

FWD

FORTUNE WEEKLY DIGEST



> INDIA'S SUPERCOMPUTING ECOSYSTEM > AFSPA > TACKLING FOOD LOSS AND WASTE

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EDITOR'S NOTE

As UPSC aspirants, it is essential to stay updated on current affairs to excel in the examination. This **Fortune Weekly Digest (ForWarD)** brings you the latest news and developments from around the world, carefully curated and analyzed to help you prepare for the Civil Services (Main) Examination.

We understand that time is precious, and we have made sure to present the information in a concise and easy-to-understand manner.

The magazine is divided into different sections. Mains relevant topics have been covered in detail with a UPSC previous year question perspective. The jot downs are examples and interesting facts to enrich your answer writing. Cherrypicks has some key words from the week, helpful again in answer writing and essay. We have also included essay topics and sample questions to help you gauge your preparation.

We have designed this magazine to best supplement the daily current affairs notes we have launched by the name of **FIND (Fortune IAS News Daily)** and **FINDER (Fortune IAS News Daily Explainer)** and the **Fortune Prelims Precise** monthly compilation. This magazine will be explained in detail and your queries addressed in a live class we conduct.

At a time when there is no dearth of current affairs materials, our hope is help you get a one-stop solution for all your current affairs needs.

This magazine is a work in progress and your feedback will be appreciated.

We hope that this magazine will serve as a valuable resource for your exam preparation and contribute to your success in the UPSC examination.

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**FIRST ATTEMPT TOPPERS FROM
OUR PRELIMS CUM MAINS BATCH**

KASTURI SHA
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MANJIMA P
AIR 235

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AIR 71

SWATHI S BABU
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TACKLING FOOD LOSS AND WASTE

Syllabus: GS III - Food processing and related industries in India

PYQ MAPPING

Q) Elaborate the scope and significance of supply chain management of agricultural commodities in India. (2025)

Q) What are the challenges and opportunities of the food processing sector in the country? How can the income of the farmers be substantially increased by encouraging food processing? (2020)

Q) What are the reasons for poor acceptance of cost-effective small processing units? How will food processing units be helpful to uplift the socio-economic status of poor farmers? (2017)

WHY IN NEWS

The **International Day of Awareness of Food Loss and Waste**, observed annually on **29 September**, highlights the need to reduce food wastage in India to strengthen food security, improve farmers' incomes and minimise environmental impacts.

INTRODUCTION

Food loss and waste threaten food security, economic efficiency and environmental sustainability. According to **UNEP's Food Waste Index Report 2024**, approximately **1.05 billion tonnes of food** were wasted globally in **2022**, highlighting the urgent need for sustainable food systems.

CURRENT STATUS

- ➔ **Global food waste:** According to the **UNEP Food Waste Index Report 2024**, approximately **1.05 billion tonnes** of food were wasted globally in 2022, equivalent to around **19%** of food available to consumers at the household, food-service and retail levels.
- ➔ **Household contribution:** Households accounted for approximately **60%** of global food waste in 2022, followed by food services (**28%**) and retail (**12%**).
- ➔ **Food loss across supply chains:** The FAO estimates that around **13%** of food is lost globally between harvest and the stage before retail.
- ➔ **India's post-harvest losses:** According to **NABCONS (NABARD Consultancy Services)** study (2022), cited by the Ministry of Food Processing Industries, estimated losses of:
 - o **Cereals:** 3.89–5.92%
 - o **Fruits:** 6.02–15.05%
 - o **Vegetables:** 4.87–11.61%
 - o **Marine fisheries:** 8.76%.

- ➔ **Economic losses:** An **ICAR-CIPHET** study published in 2015 estimated the economic value of quantitative losses across **45 major agricultural commodities** at approximately **₹92,651 crore**.



CAUSES OF FOOD LOSS AND WASTE

- ☀ **Inadequate storage infrastructure:** Insufficient scientific warehouses, cold-storage facilities and refrigerated transport lead to spoilage, particularly of fruits, vegetables and fish.
- ☀ **Poor post-harvest practices:** Improper harvesting, handling, drying, grading and packaging damage agricultural produce.
- ☀ **Supply-chain inefficiencies:** Fragmented markets, inadequate rural roads, delays in transportation and poor coordination between producers and buyers increase losses.
- ☀ **Lack of processing facilities:** Limited food processing, preservation and value-addition capacity reduces the shelf life of perishable produce.
- ☀ **Retail and commercial practices:** Strict cosmetic standards, unpredictable demand and short shelf life lead to the rejection or disposal of edible food.
- ☀ **Consumer behaviour:** Over-purchasing, excessive cooking, oversized portions, poor meal planning and

confusion over date labels contribute to household food waste..

IMPACT

- 🌀 **Food insecurity:** Wasting edible food reduces its availability for vulnerable populations and undermines efforts to achieve **Zero Hunger**.
- 🌀 **Economic losses:** Farmers lose income when produce spoils before reaching markets, while businesses and households lose money on food that is never consumed.
- 🌀 **Climate change:** According to FAO, Food loss and waste account for an estimated **8–10%** of global greenhouse gas emissions.
- 🌀 **Wastage of natural resources:** Producing food that is never consumed wastes agricultural land, freshwater, energy, fertilisers and labour.
- 🌀 **Environmental degradation:** Discarded food decomposes in landfills, generating methane and contributing to pollution.
- 🌀 **Pressure on food systems:** Unnecessary losses increase the resources required to produce, transport and distribute food, weakening the sustainability of the food system.
- 🌀 **Developmental contradiction:** Food wastage coexists with hunger and malnutrition, highlighting inequalities in food access and distribution.

GOVERNMENT INITIATIVES IN INDIA

- 🇮🇳 **PM Kisan SAMPADA Yojana:** Develops food-processing and preservation infrastructure, including cold chains and agro-processing clusters.
- 🇮🇳 **Operation Greens:** Supports agricultural value chains, processing and market linkages to address supply-chain inefficiencies.
- 🇮🇳 **PM Formalisation of Micro Food Processing Enterprises (PMFME):** Supports micro food-processing units, technology upgrades and value addition.
- 🇮🇳 **FSSAI Surplus Food Regulations, 2019:** Establishes a framework for the safe recovery and distribution of surplus edible food.

CHALLENGES

- 🔥 **Infrastructure gaps:** Uneven access to cold storage, pack houses, refrigerated vehicles and scientific warehouses.
- 🔥 **Supply-chain fragmentation:** Weak farmer–market linkages and inadequate coordination between

producers, processors and retailers.

- 🔥 **Climate change:** Heat and extreme weather can accelerate spoilage and disrupt transportation.
- 🔥 **Food safety concerns:** Temperature control, traceability and hygiene requirements complicate surplus-food redistribution.
- 🔥 **Consumer behaviour:** Over-purchasing, large portions and poor food-storage practices sustain avoidable waste.
- 🔥 **Economic incentives:** Food disposal may be easier or cheaper for businesses than safe recovery and redistribution.

WAY FORWARD

- ✳ **Farm-level solutions:** Promote scientific harvesting, drying, grading, packaging and storage.
- ✳ **Cold-chain expansion:** Develop decentralised cold rooms, pack houses and refrigerated transport near production centres.
- ✳ **Processing and preservation:** Expand freezing, drying, canning, pulping and food irradiation where appropriate.
- ✳ **Farmer collectives:** Strengthen FPOs and cooperatives to improve storage, bargaining power and market access.
- ✳ **Digital supply chains:** Use demand forecasting, inventory tracking and digital marketplaces to match supply with demand.
- ✳ **Food recovery networks:** Connect hotels, retailers, caterers and event organisers with verified food-distribution organisations.
- ✳ **Consumer awareness:** Encourage meal planning, portion control, proper storage and better understanding of date labels.

CONCLUSION

Reducing food loss and waste is essential to achieving **SDG 2 (Zero Hunger)** and **SDG 12 (Responsible Consumption and Production)** while mitigating climate change. Strengthening cold-chain infrastructure, promoting food redistribution and encouraging responsible consumption can help India build a more food-secure and sustainable future.

SAMPLE QUESTION

Q) How does food loss and waste undermine food security and environmental sustainability? Explain. **(10 Marks, 150 Words)**

INDIA'S BILATERAL INVESTMENT TREATY (BIT) UPDATE

Syllabus: GS II - International Relations

Syllabus: GS III - Indian Economy

PYQ Mapping

Q) Explain the meaning of investment in an economy in terms of capital formation. Discuss the factors to be considered while designing a concession agreement between a public entity and a private entity. (2020)

Why in the News?

The Ministry of Finance has completed a review of India's 2015 Model Bilateral Investment Treaty (BIT), with a revised, investor-friendly framework awaiting Cabinet approval. The move aims to attract sustained foreign investment while preserving India's regulatory sovereignty, amid renewed BIT negotiations with major economic partners.

Introduction

A Bilateral Investment Treaty (BIT) is a reciprocal agreement between two countries that provides legal protection to foreign investors against discriminatory treatment, unlawful expropriation and other treaty violations. India's proposed revision of its 2015 Model BIT reflects the need to balance investor confidence, foreign direct investment (FDI) and national policy autonomy.

Evolution of India's BIT Framework

- ➔ **1993–2003: Investor-friendly approach:**
 - o India adopted its first Model BIT in 1993 and revised it in 2003, prioritising investment protection and international arbitration.
- ➔ **2015–2016: Restrictive Model BIT**
 - o Approved in December 2015 and adopted in 2016, the model strengthened India's right to regulate and introduced a five-year local-remedies requirement.
- ➔ **2016–2017: Termination of older treaties**
 - o India issued termination notices for 68 BITs, seeking renegotiation under its revised framework.
- ➔ **2024–2026: Pragmatic flexibility**
 - o Newer agreements, including those with the UAE and Saudi Arabia, reduced the period for pursuing domestic remedies.

➔ 2026: Comprehensive review

- o India is developing a revised Model BIT to rebuild investment partnerships and create a more predictable legal environment.

Key Features of the 2015 Model BIT

- 🌀 **Exhaustion of Local Remedies (ELR):** Investors were required to pursue domestic judicial remedies for at least five years before accessing international arbitration, subject to treaty conditions.
- 🌀 **Restricted Investor-State Dispute Settlement (ISDS):** Limited direct access to international arbitration to reduce frivolous litigation and protect sovereign decision-making.
- 🌀 **Narrow definition of investment:** Applied protection to qualifying investments with substantive economic characteristics, rather than automatically covering every asset.
- 🌀 **Exclusion of Most-Favoured-Nation (MFN) treatment:** Prevented investors from automatically importing more favourable provisions from India's treaties with other countries.
- 🌀 **Protection of regulatory autonomy:** Preserved policy space for taxation, environmental protection, public health and other legitimate public-interest measures.
- 🌀 **Investor obligations:** Recognised the importance of compliance with domestic laws and accountability for unlawful investor conduct.

Why Does India Need to Reform Its Model BIT?

- 🇮🇳 **Weakening investment protection network:**
 - o Termination of older BITs without sufficient replacement agreements created gaps in treaty-based protection and uncertainty for prospective investors.
- 🇮🇳 **Restrictive dispute settlement:**
 - o The five-year ELR requirement was criticised as excessively prolonged, particularly where domestic litigation is slow.
- 🇮🇳 **Difficulties in negotiating with developed economies:**

- o Narrow investment protection and the absence of MFN treatment have complicated negotiations with major investment partners.

Need for sustained FDI:

- o Long-term foreign capital is vital for infrastructure, advanced manufacturing, clean energy and technology-intensive industries.

Changing global investment governance:

- o International reform discussions increasingly emphasise responsible investment, dispute prevention, sustainable development and safeguards against excessive arbitration claims.

Emergence of inconsistent treaty practices:

- o Different ELR periods in recent agreements highlight the need for a coherent, predictable negotiating template.

Key Challenges in Reforming India's BIT Framework

Investor protection versus regulatory sovereignty:

- o Excessively broad investor rights may constrain India's ability to introduce environmental, health, taxation and industrial policies in the public interest.

Risk of regulatory chill:

- o The threat of expensive arbitration and compensation claims may discourage governments from implementing legitimate public-interest regulations.

Ambiguity in treaty provisions:

- o Vague expressions such as Fair and Equitable Treatment (FET) and indirect expropriation can encourage inconsistent interpretation by international tribunals.

Misuse of Most-Favoured-Nation clauses:

- o Broad MFN provisions may enable investors to claim procedural advantages from other treaties, undermining negotiated dispute-settlement safeguards.

High cost of international arbitration:

- o ISDS proceedings may impose substantial legal and financial burdens on developing economies, particularly when compensation claims are large.

Limited evidence of automatic FDI gains:

- o BITs can improve legal certainty, but investment

decisions also depend on infrastructure, political stability, regulatory efficiency and market potential.

Way Forward: Building a Balanced and Future-Ready Model BIT

Rationalise the ELR requirement:

- o Adopt a reasonable one-to-three-year domestic remedy period, depending on treaty negotiations, while strengthening time-bound grievance redressal mechanisms.

Precisely define investor protections:

- o Clearly frame FET and expropriation provisions to prevent excessive interpretations while protecting investments against arbitrary state action.

Clarify the MFN provision:

- o If included, expressly restrict its application to dispute-settlement procedures to prevent treaty shopping and unintended expansion of investor rights.

Strengthen investor accountability:

- o Incorporate enforceable obligations concerning environmental standards, anti-corruption, labour protection and corporate responsibility, along with provisions for state counterclaims.

Institutionalise dispute prevention:

- o Establish dedicated consultation, mediation and early grievance-resolution systems to reduce dependence on costly international arbitration.

Align treaties with sustainable development:

- o Integrate climate goals, responsible investment and public-interest safeguards into investment agreements without undermining legitimate investor protections.

Strengthen domestic dispute-resolution capacity:

- o Create a statutory mechanism for expeditious investor grievance redressal, available to domestic and foreign investors alike.
 - **White Industries v. India (2011):** Highlighted investment arbitration risks and contributed to India's subsequent treaty reforms.

Ensure flexibility in bilateral negotiations:

- o Treat the Model BIT as a negotiating framework rather than an inflexible template, allowing country-specific adjustments while maintaining consistent core principles.

Conclusion

India's revised Model BIT must strike a judicious balance between investor confidence and sovereign regulatory autonomy through legal clarity, effective dispute resolution and responsible investment obligations. A predictable yet flexible framework can strengthen India's investment competitiveness while safeguarding its long-term developmental priorities.

Sample Question

Q) India's proposed revision of its Model Bilateral Investment Treaty reflects the challenge of reconciling foreign investment protection with national regulatory autonomy." Critically examine the limitations of the 2015 framework and suggest reforms necessary for a balanced investment regime **(15 marks)**

ARMED FORCES SPECIAL POWERS ACT (AFSPA)

Syllabus: GS III - Security challenges and their management in border areas

PYQ MAPPING

Q) Human right activists constantly highlight the fact that the Armed Forces (Special Powers) Act, 1958 (AFSPA) is a draconian act leading to cases of human rights abuses by security forces. What sections of AFSPA are opposed by the activists? Critically evaluate the requirement with reference to the view held by the Apex Court (2015)

WHY IN NEWS

The Union Ministry of Home Affairs has **extended the Armed Forces (Special Powers) Act, 1958 (AFSPA)** in parts of Manipur, Nagaland and Arunachal Pradesh for another six months from October 1, 2026.

INTRODUCTION

The **Armed Forces (Special Powers) Act (AFSPA), 1958** empowers the armed forces to undertake specified security operations in areas declared disturbed due to insurgency and threats to public order. Its relevance lies in balancing national security, protection of civilian rights and the restoration of normalcy in conflict-affected regions.

ABOUT AFSPA

→ Background :

- o The **Armed Forces (Special Powers) Act (AFSPA), 1958** empowers the armed forces to take specified actions in areas declared as “**disturbed areas**” to maintain public order.
- o It was enacted amid **insurgency and security challenges in Northeast India** and **came into force on 11 September 1958**.
- o The Act is intended to support security operations in areas affected by **armed violence, insurgency and threats to public order**.
- o The **Armed Forces (Jammu and Kashmir) Special Powers Act, 1990** is a separate law applicable to notified disturbed areas in Jammu and Kashmir.

→ Constitutional Context:

- o **Police and public order** fall under the **State List**, while **defence of India** falls under the **Union List** of the Seventh Schedule.

→ Current application:

- o In September 2026, the Centre **extended AFSPA for six months from 1 October** in specified areas

of **Manipur, Nagaland and Arunachal Pradesh**.

- o It was **withdrawn from Tripura in 2015 and Meghalaya in 2018**.

KEY PROVISIONS

- 🔍 **Section 3 – Declaration of disturbed areas:** The **Central Government, Governor or Administrator** of a Union Territory may declare an area disturbed if it is considered necessary to deploy armed forces in aid of civil power.
- 🔍 **Section 4 – Special powers of armed forces:**
 - o **Use of force:** Permits the use of force, including force causing death, under specified circumstances and after giving due warning.
 - o **Arrest without warrant:** Allows arrest without a warrant of persons who have committed, or are reasonably suspected of having committed, certain cognisable offences.
 - o **Search without warrant:** Permits searches of premises and recovery of weapons, ammunition or other relevant materials under specified conditions.
 - o **Destruction of armed positions:** Allows destruction of arms dumps, fortified positions and shelters used for armed attacks, subject to the statutory conditions.
- 🔍 **Section 6 – Legal protection:** Prosecution, suit or other legal proceedings for acts done or purportedly done under the Act require prior sanction of the Central Government.

IMPORTANCE

- ☀️ **Counter-insurgency operations:** Provides legal powers to respond to armed insurgency and organised militant violence.
- ☀️ **National security:** Supports operations against armed groups that threaten territorial integrity and public order.
- ☀️ **Protection of security personnel:** Provides a legal framework for personnel operating in high-risk and conflict-affected areas.
- ☀️ **Restoration of normalcy:** Can help create conditions for restoring civilian administration, conducting elections and resuming development activities.

- ☀ **Deterrence against armed violence:** Enables action against armed groups and fortified positions that may overwhelm ordinary law-enforcement capacity.

JUDICIAL INTERVENTIONS

- ✍ **Naga People's Movement of Human Rights v. Union of India (1997):**
 - o The Supreme Court **upheld AFSPA's constitutional validity** but ruled that its **powers are not absolute and must follow operational guidelines** and periodic review of disturbed-area declarations.
- ✍ **Extra Judicial Execution Victim Families Association (EEVFAM) v. Union of India (2016) :**
 - o The Supreme Court held that **excessive or retaliatory force is impermissible even in AFSPA-covered areas** and alleged extrajudicial killings must be thoroughly investigated.

COMMITTEE RECOMMENDATIONS

- 🌀 **Justice B. P. Jeevan Reddy Committee (2004–2005):** Recommended **repealing AFSPA and incorporating appropriate provisions into the UAPA, 1967**, along with grievance redressal mechanisms.
- 🌀 **Justice Santosh Hegde Commission (2013):** Found **all six alleged extrajudicial killing cases it investigated in Manipur to be fake encounters**, highlighting the need for accountability and independent investigations.
- 🌀 **Justice J. S. Verma Committee (2013):** Recommended **excluding the requirement of prior government sanction** for prosecuting armed forces personnel accused of sexual offences and strengthening victim protection in conflict areas.

CONCERNS AND CRITICISMS

- ▼ **Human rights violations:** Allegations of extrajudicial killings, torture, arbitrary detention and excessive use of force have raised serious concerns.
 - o **Example:** The **Oting incident in 2021** involved the killing of 14 civilians by Army personnel in Nagaland.
- ▼ **Impunity concerns:** The requirement of **prior Central Government sanction** under Section 6 can create obstacles to prosecuting personnel accused of wrongdoing.
- ▼ **Impact on fundamental rights:** The exercise of special powers raises questions concerning **Article 21 (right to life and personal liberty)** and **Article 14 (equality before law)**.
 - o **Example** The **Malom Massacre (2000)** involved the killing of 10 civilians by security forces in Manipur,

prompting **Irom Sharmila's 16-year hunger strike** demanding AFSPA's repeal.

- ✧ **Alienation of local populations:** Prolonged military deployment may weaken trust between citizens and the State.
- ✧ **Excessive militarisation:** Reliance on security measures may overshadow political dialogue, reconciliation and civilian governance.
- ✧ **Gender-related concerns:** Allegations of sexual violence and other abuses have intensified public opposition to AFSPA in affected regions.
 - o **Example: Thangjam Manorama case (2004)** where her tortured body was found with bullet wounds after her arrest by Assam Rifles personnel in Manipur.
- ✧ **Weak accountability mechanisms:** Delays in investigations and prosecution can undermine confidence in justice institutions.
- ✧ **Prolonged application:** Repeated extensions may normalise exceptional security arrangements instead of enabling a transition to ordinary policing.
- ✧ **Developmental consequences:** Insecurity and mistrust can affect education, investment, tourism and livelihood opportunities.

WAY FORWARD

- ✧ **Periodic and transparent review:** Disturbed-area declarations should be based on updated security assessments, with clearly stated reasons and measurable criteria for withdrawal.
- ✧ **Strengthen accountability:** Establish independent and impartial investigations into allegations of unlawful killings and other serious violations.
- ✧ **Follow judicial safeguards:** Enforce the Supreme Court's directions on proportionality of force, investigations and operational accountability.
- ✧ **Strengthen civilian policing:** Improve police capacity, intelligence gathering, forensic facilities and local law-enforcement institutions so that the armed forces are not used indefinitely for routine policing.
- ✧ **Promote political dialogue:** Engage State governments, civil society, community leaders and affected groups in peace negotiations and reconciliation.
- ✧ **Address local grievances:** Tackle unemployment, displacement, ethnic tensions and perceived political exclusion that can sustain insurgency.
- ✧ **Human rights training:** Ensure that personnel receive regular training in constitutional rights, civilian protection and rules governing the use of force.

CONCLUSION

The long-term objective should be to create conditions in which **effective civilian administration and ordinary law enforcement can replace exceptional security measures**. Periodic review of disturbed areas, accountability for human rights violations and sustained political dialogue

are essential to achieving lasting peace and public trust.

SAMPLE QUESTION

Q) “AFSPA may provide an operational framework for counter-insurgency, but lasting peace requires political dialogue and public trust.” Discuss. **(15 marks, 250 words)**

INDIA'S SUPERCOMPUTING ECOSYSTEM

Syllabus: GS III - Science & Technology

PYQ MAPPING

Q) What is agentic Artificial Intelligence (AI)? Explain its working. Describe its applications with suitable examples. Discuss the advantages, risks and challenges associated with agentic AI systems. **(2026)**

SHORT TAKES

- **AUM processor:** An indigenous high-performance computing (HPC) processor being developed by the Centre for Development of Advanced Computing (C-DAC) to support powerful computing systems in India.

WHY IN NEWS

The Press Information Bureau (PIB) released a background paper on **India's Rising Supercomputing Ecosystem**, highlighting the country's progress under the National Supercomputing Mission (NSM)

INTRODUCTION

Supercomputing uses High-Performance Computing (HPC) systems to process vast amounts of data and solve complex problems at high speed. India generates **nearly 20% of the world's data**, increasing the need for advanced computing infrastructure for Artificial Intelligence (AI), weather forecasting and space research.

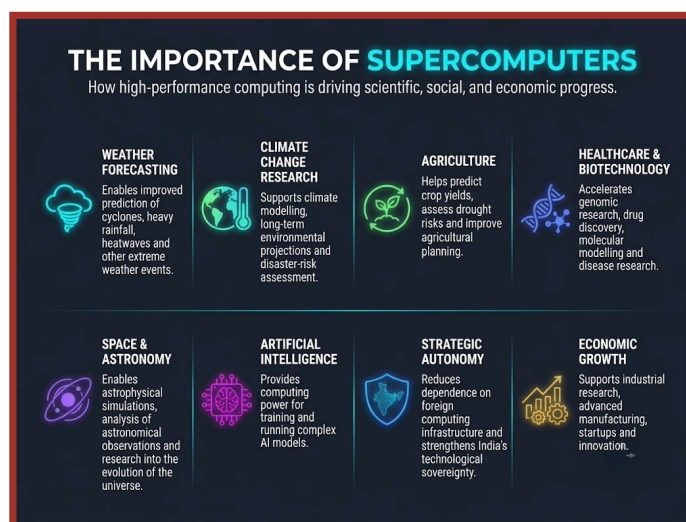
ABOUT SUPERCOMPUTING

➔ Meaning:

- Supercomputing refers to the use of **extremely powerful computers to perform complex calculations** and process massive amounts of data at very high speeds.
- **High-Performance Computing (HPC)** uses powerful computing systems to solve problems that ordinary computers may take much longer to handle.
- Supercomputers use **parallel processing**, in which multiple processors work simultaneously on different parts of a complex problem.

➔ PARAM series:

- A family of indigenous supercomputers developed by C-DAC.
- Includes PARAM 8000, PARAM Yuva and PARAM Rudra, reflecting the evolution of India's computing capabilities.



RECENT DEVELOPMENTS

- ➔ **National Supercomputing Mission (NSM):** Launched in **2015** with an **initial outlay of approximately ₹4,500 crore** to expand computing infrastructure, develop indigenous technologies and make supercomputing accessible to Indian researchers.
- ➔ **India's supercomputing capacity:** As of September 2026, India had deployed **40 supercomputers with a combined capacity of 68 petaflops** under the National Supercomputing Mission
- ➔ **PARAM Rudra at IIT Bombay:** Inaugurated in January 2026, this 3-petaflop system uses indigenously designed Rudra servers, Indian-developed system software and Direct Contact Liquid Cooling (DCLC) technology.
- ➔ **PARAM Shavak:** A supercomputer-in-a-box designed and manufactured in India to meet HPC and AI computing needs in **educational institutions**.
- ➔ **Expanding research access:** By September 2026, NSM infrastructure had supported over **16,000 researchers across more than 400 institutions**, with over 1.5 crore computing jobs completed.



CHALLENGES

- **Dependence on imported components:** Advanced processors, accelerators and other critical components remain areas of external dependence.
- **High development costs:** Designing, deploying and upgrading supercomputers requires substantial investment.
 - **Example:** The 0.84 petaflops **PARAM Shivay system at IIT (BHU)** required an initial investment of **₹32.5 crore**.
- **Energy consumption:** High computational loads require large amounts of electricity.
 - **Example:** Global data centre power consumption is currently estimated at 415 TWh and projected to **surge to 945 TWh by 2030**.
- **Cooling requirements:** Heat generated by powerful processors creates technical and operational challenges.
- **Shortage of specialised talent:** India needs more experts in HPC architecture, parallel programming, system engineering and computational science.
- **Unequal access:** Smaller universities, laboratories and startups may lack the funding and expertise to fully use supercomputing facilities.
 - **Example:** **PARAM Pravega** are housed at IISc Bengaluru, while **PARAM Sanganak** is at IIT Kanpur.
- **Research-to-industry gap:** Greater collaboration is needed to translate supercomputing capabilities into commercially useful products and public services

WAY FORWARD

- ✦ **Promote semiconductor self-reliance:** Connect supercomputing research with India's semiconductor design and manufacturing ecosystem.
- ✦ **Develop energy-efficient systems:** Expand liquid cooling, efficient power management and renewable-

energy integration.

- ✦ **Expand research access:** Make computing resources more accessible to universities, startups, MSMEs and public research institutions.
- ✦ **Build skilled human resources:** Expand specialised education and practical training in HPC, AI and computational science.
- ✦ **Promote public-private partnerships:** Encourage collaboration among government institutions, academia, industry and startups.
 - **Example:** C-DAC partnered with private semiconductor firms MosChip Technologies (India) and Socionext Inc. (Japan) to design the **AUM processor**.
- ✦ **Focus on national applications:** Prioritise supercomputing applications in weather forecasting, healthcare, agriculture, disaster management and advanced manufacturing.
 - **Example:** AIRAWAT system was used for molecular docking and drug discovery during COVID-19.
- ✦ **Ensure sustained funding:** Provide predictable long-term investment for research, infrastructure maintenance and technology upgrades.

CONCLUSION

As of September 2026, India had **40 supercomputers with an aggregate computing capacity of 68 petaflops under its expanding supercomputing ecosystem**. Strengthening indigenous hardware, software and energy-efficient technologies will be essential to achieving technological self-reliance and supporting research, weather forecasting, healthcare and artificial intelligence.

SAMPLE QUESTION

Q) Discuss the evolution of India's supercomputing ecosystem. How has the National Supercomputing Mission contributed to technological self-reliance? **(15 marks, 250 words)**

WEEKLY DOSSIERS

INDIA EMERGES AS A GLOBAL LEADER IN SHIP RECYCLING

Why in the News?

India emerged as the world's leading ship recycling nation in 2025, accounting for 35.4% of the global market, according to the Ministry of Ports, Shipping and Waterways.

Introduction

Ship recycling involves dismantling end-of-life vessels to recover steel and reusable materials. India's growing recycling capacity has strengthened its maritime economy, resource efficiency and global competitiveness.

India's Growing Global Leadership

35.4%	Global market share in 2025
2.99MT	Gross tonnage recycled in 2025
~60%	Annual volume growth

Significance of Ship Recycling

- ◆ **Resource Security:** Supplies ferrous scrap to domestic steel industries, reducing reliance on imported raw materials.
- ◆ **Circular Economy:** Promotes material recovery and reuse while reducing industrial waste.

- ◆ **Environmental Sustainability:** Recycled steel generally requires less energy than primary steel production, contributing to decarbonisation.
- ◆ **Employment Generation:** Supports dismantling workers, re-rolling mills, transportation and waste-management industries.
- ◆ **Industrial Development:** Strengthens Make in India and Atmanirbhar Bharat through domestic material recovery.

Challenges

- ◆ Hazardous waste management, occupational safety risks, coastal pollution and infrastructure gaps remain key concerns.

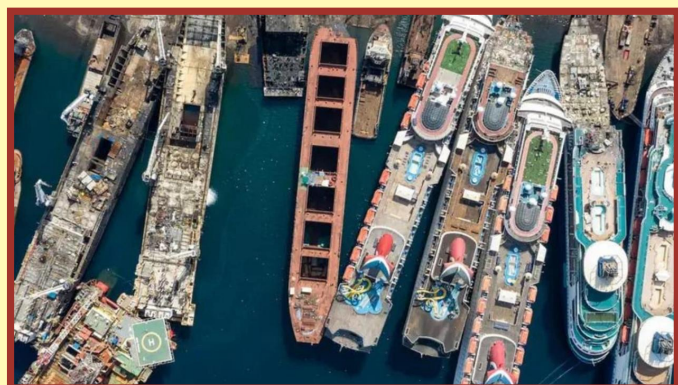
Way Forward

- ◆ India should expand mechanised recycling, strengthen environmental monitoring, improve worker training and develop modern recycling infrastructure.

Conclusion

- ◆ India's leadership in ship recycling demonstrates the potential of integrating industrial growth, resource security and circular economy principles to achieve sustainable maritime development.

ALANG-SOSIYA – THE BACKBONE OF INDIA'S SHIP RECYCLING INDUSTRY



Why in the News?

The Alang-Sosiya ship recycling cluster in Gujarat has emerged as the backbone of India's global leadership in ship recycling, supported by modernisation and capacity

expansion.

Introduction

Located in Gujarat, Alang-Sosiya is recognised as the world's largest ship recycling hub. It plays a crucial role in recovering steel, generating employment and supporting India's maritime industrial ecosystem.

Significance of Alang-Sosiya

- ◆ **Industrial Dominance:** Accounts for approximately 98% of India's ship recycling activity, according to the ministry's report.
- ◆ **Resource Recovery:** Produces around 3.5 million metric tonnes of steel annually, supporting downstream industries.
- ◆ **Employment:** The Safety Training and Labour Welfare

Institute at Alang-Sosiya has trained over 1.5 lakh workers cumulatively.

- ♦ **Capacity Expansion:** India aims to increase ship recycling capacity to approximately 9 million light displacement tonnes (LDT).
- ♦ **Ancillary Industries:** Supports steel re-rolling mills, transport services, equipment suppliers and waste-management facilities.

Modernisation Initiatives

- ♦ Development of engineered and demarcated recycling plots.
- ♦ Mechanised material handling and lifting equipment.
- ♦ Impermeable working surfaces and drainage infrastructure.
- ♦ Segregated hazardous-waste storage and authorised disposal facilities.

- ♦ Structured occupational safety and emergency response mechanisms.

Challenges

- ♦ Worker exposure to hazardous substances, waste disposal costs, dependence on global vessel supply and environmental compliance requirements.

Way Forward

- ♦ Develop a comprehensive Alang Ship Recycling Yard master plan, adopt cleaner technologies, strengthen worker welfare and attract investment in advanced recycling facilities.

Conclusion

- ♦ Alang-Sosiya represents the transformation of ship recycling from a conventional dismantling activity into a strategic industrial ecosystem supporting India's circular economy and maritime ambitions.

INDIA'S SHIP RECYCLING REGULATIONS AND THE HONG KONG CONVENTION

Why in the News?

India has strengthened its regulatory framework for ship recycling following the entry into force of the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships on 26 June 2025.

Introduction

Ship recycling involves hazardous substances such as asbestos, heavy metals and residual fuels. A robust regulatory framework is essential to protect workers, prevent marine pollution and promote environmentally sustainable recycling.

India's Regulatory Framework

Legislation	Key Provisions
Recycling of Ships Act, 2019	Legal framework for safe ship recycling, authorisation, certification and enforcement
Recycling of Ships Rules, 2021	Procedures for facility approval, recycling plans, hazardous-material management and worker safety
Ship Recycling Regulations, 2026	Strengthened operational, safety, environmental and compliance requirements

Significance of the Hong Kong Convention

- ♦ **Global Standards:** Establishes internationally binding

requirements for safe and environmentally sound ship recycling.

- ♦ **Worker Protection:** Promotes occupational safety, training and hazardous-material risk management.
- ♦ **Environmental Protection:** Encourages controlled handling and disposal of hazardous substances.
- ♦ **Inventory of Hazardous Materials (IHM):** Facilitates identification and documentation of hazardous materials present on ships.
- ♦ **Global Competitiveness:** Helps Indian recycling yards meet international regulatory requirements and attract compliant vessels.

India's Compliance Initiatives

- ♦ Financial assistance of ₹53.5 crore provided for modernisation of ship recycling yards.
- ♦ 115 facilities supported in achieving Hong Kong Convention compliance, as reported in the document.
- ♦ 35 ship recycling yards at Alang applied for inclusion on the European Union's approved ship recycling list.
- ♦ Introduction of a Ship-breaking Credit Note Scheme to encourage recycling at compliant Indian yards and support domestic shipbuilding.

Challenges

- ♦ **Weak Enforcement:** Inconsistent implementation of

safety and environmental regulations.

- ◆ **Occupational Hazards:** Workers face exposure to toxic materials and unsafe dismantling practices.
- ◆ **Hazardous Waste Management:** Inadequate tracking, treatment and disposal of hazardous substances.
- ◆ **Infrastructure Gaps:** Limited mechanisation and modern recycling facilities.
- ◆ **High Compliance Costs:** Financial burden on smaller recycling yards in meeting international standards.

Way Forward

- ◆ **Strengthen Enforcement:** Ensure strict implementation of ship recycling laws and international standards.
- ◆ **Independent Inspections:** Conduct regular third-party safety and environmental audits.

- ◆ **Waste Traceability:** Establish digital tracking systems for hazardous materials from dismantling to disposal.
- ◆ **Infrastructure Modernisation:** Promote mechanisation, safer technologies and environmentally sound recycling facilities.
- ◆ **Worker Welfare:** Strengthen safety training, protective equipment, healthcare and social security for recycling workers.
- ◆ **Financial Support:** Provide incentives and affordable financing for upgrading recycling yards.

Conclusion

India's regulatory transformation reflects a shift from volume-driven ship dismantling towards safe, sustainable and globally competitive ship recycling, aligning maritime development with environmental responsibility.

BEYOND VERDICTS: KEY JUDICIAL INTERVENTIONS

Supreme Court: Inter-District Transfer Is Not a Fundamental Right of Teachers

- ◆ The Supreme Court ruled that government teachers cannot claim inter-district transfers as a matter of right solely on grounds of family separation or personal convenience.
- ◆ In **Pratap Singh Baghel v. Akanksha Shukla (2026)**, the Court emphasised that the education system must prioritise students' interests over teachers' posting preferences. It upheld the rejection of a teacher's transfer request, noting that the understaffed school required five teachers under the Right to Education Act, 2009, but had only two in its primary section.
- ◆ The Court clarified that special transfer relaxations for women employees cannot compromise students' education or override legitimate administrative requirements.

Calcutta High Court: Peaceful Protest Is an Integral Part of Democracy

- ◆ The Calcutta High Court quashed criminal proceedings against six School Service Commission (SSC) job aspirants who protested alleged recruitment irregularities during the COVID-19 pandemic, reaffirming that peaceful protest and dissent are essential features of democracy.
- ◆ The Court observed that merely assembling and raising slogans does not constitute an unlawful assembly under Section 141 of the IPC, unless the gathering has an unlawful common objective. It emphasised that peaceful demonstrations are protected under Articles 19(1)(a) and 19(1)(b) of the Constitution.
- ◆ The judgment further clarified that criminal proceedings cannot be sustained without specific evidence of an offence, reinforcing the importance of constitutional freedoms, democratic dissent and protection against arbitrary state action.

Supreme Court: Contempt Plea Over Delhi Metro Closures and Train Cancellations

- ◆ A contempt petition has been filed in the Supreme Court alleging that authorities continued closing Delhi Metro stations and cancelling train services during protests against the Chief Election Commissioner, despite the Court's October 9, 2026, directions.
- ◆ In **M.A. Baby v. Union of India**, the Supreme Court had observed that blanket restrictions on essential public

transport were excessive, directing authorities to regulate services rather than impose a complete shutdown.

- ♦ The petition alleges wilful disobedience of judicial directions, highlighting the importance of judicial accountability, freedom of movement and the doctrine of proportionality in balancing public order with citizens' constitutional rights. The allegations remain subject to judicial determination

Supreme Court Seeks Response Over Deaths of 35 Tribal Children in Madhya Pradesh

- ♦ The Supreme Court has issued notices to the Centre, Madhya Pradesh government and **National Human Rights Commission (NHRC)** on a PIL seeking to declare the Baiga-dominated Birsa and Baihar blocks of Balaghat district as epidemic-prone areas under the Epidemic Diseases Act, 1897, following the reported deaths of over 35 tribal children from measles-rubella and severe malnutrition.
- ♦ The petition alleges inadequate immunisation, poor healthcare infrastructure, malnutrition and administrative negligence, particularly affecting the Baiga community, a Particularly Vulnerable Tribal Group (PVTG).
- ♦ It seeks safe drinking water, nutritious food, compensation and effective implementation of tribal welfare schemes, including PM-JANMAN, highlighting the State's constitutional obligations under Article 21 (Right to Life), Article 39(f) (Child Protection) and Article 47 (Public Health and Nutrition). The allegations remain under judicial consideration.

Supreme Court Pulls Up Kerala Government Over Captive Elephant Welfare

- ♦ The Supreme Court criticised the Kerala government for failing to comply with its June 2026 directive to take custody of Raman, a captive elephant, and relocate it to an appropriate rescue or rehabilitation centre.
- ♦ The Court had earlier held the elephant's caretaker guilty of contempt for using the animal in temple-related activities despite an undertaking prohibiting such use. Expressing concern over inadequate monitoring of the elephant's health, the Court directed the State to submit an updated medical report and ensure compliance with its welfare directions.
- ♦ The case highlights the importance of animal welfare, enforcement of judicial orders and state accountability under the Wildlife (Protection) Act, 1972.

ETHICS - CASE STUDY

Q) A 24-year-old woman working in a metropolitan city has been repeatedly stalked by a man who follows her to her workplace, sends threatening messages and monitors her social media activities. Despite repeatedly rejecting his advances, the harassment continues. She approaches the local police station seeking protection. However, the police initially dismiss her complaint as a personal matter and advise her to ignore the accused. The situation becomes more complicated when it is discovered that the accused is the son of an influential local politician. As the Deputy Commissioner of Police (DCP), you learn that the woman has stopped attending work due to fear, while the accused continues to intimidate her. Meanwhile, political pressure is mounting to settle the matter informally to avoid public controversy.

Questions

- Identify the key ethical issues and stakeholders involved in the case.
- As the DCP, what immediate and long-term measures would you take to ensure the victim's safety and uphold the rule of law?
- How would you address political interference, police insensitivity and institutional accountability while ensuring a fair investigation?
- Discuss how empathy, integrity, courage of conviction and gender sensitivity can guide ethical decision-making in this situation. (5 marks)

ETHICS - EXAMPLES

- Professional Ethics:** The National Medical Commission (NMC) issued ethical advertising guidelines in October 2026, banning fake patient testimonials, misleading medical claims and AI-generated promotional content. The guidelines also prohibit paid manipulation of online rankings by doctors and hospitals.
- Social Justice:** Chutni Mahato is a social worker from Jharkhand who was branded a witch in 1995 and faced severe violence. Turning survivor into activist, she has helped rescue and rehabilitate over 100 women accused of witchcraft and spread awareness against witch-hunting, earning the Padma Shri in 2021 for her social work.
- Governance Ethics:** Speak Up is a Kerala Police initiative launched to prevent domestic violence, led by IG Ajeetha Begum, offering survivors confidential complaint registration, legal aid, counselling, safe accommodation and livelihood support.
- Gender Justice:** The Kerala High Court upheld ₹10,000 monthly maintenance for a woman divorced from a man with 70% permanent locomotor disability, ruling that his disability did not absolve him of responsibility when he had sufficient financial means. The Court rejected his claim that he had married her only to obtain a caretaker.
- Determination:** Kavita Kumari Mahto, a widow from Ramgarh district, Jharkhand, ran 1,600 metres barefoot in a saree during a Jharkhand Home Guard recruitment trial to secure a government job and provide a stable future for her two children.
- Constitutional Morality:** The Kerala High Court ruled that a school headmistress cannot be prevented from entering school for wearing a churidar instead of a saree, as dress is a matter of personal choice and individual dignity. The court directed the police to ensure her free entry into the school observing that no one can impose a dress code without legal backing.
- Courage of Conviction:** Alice Stewart (1906–2002) was a British physician and epidemiologist who demonstrated the link between X-rays during pregnancy and childhood cancer. Despite opposition from medical and government authorities, she continued her research and highlighted the health risks of radiation.
- Human Rights Ethics/Discrimination:** A Gram Sabha in Punpalli village in Chattisgarh passed a resolution denying village land for the burial of Christians and converts, as well as for churches and prayer meetings. It also restricted pastors and Christian preachers from entering the village for religious activities, citing the Panchayats (Extension to Scheduled Areas) Act (PESA), 1996.
- Lack of Emotional Intelligence:** In October 2026, Sangram Kumar Singh, Station House Officer (SHO) of Maker police station in Bihar's Saran district, was allegedly seen pointing his service pistol at people seeking flood relief supplies. He was suspended and an inquiry was ordered following the incident.

MODEL ESSAY

"Tradition is not the worship of ashes, but the preservation of fire."

Introduction

- Quote by Austro-Bohemian Romantic composer **Gustav Mahler**
- In 1888, **Sree Narayana Guru consecrated a Shiva idol at Aruvippuram**, challenging the caste-based belief that only Brahmins could install deities. When questioned, he reportedly replied that it was an "Ezhava Shiva." By rejecting caste discrimination while preserving the essence of devotion, Guru kept alive the fire of spiritual equality and inspired Kerala's social renaissance.
- True tradition is not a static, regressive anchor holding society to obsolete eras, but a dynamic, evolutionary engine

Preserving the Fire (Dynamic Tradition)

- **Indigenous Ecological Wisdom:** Traditional practices can support modern environmental conservation. **Eg:** Kerala's sacred groves (Kavus) protect biodiversity and local ecosystems.
- **Sustainable Architecture:** Traditional building methods can be adapted to modern needs. **Eg:** Laurie Baker promoted affordable homes using local materials, natural ventilation and climate-sensitive designs.
- **Traditional Knowledge and Science:** Traditional knowledge can guide scientific research, but claims require evidence. **Eg:** Artemisinin, an important antimalarial drug, was developed from research inspired by traditional Chinese medicine.
- **Martial Arts and Fitness:** Traditional practices can gain new purposes in modern society. **Eg:** Kalaripayattu is practised for physical fitness.
- **Culinary Traditions:** Traditional foods can be adapted to modern dietary needs. **Eg:** Millets are being incorporated into modern diets as nutritious, climate-resilient grains.
- **Spiritual Reform:** Reform movements preserve spiritual values by challenging exclusionary practices. **Eg:** The Bhakti movement promoted personal devotion and the use of vernacular languages.

Worshipping the Ashes (Rigid Tradition)

- **Patriarchy and Honour Killings:** Using family

honour to control personal choices can lead to violence and denial of individual freedom. **Eg:** 2016 killing of V. Shankar in Tamil Nadu, a Dalit man murdered after marrying a woman from a dominant caste.

- **Scientific Denialism:** Rejecting scientific evidence in favour of unverified traditional remedies can endanger lives. **Eg:** Promoting cow urine as a proven cure for COVID-19 without reliable evidence.
- **Linguistic Chauvinism:** Imposing one language or restricting access to others can limit educational and employment opportunities. **Eg:** The anti-Hindi agitations in Tamil Nadu
- **Animal Cruelty in the Name of Heritage:** Cultural traditions must evolve with changing ethical standards and animal-welfare concerns. **Eg:** Debates over animal welfare in Spanish bullfighting and Jallikattu.

Synthesis

- Rejecting all traditions can create a rootless society that loses its cultural identity and repeatedly reinvents existing ideas.
- Blindly following traditions can lead to stagnation, tyranny and the continuation of harmful practices.
- Balanced approach requires treating people as custodians, not prisoners, of their cultural heritage.

Conclusion

- Sree Narayana Guru's Aruvippuram consecration reminds us that tradition must preserve the fire of equality and humanity, not the ashes of caste and discrimination.
- A civilization's past is a library, not a rulebook. We should draw inspiration from it, not blindly follow it and become prisoners of our ancestors.

Sample Question

- *Justice is truth in action — Benjamin Disraeli*
- *We suffer more often in imagination than in reality. — Seneca*
- *The most potent weapon in the hands of the oppressor is the mind of the oppressed. — Steve Biko*

MAINS JOT DOWN



GS II: SOCIAL JUSTICE

→ School Sanitation: Infrastructure Expansion Outpaces Maintenance

- » **Near-Universal Toilet Coverage:** According to the Ministry of Education's UDISE+ 2025–26 Report, 99.1% of schools have toilets, including 98.5% with girls' toilets, reflecting substantial infrastructure expansion.
- » **Construction–Usability Gap:** Pratham's ASER 2024 found that only 79% of surveyed rural schools had usable toilets, while 72% had usable girls' toilets, highlighting inadequate maintenance.
- » **Gender and Regional Disparities:** According to ASER 2024, usable girls' toilets increased from 66.4% (2018) to 72% (2024), while northeastern States such as Meghalaya, Mizoram and Nagaland continued to face infrastructure gaps.
- » **Disability Inclusion Gap:** UDISE+ 2025–26 reported that only 40.1% of schools had toilets for Children with Special Needs (CWSN), reflecting shortcomings in inclusive education.



GS I: SOCIAL JUSTICE

→ India Struggles to Curb Leprosy Transmission (2026)

- » According to the **National Leprosy Eradication Programme (NLEP)** Report 2025–26, India recorded 91,783 new leprosy cases, exceeding its projected target by 41%, highlighting continued transmission.
- » The NLEP Report 2025–26 recorded 3,832 new cases among children, exceeding the target of 2,000 by 91.6%. Of these, 37 children had Grade-2 Disability (G2D) at diagnosis, indicating delayed detection.
- » According to the **World Health Organization (WHO)**, 2025, India remained among the countries with the highest leprosy burden. Globally, 167,356 new cases were reported, including 8,344 children, highlighting persistent transmission.



GS I: INDIAN SOCIETY



According to the **National Household Travel Survey (NHTS) 2025–26**, conducted by the National Statistical Office (NSO), MoSPI, nearly 67% of commuting women walk or use public transport, compared to 33% of men.

- » Over 50% of rural working women walk to work, while urban women depend more on buses and other transport. In urban India, 21.7% of women use buses, compared to 6.9% of men.



GS II: SOCIAL JUSTICE



→ Operation Thelima: Strengthening Food Safety Enforcement in Kerala (2026)

- » **Food Safety Enforcement:** Under Operation Thelima, Kerala's Food Safety Department imposed fines exceeding ₹16 lakh on eateries in Kozhikode district within three months, highlighting intensified regulatory monitoring.



GS II: SOCIAL JUSTICE



→ Centre Proposes Stricter Curbs on Prescription Drug Advertisements (2026)

- » **Stricter Advertisement Regulation:** The Union Ministry of Health and Family Welfare (MoHFW) proposed amending the Drugs Rules, 1945, requiring prior Central Government approval for advertising medicines under Schedules H, H1 and X.
- » **Closing Regulatory Loopholes:** Existing restrictions explicitly cover pharmaceutical manufacturers; the proposed amendment extends them to retailers, wholesalers and distributors, preventing unauthorised drug promotion.
- » **Preventing Drug Misuse:** The restrictions cover certain antibiotics, psychotropic medicines and GLP-1 weight-loss drugs, aiming to reduce self-medication, inappropriate drug use and associated public health risk.



GS III: ECONOMY



India's Coal Stock Crisis Amid Rising Power

Demand (2026)

- » According to the **Central Electricity Authority (CEA)**, 84 of 191 thermal power plants (44%) had critically low coal stocks as of September 30, 2026, exposing vulnerabilities in India's power supply chain.
- » India's power demand increased by 10% in 2026, the highest annual growth rate in a decade, while peak demand reached 270.8 GW on May 21, 2026, intensifying pressure on thermal power generation



GS III: ENVIRONMENT

→ Women for Bees Initiative: Integrating Biodiversity Conservation with Women's Empowerment (2026)

- » **UNESCO–Guerlain Initiative:** The Women for Bees Programme, implemented with the Keystone Foundation, promotes sustainable beekeeping, women's entrepreneurship and indigenous knowledge in the Nilgiri Biosphere Reserve.
- » **Tribal Women Empowerment:** According to UNESCO (July 2026), 50 women from five locations in Kerala and Tamil Nadu received 230 hours of structured training each, creating alternative livelihoods for indigenous communities, including Irula, Paniya and Kurichiya women.



GS III: ENVIRONMENT

→ Malarikkal's Pink Water Lilies: Tourism Boom Threatens Wetland Ecology (2026)

- » **Uncontrolled Aquatic Plant Growth:** A two-year study for the Kerala State Biodiversity Board (KSBB) found that pink water lilies, which proliferated after the 2018 Kerala floods, are spreading rapidly in Malarikkal, Kottayam, threatening wetland biodiversity.
- » **Biodiversity and Ecological Disruption:** According to the Jawaharlal Nehru Tropical Botanic Garden and Research Institute (JNTBGRI), excessive lily growth is displacing native aquatic plants, restricting sunlight penetration, slowing water flow and increasing sedimentation and water pollution.



GS III: ENVIRONMENT

→ Great Indian Bustard Conservation: Need for Landscape-Based Protection (2026)

- » **Conservation Milestone:** Under the Great Indian Bustard (GIB) Conservation Programme, implemented by the Union Environment Ministry, Rajasthan Forest Department and Wildlife Institute of India (WII), two captive-bred birds were released into Desert National Park, Jaisalmer, marking India's first GIB rewilding trial.
- » **Critically Endangered Population:** The GIB population declined from approximately 1,260 (1969) to 120 (2026). The conservation programme now holds 97 birds, including 57 captive-bred individuals, with 29 chicks produced in 2026



GS III: SCIENCE & TECHNOLOGY

→ ISRO Employees Raise Concerns Over Private Participation in India's Space Sector (2026)

- » **Concerns Over Privatisation:** The Joint Action Council (JAC), representing nine ISRO employees' associations, sought clarification from ISRO Chairman V. Narayanan regarding private-sector participation, technology transfer and ISRO's future role.
- » **Strategic Autonomy and Public Control:** Employee associations raised concerns over transferring LVM-3 launch vehicle manufacturing, satellite operations and launch infrastructure to private entities, emphasising the need to retain critical technological capabilities within ISRO.
- » **Institutional and Workforce Challenges:** The JAC highlighted delayed recruitment, career stagnation following cadre reviews, staff attrition and inadequate consultation, raising concerns over institutional capacity and employee welfare.

CHERRYPICKS OF THE WEEK

REWILDING:

- Reintroducing species into suitable natural habitats to restore self-sustaining populations.
- Captive-bred Great Indian Bustards released under Project GIB.

TERRESTRIAL STILLING

- It is the long-term decline in average near-surface wind speeds over land masses, typically measured at 10 meters above the ground.

CALIBRATED MONETARY TIGHTENING

- It is a central bank policy stance where interest rates are either kept steady or gradually raised, while rate cuts are completely ruled out for the near future.

OCTOBER HEAT

- It is a weather phenomenon in the Indian subcontinent characterized by an oppressive combination of high daytime temperatures (typically 30°C to 35°C or higher) and high humidity during the post-monsoon, pre-winter transition period in October and November.

LAND-ATMOSPHERE FEEDBACK

- Interaction in which soil moisture, vegetation and surface temperatures influence atmospheric heat, humidity and precipitation.