketing cooperatives that enabled input distribution and support services.
 - **The White Revolution**, led by **AMUL** and its replica in every State/ UTs, transformed India into the **world's largest milk producer** and empowered millions of rural dairy farmers.



Contributions of Cooperatives to Specific SDGs:

- **Producer Cooperative:** These cooperatives provide primary inputs, credit, marketing, and technical support to members. They are linked to:
 - **SDG 1 (No Poverty):** By enhancing the livelihoods of producers.
 - **SDG 2 (Zero Hunger):** By ensuring food security through support services for increasing food production.
 - Eg: AMUL
- **Consumer Cooperative:** These cooperatives ensure fair access to consumer goods and protect members from exploitation. They are linked to:
 - **SDG 1 (No Poverty):** By providing affordable goods and services.
 - **SDG 12 (Responsible Consumption and Production):** By promoting responsible consumption.
 - Eg: Housing Cooperatives.
- **Worker Cooperative:** These cooperatives are owned and operated by their workers, ensuring decent employment. They are linked to:
 - **SDG 8 (Decent Work and Economic Growth):** By ensuring fair labor practices and ownership.
 - **SDG 10 (Reduced Inequalities):** By empowering workers and reducing income disparities.
 - Eg: Cooperative Industrial Societies.
- **Multi-purpose Cooperative:** These cooperatives provide multiple services like banking, agri-inputs, and marketing, helping to achieve a range of objectives. They are linked to:
 - **SDG 9 (Industry, Innovation and Infrastructure):** By supporting different sectors with crucial services.
 - **SDG 10 (Reduced Inequalities):** By ensuring that diverse communities have access to services.
 - Eg: Tribal Societies.

Government's Vision and Reforms

- **Separate Ministry:** The Ministry of Cooperation was established in 2021 to modernize and strengthen the sector. The government's vision is encapsulated in the call '**Sahkar Se Samridhi (Prosperity through Cooperation)**'.
- **Recent Initiatives:** The Ministry is spearheading reforms that include:
 - Introducing **Model Bye-Laws for Primary Agricultural Credit Societies (PACS)** to make them multipurpose business entities.
 - Forming **new Multi-State Cooperative Societies (MSCS)** for organic farming, seed production, and export marketing.
 - Creating a **National Cooperative Database** and computerizing all cooperative departments.
 - Promoting the "**One multipurpose PACS/ dairy/ fisheries cooperative per panchayat**" model.

Challenges faced by Cooperatives:

- **Governance:** Many cooperatives suffer from weak governance, political interference, and a lack of professional management.
- **Technology Access:** There's an uneven adoption of technology, and many small cooperatives lack the IT infrastructure needed for modern services and market linkages.
- **Youth Engagement:** The sector **struggles to attract and retain young people** due to a lack of awareness, outdated governance, and a perception of limited opportunities.
- **Regulatory Issues:** The cooperative sector is governed by multiple laws at both Central and State levels, leading to jurisdictional ambiguities and regulatory complexity.



- **Financial Constraints:** Many cooperatives face fund shortage for expansion and modernization due to limited access to long-term finance from banks and **delays in government subsidies**.
- **Marketing:** A significant number of cooperatives are stuck at the primary production level **without adequate processing or branding**, which limits their **profitability** and value addition.

Conclusion:

- Cooperatives have been an intrinsic part of India's socio-economic fabric for over a century.
- The establishment of the **Ministry of Cooperation, coupled with recent reforms and policy focus**, signals a renewed commitment to modernise and strengthen cooperatives as engines of sustainable growth.
- By nurturing a vibrant, resilient, and inclusive cooperative sector, India can ensure that its development is **truly people-centered, equitable, and sustainable, delivering prosperity** not only to urban centers but to every village and hamlet.

16) Global Plastics Treaty

Source: DownToEarth | Syllabus: GS III: Conservation, Environmental Pollution and Degradation, Environmental Impact Assessment.

Context

- The Geneva negotiations on the global plastic treaty collapsed due to several deeply entrenched disagreements and procedural hurdles that failed to provide a timeline as to when plastic production was to halt.

About the Treaty

- The **Global Plastics Treaty** is an ambitious initiative involving at least **175 United Nations** member nations to **eliminate the use of plastics**.
- The goal is to finalize a legal document by the end of 2024 with timelines by when countries must agree to **curb plastic production, eliminate its uses** that create wastage, **ban certain chemicals** used in its production and **set targets for recycling**.

Need for a plastic treaty

- **Exposure to plastics** can harm human health, potentially affecting **fertility, hormonal, metabolic and neurological activity**, and **open burning** of plastics contributes to **air pollution**.
- The **Organisation for Economic Co-operation and Development** estimates that, in **2025**, there will be **over 1 billion tonnes of plastic waste** in the world, rising to **1.7 billion by 2060**.
- More than **800 marine and coastal species** are affected by this pollution through **ingestion, entanglement, and other dangers**.
- **Plastics production, use and waste management** account for **around 4% of greenhouse gas emissions globally**.

Highlights of the Recent Meeting

- In 2022, the **UN Environment Assembly** met in **Nairobi, Kenya**, to address the **global plastic crisis**. In a landmark decision, 175 countries agreed to establish a **global treaty on plastic pollution**, setting an ambitious target for its implementation by 2025.
- However during the recent Geneva negotiations, sharp divisions emerged:
 - The **High Ambition Coalition**, led by Rwanda and Norway, supported by many African nations and the European Union, pushed for a strong treaty with **binding global rules covering the entire life cycle of plastics, from production to disposal**.
 - On the other hand, the **Like-Minded Group**, a bloc of **petrochemical-producing countries** led by Saudi Arabia and joined by Iran, Iraq, India, Malaysia, Russia, Morocco, Uganda, Cuba, and Kazakhstan, advocated for a weaker, voluntary treaty **focused only on waste management**, excluding production caps and lifecycle regulations.



- Thus, due to differences between member countries, the recent UN global plastics treaty negotiations in Geneva **failed to reach consensus on a legally binding instrument to end plastic pollution.**

17) Solid Waste Management

Source: DownToEarth | Syllabus: GS III: Conservation, Environmental Pollution and Degradation, Environmental Impact Assessment.

Context

- **India** ranks among the **world's top ten generators of municipal solid waste (MSW)**, a crisis demanding immediate and comprehensive action.

About

- Solid waste management refers to the **systematic collection, transportation, disposal, recycling, and monitoring** of **solid waste** generated by human activities.
- **Solid waste** includes a variety of materials such as **household garbage, industrial waste, construction and demolition debris, agricultural waste**, and more.

Impacts of Improper Solid Waste Management

- **Environmental Degradation:** Open dumping and landfill leachate **contaminate soil and groundwater with heavy metals and toxins.**
- **Public Health Hazards:** Uncollected waste serves as a **breeding ground for disease vectors** like mosquitoes, flies, and rodents, leading to the spread of dengue, malaria, and cholera. **Exposure to hazardous waste** can cause **respiratory illnesses and skin infections.**
- **Social and Economic Costs:** Visual pollution and foul odours **degrade the quality of life**, particularly for marginalized communities living near dump sites. **Tourism and local economies suffer**, while cleaning polluted sites imposes significant financial burdens on municipalities.

Methods of Solid waste Management

- **Landfilling:** It involves the **disposal of waste in designated sites** that are specifically engineered to **minimize soil and water contamination.** In these sites, a layer of soil is regularly added after the **waste is dumped into the landfill, to reduce odour and pest infestation.**
- **Incineration:** It is a waste treatment process that **involves burning waste materials at high temperatures** to reduce their volume and sometimes recover energy. This process results in the **release of pollutants like ash, dioxins and furans into the air.**
- **Composting:** Composting is the **natural process of decomposing organic materials**, like food scraps and yard waste, using microorganisms such as **bacteria and fungi** into a **nutrient rich soil amendment called compost** which is used to enhance soil health, structure and fertility.
- **Waste-to-Energy technology:** It refers to **generating energy from the combustion of waste.** This method is considered as a form of **sustainable waste management**, as it can **produce electricity or heat** while reducing the volume of waste.

Benefits of Solid waste management

- **Environmental Protection** - It aims to **reduce pollution of air, soil, and water by controlling improper waste disposal.**
- **Resource Conservation** - Solid waste management promotes **recycling and reuse**, conserving natural resources and **composting organic waste** enriches soil and reduces dependence on chemical fertilizers.
- **Energy Generation** - **Waste-to-Energy plants** convert waste into electricity and heat, contributing to **renewable energy supply.**
- **Public Health** - Proper waste disposal reduces breeding grounds for pests, insects **thereby reducing disease burden and promoting improved public health.**



Conclusion

- Given India's significant waste generation, transitioning from a linear "take-make-dispose" model to a circular economy focused on reduction, reuse, and recycling is not just an environmental necessity but a critical imperative for sustainable development and public health.

18) India's War Against Terrorism

Source: Yojana | Syllabus: GS III: Linkages between Development and Spread of Extremism.

Context

- India's evolving counter-terrorism strategy now blends precision military strikes, institutional reforms, and global partnerships to combat an increasingly complex terrorist threat.

Counter-Terror Policy Shifts

- Over the last decade, India has shifted from restraint and dialogue to a proactive stance, particularly in response to Pakistan-sponsored terrorism.
- The atrocities in regions like Jammu & Kashmir, notably the Pahalgam attack, propelled coordinated efforts across military, domestic, and diplomatic spheres.
- Prime Minister Narendra Modi's statements in 2025 asserted that **India will not distinguish between the terrorists and those elements that support them.**
- Any future terrorist attack on Indian soil or its interest will be deemed an 'act of war'.**
- India's resolve to hold Pakistan accountable, rejecting 'plausible deniability' for cross-border terrorism.

Precision Military Responses

- India has increasingly employed precision strikes to target terrorist infrastructure deep inside Pakistan and Pakistan-Occupied Jammu & Kashmir (PoJK), with major operations such as **'Operation Sindoor' (2025), Uri (2016), Balakot airstrikes (2019), and cross-border engagements.**
- These operations avoided civilian casualties and marked a new normal in India's counter-terror (CT) doctrine.
- By demonstrating the resolve and capability to carry out strikes deep inside Pakistan, India will no longer be deterred by nuclear threats or blackmails, which Pakistan often takes recourse.
- India has also leveraged economic measures such as suspending the Indus Waters Treaty and tightening diplomatic pressure.

Strengthening Institutional Capacity

- India has implemented key reforms since the 2008 Mumbai attacks, including revitalizing the **Multi-Agency Centre (MAC)** for intelligence sharing, establishing the **National Investigation Agency (NIA) in 2009** as the principal CT body and establishment of **National Intelligence Grid**, which enables real time information sharing between agencies linking their databases.
- Other notable initiatives include specialized courts for quicker trials, new laws targeting cyber and financial terrorism, and expanded crime definitions (human trafficking, prohibited arms).

Financial Countermeasures

- India's CT strategy now prioritizes combating terrorist financing through international collaborations, amendments to anti-money laundering laws, and actions under the **Financial Action Task Force (FATF).**
- India set up the **Financial Intelligence Unit (FIU-IND)** in November 2004 and became a part of the Egmont Group of FIUs. Moreover, the **Prevention of Money Laundering Act, 2002, was amended in 2009 & 2023** to expand the list of scheduled offences and strengthen the legal framework against money laundering and terrorist financing.



- It also **mandates registration of NGOs on the DARPAN portal** and includes crypto transactions within its purview—aligning India's compliance with global FATF standards and boosting transparency across financial and non-profit sectors.

Disrupting Insurgency in Kashmir

- J&K has become the key focus when it comes to fighting terrorism.
- Security agencies have particularly paid attention to stemming local recruitment, which has largely dented the operational capabilities of the terrorist organisations
- Security forces target hybrid cadres and narco-terrorism, with increased surveillance, anti-infiltration grids, and advanced investigation of terrorist finances.
- India has raised a three-tier counter-infiltration grid that has largely curbed the flow of militants.
- Moreover, it has **constructed extensive barbed-wire fencing along the LoC and International Boundary (IB)**, deploying an Anti-Infiltration Obstacle System and strengthening surveillance through reconnaissance drones, night-vision equipment, and hand-held thermal imaging devices to detect unauthorised crossings.
- **These measures undeniably contributed to the substantial drop in violence in the region.**

Addressing Radicalisation

- Radicalisation has been emerged as a sensitive issue for policy makers.
- As several studies have pointed out, multiple factors contribute to this phenomenon, **including peer pressure, victimhood feelings, and self-radicalisation enabled by cyberspace and social media propaganda.**
- Radicalisation, especially among youth, is tackled via multi-pronged strategies—curbing online propaganda and monitoring self-radicalised threats.
- However, resolving this challenge is acknowledged as ongoing, requiring continuous adaptation of policies and engagement with civil society.

International Collaboration

- India has expanded CT diplomatic partnerships, engaging with multilateral forums such as the United Nations, FATF, and Interpol.
- Efforts focus on emerging threats (cryptocurrency, drone tech), and leveraging global best practices to contain funding and recruitment for terrorist outfits.
- Bilateral relations (e.g., with the US, Bangladesh, Nepal) have been vital in facilitating extradition and neutralising transnational terrorist networks.
- Despite widespread agreement on the danger of terrorism, the world cannot agree on a single definition for it.
- This is due to the subjective saying, "**one man's terrorist is another man's freedom fighter.**" Because of this ongoing disagreement, the Comprehensive Convention on International Terrorism, proposed by India in 1996, remains stalled.

Way Forward

- India must stay strong and determined. To get rid of terrorism, it needs to constantly update its methods, work closely with other countries, and adjust to changes in global politics.
- India is fighting terrorism on all fronts—using its military, strengthening its institutions, cutting off terrorist funding, and using diplomacy. This well-rounded, active approach is crucial for keeping the country safe, especially given its unstable surrounding region.



19) Empowering the Farmers

Source: Yojana | Syllabus: GS III: Inclusive Growth and issues arising from it

Context

- The article outlines the **Indian government's multi-pronged strategy to empower farmers**, shift policy **focus from mere production to income security**, and transform them into agri-entrepreneurs.

The State of Indian agriculture

- India has achieved **self-sufficiency in food grains** (rice, wheat, pulses) and made significant strides in oilseeds and horticulture production.
- Agriculture contributes **18% to GVA but employs 46% of the workforce**, highlighting the need for income growth.
- India's agriculture sector has achieved significant progress over the last decade, registering robust **average annual growth of 5 percent** (Source: Economic Survey 2024).

Core measures for Income Security:

The government's approach includes:

- Increasing Production/Productivity:** Disseminating high-yielding, climate-resilient seed varieties through institutions like Indian Council of Agriculture Research (ICAR) increases production and productivity and is a strategy embedded in the important missions of the government including the National Food & Nutrition Security Mission and National Mission on Edible Oil.
- Reducing Cultivation Costs:** Providing concessional credit through Kisan Credit Cards, and modified Interest Subvention Scheme and insulating farmers from high global fertilizer prices through subsidies helps reduce cultivation cost.
- Ensuring Remunerative Prices:** Procuring 22 crops at **Minimum Support Price (MSP)** set at 1.5 times the cost of production to prevent distress sales and enhancing farmer income..
- Post-Harvest Value Addition & Infrastructure:** The **Agriculture Infrastructure Fund** which provided for an interest subvention of 3% on loans for projects related to post-harvest infrastructure helped to reduce post-harvest losses and increase farmers' income through better price realisation.
- Promoting Farmer Producer Organisations (FPOs):** 10,000 FPOs are being established to enable collective, cluster-based farming, improve bargaining power, and facilitate diversification into organic farming and value-added activities.
- Diversification to higher-value crops.**
- Risk mitigation through crop insurance and climate-smart agriculture.**
- Adoption of technology, including Digital Public Infrastructure and Artificial Intelligence.**

Examples include

- Digital Agriculture Mission** aims to empower farmers by streamlining access to services (loans, insurance, advisories), ensuring transparent benefit transfer, and eliminating the need for repeated physical verification of documents.
- SATHI (Seed Traceability, Authentication and Holistic Inventory) Portal** is a Centralized Online System for seed traceability, authentication and inventory designed to deal with the challenges of seed production, quality seed identification and seed certification.
- Scheme of the Sub Mission on Agriculture Mechanisation:** Promoting subsidized machinery and "Machinery Banks" for small farmers to counter rising labour costs.



Conclusion

- India's agricultural policy is gradually shifting from food self-sufficiency to farmer prosperity by focusing on income security, risk mitigation, and technology-driven solutions.
- By integrating MSP, FPOs, crop diversification, and digital innovations, the government aims to transform farmers from producers into agri-entrepreneurs.
- Sustained investment in infrastructure, value addition, and climate-smart practices will be key to making Indian agriculture both globally competitive and farmer-centric.



RELATED PYQS

1. "Distinguish between 'care economy' and 'monetised economy'. How can care economy be brought into monetised economy through women empowerment? (2023)
2. National Education Policy 2020 is in conformity with the Sustainable Development Goal-4 (2030). It intends to restructure and reorient the education system in India. Critically examine the statement." (2020)
3. Discuss how emerging technologies and globalisation contribute to money laundering. Elaborate measures to tackle the problem of money laundering both at national and international levels. (2021)
4. The diverse nature of India as a multi-religious and multi-ethnic society is not immune to the impact of radicalism which has been in her neighbourhood. Discuss along with the strategies to be adopted to counter this environment. (2014)
5. What introduces friction into the ties between India and the United States is that Washington is still unable to find for India a position in its global strategy, which would satisfy India's National self-esteem and ambitions. Explain with suitable examples. (2019)
6. Appropriate local community level healthcare intervention is a prerequisite to achieve 'Health for All' in India. Explain. (2018)
7. In contemporary world, corporate sector's contribution in generating wealth and employment is increasing. In doing so, they are bringing in unprecedented onslaught on the climate, environmental sustainability and living conditions of human beings. In this background, do you think Corporate Social Responsibility (CSR) is efficient and sufficient enough to fulfill the social roles and responsibilities needed in the corporate world? Critically examine. (2022)
8. Describe the various causes and the effects of landslides. Mention the important components of the National Landslide Risk Management Strategy. (2021)
9. Disaster preparedness is the first step in any disaster management process. Explain how hazard zonation mapping will help disaster mitigation in the case of landslides. (2019)
10. Hunger and Poverty are the biggest challenges for good governance in India still today. Evaluate how far successive governments have progressed in dealing with these humongous problems. Suggest measures for improvement. (2017)
11. How does a smart city in India, address the issues of urban poverty and distributive justice ? (2025)
12. Does urbanisation lead to more segregation and/or marginalization of the poor in Indian metropolises? (2023)
13. Introduce the concept of Artificial Intelligence (AI). How does AI help in clinical diagnosis? Do you perceive any threat to privacy of the individual in the use of AI in healthcare? (2023)



14. It is often said that 'politics' and 'ethics' do not go together. What is your opinion in this regard? Justify your answer with illustrations. (2013)
15. Demographic Dividend in India will remain only theoretical unless our manpower becomes more educated, aware, skilled and creative." What measures have been taken by the Government to enhance the capacity of our population to be more productive and employable? (2016)
16. How does e-Technology help farmers in production and marketing of agricultural produce? Explain it. (2023)
17. Winning of Hearts and Minds' in terrorism-affected areas is an essential step in restoring the trust of the population. Discuss the measures adopted by the Government in this respect as part of the conflict resolution in Jammu and Kashmir. (2023)
18. Analyse the complexity and intensity of terrorism, its causes, linkages and obnoxious nexus. Also suggest measures required to be taken to eradicate the menace of terrorism. (2021)



PRACTICE QUESTIONS

1. "Ayushman Bharat aims to transition India's health system from being reactive and curative to being preventive and participatory." In light of this statement, evaluate the effectiveness of its architecture in addressing the structural gaps in the healthcare sector.
2. Examine how caste hierarchies and patriarchal structures influence the female labour force participation in India.
3. 'Early Childhood Care and Education (ECCE) is foundational, not merely preparatory.' Examine the statement in light of the National Education Policy 2020's focus on ECCE.
4. Discuss why India's e-waste management has escalated into a major environmental and public-health concern. What solutions do you suggest to mitigate this growing challenge?
5. Critically examine how India should recalibrate its diplomatic approach towards Myanmar to balance its ideological values with the imperatives of realpolitik.
6. Examine the major factors hindering India's efforts to effectively prevent and control money laundering.
7. Radicalisation cannot be countered without addressing its socio-economic and psychological roots. Analyze.
8. Enumerate the objectives of the Election Commission of India's Special Intensive Revision (SIR) process. Assess the shortcomings that impede the achievement of its core goal of ensuring 'no voter to be left behind'.
9. Examine the economic and strategic implications of the recent US tariffs on India. What should be India's calibrated response to safeguard its interests while managing this crucial bilateral partnership?
10. How does the India-Middle East Economic Corridor (IMEC) transcend mere economic integration? Discuss from India's standpoint.
11. How does citizen engagement contribute to the effectiveness of India's health governance framework? Discuss the barriers to meaningful participation.
12. How does the Employment Linked Incentive (ELI) Scheme differ from earlier initiatives like the Production Linked Incentive (PLI) Scheme? Suggest measures for effective implementation of the scheme.
13. Critically examine the effectiveness of Corporate Social Responsibility (CSR) in India. To what extent has mandatory CSR contributed to inclusive development?
14. Bring out the factors contributing to the growing threat of landslides in India.



15. Explain the rationale behind the government's push for ethanol blending in India, and assess the key concerns associated with it.
16. Identify the key drivers that contributed to declining hunger rates in India. What are the evolving challenges in achieving comprehensive nutritional security?
17. A developed India is contingent on developed cities. In this context, discuss the potential of the Urban Challenge Fund to catalyze this transformation and suggest measures to ensure its effective implementation.
18. The space sector in India is on the cusp of transformation. In this context, assess the need for dedicated space legislation.
19. Beyond generating revenue, disinvestment is a strategic instrument for better governance. Do you agree? Substantiate your answer.
20. Contrary to the perception of being merely disruptive, Artificial Intelligence can serve as a catalyst for India's employment landscape. Comment.
21. What are the primary social causes behind the criminalization of politics in India? To what extent can the proposed Constitution (One Hundred and Thirtieth Amendment) Bill, 2025 provide an adequate solution?
22. In the context of an assertive China and a volatile Indo-Pacific, the India-Japan Special Strategic and Global Partnership assumes critical significance. Discuss.
23. "The inefficiencies in India's electricity sector severely cripple economic growth". Elaborate on this statement and suggest a framework for reforms.
24. Despite its recognized benefits, what key challenges impede the widespread adoption of biomass co-firing in India?
25. India's demographic dividend is at risk of turning into a demographic liability without urgent policy interventions. Critically analyse.
26. Railways' role as an agent of economic development in the country is hurdled by multiple challenges. Examine.
27. Discuss how the unique demographic and socio-economic challenges faced by elderly women in India intersect with existing systemic barriers in healthcare and social security. Suggest practical solutions to overcome the problem.
28. Assess the potential of satellite internet to bridge the digital divide in India in light of the associated security and regulatory challenges.
29. Elucidate the multi-faceted role of digital agriculture in revolutionizing the Indian farm sector. Are there any systemic challenges hindering its equitable adoption? Examine.
30. Agritech startups leveraging technology to address India's agricultural challenges. Elaborate.



31. India's Cooperative sector can play an immense role in India's path to achieve the Sustainable Development Goals 2030. Critically Analyse.
32. "The digitalization of Indian agriculture is an urgent imperative to overcome persistent challenges in the sector." In light of this statement, critically analyze the potential of "Agriculture 4.0" to address the core issues faced by Indian agriculture.
33. The failure to establish a legally binding Global Plastics Treaty underscores the challenges of multilateralism in addressing transboundary environmental issues. Comment.
34. Examine the environmental and public health impacts of improper solid waste management in the country. Also, discuss the efficacy of the Waste-to-Energy approach as a sustainable solution.
35. "Innovation in India is shifting from privilege to national imperative." Comment.
36. "Terrorism remains one of the gravest threats to India's internal security, but it cannot be fought by military means alone." Comment.
37. Discuss the multi-pronged approach of the Indian government in shifting focus from food self-sufficiency to farmer prosperity.

