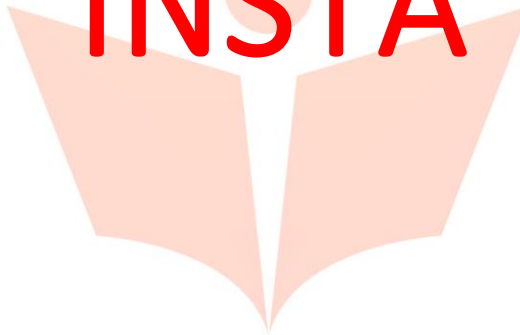




**INSIGHTSIAS**

SIMPLIFYING IAS EXAM PREPARATION

# INSTA MINDMAPS



INSIGHTSIAS

SIMPLIFYING IAS EXAM PREPARATION

# APRIL 2024

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# General Studies – 1

Topic: Women related Issues

## 1. India's Missing Women

### Introduction

- More than 13.13 lakh girls and women went missing in the country in the three years between 2019 and 2021, per Union Home Ministry data.

### Experts opinion

- Experts note that India's calculation of women reported missing is not wholly representative of ground realities.
- Women could be eloping for inter-caste or inter-faith marriage or they might be leaving an abusive situation at home.
- Some families also abandon women who are disabled.
- NCRB's aggregate data currently doesn't reflect these complexities.

### 'Missing women' vs 'women reported missing'

- **Economist Amartya Sen in the early nineties devised the concept of "missing women" to articulate the gender bias in mortality.**
- Women's ratio to men was low due to skewed sex ratio at birth, and excess female mortality.
- Mr. Sen argued "social inequality outweighs women's survival advantage".
- Women reported missing, however, is a different computation.
- They will be considered missing until located and their well-being or otherwise established.

### Concerns / Challenges

- **Women who go missing may become vulnerable to trafficking, violence, drug addiction and other risks of exploitation.**
- Official statistics often misreport non-criminal activity as crime and use wrong sections of the law to book some crimes.
- Ignoring and underestimating certain violent crimes against women.
- Evidence shows women very rarely report crimes that happen to them due to complex social factors: accessibility of police stations, fear of stigma, or lack of awareness.
- Fear of data inflation around 'found' women or women who were traced.
- The paucity of data makes it harder to create support systems for recovered women.

### Government Initiatives

- **Criminal Law (Amendment), Act, 2013 and the Criminal Law (Amendment) Act, 2018** to deter sexual violence.
- The 2018 Act mandates that a chargesheet be filed and an investigation conducted within two months, and trials are completed in another two months.
- A pan-India **Emergency Response Support System** with a recognised number (112) for all emergencies.
- A **National Database on Sexual Offenders** was launched to facilitate the investigation and tracking of sexual offenders across the country.
- The Ministry of Women & Child Development set up 733 **One Stop Centres** to aid women affected by violence and in distress.
- Karnataka and Maharashtra have launched government programmes that train health professionals to recognise signs of gender-based violence.

### Way Forward

- Law enforcement must swiftly bring the perpetrators to book and state governments must ascertain areas of high crime rates and double safety protocols in those areas.
- **Using technology to aid smart policing and safety management.**
- The focus of the criminal justice system needs to shift from sentencing and punishment to the stages of reporting, investigation, and victim-support mechanisms.
- Include hospitals that treat women who have faced violence.
- Need for thorough investigation and details from both, people reporting the crime and from women who are found.

## General Studies – 2

Topic: Structure, organization and functioning of the Executive and the Judiciary

### 2. Court Vacations

#### Introduction

- The debate over the vacation days allotted to has come up repeatedly.
- Chief Justice of India recently spoke about the criticism often made towards the number of vacation days awarded to Indian judges.

#### What are court vacations?

- The Supreme Court has 193 working days a year, High Courts - approximately 210 days, and trial courts for 245 days.
- The Supreme Court breaks for its annual summer vacation which is typically for seven weeks.
- The court takes a week-long break each for Dussehra and Diwali, and two weeks at the end of December.
- This judicial schedule has its origins in colonial practices.
- The summer break began because European judges of the Federal Court of India found Indian summers too hot.

#### What happens to important cases during court vacations?

- A few judges called vacation benches are available to hear urgent cases even when the court is in recess.
- Cases such as bail, eviction, etc. often list before vacation benches.
- In 2015, a five-judge Bench of the Supreme Court heard the challenge to the constitutional amendment setting up NJAC during the summer vacation.
- In 2017, a Constitution Bench held hearing in the case challenging the practice of triple talaq during summer vacation.

#### Why are court vacations criticised?

- Mounting pendency of cases and the snail's pace of judicial proceedings.
- Vacation leads to further unavoidable delays in listing cases.

#### What are the arguments in favour of court vacations?

- In a profession that demands intellectual rigour and long working hours, vacations are much needed for rejuvenation.
- Judges typically work for over 10 hours on a daily basis.
- A frequently-made argument is that judges utilise the vacation to write judgments.
- The issue of pendency relates largely to legacy cases that need to be tackled systemically.

#### Cases disposed by Indian Courts

- Supreme Court has the highest caseload among the apex courts around the world.
- With 34 judges, the Supreme Court leads the way in terms of the number of judgments delivered.
- In 2021, 29,739 cases were instituted before the Supreme Court, and 24,586 cases were disposed of by the court in the same year.

### Suggested Reforms

- **Justice Malimath Committee was set up to recommend reforms in the criminal justice system.**
- It suggested that the vacation should be reduced by 21 days, keeping in mind the long pendency of cases.
- The **Law Commission of India** suggested that vacations in the higher judiciary must be curtailed by at least 10 to 15 days and the court working hours should be extended by at least half an hour.
- In the past, **Chief Justices of India have suggested reforms in vacation cycles in view of the criticism.**

Topic: Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources.

## 3. Digitisation of Waste Management

### Introduction

- Expanding urban areas, growing populations, increasing incomes and changing lifestyles are rapidly increasing the amount of municipal solid waste (MSW).
- To address the waste management issues, the Government of India launched the Swachh Bharat Mission in 2014 and updated the Solid Waste Management Rules in 2016.

### Material recovery facilities (MRF)

- Urban local bodies (ULB), in partnership with non-government organisations started setting up material recovery facilities (MRF).
- MRFs are centres where dry waste is collected, separated and sent to recycling facilities.
- They help to keep waste in the recycling loop, thus helping cities to become waste-free.
- Currently, there are more than 2,000 MRFs in India and many more are being set up.
- The MRFs also provide with the traceability and transparency.
- The Union Ministry of Jal Shakti, under the Swachh Bharat Mission – Grameen, has shared guidelines to establish an MRF in every block of India.

### Present Status

- Around 154,090 tonnes of waste is generated in the country every day.
- According to MoHUA estimate, almost 76 per cent of the waste is processed and about 93 per cent of all wards separate waste at source.

### Concerns / Challenges

- Improper waste management is often linked to global environmental issues such as marine litter, pollution from release of toxic gases, ultimately affecting climate change.
- 80 per cent of plastics enter the oceans from land.
- The main reason is the improper waste management in cities.

### Digitalisation in waste management

- Digitalisation in waste management has proven to be one of the most important solutions to make cities and towns cleaner.
- Digital tools in waste management help city administrators take informed decisions in involving the ecosystem stakeholders, on issues such as inclusivity of waste-pickers.
- Such tools are useful in tracking status of policy implementation.
- Sansaadhan Portal provides ULBs with a digital solution to monitor the performance of their MRFs.

**Way Forward**

- The efficacy of the current methods of waste segregation needs to be monitored in more detail in most cities.
- If municipal solid waste is adequately segregated and sent to MRFs, the waste can be converted into an important resource.
- Integrate wastes from other sectors such as solar panels, batteries and other material resources to give a circular approach.
- Organics, which make up about 43-45 per cent of MSW, can be turned into a valuable resource that can be used in the production of biogas or compost.

## 4. Obesity and Undernutrition Levels in India

**Introduction**

- **India has seen a steady increase in obesity levels — not only in adults but children too.**
- The prevalence of undernutrition has also remained high.
- As a result, India has become one of the countries with a high “double burden”.

**Reason**

- Lack of access to affordable and nutritious food lead to undernutrition.
- Increased access to processed foods high in fats, salt, and sugar lead to obesity.

**Parameters of being obese and underweight**

- Obesity is an abnormal or excessive accumulation of fat that poses health risks.
- Adults are considered to be obese, if they have a body mass index (BMI) of 30 kg/m<sup>2</sup> or more.
- Underweight is one of the four broad sub-forms of undernutrition.
- An adult is considered underweight if their BMI is less than 18 kg/m<sup>2</sup>.

**Present Status**

- Obesity in women has spiked in the past three decades — it increased from 1.2% in 1990 to 9.8% in 2022.
- Obesity in men increased by 4.9 percentage points during the same period.
- There has also been a significant increase in childhood obesity.
- The prevalence of underweight and thinness continues to be high across genders and age groups.

**Why are more women obese as compared to men?**

- Most of the women do not have access to or time for physical activities such as walks or gyms.
- They are also likely to put the nutrition of the family above theirs.
- Likely to have fewer hours of proper sleep, waking up first and going to bed last.

**Socio-economic conditions affecting obesity and undernutrition**

- Obesity is no longer the disease of the rich in India.
- Eating junk food is cheaper and easier.
- This has led to an increase in obesity even among the poor.
- There continues to be a rural-urban divide when it comes to obesity.
- Undernutrition persists in extremely remote and rural parts of poorer states where access to any kind of food is low.

**Impacts of obesity and undernutrition on health**

- **Increase in diseases such as diabetes, hypertension, heart attacks, and strokes.**
- Undernutrition is likely to increase the **burden of non-communicable diseases.**
- There is a hypothesis that says babies who are born small are likely to have smaller organs and vessels.

- They have a catch-up growth later in life, but their bodies are less likely to adjust to increases in nutrition, making them more prone to lifestyle disease.

### **Concerns / Challenges**

- Making healthy food affordable and accessible is the challenge.
- New pharmacological treatment of obesity is likely to have a low impact globally in the short-term.
- High cost and the absence of generalisable clinical guidelines.

### **Way Forward**

- Obesity and underweight should not be considered in isolation.
- Focus has to be on programmes that enhance healthy nutrition, such as
  - targeted cash transfers,
  - food assistance as subsidies or vouchers for healthy foods,
  - free healthy school meals, and
  - primary care-based nutritional interventions
- There is an urgent need for supporting weight loss in those with obesity.
- Making healthy food affordable and accessible.

## 5. Antiretroviral Therapy (ART) Initiative

### **Introduction**

- Twenty years ago, on April 1, 2004, the Indian government had launched Free Antiretroviral Therapy (ART), for Persons living with HIV (PLHIV).
- This is a key intervention in the fight against HIV/AIDS.

### **Background**

- HIV/AIDS was considered a death sentence and was met with a lot of fear, stigma and discrimination.
- The first antiretroviral drug AZT (zidovudine) was approved by US FDA in 1987 and three more drugs were approved soon after.
- Access to these medicines remained limited for most of the world's population.

### **Evolution to free ART**

- In 2000, at the UN General Assembly's Millennium Summit, the declaration to stop and reverse the spread of HIV was issued.
- The Global Fund to Fight AIDS, Tuberculosis and Malaria advocated universal access to HIV prevention, treatment, care and support services.
- From November 2006, the free ART was made available for children.
- In two decades of free ART initiative, the facilities offering ART have expanded from less than 10 to around 700 ART centres.
- The impact has been that in 2023, the prevalence of HIV in 15-49 years has come down.
- The annual new HIV infections in India have declined by 48% against the global average of 31% (the baseline year of 2010).
- The annual AIDS-related mortalities have declined.

### **Patient-centric approach to services**

- There were many complementary initiatives which have contributed to halting the HIV epidemic. These include
  - the provision of free diagnostic facilities;
  - attention on prevention of parent to child transmission of HIV (PPTCT) services;
  - prevention, diagnosis and management of opportunistic infections including management of co-infections such as tuberculosis (TB).
- Early initiation of ART and Treat all policy evolved over the years.

- This has contributed to reduced virus transmission, both at the individual and the community levels.
- The ongoing National AIDS Control programme aims to (by 2025)
  - reduce the annual new HIV infections by 80%,
  - reduce AIDS-related mortalities by 80% and
  - eliminate vertical transmission of HIV and syphilis.

### Concerns / Challenges

- Delayed enrolment to the ART facilities is the biggest challenge.
- After starting on ART and when the patient starts feeling well! they start missing doses and miss medicines.
- This results in the development of resistance as well.

### Way Forward

- The sustained supply and availability of ART needs to be ensured in every geography of the country and in tough terrain, hilly and remote areas.
- Focus on the private sector engagement in care of PLHIV.
- Need for constant training and capacity building of staff as science keeps evolving.
- Focus on strengthening integration with other programmes such as hepatitis, non-communicable diseases and mental health.
- A focused approach needs to be adopted to reduce preventable mortality.

### Conclusion

- The 20 years of free ART and subsequent steps under the NACP have the potential to guide other public health programmes in the country.
- The learnings can be used to launch a nationwide free hepatitis C treatment initiative in India and accelerate progress towards hepatitis C elimination.

## 6. The Malnutrition Gap

### Introduction

- Experience has taught that simple things are often the most effective solutions.
- In this light, counselling people on eating and feeding practices along with monitoring their progress can prove to be a game-changer.

### Government Efforts

- Over the years, the government has made several efforts to ensure food security.
- Children have **mid-day-meals** in their schools and people receive monthly rations through **Public Distribution System**.
- Ready-to-eat packets and hot meals are served at **Anganwadi Centres (AWCs)**, under the **Prime Minister's Overarching Scheme for Holistic Nourishment (POSHAN) Abhiyaan**.
- Jan Andolan or social and behaviour change communication (SBCC), has been a facet of POSHAN Abhiyaan.
- Egg, banana, protein powders, peanut chikki and jaggery are also being distributed under various State-specific schemes.

### Concerns / Challenges

- Nutrition security is still a distant dream.
- People often lack knowledge of proper eating and feeding practices.
- Myths around food and increased accessibility to highly processed food have compounded the problem.

### Lessons from Bemetara

- Bemetara in Chhattisgarh is a puzzling district in the context of its malnutrition status.
- The number of Severe Acute Malnourished (SAM) children there was as high as 3,299 in December 2022.
- It points to the lack of proper knowledge about feeding practices.
- **Nutrition counselling combined with robust monitoring was chosen as the modus operandi for this area.**
- **Potth Laika Abhiyaan** is a nutrition counselling programme that is being implemented in 72 of the most affected AWCs of Bemetara district.
- Ground-level staff from the Health and Women and Child Development departments have been well trained on how to provide nutrition counselling in the region.
- Local leaders such as sarpanchs, panchayat sachivs and religious heads have also participated in the counselling sessions.
- As a result, 53.77% of targeted children were brought out of malnutrition by the Potth Laika Abhiyaan, in a span of nine months.
- This mission is a zero cost one, requiring no more than a few training sessions and regular monitoring.
- Thus, it has shown to be cost effective as well.
- This model needs to be replicated on a larger scale across districts and States.

### Way Forward

- The concept of nutrition counselling has to be properly institutionalised and implemented uniformly across States.
- A focused and coherent social and behaviour change communication (SBCC) Action Plan is essential to take the work of POSHAN Abhiyaan forward.
- There is a need for field staff to be properly trained in nutritional counselling.

## 7. Universal Health Coverage

### Introduction

- **Universal health coverage (UHC) signifies universal accessibility to comprehensive, high-quality health services, without financial hardship.**
- UHC ensures that people receive care whenever and where ever they need it.
- The two critical components of the UHC policy — **strengthening primary healthcare and reducing out-of-pocket expenditure.**

### Significance of UHC

- It enables people to be more productive and active contributors to their families and communities.
- It ensures that children can go to school and learn.
- It prevents people from being pushed into poverty when they have to pay for health services out of their own pockets.
- It is a critical component of sustainable development and a key element to reduce social inequities.

### Efforts towards UHC

- **In 2012, the UN General Assembly endorsed a resolution urging countries to accelerate progress towards UHC.**
- The National Health Policy, 2017 aligns with the UHC target.
- Pradhan Mantri Jan Arogya Yojana (PMJAY) — the insurance programme which aims to cover 10 crore poor families for hospitalisation expenses of up to ₹5 lakh per family per annum.

### Right to health

- India lacks a constitutional provision for the fundamental right to basic health.
- DPSP provides a basis for the right to health.

- The Constitution not only mandates the state to enhance public health but also endows the panchayats and municipalities to strengthen public health.
- **The constitutional right to health is critical to breaking the vicious cycle of poverty and poor health.**

### Concerns / Challenges

- Crumbling public health infrastructure.
- India has one of the lowest per capita healthcare expenditures in the world.
- India has a large migrant population: total migration rate was 28.9% (Periodic Labour Force Survey, 2020-21).
- 49% of the population lives in urban slums, according to UN-Habitat/World Bank.

### Way Forward

- Since health is a state subject and the UHC policy is envisaged at the national level, there is a need for discourses on implementation.
- The focus should be on ensuring the availability and accessibility of primary health services.
- Address urban migrants' health needs, and reforms in informal sectors.
- Need to include the element of mobility and portability of access to health care services to aid continuity of treatment.
- Simplify the reimbursement processes for reducing out-of-pocket expenditure.
- Implement community-based primary healthcare in urban and peri-urban areas.

### Conclusion

- **Effectively implementing UHC necessitates political will, substantial investment, and a clear, long-term vision.**

Topic: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

## 8. Pricing Water Properly

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### Introduction

- It is not a surprise that we are going from water scarcity to water crisis.
- Water is a necessity of life and everyone should have access to a basic quantity of it.

### Underpriced Resource

- An underpriced resource is over-consumed.
- The current approach of underpricing water is no longer tenable.
- Water can only be conserved when it is priced at marginal cost.

### Need for Pricing Water

- Pricing can solve upstream problems as well.
- One reason the Kaveri water dispute has persisted for decades is that there is no reason for the claimants to moderate their claims.
- States that claim more than a low basic quota must pay for the excess into a Kaveri Water Fund.
- States that take below their quota can receive money instead.
- This would give the state governments the financial resources to compensate farmers and others who have to change their water-use patterns.
- Pricing will create incentives to economise on the use of water and lead to a more efficient allocation.
- The biggest hurdle is a political system that is addicted to populism.
- National highways—where pricing has created a bigger and better road network.
- Water should be priced because it creates incentives for conservation.

### Access to Water

- The United Nations General Assembly has decreed that every human has a right to 50 to 100 litres of water per day from a source less than 1km and 30 minutes from home.
- There is a case to make available this basic quantity of water free of cost to poor households.
- With the availability of Jan Dhan, Aadhaar and Mobile (JAM), it is possible that the poor are provided the money to purchase it.

### Way Forward

- Indian cities must raise water prices over a period of a few years until they are close to its marginal cost.
- Entitle poor households to water vouchers, that can be financed through the state government's budget.
- Municipal water companies should be mandated to provide at least 100 litres per person per day regardless of the means of delivery.
- Tackling scarcity requires action on multiple fronts:
  - increasing efficiency of use,
  - promoting reuse,
  - governing ground-water,
  - harvesting rainwater,
  - rehabilitating water bodies,
  - building new infrastructure and so on.

## General Studies - 3

Topic: Inclusive growth and issues arising from it.

### 9. Financial Inclusion

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#### Introduction

- Financial inclusion has been the key tool used by policymakers globally to reduce poverty and inequality, strengthen the livelihoods of people and spur global growth.

#### B20 platform to advance financial inclusion

- Financial inclusion has been a part of the B20 deliberations for a long time.
- At the Pittsburg Summit in 2009 a Financial Inclusion Experts Group (FIEG) was set up.
- Setting up of the Global Partnership for Financial Inclusion (GPII) at the Seoul Summit (2011).
- Rolling out of a basic set of financial inclusion indicators at the Mexico Summit (2012).
- Adoption of high-level principles for digital financial inclusion at the China Summit (2016).

#### Present Status

- **The Global Findex Database 2021 of the World Bank estimates that almost 24% of adults globally do not have access to formal financial accounts.**
- Micro, small and medium enterprises are also experiencing increased financing disparities.
- In developing countries, 21% of micro-enterprises are constrained either due to rejection of loan applications or incompatible terms.
- Globally MSMEs contribute around 35% of GDP in developing economies and 50% in developed nations.
- Closing this funding gap is essential for boosting global growth and generating productive jobs.

#### Gender Gap in Financial Inclusion

- **Women face obstacles such as restrictive social norms, mobility constraints, a lack of identification, limited financial literacy, etc, in obtaining basic banking services.**

- This is reflected in the gender gap in bank account ownership, which is more exacerbated in low-income and developing countries.
- The gender gap in Sub-Saharan Africa and the Middle East and North Africa is 12 and 14 percentage points, respectively.
- Men with accounts are typically 6 percentage points more likely than women to use digital payments in developing nations.
- Women also find it more difficult to raise emergency money.

### Concerns / Challenges

- A **lack of innovation in the delivery of financial services, low financial literacy levels, limited capacity-building avenues and gender-based exclusion can put a lot of stress on financial inclusion initiatives.**
- Globally, insurance penetration is also very low at 7% of GDP.
- Rural and migrant segments often find it hard to access timely and affordable financial services.

### Way Forward

- There is a need to strengthen the ecosystem and enablers that drive financial inclusion.
- **Promoting private sector involvement in financial inclusion** through partnerships.
- There is a need to **increase the penetration of financial products and services.**
- There is also a need to **accelerate financial inclusion of the agricultural, rural and migrant segments.**
- Focus on reducing the cost of capital for financial institutions.

Topic: Effects of liberalization on the economy, changes in industrial policy and their effects on industrial growth.

## 10. Socio-economic development of MSMEs

### Introduction

- The Micro, Small and Medium Enterprises (MSMEs) sector is an important pillar of the Indian economy.
- Its vast network contributes about 45% to manufacturing output.
- **It is termed as “engine of growth “for India.**

### Role of MSMEs in socio-economic development

- The share of MSMEs in the **country’s gross value added** is estimated to be about 32%.
- It also contributes about 40% to total exports and 45% to manufacturing output.
- MSMEs provide about 110 million jobs which is 22-23% of the **total employment** in India.
- There are approximately 30 million MSME Units in India and is quite **diverse in terms of its size, technology employed and range of products and services provided.**
- The sector has made significant contributions to the **country’s rural socio-economic growth** and complemented major industries as well.

### Concerns / Challenges

- MSME sector faces a major problem in terms of **getting adequate credit** for expansion of business activities.
- Most banks are reluctant to lend to MSMEs because of **inexperience** of these enterprises, **poor financials, lack of collaterals and infrastructure.**
- Most of the MSME funding comes from informal sources.
- With poor infrastructure, MSMEs’ production capacity is very low while production cost is very high.
- Financial constraints limit the access to modern technology and consequently the technological adoption remains low.
- Getting statutory clearances related to power, environment, labour are major hurdles.
- There has been a constant **crunch of skilled manpower** in MSMEs.

- Due to **bureaucratic red tapism**, getting a project off the ground is not easy yet.

### Way Forward

- **Focus on quality manufacturing, with the use of automation to enhance operations, and the exploration of new markets through e-commerce.**
- Skilling plans in accordance with sector-wise requirements will enable us to create appropriate job opportunities.
- Indian policies need to be revisited so that discrepancies are removed.
- Government should encourage procurement programme, credit and performance ratings and extensive marketing support to revive the growth of sick units.
- Through **productivity-linked incentives**, creating a separate window for fresh outlays for MSMEs.

### Conclusion

- India needs to ease the regulatory burden of small units and aid their survival through fiscal support.
- Above all, they **need a level-playing field vis-à-vis big business.**

## 11. Private Labels and MSMEs

### Introduction

- **India's focus on linking Micro, Small and Medium Enterprises (MSMEs) to global value chains, as highlighted at G20 meetings is a step in the right direction.**
- In this uncertain global scenario, the role of **MSMEs as drivers of India's growth and employment** cannot be undermined.

### Present Status

- The MSME sector is one of India's largest employers, accounting for 29.2% of GDP and 36.2% of manufacturing output in 2021-22.
- However, the share of MSMEs in exports has declined from 49.4% in 2020-21 to 43.6% in 2022-23.

### Private label market in India

- A private label product is one that a retailer or e-commerce company can get manufactured by a third party (usually an MSME) to sell under its own store brand name.
- The private label market in India is on the rise.
- This growth is fuelled by consumer preferences for distinctive, high-quality products at affordable prices.
- This offers an opportunity for companies to launch private labels as affordable alternatives to branded equivalents.
- This offers a lifeline to MSMEs, helping them overcome challenges like achieving brand appeal and reaching customers.

### Benefits for MSMEs

- Private labels also help MSMEs to **increase their revenue**, thereby gaining financial stability.
- Private labels enable small enterprises fosters **domestic and global expansion**, resource-efficient growth and innovation.
- Small businesses can tap the established supply chains of large retailers with wide market reach.
- On a global scale, involving export orders, all this helps in **improving global competitiveness.**

### Concerns / Challenges

- Concerns related to **consumer protection** from fake and deceptive reviews of private-label products online.
- There is **no specific law regulating private labels in India.**

- The **overlapping regulations** hinder business ease, and impede the integration of MSMEs into global value chains through e-commerce platforms.

### Way Forward

- Labelling rules and norms for private labels in India could be covered under the Legal Metrology Act.
- Adopting a prudent approach to **regulating private label sales on e-commerce platforms** is of paramount importance.
- Need to address gaps in existing regulations, including Consumer Protection (E-Commerce) Rules, 2020, unfair trade practices, and dispute resolution mechanisms.
- A well-designed, transparent regulation will benefit all stakeholders—companies, MSME suppliers and consumers.
- The government and companies must forge collaborations aimed at onboarding a greater number of MSMEs onto e-commerce platforms

Topic: Infrastructure: Energy, Ports, Roads, Airports, Railways etc.

## 12. Infrastructure development

### Introduction

- Traditionally, public capital expenditure on the creation of public utilities has had only a limited assessment of risks and financial returns.
- However, a paradigm shift is underway as we move from public capex to private investment.
- Therefore, **de-risking strategies for investment have become crucial.**

### Measures to encourage investments

- **The Indian government has encouraged private and foreign investment through various measures such as**
  - liberal FDI policy,
  - Ease of Doing Business measures like a National Single Window System,
  - fiscal incentives, and
  - establishment of agencies like Invest India.
- **Investment de-risking measures have also been introduced.**
  - **The triad of PM Gati Shakti, Project Monitoring Group (PMG) and public private partnerships (PPP).**
- Leveraging technology and rationalized risk-sharing mechanisms, etc.

### PM Gati Shakti

- **PM Gati Shakti seeks to revolutionize infrastructure development through digital Geographic Information System (GIS)-based platform and an institutional arrangement.**
- It aims to develop plans for integrated multimodal infrastructure for the efficient transportation of goods and people.
- It brings together various ministries and departments on a single digital platform.
- It enables data-driven decision-making for project planning and implementation.
- Land acquisition risk is also minimized by using the planning tools available on the GIS platform.
- It also emphasizes multimodal connectivity to economic nodes and cargo hubs.

### PPP model

- The PPP model is another mechanism for an equitable and rational distribution of risks and rewards between public authorities and private partners.
- Over the past three decades, **PPP in India has attracted private capital along with state-of-the-art technologies and best practices in infrastructure development.**
- This growth is significant and can be attributed to de-risking measures.

### Way Forward

- **Intensifying PM Gati Shakti National Master Plan, Project Monitoring Group and Public Private Partnerships are likely to boost investor confidence and attract further investments.**
- Laying the foundation for a more efficient and resilient logistics ecosystem.
- Greater integration of India's economy with global value chains.
- India's joining a global club of the 10 most efficient logistics ecosystems would be incidental to it.

Topic: Major crops cropping patterns in various parts of the country

## 13. Secondary Agriculture

### Introduction

- Adding value is the cornerstone of secondary agricultural activities because it transforms raw agricultural products into finished goods.
- It involves the **use of technology and various skills, and results in improved quality.**

### Types of Secondary Agriculture

- Value addition to primary agriculture production systems.
- Alternative enterprises like beekeeping, poultry, agritourism, and off-farm enterprises.
- Enterprises that thrive on crop residues and waste materials of primary agriculture.

### Benefits

- It enhances farmers' income and competitiveness.
- Research confirms that in India, a mere 1% rise in agricultural value added per hectare can result in a short-term reduction of 0.4% in poverty and, in the long term, a decrease of 1.9%.

### Opportunities

- In India, less than 10% of agricultural and food items are processed.
- Huge demand is expected for processed food in India in the years ahead.
- This could lead to opportunities for higher value addition, reduced wastage and alternative employment.
- Secondary agricultural activities have been linked with the strategy of Doubling Farmers' Income (DFI).

### Various initiatives

- The Karnataka government established a **Directorate of Secondary Agriculture to take agriculture forward.**
- The NGO, Self-Reliant Initiatives through Joint Action (SRIJAN), has empowered Sahariya tribal communities in Madhya Pradesh by involving them in secondary agriculture activities.

### Concerns / Challenges

- Lack of study on secondary agriculture.
- Multiple ministries in both the Central and state governments manage activities related to secondary agriculture.

### Way Forward

- States have to constitute committees to study the importance of secondary agriculture.
- Bridge the gap between the primary and secondary agriculture.
- Secondary agriculture can be given priority sector status to receive institutional credit.
- The relationship between research institutes, bioresource industries, financial institutions, and farmer-producer organisations must be reinforced.
- Private-public partnerships (PPPs) should be promoted for technology development, commercialisation and investment.
- Facilitating rural industrialisation is essential to connect farm and off-farm activities.

- Providing capacity-building opportunities in secondary agriculture to progressive farmers as most agricultural households seek technical advice from these progressive farmers.

Topic: Issues related to direct and indirect farm subsidies and minimum support prices; Public Distribution System- objectives, functioning, limitations, revamping; issues of buffer stocks and food security

## 14. Managing Food Security

### Introduction

- The government has taken a slew of measures to bolster finances required for institutionalised food security management.
- These Involve
  - procurement of wheat, rice and coarse grains from farmers,
  - their safe storage and transportation to deficit regions, and
  - their distribution among beneficiaries.

### Food Security

- **Food security is the condition in which all people, at all times, have access to safe and nutritious food that meets their dietary needs for an active and healthy life.**

### Food Credit

- There has been a separate arrangement for pre-emptive lending to FCI and food-procuring state governments regulated by the Reserve Bank of India (RBI).
- The entire volume of food credit is extended by a consortium of banks led by State Bank of India (SBI).
- This reduced the credit available for other sectors of the economy.
- Since the establishment of FCI, food credit had been consuming a significant share of the total credit deployed in the Indian economy.
- Since the establishment of FCI in 1965, food credit had been consuming a significant share of the total credit deployed in the Indian economy.
- It declined further with FCI's diversification of fund sources.

### Food subsidy

- During 2011 to 2020, FCI had managed its finances by borrowing huge amounts of money from various sources.
- High economic costs in turn leads to higher food subsidy pay-outs by the government.
- This places constraints on modernising food-security infrastructure for more efficient operations.
- From 2020-21 onward, the government has developed a mechanism for quick and regular disbursements of subsidy claims.
- The government has extended support to FCI in raising funds through cheaper sources, such as bonds.
- This is likely to have a positive impact on the operational capabilities of the world's largest food dispensing system.

### Government interventions to tackle hunger

- **Pradhan Mantri Matru Vandana Yojana (PMMVY):** 6,000 is transferred directly to the bank accounts of pregnant women for availing better facilities for their delivery.
- **POSHAN Abhiyaan:** aims to reduce stunting, under-nutrition, anaemia.
- **National Food Security Act (NFSA), 2013,** aims to ensure food and nutrition security.
- **Mid-day Meal (MDM) scheme** aims to improve nutritional levels among school children.
- **Public Distribution System (PDS)** that reaches over 800 million people under the National Food Security Act.
- NITI Aayog has worked on a **National Nutrition Strategy (NNS)**, isolated the 100 most backward districts for stunting and prioritised those for interventions.

**Concerns / Challenges**

- Financing food security operations has been a highly challenging part of public financial management.
- India ranked 111th out of 125 countries in the Global Hunger Index-2023 with the country reporting the highest child wasting rate.
- The NSFA does not guarantee universal right to food.
- NSFA does not address the issue of malnutrition and nutritional deficiency adequately.
- Food adulterations in distributed food.
- The open market operations (OMO) are much less compared to what is needed to liquidate the excessive stocks.
- Food grains rotting or damaging on the CAP or Cover & Plinth storage.

**Way Forward**

- Food should be priced not only by its weight or volume but also by its nutrient density.
- Prioritising early childhood nutrition.
- Reforming the institutional framework through which interventions are delivered.
- India's ability to harness long-term demographic dividends rests on it prioritising nutrition in its health agenda

Topic: Conservation, environmental pollution and degradation

## 15. Protecting World Heritage Sites

**Introduction**

- UNESCO World Heritage sites are home to 75,000 species of plants, and over 30,000 species of mammals, birds, fish, reptiles and amphibians.
- **Protecting these sites can help conserve biodiversity and meet the targets set by the Kunming-Montreal Global Biodiversity Framework (GBF).**

**Present Status**

- The World Heritage sites take up only 1 per cent of the earth's surface.
- The last of several iconic species are found in these sites.
- Up to 1/3 of remaining elephants, tigers and pandas can be found in these sites, as well as at least one in 10 great apes, giraffes, lions and rhinos.
- They are home to all remaining Javan rhinos, vaquitas and pink iguanas.

**Importance of World Heritage Sites**

- These locations offer a **safe haven for many threatened species.**
- They are critical to the preservation of the diversity of life on Earth, maintaining essential ecosystem services, and addressing climate disruption.
- **Water resources that cater to human needs, are conserved in many of these sites.**
- They provide the opportunity for people to earn a livelihood through sustainable work.
- **Cultural World Heritage sites help maintain a beneficial relationship between human beings and nature.**

**Need for Protecting these sites**

- Urgently protecting them is thus **essential in saving the vulnerable species.**
- Every 1-degree Celsius rise in global temperature can "double the number of species threatened by dangerous climate conditions.

**Concerns / Challenges**

- These areas are affected by climate change and anthropogenic pressures like agricultural expansion, infrastructure development, poaching, overexploitation of resources and the proliferation of invasive species.

**Way Forward**

- Countries should nominate all other biodiversity-rich areas for World Heritage inscription.
- Governments should prioritise World Heritage sites in National Biodiversity Strategies and Action Plans.
- All World Heritage site managers must be trained in climate change adaptation strategies.

## 16. Production of E-Waste

**Introduction**

- The world produced a whopping 62 billion kg of electronic waste (e-waste) in 2022.
- It is projected to rise to 82 billion kg in 2030, according to a United Nations (UN) report.

**Reasons for Increased E-Waste Production**

- Rise in e-waste generation is outpacing the rise in formal recycling by a factor of almost 5.
- This is due to technological progress, limited repair options, short product lifecycles, growing electrification, and inadequate e-waste management infrastructure.

**E-waste Generation in India**

- India is the third largest E-waste generator, after USA and China.
- E-waste is growing at a compound annual growth rate (CAGR) of about 30% in the country.
- **India's first e-waste clinic for segregating, processing and disposal of waste from household and commercial units has been set-up in Bhopal.**

**Concerns / Challenges**

- Handling of e-waste in informal sector in low- and lower-middle-income countries, with no developed e-waste management infrastructure.
- The majority of the e-waste that is disposed of as residual waste is put in landfills worldwide.
- With this mercury and brominated flame retardants are released into the environment.
- Only a few Countries in Asia have enacted legislation or established clear e-waste collection targets.
- Child labourers in the age group of 10-14 are observed to be engaged in various E-waste activities.
- E-waste contains over 1,000 toxic materials, which contaminate soil and groundwater.

**International Practice**

- Europe has the highest rate of documented formal collection and recycling of e-waste.
- Africa generates the lowest rates of e-waste but struggles to recycle it.
- Countries in Asia generate almost half of the world's e-waste but have made limited advances in e-waste management.
- On the policy front, 81 countries have adopted e-waste policy, legislation or regulation.

**Way Forward**

- The easiest solution for all e-waste issues is not to generate any e-waste in the first place.
- Accelerating formal and environmentally sound collection and recycling.
- Identifying and promoting cooperatives and expanding the scope of the E-Waste (Management) Rules, 2016 to these cooperatives or the informal sector workers.
- Effective implementation of regulations is the way ahead to managing the e-waste.

## 17. E-Waste Management

### Introduction

- **Recent NITI Ayog report talks about changing the outlook on e-waste management to build a system where discarded electronics can have a new life by reintroducing components and precious metals into new hardware.**
- There could be an additional \$7 billion market opportunity in harnessing e-waste, the report said.
- India along with the US, the UK, China and Japan are the highest e-waste generating nations.

### E-waste management in India

- E-waste management is **largely informal in India**, as in the case of recycling.
- Roughly 90% of collection and 70% of the recycling are managed by informal sector.
- The Union Government notified the **E-Waste (Management) Rules, 2022** in order to digitise and provide more visibility to the movement of e-waste in the economy.
- The level of e-waste may grow as phones get cheaper and people use them more.

### Circular economy

- Demand for electronics is growing across all price segments.
- Instead of merely salvaging these parts, a circular economy seeks to bring them back into the electronics ecosystem.
- By 2019, China ensured that 5% of their secondary raw material went into manufacturing of new products, by 2030, they are targeting 35%.

### Recycling E-waste

- Public-private partnerships to distribute the costs of setting up reverse supply chain.
- Incentivise the 'high yield' recycling centres.
- Encouraging repair and making products last longer.
- **Supporting right to repair by users may reduce the environmental burden of electronic waste.**
- As much as 7% of the world's gold may currently be contained in e-waste, with 100 times more gold in a tonne of e-waste than in a tonne of gold ore.

### Concerns / Challenges

- Large informal sector that is hard to track or hold to environmental norms.
- A whopping 200 million devices are estimated to be lying at consumers' homes, who don't hand them in for recycling after they stop using them.
- **Electronics are stored in open yards, further increasing the risk of electric leakages.**
- Many people are concerned about what may happen to the personal data on their devices if they hand them in for recycling.
- Building recycling plants on a large scale requires more than the initial capital costs.
- Many formal recyclers undertake activities only up to the pre-processing stage, and later channelise e-waste to the informal sector

### International initiatives

- **France's 2019 'anti-waste Bill'** has pushed up the 'repairability index' that mandates a clear display of information on the repairability of electronic devices.
- Japan initiated a first-of-its-kind nationwide effort to recycle e-waste from 2020 Tokyo Olympics medals production.
- The UK has cleared the **'Right to Repair' law** that gives consumers the right to repair their own electronic devices and requires the manufacturers to supply the necessary spare parts.

### Way Forward

- There need to be a policy push to encourage manufacturers to reuse old components.
- Standardising the e-waste value chain through a common digital 'portal' may ensure transparency.

- Increasing consumer awareness, building capacity of stakeholders, improving existing infrastructure, enhancing product designing and adopting green procurement practices.

## 18. Deep Sea Mining

### Introduction

- **Deep-sea mining is the process of retrieving mineral deposits from the deep seabed, the ocean below 200 metres, that covers two-thirds of the total seafloor.**
- Deep-sea mining involves extracting ores rich in cobalt, manganese, zinc and other rare metals from the seafloor.
- Experts believe they contain critical minerals required for the production of batteries for electric vehicles, smartphones, laptops and renewable energy capacity.

### Issues posed by Deep Sea mining

- Deep remote locations can be home to unique species that have adapted to poor oxygen and sunlight, high pressure and extremely low temperatures.
- Mining expeditions can make them go extinct even before they are known to science.
- The deep sea's biodiversity and ecology remain poorly understood.
- This makes it difficult to assess the environmental impact and frame adequate guidelines.
- Concerns about the sediment plumes that will be generated along with noise and light pollution from mining.
- An estimate from the ISA says it will be commercially viable only if about three million tonnes are mined per year.
- Extracting these minerals would be energy intensive and the problems experienced in terrestrial mining would be replicated at sea.
- Deep seabed mining may also be perceived as an assault on Indigenous groups that share a profound cultural connection and bond to the deep ocean.

### Conventions regulating deep sea mining

- International Seabed Authority was established under the United Nations Convention on the Law of the Sea (UNCLOS).
- ISA regulates activities on the seabed and ocean floor beyond the scope of national jurisdiction while ensuring their protection.
- IUCN Members adopted Resolution 122 to protect deep-ocean ecosystems and biodiversity.
- UN High Seas Treaty, to protect the world's oceans outside national boundaries.
- Draft Deep Seabed Mining Regulations, 2021 has been formulated by the Indian government to provide a legal framework for the exploration of mineral resources in the country's exclusive economic zone (EEZ).

### Way Forward

- In the absence of a clear charter, deep sea mining operations could cause irreversible damage.
- There is an urgent need for an international charter.
- Developing standards for the protection and preservation of the marine environment.
- Studying the environmental impact of activities in the seabed area.
- A new set of exploration guidelines must be worked out with discussions involving multi-stakeholders like ISA, IUCN, UNCLOS, littoral nations etc.

Topic: Science and Technology- developments and their applications and effects in everyday life.

## 19. Generative Artificial Intelligence (AI)

### Introduction

- The global generative AI market is projected to experience explosive growth in the coming years.
- As the commoditisation of AI services becomes more widespread, business models of industries will change drastically.

### What is generative AI?

- Generative AI, sometimes called *gen AI*, is artificial intelligence (AI) that can create original content—such as text, images, video, audio or software code—in response to a user’s prompt or request.
- Generative AI relies on sophisticated machine learning models—algorithms that simulate the learning and decision-making processes of the human brain.

### AI Future

- LLMs (Large Language Models) and Generative AI are set to automate various tasks that require natural language understanding.
- That includes summarisation, translation, answering questions, coding, and even conversation.
- AI-powered coding assistants like ChatGPT and Amazon CodeWhisperer are rapidly gaining popularity and helping developers undertake routine tasks.
- Ninety-two per cent of programmers based in the US are now leveraging AI to supplement their coding abilities.

### Benefits

- A large majority of developers believe that AI coding tools will give them an edge in the workplace.
- Benefits from using AI coding assistants, include accurate, efficient and faster coding.

### Concerns / Challenges

- Disruption of markets, creation of inequalities, reduction of incentives for human creativity and innovation, and the displacement of workers.
- This will create hundreds of millions of unemployed skilled and semi-skilled workers.
- It will also impact developed and developing nations differently.
- Nations and societies that do not rapidly reskill their workforce will be disproportionately affected.
- In India, sectors that involve routine information processing will be affected.
- India is not as well-prepared as China and the US to face the onslaught of Generative AI and related technologies.
- There are limitations in access to cloud computing in India for training large language models.
- Lack of coordination between academia and industry in India.
- Data security and privacy concerns.

### Way Forward

- Workforce training programmes, new policies, and social support measures that help people through this transition are the need of the hour.
- Incentivisation of the transition of workers by helping them gain new technical skills should be a high priority.
- The state can think of providing tax breaks and other incentives to help businesses retrain workers.
- Creating income supplement opportunities and job placement services to help displaced workers apply for new roles.
- Develop a comprehensive national AI strategy that connects stakeholders to provide a roadmap for responsible AI deployment.
- Establish AI policy think tanks and research institutes to foster AI innovation and nurture talent.
- Incentivise businesses to invest in AI R&D and support workers’ training for the changing technological landscape.