



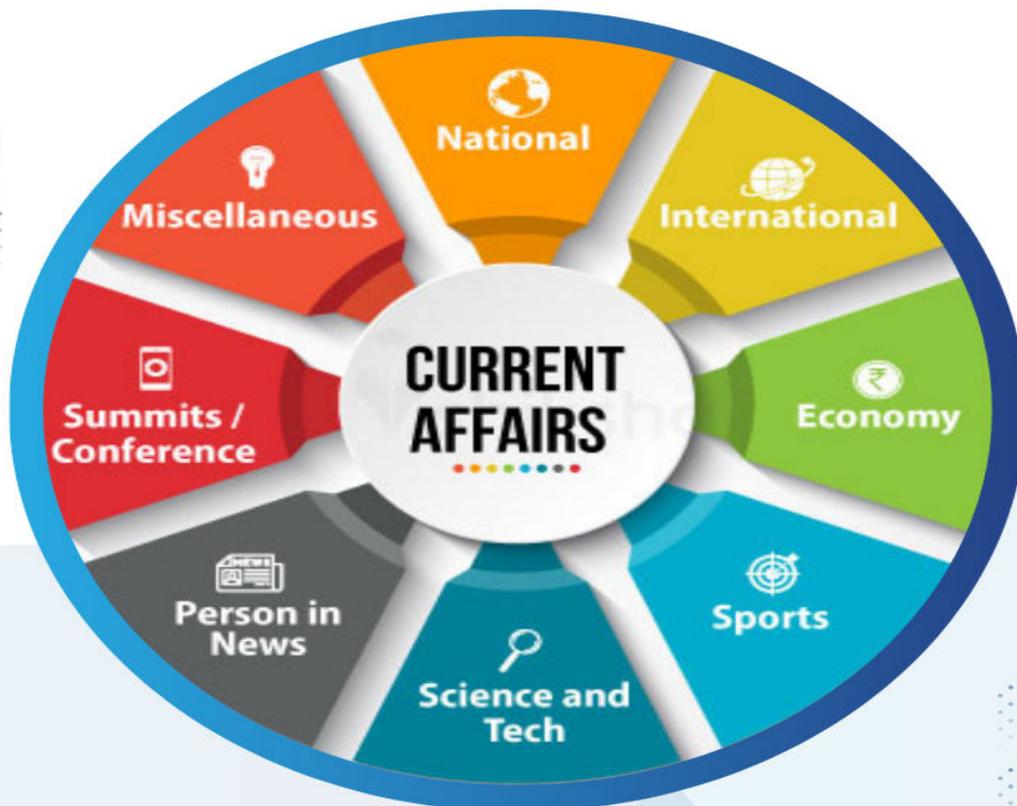
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STUDY CENTRE

DAILY CURRENT AFFAIRS

FOR UPSC CIVIL SERVICE EXAMINATION

DATE: 23/02/2026 (MONDAY)



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1. Unionisation of the Global South: Countering Tariff Hegemony

President Luiz Inacio Lula da Silva's call for a "negotiating bloc" reflects a strategic shift in international trade diplomacy, urging developing nations to leverage collective bargaining against unilateral protectionism.

- **Collective Bargaining in Trade:** President Lula advocates for the "unionisation" of nations facing high tariffs, arguing that individual negotiations between smaller economies and superpowers like the U.S. result in inherently lopsided and harmful agreements.
- **Rejection of a New Cold War:** Brazil emphasizes a multipolar world order, explicitly stating a desire to avoid new bloc-based hostilities while demanding equal treatment and non-interference in the sovereign trade choices of Global South nations.
- **Impact of Unilateral Tariffs:** Both India and Brazil have been significantly impacted by U.S. trade policies, facing up to 50% duties on specific exports, which Lula views as a tool of economic coercion rather than fair market competition.
- **BRICS and Geopolitical Autonomy:** The call for unity is heightened by threats of tariffs linked to BRICS membership, trade with Iran, and Russian oil imports, highlighting the tension between national strategic autonomy and global trade dependencies.
- **The Trade Union Model:** Drawing on his background as a labor leader, Lula applies the "employer-worker" dynamic to geopolitics, suggesting that only through a "united front" can developing nations confront the policy shifts of global superpowers effectively.
- **Sovereignty vs. Protectionism:** The core of the argument rests on the principle that international trade should not be used as a weapon to dictate the domestic or foreign policies of sovereign states.



Key Definitions

- **Tariffs:** Custom duties or taxes imposed by a government on imported goods, often used as a protectionist tool to make foreign products less competitive.
- **Global South:** A term used to describe developing, emerging, or lower-income nations, primarily located in Africa, Asia, and Latin America, often sharing a history of colonialism and seeking reform in global governance.
- **Negotiating Bloc:** A group of countries that coordinate their positions and act as a single entity in international negotiations to increase their collective influence and leverage.

Constitutional and Legal Context

- **Article 51 (India):** The Directive Principles of State Policy (DPSP) mandate that the State shall endeavor to promote international peace, maintain just and honorable relations between nations, and foster respect for international law and treaty obligations.
- **WTO Principles:** The World Trade Organization (WTO) promotes "Most-Favored-Nation" (MFN) status, which prohibits discrimination between trading partners. Unilateral high tariffs often challenge the spirit of these multilateral trade rules.



- **Enabling Clause (1979):** Under GATT/WTO, this allows developed countries to give differential and more favorable treatment to developing countries, a principle currently under pressure from protectionist policies.

Additional Strategic Keypoints

- **India-Brazil Synergy:** As key members of G4, IBSA, and BRICS, both nations share a common interest in reforming the UN Security Council and the global financial architecture.
- **Counter-Coercion:** The formation of a trade bloc serves as a "shield" against "secondary sanctions" or trade penalties imposed for engaging with countries outside the Western-led financial system.
- **Supply Chain Resilience:** Collaborative negotiating blocs can help secure critical supply chains for the Global South, reducing dependence on single-market superpowers.

Conclusion

President Lula's proposal marks a transition from passive participation in global trade to active, collective resistance against economic unilateralism. By likening international diplomacy to trade unionism, he underscores the necessity of solidarity among Global South nations to ensure that "equality" in trade is not just a rhetorical device but a functional reality. For India, this aligns with its "Vishwa Bandhu" (Global Friend) approach, balancing its strategic partnership with the U.S. while leading the voice of the developing world.

UPSC Relevance

- **General Studies II:** International Relations (Bilateral, regional, and global groupings involving India); Effect of policies of developed countries on India's interests.
- **General Studies III:** Indian Economy (Changes in industrial policy and their effects on industrial growth); International Trade and WTO.
- **Context:** This topic is crucial for understanding the evolving dynamics of the North-South divide and India's leadership role in the Global South.

2. Strategic Ebb of Left-Wing Extremism: Top Maoist Surrenders in Telangana

The surrender of high-ranking cadres, including the General Secretary of the CPI (Maoist), marks a watershed moment in India's internal security landscape, signaling the structural disintegration of the Maoist insurgency.

- **Collapse of Leadership Hierarchy:** The surrender of Tippiri Tirupati (alias Devji), who succeeded as General Secretary after the 2025 encounter of Nambala Keshav Rao, represents a terminal blow to the command-and-control structure of the Maoist movement.
- **Dilution of Ideological Patronage:** Senior leaders like Malla Raji Reddy and Mallojula Venugopal Rao have publicly acknowledged the lack of grassroots support and "patronage" for militant struggle in the current socio-economic climate, advising remaining cadres to lay down arms.
- **Success of Modern Counter-Insurgency:** The development highlights the efficacy of the "Surrender and Rehabilitation" policies, shifting the focus from purely kinetic operations to incentivized mainstreaming of senior leaders.





- **National Deadline for Elimination:** These surrenders align with the Union Government's strategic objective to completely eliminate armed Maoist struggle from the country by March 2026, showcasing a coordinated approach between State and Central forces.
- **Operational Pedigree of Surrendered Cadres:** Devji was a pivotal figure in creating the People's Liberation Guerrilla Army (PLGA) and held positions in the Central Committee and Politburo, making his exit a significant intelligence and psychological victory for the state.
- **Regional Shift in Surrender Trends:** Historically, Telangana-origin Maoists surrendered in neighboring Maharashtra or Chhattisgarh; however, the recent surrenders in Asifabad indicate the Telangana Police's successful revival of local intelligence networks and "pursuit" strategies.

Key Definitions

- **Left-Wing Extremism (LWE):** Also known as Maoism or Naxalism, it is an armed insurgency based on the ideology of Mao Zedong, aiming to overthrow the state through "Protracted People's War."
- **Politburo:** The highest policy-making body within the CPI (Maoist) organization, responsible for strategic decisions and ideological direction.
- **People's Liberation Guerrilla Army (PLGA):** The armed wing of the CPI (Maoist), established in 2000, responsible for carrying out tactical operations against security forces.

Constitutional and Legal Context

- **Seventh Schedule:** "Public Order" and "Police" are State subjects. However, the Central Government assists states through the CAPFs (Central Armed Police Forces) and funding for modernization.
- **Unlawful Activities (Prevention) Act (UAPA), 1967:** The CPI (Maoist) is a banned organization under this Act, which provides the legal framework for prosecuting individuals associated with terrorist activities.
- **Article 21:** The "Right to Life" extends even to insurgents; hence, the state prioritizes surrender over encounters to uphold democratic values while maintaining security.

Additional Strategic Keypoints

- **SAMADHAN Doctrine:** The Ministry of Home Affairs' (MHA) comprehensive strategy—Smart leadership, Aggressive strategy, Motivation, Actionable intelligence, Dashboard-based KPIs, Harnessing technology, Action plan for each theatre, and No access to financing.
- **Developmental Interventions:** Targeted schemes like the Special Central Assistance (SCA) and the construction of Eklavya Model Residential Schools in LWE-affected districts have eroded the insurgents' recruitment base.
- **Vacuum of Second-Line Leadership:** With the "old guard" surrendering or being neutralized, the movement faces a crisis of succession, as the younger generation shows a diminishing interest in jungle-based guerrilla warfare.

Conclusion

The surrender of the top Maoist brass in Telangana reflects the "endgame" of a decades-old insurgency. It proves that a combination of relentless security pressure, attractive rehabilitation packages, and the deepening reach of democratic developmental processes can effectively neutralize even the most entrenched



ideological movements. The focus must now shift to ensuring the safe reintegration of these individuals to prevent any resurgence or "splintering" of the movement.

UPSC Relevance

- **General Studies III:** Internal Security; Challenges to internal security through non-state actors; Linkages between development and spread of extremism.
- **General Studies II:** Governance; Government policies and interventions for development in various sectors.
- **Context:** This is a high-priority topic for the Personality Test (Interview) and Mains, specifically regarding the "National Policy and Action Plan to address LWE."

3. The "Queue Economy" and Social Security: Analysis of West Bengal's Banglar Yuva Sathi

The emergence of "lining up" as a structural feature of Indian democracy highlights the increasing reliance of the citizenry on direct benefit transfers (DBT) and state-led social safety nets amidst a challenging employment landscape.

- **Banglar Yuva Sathi Scheme:** Introduced in the 2026-27 State Budget, this unemployment assistance program targets youth aged 21-40 who have passed Class 10. It provides a monthly stipend of 1,500 until employment is secured or for a maximum of five years.
- **Massive Registration Surge:** Within days of its announcement, millions have queued at camps like Geetanjali Stadium. The scale of applicants, including MBAs and postgraduates, underscores the severity of the "underemployment" crisis where highly qualified individuals seek basic sustenance aid.
- **Shift Towards Populist Transfers:** The scheme follows the template of 'Lakshmir Bhandar' (for women), signaling a governance shift toward cash incentives. While providing immediate liquidity to households, it raises questions about long-term capital expenditure versus revenue expenditure on doles.
- **Contractualization of Public Services:** The state budget also hiked wages for over 1.25 lakh "civic volunteers" and "village police." Critics argue this promotes a "contractual force" lacking the rigorous training and accountability of permanent cadres, citing security concerns like the 2024 R.G. Kar Hospital incident.
- **Political Economy of Patronage:** Analysts suggest that ad-hoc and contractual appointments, often lacking transparent recruitment processes, may be used to build local political loyalties, potentially blurring the line between state administration and party machinery.
- **Sustainability and Job Creation:** While the 5,000 crore allocation provides temporary relief, the opposition and economists highlight a "job jobless growth" trap, where cash transfers are prioritized over structural industrial investment and permanent employment generation.



Key Definitions

- **Unemployment Allowance:** A social security benefit paid by the state to unemployed individuals who are registered with the government and actively seeking work.



- **Direct Benefit Transfer (DBT):** A mechanism to transfer subsidies or cash directly into the bank accounts of beneficiaries, aimed at reducing leakages and ensuring transparency.
- **Underemployment:** A situation where an individual is employed but in a job that is under-utilizing their skills, or is part-time when they desire full-time work.

Constitutional and Legal Context

- **Article 41 (DPSP):** The Constitution mandates that the State shall, within the limits of its economic capacity, make effective provision for securing the right to work, to education, and to public assistance in cases of unemployment.
- **Seventh Schedule:** "Social security and social insurance; employment and unemployment" falls under the Concurrent List (Entry 23), allowing both Centre and States to legislate and launch schemes.
- **Fiscal Responsibility and Budget Management (FRBM) Act:** States must balance welfare spending (revenue expenditure) with fiscal deficit targets to ensure long-term economic stability.

Additional Strategic Keypoints

- **The "Dole" vs. "Development" Debate:** Constant reliance on cash transfers can create a fiscal burden that crowds out investment in infrastructure, health, and education.
- **Gendered Impact of Welfare:** Schemes like Lakshmir Bhandar have historically shown high electoral returns by creating a dedicated "women's vote bank" through financial empowerment.
- **Security Implications of Civic Volunteers:** The use of semi-trained volunteers in sensitive sectors like policing raises legal questions regarding sovereign functions and the liability of the state for their actions.

Conclusion

The "Banglar Yuva Sathi" scheme reflects a broader national trend where state governments utilize cash transfers as a primary tool for social mitigation. While these measures offer a vital safety net for the vulnerable, they are often symptomatic of a deeper crisis in the formal labor market. For sustainable growth, such "stop-gap" financial aid must be complemented by robust industrial policies that transition the youth from being "beneficiaries" to "productive contributors" to the economy.

UPSC Relevance

- **General Studies II:** Issues relating to development and management of Social Sector/Services relating to Human Resources; Welfare schemes for vulnerable sections of the population.
- **General Studies III:** Indian Economy and issues relating to planning, mobilization of resources, growth, development, and employment.
- **Context:** Essential for understanding the "Welfare State" vs. "Freebie Culture" debate frequently asked in Mains and Personality Tests.



4. The Nari Shakti Vandan Adhiniyam: Analysis of Implementation Roadblocks

The Constitution (One Hundred and Sixth Amendment) Act, 2023, while historic in intent, faces significant procedural and constitutional hurdles that potentially push its actualization to the mid-2030s.

- **The Linkage Clause:** The Act stipulates that women's reservation (1/3rd of seats) will only take effect after a census is conducted post-2026, followed by a subsequent delimitation exercise. This effectively renders implementation impossible for the 2029 General Elections.
- **Census-Delimitation Timeline:** With the Census likely scheduled for 2027 and the compilation of data taking 12-18 months, a Delimitation Commission (under Article 82) would only begin work around 2029. Historically, such commissions take 3-6 years to conclude, pushing the timeline to 2032-2034.
- **Political Arithmetic of Expansion:** The linkage to delimitation suggests a strategy to implement reservation by increasing the total seats in Lok Sabha (potentially to 888) rather than displacing current male incumbents within the existing 543-seat framework.
- **The North-South Deadlock:** By tying reservation to delimitation, gender justice becomes entangled with the controversial issue of inter-state seat reallocation. States that have successfully controlled population growth fear a loss of political representation compared to high-growth northern states.
- **Design Omissions:** Critics highlight significant gaps in the current Act, including the absence of reservation in the Rajya Sabha and State Legislative Councils, the lack of an OBC sub-quota, and the absence of a clear operational framework for the rotation of reserved seats.
- **Potential Solutions:** Experts suggest that Parliament could delink reservation from delimitation through a fresh amendment or implement an incremental expansion of the House to fulfill the constitutional promise before 2034.



Key Definitions

- **Delimitation:** The act of redrawing boundaries of Lok Sabha and Assembly seats to represent changes in population over time, ensuring "one citizen, one vote, one value."
- **Freeze on Delimitation:** The 42nd Amendment (1976) froze seat allocation based on the 1971 Census to promote population control; this was extended until the first census after 2026 by the 84th Amendment (2001).
- **Direct Election:** An election where people vote directly for their representatives (e.g., Lok Sabha), as opposed to indirect elections (e.g., Rajya Sabha).

Constitutional and Legal Provisions

- **Article 330A & 332A:** New articles inserted by the 106th Amendment to provide reservation for women in the Lok Sabha and State Legislative Assemblies respectively.
- **Article 15(3):** Empowers the State to make special provisions for women and children, providing the constitutional basis for gender-based quotas.



- **Article 82:** Mandates the readjustment of seats and boundaries after each Census through a Delimitation Act.
- **Sunset Clause:** The 106th Amendment includes a provision that the reservation will last for 15 years from the date of commencement, unless extended by Parliament.

Additional Strategic Keypoints

- **Historical Context:** The journey began with the 81st Amendment Bill in 1996. The 2023 Act succeeded after 27 years of parliamentary stalemate.
- **Vertical vs. Horizontal Reservation:** While SC/ST women have a "quota within quota," the demand for a similar horizontal sub-quota for OBC women remains a major point of political contention.
- **Federal Tensions:** The 15th Finance Commission and upcoming delimitation have already created friction regarding fiscal and political parity between Southern and Northern states.

Conclusion

The Nari Shakti Vandan Adhiniyam is a landmark in India's journey toward substantive democracy. However, by making its execution contingent upon a complex and politically sensitive delimitation exercise, the legislature has delayed the "moment of arrival" for Indian women. To ensure that representation delayed is not representation denied, the government must provide a transparent roadmap that addresses both the logistical hurdles and the federal concerns of the states.

UPSC Relevance

- **General Studies II:** Indian Constitution—historical underpinnings, evolution, features, amendments, and significant provisions; Parliament and State Legislatures—structure, functioning, and conduct of business.
- **Social Justice:** Issues relating to the empowerment of women; Governance and the electoral process.
- **Context:** A high-probability topic for Essay and Ethics papers, focusing on the dichotomy between symbolic legislation and operational reality.

5. From Back Office to Global Brain Trust: The Rise of India's GCC 4.0

The transformation of Global Capability Centres (GCCs) from low-cost support units to strategic innovation hubs marks a pivotal shift in India's role within the global value chain, establishing the nation as a premier "global brain trust."

- **The Evolution to GCC 4.0:** India has transitioned through four waves of outsourcing, moving from basic labor arbitrage and routine IT tasks to the current era of "Agentic AI" and end-to-end product ownership. Today, GCCs define the future strategy of parent MNCs rather than just supporting them.
- **Strategic Hubs of Innovation:** With over 1,800 GCCs employing nearly 2 million professionals, these centers have become "Centres of Excellence" (CoEs) for high-end R&D in quantum computing, semiconductor design, and proprietary intellectual property (IP) creation.
- **Economic Decentralization:** The GCC boom is increasingly trickling down to Tier-II and Tier-III cities like Coimbatore, Indore, and Kochi. This geographic diversification reduces the burden on saturated metros like Bengaluru and Hyderabad while stimulating regional infrastructure and local economies.
- **Fiscal and Regulatory Headwinds:** The ecosystem faces challenges from the OECD's Global Minimum Tax (Pillar Two) of 15% and complex Transfer Pricing norms. These international tax



shifts, combined with India's Safe Harbour rules, have made fiscal predictability a primary concern for global boards.

- **Emerging Security Risks:** As GCCs manage more critical global data, they have become prime targets for state-sponsored cyber-attacks. The implementation of the Digital Personal Data Protection (DPDP) Act, 2023, has placed unprecedented governance and compliance pressure on these entities.
- **The Talent Paradox:** Despite a massive engineering base, a "fierce war for talent" exists for niche skills in AI security and quantum-resistant cryptography. Rising wage inflation threatens to erode the cost-advantage traditionally associated with the Indian market.



Key Definitions

- **Global Capability Centre (GCC):** Also known as captive centres, these are offshore units of large MNCs that perform specialized functions (R&D, IT, Finance) to enhance the parent company's global operations.
- **Agentic AI:** Autonomous artificial intelligence systems capable of independent reasoning and executing complex, multi-step tasks without constant human intervention.
- **Transfer Pricing:** The accounting practice of pricing transactions between different branches of the same multinational enterprise, often a point of contention regarding tax liabilities.
- **Safe Harbour Rules:** Circumstances under which the tax authorities will accept the transfer price declared by the taxpayer without further audit, providing administrative simplicity and certainty.

Constitutional and Legal Provisions

- **Digital Personal Data Protection (DPDP) Act, 2023:** The primary legal framework governing how GCCs process and protect the personal data of global users, emphasizing "Data Fiduciary" responsibilities.
- **Seventh Schedule (Union List):** "Taxes on income other than agricultural income" (Entry 82) and "Corporation tax" (Entry 85) allow the Union Government to regulate the fiscal environment for GCCs.
- **Article 265:** No tax shall be levied or collected except by authority of law, ensuring that the introduction of new international tax regimes like the OECD Pillar Two must be backed by domestic legislation.
- **National GCC Policy Framework (Proposed):** A specialized policy aimed at providing single-window clearances and rationalizing R&D subsidies to maintain India's competitive edge.

Additional Strategic Keypoints

- **Follow-the-Sun Model:** Utilizing India's time zone to ensure 24/7 global operations and faster innovation cycles.
- **Shadow Leadership:** The trend where senior technical and executive leaders based in Indian GCCs hold more execution power than their counterparts at the traditional Western headquarters.



- **Sovereign Risks:** Increasing global protectionism and "reshoring" policies in the West pose a threat to the expansion of offshore digital operations.

Conclusion

The transition of India from the "world's back office" to its "strategic nerve center" represents a fundamental upgrade in the country's economic software. While the growth of GCCs offers immense potential for high-value employment and technological leadership, its sustainability hinges on proactive policymaking. Addressing the talent gap through deep-tech upskilling and providing a stable, predictable fiscal environment will be essential to cement India's position as the world's innovation capital by 2030.

UPSC Relevance

- **General Studies III:** Indian Economy and issues relating to planning, mobilization of resources, growth, development, and employment; Effects of liberalization on the economy.
- **General Studies III:** Science and Technology-developments and their applications and effects in everyday life; Awareness in the fields of IT, Space, Computers, Robotics, and AI.
- **Context:** Highly relevant for questions on "Services-led growth," "Digital India," and the evolving nature of India's integration into the Global Value Chain (GVC).

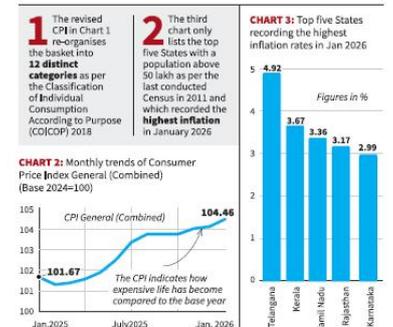
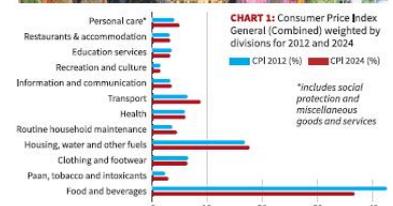
6. Refining Inflation Measurement: The Transition to CPI Base 2024

The recent revision of the Consumer Price Index (CPI) with 2024 as the new base year marks a significant shift in India's macroeconomic monitoring, aligning inflation data with the contemporary consumption patterns of Indian households.

- **Modernized Basket Composition:** The updated CPI adopts the Classification of Individual Consumption According to Purpose (COICOP) 2018, expanding the basket from six to 12 distinct categories to provide granular visibility into household expenditure.
- **Structural Weight Shift:** Reflecting the "Engel's Law" progression in the Indian economy, the weight of food has been reduced while the shares of housing and services—including health, education, and transport—have increased significantly.
- **Service-Driven Inflation Signals:** In states like Telangana, Kerala, and Tamil Nadu, higher inflation figures (e.g., Telangana at 5%) now more accurately reflect rising costs in the services sector rather than just transitory food price shocks.
- **Inclusion of Rural Housing:** A major methodological correction in CPI 2024 is the explicit inclusion of rural housing and utilities, which addresses previous understatements of non-food inflation in states like Rajasthan.
- **Improved Monetary Policy Input:** By isolating "sticky" service inflation from volatile food prices, the new index allows the Reserve Bank of India (RBI) to better distinguish between transitory and persistent price pressures for interest-rate decisions.

A revised basket

The data for the charts were sourced from the Ministry of Statistics and Programme Implementation (MOSPI)





- **Clarifying Index vs. Rate:** The revision reinforces the distinction between the CPI (a price level indicator relative to the 2024 base of 100) and the inflation rate (the year-on-year pace of price changes), ensuring more accurate public and policy discourse.

Key Definitions

- **Consumer Price Index (CPI):** A measure that examines the weighted average of prices of a basket of consumer goods and services, used to assess price changes associated with the cost of living.
- **Base Year:** The benchmark year against which the price levels of other years are compared. The current revision has moved the base year from 2012 to 2024.
- **Household Consumption Expenditure Survey (HCES):** A survey conducted by the National Sample Survey Office (NSSO) that provides the data used to determine the weights of various items in the CPI basket.
- **Headline Inflation:** The total inflation within an economy, including commodities such as food and energy prices, which tend to be much more volatile.

Constitutional and Legal Provisions

- **Article 246 (Seventh Schedule):** Statistics, including the collection of price data and inflation monitoring, falls under the Concurrent List (Entry 45), allowing both the Union and States to engage in data collection, though the National Statistical Office (NSO) handles national CPI.
- **RBI Act, 1934 (2016 Amendment):** Provides a statutory basis for the Flexible Inflation Targeting (FIT) framework. The RBI is mandated to maintain CPI inflation at 4% with a tolerance band of +/- 2%.
- **Collection of Statistics Act, 2008:** The legal framework under which the HCES and other price collection activities are conducted to ensure data reliability and respondent cooperation.

Additional Strategic Keypoints

- **Correction of "Weight Bias":** The older 2012 base was criticized for over-representing food, which led to policy "over-reactions" when seasonal crop failures caused temporary spikes.
- **Convergence of Rural-Urban Spending:** HCES data indicates that rural consumption is increasingly mirroring urban patterns, with higher spending on processed foods and services, a reality now captured by the 2024 base.
- **Impact on Dearness Allowance (DA):** Significant for GS-III (Economy) as CPI changes directly affect the cost-of-living adjustments for government employees and the calculation of the real GDP.

Conclusion

The transition to CPI 2024 is a vital "statistical recalibration" that reflects the maturation of the Indian economy. By shifting focus toward services and housing, the new index provides a more realistic "cost-of-living" metric. This transparency is crucial for the RBI to maintain price stability without stifling growth, ensuring that monetary interventions are based on persistent economic trends rather than short-term volatility in the vegetable markets.

UPSC Relevance

- **General Studies III:** Indian Economy and issues relating to planning, mobilization of resources, growth, development, and employment; Inflationary trends and monetary policy.

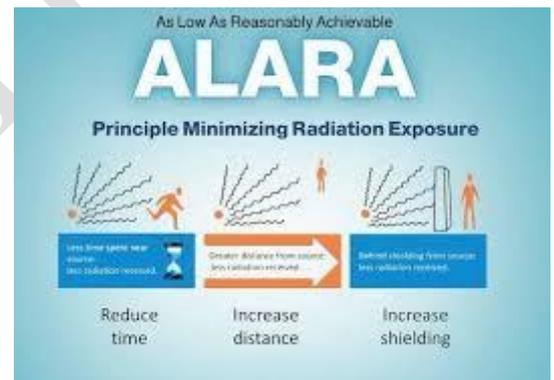


- **General Studies II:** Statutory, regulatory, and various quasi-judicial bodies (NSO, RBI, Monetary Policy Committee).
- **Context:** This update is a high-priority topic for Prelims (conceptual clarity on CPI vs. WPI) and Mains (evaluating the effectiveness of inflation targeting in India).

7. Paradigm Shift in Radiation Protection: The US Move Away from ALARA

The recent decision by the U.S. Department of Energy (DOE) to eliminate the "As Low As Reasonably Achievable" (ALARA) principle from its regulations represents a significant departure from decades of global consensus on nuclear safety and radiation protection.

- **The LNT Framework:** The Linear No-Threshold (LNT) model posits that any exposure to ionizing radiation, however minute, carries a proportional risk of health hazards like cancer, assuming no "safe" threshold exists.
- **The ALARA Principle:** Serving as the operational counterpart to LNT, ALARA mandates that radiation exposure should be minimized taking into account economic, social, and technological feasibility, fostering a continuous "safety culture."
- **U.S. Regulatory Departure:** On January 12, 2026, the U.S. DOE removed ALARA from its directives, citing the need to foster nuclear innovation and streamline the deployment of advanced nuclear technologies by reducing perceived regulatory "baggage."
- **Global Scientific Divergence:** This move places the U.S. at odds with international bodies like the ICRP, WHO, and UNSCEAR, which maintain that LNT remains the most prudent basis for public and occupational safety in the absence of definitive human data for alternative models.
- **Emerging Health Evidence:** Recent large-scale research, including the 'Million Person Study' and 2023 findings in Nature Medicine, suggests potential links between very low-dose radiation and blood-related cancers, complicating the push for higher dose thresholds.
- **Implications for Public Trust:** Critics warn that abandoning these foundational principles may be perceived as a dilution of safety standards, potentially fueling public opposition to nuclear projects and creating a fragmented global regulatory landscape.



Key Definitions

- **Ionizing Radiation:** High-energy radiation (like X-rays or Gamma rays) capable of removing electrons from atoms, which can cause chemical changes in cells and damage DNA.
- **Hormesis:** A biological hypothesis suggesting that low doses of radiation might be beneficial or stimulate cellular repair mechanisms, a concept currently deemed unsuitable for regulatory standards due to lack of reproducible human data.
- **Dose-Response Model:** A scientific mapping used to estimate the risk of an effect (like cancer) based on the amount of exposure to a specific agent (like radiation).



Constitutional and Legal Provisions

- **Atomic Energy Act, 1962 (India):** Provides the legal framework for the development, control, and use of atomic energy. It empowers the Central Government to ensure radiation safety across the country.
- **Atomic Energy Regulatory Board (AERB):** The statutory body in India responsible for enforcing safety standards. India strictly adheres to ICRP recommendations, including LNT and ALARA, to maintain its global standing in nuclear safety.
- **Article 21 (India):** The Right to Life includes the right to a healthy environment. Any dilution of radiation safety standards could be seen as a violation of this fundamental right, making adherence to international norms a constitutional imperative.

Additional Strategic Keypoints

- **Nuclear Innovation vs. Safety:** The U.S. move reflects a tension between accelerating "Next-Gen" nuclear reactors (SMRs) and maintaining the traditional "precautionary principle."
- **Economic Impact:** Proponents of the shift argue that over-stringent adherence to ALARA leads to excessive shielding costs and administrative delays that hinder the transition to carbon-free nuclear energy.
- **Epidemiological Challenges:** It is statistically difficult to isolate the effects of low-level radiation from other environmental carcinogens, which is why the "conservative" LNT model has historically been the global default.

Conclusion

The elimination of ALARA by the U.S. DOE marks a controversial pivot toward a more "performance-based" rather than "precautionary-based" safety regime. While this may expedite technological innovation in the nuclear sector, it risks undermining the uniform global safety architecture. For a nation like India, which is expanding its nuclear energy footprint through the three-stage nuclear power program, maintaining alignment with ICRP and the LNT model is essential to ensure both scientific rigor and public confidence.

UPSC Relevance

- **General Studies III:** Science and Technology-developments and their applications and effects in everyday life; Nuclear technology and safety; Environmental impact assessment.
- **General Studies II:** Statutory, regulatory and various quasi-judicial bodies (AERB, ICRP, IAEA); Effect of policies of developed countries on India's interests.
- **Context:** Vital for understanding the "Precautionary Principle" in environmental governance and the global politics of nuclear regulation.

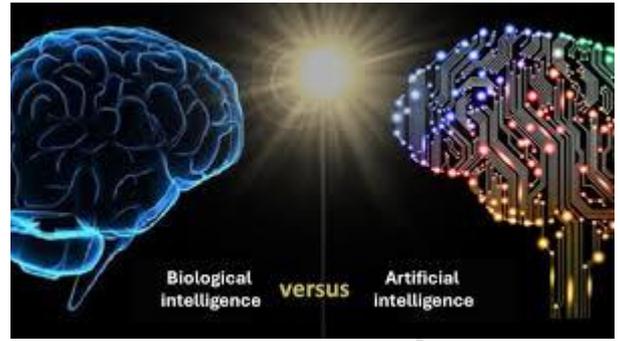
8. Artificial vs. Biological Intelligence: Scale, Design, and Divergence

The rapid evolution of Large Language Models (LLMs) has brought artificial intelligence to a scale rivaling the human brain, yet the underlying architectural principles and energy efficiencies remain fundamentally distinct.

- **Conceptual Foundations:** AI is built on artificial neural networks, a concept dating back to the 1943 McCulloch–Pitts neuron model. The Universal Approximation Theorem suggests that sufficient layers of these simple mathematical units can simulate any complex function, provided there is enough data and computational power.



- **Scale and Convergence:** Modern AI models like GPT-4 have parameters reaching into the trillions, approaching the estimated 100 trillion synapses in the human brain. However, while AI relies on brute-force parallel computation via GPUs, the brain utilizes dense feedback loops and event-driven signaling.
- **Feed-forward vs. Feedback Loops:** Most LLMs operate in a strictly feed-forward manner for efficiency. In contrast, the human brain relies on continuous internal dialogue between sensory input and prior knowledge, where neurotransmitters like Dopamine and Acetylcholine dynamically modulate perception and focus.
- **Energy Efficiency and Sparsity:** The human brain operates on a mere 20 watts of power due to "sparsity"—where only a fraction of neurons fire at any given time. AI systems require megawatts of electricity because they activate massive numerical matrices for every single input.
- **Learning Density:** AI is data-intensive, requiring trillions of words to learn patterns. Humans develop flexible reasoning from a fraction of that data, as biological memory and computation are co-located at the synapses, allowing for localized learning rather than global optimization signals.
- **Neuromorphic Innovations:** To bridge this gap, researchers are developing "Mixture-of-Experts" (MoE) architectures and "neuromorphic chips" that mimic biological modularity and spike-like operations to reduce energy consumption and improve conceptual learning.



Key Definitions

- **Transformer Architecture:** A deep learning model that uses "attention mechanisms" to weigh the significance of different parts of input data, enabling the model to handle long-range dependencies in text.
- **Parameters:** The internal variables (weights) that a model learns from training data, which determine how it processes input to produce an output.
- **Neuromorphic Computing:** A method of computer engineering in which elements of a computer are modeled after systems in the human brain and nervous system.
- **Mixture-of-Experts (MoE):** A machine learning technique where different parts of a model (experts) are trained to handle different types of tasks, activating only the relevant "expert" for a given input.

Constitutional and Legal Context

- **Article 51A(h):** The Indian Constitution lists the development of "scientific temper, humanism and the spirit of inquiry" as a Fundamental Duty, which encompasses the ethical pursuit of advanced technologies like AI.
- **National Strategy on AI (NITI Aayog):** India's policy framework ("AI for All") focuses on leveraging AI for social inclusion and economic growth while addressing ethical concerns and data sovereignty.
- **Digital Personal Data Protection Act, 2023:** Regulates the massive datasets required to train LLMs, ensuring that the "data-intensive" nature of AI does not compromise individual privacy rights.



Additional Strategic Keypoints

- **Metabolic Constraint vs. Silicon Scaling:** Biology is limited by physical size and energy; machines can scale indefinitely, potentially leading to "Superintelligence" that does not resemble human cognition.
- **Agentic AI:** The transition from passive models to autonomous systems that can reason and execute tasks, moving closer to the brain's goal-directed behavior.
- **Hardware Evolution:** The shift from general-purpose GPUs to specialized AI accelerators and neuromorphic hardware is essential for making AI sustainable and "edge-compatible."

Conclusion

While AI has achieved a scale that mirrors the human brain, it remains a mathematical approximation of biological complexity. The brain's efficiency stems from millions of years of evolutionary refinement, emphasizing feedback and energy conservation. As AI moves toward neuromorphic designs, the goal is not necessarily to replicate the brain but to achieve a level of "general intelligence" that can augment human capabilities. Ultimately, the divergence in design suggests that AI may become a unique form of intelligence, powerful precisely because it is not bound by biological limitations.

UPSC Relevance

- **General Studies III:** Science and Technology-developments and their applications and effects in everyday life; Awareness in the fields of IT, Computers, and Robotics.
- **General Studies IV:** Ethics and Human Interface; Ethical implications of AI surpassing human cognitive capabilities and its impact on decision-making.
- **Context:** This topic is vital for understanding the "Fourth Industrial Revolution" and the technological competition between global superpowers in the field of Artificial General Intelligence (AGI).

9. Historic Win for Indian Cinema: "Boong" Secures India's First BAFTA

The Manipuri film "Boong" created history at the 79th British Academy of Film and Television Arts (BAFTA) Awards 2026 by becoming the first-ever Indian production to win in the "Best Children and Family Film" category.

- **Historic Milestone:** This victory marks India's debut win at the BAFTAs, an event widely regarded as the British equivalent of the Academy Awards (Oscars). It represents a significant breakthrough for Indian regional cinema on the global stage.
- **Overcoming Global Competition:** Directed by debutant Lakshmi Priya Devi, "Boong" triumphed over high-budget international contenders, including Hollywood blockbusters like *Zootropolis 2* (*Zootopia 2*) and *Lilo & Stitch*, as well as the animated science fantasy *Arco*.
- **Narrative and Themes:** The film follows the innocent journey of a young schoolboy, Boong, from the Imphal valley who attempts to bring his missing father back from the Myanmar border town of Moreh as a "gift" for his mother. It explores themes of childhood resilience, the complexities of ethno-racial discord, and cross-border identities.





- **Cultural and Regional Significance:** Set against the backdrop of Manipur's socio-political landscape, the film highlights the cultural richness of Northeast India. The director utilized her acceptance speech to make a poignant plea for peace in the conflict-torn region.
- **Collaborative Support:** The film was backed by notable Indian producers Farhan Akhtar and Ritesh Sidhwani (Excel Entertainment) and Alan McAlex, showcasing a successful synergy between mainstream industry support and independent regional storytelling.
- **Global Festival Journey:** Before its BAFTA success, the film gained critical acclaim at various international platforms, including the Toronto International Film Festival (TIFF) 2024, the MAMI Mumbai Film Festival, and the International Film Festival of India (IFFI).

Key Definitions

- **BAFTA:** The British Academy of Film and Television Arts is an independent charity that supports, develops, and promotes the art forms of the moving image (film, television, and games) in the United Kingdom.
- **Coming-of-Age Film:** A genre that focuses on the psychological and moral growth of the protagonist from youth to adulthood.
- **Soft Power:** The ability of a country to persuade others through culture, values, and ideas rather than coercion or force. Cinema is a primary instrument of India's soft power.

Constitutional and Legal Context

- **Article 29:** Protects the interests of minorities and grants citizens the right to conserve their distinct language, script, or culture. The recognition of a Manipuri-language film aligns with the constitutional spirit of promoting linguistic diversity.
- **Eighth Schedule:** Manipuri (Meitei) is one of the 22 official languages listed under the Eighth Schedule of the Indian Constitution, highlighting its national importance.
- **Cinematograph Act, 1952:** The primary legislation regulating the certification and exhibition of films in India. While this act governs domestic screening, international wins like the BAFTA bolster the case for less restrictive censorship for artistic merit.

Additional Strategic Keypoints

- **Northeast Representation:** The win draws global attention to the "Seven Sister" states, traditionally underrepresented in the national and international cinematic discourse.
- **Diplomacy through Art:** The presence of Indian actors like Alia Bhatt as presenters at the 79th BAFTA Awards (speaking in Hindi/Namaste) alongside the win for "Boong" underscores the growing "India Moment" in global entertainment.
- **Niche Category Success:** Success in the "Children and Family Film" category highlights the potential for Indian storytellers to create universal content that resonates beyond linguistic and geographical barriers.

Conclusion

The success of "Boong" at the 2026 BAFTAs is more than just a cinematic achievement; it is a testament to the power of regional narratives in transcending borders. By bringing the specific nuances of Manipuri life to a global audience, the film exemplifies how local stories, when told with authenticity, can achieve



universal appeal. This win serves as a catalyst for future investment in regional Indian cinema and strengthens India's cultural diplomacy.

UPSC Relevance

- **General Studies I:** Indian Culture—Salient aspects of Art Forms, Literature, and Architecture from ancient to modern times (Role of Cinema in modern Indian culture).
- **General Studies II:** Governance—Government policies and interventions for development in various sectors (Northeast development and cultural integration).
- **Current Affairs:** Recognition of Indian artists and films at international forums; India's soft power and global standing.
- **Context:** This topic is highly relevant for the "Culture" and "Northeast India" segments of the Prelims and Mains, as well as for the Essay paper on topics related to diversity, peace, and national identity.

10. Diplomatic Balancing Amidst Domestic Turmoil: PM Modi's 2026 Israel Visit

Prime Minister Narendra Modi's scheduled visit to Israel from February 25-26, 2026, has become a focal point of intense domestic political friction in Jerusalem, as the Israeli Opposition ties their attendance at his Knesset address to the country's ongoing judicial crisis.

- **The Boycott Threat:** Opposition leader Yair Lapid has threatened to boycott PM Modi's address to the Knesset unless Supreme Court President Yitzhak Amit is invited, as per parliamentary convention. This ultimatum highlights the deep rift between the Netanyahu government and the judiciary.
- **Judicial Overhaul Conflict:** The primary cause of the friction is the long-standing debate over judicial reforms. Following Yitzhak Amit's appointment as Chief Justice in early 2025, Justice Minister Yariv Levin has refused to officially recognize his authority or publish his name in the State Gazette.
- **Potential for "Enormous Embarrassment":** The Opposition warns that a "half-empty Knesset" during the address of a leader representing 1.4 billion people would cause significant diplomatic embarrassment, reporting that the Indian Embassy is monitoring the internal standoff with concern.
- **Knesset Speaker's Response:** Speaker Amir Ohana has criticized the boycott threat as an "illegitimate weapon" in an internal struggle, accusing the Opposition of harming Israel's foreign relations with a "gigantic power" like India to score domestic political points.
- **Strategic Partnership Context:** The visit follows significant bilateral momentum in 2025, including the signing of a Bilateral Investment Treaty (BIT) and progress toward a Free Trade Agreement (FTA), emphasizing India's role as a "model ally" in the region.
- **Broader Regional Implications:** The visit occurs against a backdrop of regional volatility involving Iran and Gaza, where India continues to perform a delicate "balancing act" by maintaining strong ties with both Israel and the Arab world.





Key Definitions

- **Knesset:** The unicameral national legislature of Israel, which serves as the country's supreme governing body.
- **Judicial Overhaul:** A series of proposed changes to the Israeli legal system aimed at limiting the Supreme Court's power to exercise judicial review over the executive and legislative branches.
- **Seniority System:** A long-standing convention in Israel where the most senior justice on the Supreme Court is appointed as its President, a practice the current government has sought to abolish.

Constitutional and Legal Context

- **Article 51 (Directive Principles):** The Indian Constitution mandates that the State shall endeavor to promote international peace and security and maintain just and honorable relations between nations.
- **Basic Laws of Israel:** Since Israel lacks a formal written constitution, its "Basic Laws" function as such. The current struggle involves the *Basic Law: The Judiciary*, specifically concerning the appointment of judges.
- **Vienna Convention on Diplomatic Relations (1961):** Provides the framework for diplomatic immunity and the conduct of state visits, ensuring that visiting heads of government are accorded appropriate honors regardless of the host nation's internal politics.

Additional Strategic Keypoints

- **Soft Power Diplomacy:** PM Modi's visit, his second after the historic 2017 trip, leverages personal "bonhomie" with PM Netanyahu to advance defense and technology cooperation.
- **I2U2 and IMEC:** India and Israel are key partners in the I2U2 Group (India, Israel, UAE, US) and the proposed India-Middle East-Europe Economic Corridor (IMEC), both of which are critical to India's maritime and trade strategy.
- **Domestic vs. International Image:** The exclusion of the Chief Justice from high-profile events (including addresses by US President Trump in 2025) is viewed by the Israeli Opposition as a systematic effort to delegitimize the judiciary.

Conclusion

The entanglement of PM Modi's visit in Israel's domestic judicial crisis underscores the challenges of conducting high-level diplomacy in a polarized world. While the strategic and economic ties between New Delhi and Jerusalem remain robust—exemplified by the \$11 billion bilateral trade and the BIT—the internal "constitutional crisis" in Israel threatens to cast a shadow over the ceremonial aspects of the visit. For India, the priority remains a stable partnership that survives changes in leadership and domestic policy shifts in the Middle East.

UPSC Relevance

- **General Studies II:** India and its neighborhood-relations; Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.
- **General Studies II:** Comparison of the Indian constitutional scheme with that of other countries (Judicial independence and Executive-Judiciary relations).
- **International Relations:** Effect of policies and politics of developed and developing countries on India's interests; Indian Diaspora.



11. Maritime Security Alert: Unauthorized Use of Satellite Phones in Indian Waters

The Directorate General of Shipping (DGS) has intensified its crackdown on the illegal use of satellite communication devices by vessels and seafarers, citing significant gaps in the ability to monitor untraceable communication channels which jeopardize national security.

- **Security Threat Perception:** Use of undeclared satellite phones (like Thuraya) and messaging devices (like Zoleo) is categorized as a major security risk because these signals often bypass Indian gateways, making them impossible to intercept or trace by domestic agencies.
- **The Monitoring Gap:** A critical concern highlighted is the absence of Iridium ground stations or gateways within Indian territory; consequently, communications made via portable Iridium devices cannot be monitored, presenting a "blind spot" in sensitive maritime zones.
- **Prohibited vs. Permitted Devices:** While Iridium-based equipment is allowed strictly for distress and safety purposes under the Global Maritime Distress and Safety System (GMDSS), the use of "Thuraya" and "Inmarsat" (specific models) remains prohibited or heavily restricted in Indian waters.
- **Sealing Protocols:** Under current regulatory norms, any personal satellite communication equipment belonging to the crew that is not part of the ship's official GMDSS station must be declared, handed over to the Ship's Master (Captain) for custody, and sealed by Indian authorities upon arrival at port.
- **Proposed Penal Measures:** The DGS has proposed stricter legal consequences and infringement notices for non-declaration or unauthorized use, moving beyond mere administrative warnings to formal penal action under the Indian maritime and telecommunication laws.
- **Zoleo and Smartphone Integration:** Modern technology allowing smartphones to link with Iridium satellites via external devices (like Zoleo) has emerged as a new challenge, as these "hybrid" communications occur outside the traditional cellular network coverage and state surveillance.



Key Definitions

- **Satellite Phone (Satphone):** A type of mobile phone that connects to orbiting satellites instead of terrestrial cell sites, providing coverage in remote areas or at sea.
- **GMDSS (Global Maritime Distress and Safety System):** An internationally agreed-upon set of safety procedures, types of equipment, and communication protocols used to increase safety and make it easier to rescue distressed ships.
- **Thuraya:** A regional mobile satellite service provider based in the UAE. Its devices are banned in India due to security concerns related to the inability to monitor its traffic via Indian gateways.
- **Gateway/Ground Station:** A terrestrial radio station that serves as a telecommunications link between the satellite and the local telecommunications network.

Constitutional and Legal Provisions

- **Article 297:** Specifies that all lands, minerals, and other things of value underlying the ocean within the territorial waters, or the continental shelf, or the exclusive economic zone (EEZ) of India shall vest in the Union. This provides the basis for Union jurisdiction over maritime security.



- **Indian Telegraph Act, 1885:** Sections 4 and 20 of this Act govern the possession and use of wireless telegraphy equipment. Unauthorized possession of satellite phones is a punishable offense under this Act.
- **Territorial Waters, Continental Shelf, Exclusive Economic Zone and Other Maritime Zones Act, 1976:** Defines India's sovereignty over its territorial waters (12 nautical miles) and jurisdiction over the EEZ (200 nautical miles).
- **DG Shipping Orders:** The DGS, under the Ministry of Ports, Shipping and Waterways, issues executive orders that carry the force of law for all vessels entering Indian maritime zones.

Additional Strategic Keypoints

- **Post-26/11 Security Paradigm:** Since the 2008 Mumbai attacks, where terrorists used satellite phones to coordinate, India has maintained a zero-tolerance policy toward untraceable satellite communication in its waters.
- **Coastal Security Architecture:** The monitoring of satellite signals is a core component of the "Integrated Coastal Surveillance System" involving the Indian Coast Guard, Navy, and Intelligence Bureau.
- **Vessel Traffic Management System (VTMS):** While VTMS tracks the movement of ships, it cannot intercept encrypted satellite voice/data without local gateways, necessitating physical checks and sealing of devices.

Conclusion

The move by the Directorate General of Shipping to enhance penal provisions underscores the evolving nature of maritime threats where "digital invisibility" is as dangerous as physical infiltration. By mandating the declaration and sealing of personal satellite devices, India aims to close a regulatory loophole that could be exploited for smuggling, espionage, or terrorism. Strengthening the legal framework ensures that maritime safety is not compromised by the rapid proliferation of low-cost, portable satellite technology.

UPSC Relevance

- **General Studies III:** Internal Security; Challenges to internal security through communication networks; Role of media and social networking sites in internal security challenges; Basics of cyber security; Maritime security.
- **General Studies II:** Statutory, regulatory and various quasi-judicial bodies (DGS, TRAI); Government policies and interventions for development in various sectors and issues arising out of their design and implementation.
- **Context:** This topic is vital for understanding India's coastal security grid and the legal hurdles in monitoring "off-grid" communication technologies in the Indian Ocean Region (IOR).

12. Personalised Medicine and the Bio-Revolution: Biopharma Shakti Initiative

The Union Budget 2026-27 has earmarked a significant investment of 10,000 crore for the biotechnology sector, signaling India's transition toward becoming a global hub for biopharma manufacturing and precision healthcare.

- **Strategic Investment and Biopharma Shakti:** The Centre's 10,000 crore allocation aims to bolster the production of biologics and biosimilars. The "Biopharma Shakti" initiative is designed to create a robust ecosystem for advanced therapeutics and high-value manufacturing.



- **Paradigm Shift in Treatment:** Healthcare is moving from a "one-size-fits-all" reactive model to a "proactive and individualized" approach. Treatments are now being tailored based on a patient's genetic, metabolic, lifestyle, and ethnic profile.
- **Role of Industry 5.0:** The integration of biotechnology with generative AI, multimodal machine learning, and reinforcing AI is accelerating drug discovery and neuroinformatics, making the development process faster and more accurate.
- **Educational Evolution:** Biotechnology education is rapidly integrating genomics, bioinformatics, and data science. New specialized programs are focusing on large dataset analysis and computational biology to meet the demands of the transforming clinical landscape.
- **Post-Pandemic Transformation:** The COVID-19 pandemic acted as a primary catalyst, shifting public and private focus toward human-centric innovations and sustainable science-led solutions in biotechnology.
- **Economic and Career Prospects:** With strong government backing and a growing global job market, biotechnology is emerging as a stable and promising career path, particularly in sectors involving targeted therapies and optimized drug selection.



Key Definitions

- **Personalised Medicine:** A medical model that separates patients into different groups, with medical decisions, practices, or products being tailored to the individual patient based on their predicted response or risk of disease.
- **Biologics:** Complex medicines produced from living organisms (such as bacteria, yeast, or animal cells) using highly advanced technologies.
- **Biosimilars:** A biologic medical product that is almost an identical copy of an original product that is manufactured by a different company.
- **Bioinformatics:** An interdisciplinary field that develops methods and software tools for understanding biological data, especially when the data sets are large and complex.

Constitutional and Legal Provisions

- **Article 21:** The Right to Life includes the right to health. Advancements in biotechnology and personalised medicine directly support the state's obligation to provide high-quality healthcare.
- **Article 47 (DPSP):** Mandates the State to regard the raising of the level of nutrition and the standard of living of its people and the improvement of public health as among its primary duties.
- **Drugs and Cosmetics Act, 1940:** Regulates the import, manufacture, and distribution of drugs. Current amendments are being sought to include specialized regulations for biologics and gene therapies.
- **National Biotechnology Development Strategy (2021-2025):** The policy framework that aims to make India a "Global Bio-manufacturing Hub" by 2025, which has been further extended by the 2026 budget initiatives.



Additional Strategic Keypoints

- **Targeted Therapies:** These involve using medicines that "target" specific genes or proteins to stop the growth of cancer or other diseases with minimal damage to healthy cells.
- **Ethno-Racial Profiling in Medicine:** Experts highlight that drugs react differently across various racial groups. For instance, certain ACE inhibitors are less effective in people of African descent compared to Caucasians. Personalised medicine uses these concrete statistical variations to optimize dosage.
- **Computational Biology:** The use of algorithms and modeling to understand biological systems and relationships, which is essential for "in-silico" drug testing (testing via computer simulation).

Conclusion

The infusion of 10,000 crore into the biotechnology sector via the Biopharma Shakti initiative represents a watershed moment for Indian healthcare. By leveraging the synergy between AI and genomics, India is not merely expanding its manufacturing capacity but is actively participating in the "Industry 5.0" revolution. The shift toward personalised medicine ensures that healthcare becomes more effective and less toxic, though it requires a simultaneous update in India's regulatory and educational frameworks to remain globally competitive.

UPSC Relevance

- **General Studies III:** Science and Technology-developments and their applications and effects in everyday life; Achievements of Indians in science & technology; Indigenization of technology and developing new technology; Biotechnology and issues relating to intellectual property rights.
- **General Studies II:** Issues relating to development and management of Social Sector/Services relating to Health and Education.
- **Context:** This topic is highly relevant for the 2026-27 Mains examination due to the specific budgetary mention and the strategic shift toward "Biopharma Shakti" as a pillar of the Indian economy.